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THIRD EDITION

Evelina M. Tainer

Using Economic Indicators to Improve Investment Analysis

Third Edition

EVELINA M. TAINER



John Wiley & Sons, Inc.

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

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Library of Congress Cataloging-in-Publication Data:

Tainer, Evelina M., 1958–

Using economic indicators to improve investment analysis / Evelina M.

Tainer.—3rd ed.

p. cm.—(Wiley finance series)

Includes bibliographical references and index.

ISBN-13: 978-0-471-74096-4 (cloth)

ISBN-10: 0-471-74096-9 (cloth)

1. Investment analysis—Statistical methods. 2. Economic

indicators—United States. I. Title. II. Series.

HG4529.T34 2006

332.6'01'5195—dc22

2005020235

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

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Preface

The ivory tower view that you cannot bring economic theory to the real world is simply untrue. You—consumers, investors, even government policymakers—*can* apply economic principles, events, and conditions to your daily life, moneymaking ventures, and policy initiatives respectively. Nevertheless, economic indicators reported by public and private agencies are sometimes misread. Relevant indicators are overlooked, while less useful ones get too much attention. As a result, you do not get a clear picture of the current economic environment and what it means for the future. That is why I wrote this book, which began as a pamphlet more than 20 years ago.

Successful trading and speculating, profitable investing, proper policymaking, and effective buying require a thorough grasp of the available data. This includes a healthy dose of skepticism for the information in published reports and a constant eye for aberrations in the established trend. This book explains the relevant details of economic indicators reported by public and private agencies. By the end, you will be able to determine whether the reported data are reliable at face value or need deeper analysis before assessing their role in the current economic environment.

The goal of this book is not to transform you into a full-time economist, but to apprise you of the factors and statistical series that economists monitor in assessing current economic conditions. The reported economic series will have the same meaning whether you are making investment decisions for your household or for your firm. However, the strategy that bond traders take in following the economic statistics is likely to be different from the strategy followed by manufacturing executives or by consumers in their financial investments. In all cases, investors (bond traders, manufacturers, or consumers) or government policymakers must understand the reported economic indicator to make rational decisions.

I have written this book in plain English—not economic or business jargon that is understood by a select few. Economic statistics are described in nontechnical terms—but this is also done by familiarizing you with the language used by financial market participants so that, for example, individual investors can have a better understanding of the relationship between economic indicators and financial markets. While changing interest

rates and foreign exchange rates have an impact on economic activity, it is also true that economic indicators cause stock prices, interest rates, and the foreign exchange value of the dollar to rise and fall. Consumers and investors who are not intimately involved with the financial markets can find it difficult to understand that strong economic growth is bad for the bond market. (Something “good,” such as a drop in the unemployment rate, actually causes interest rates to rise.) I will explain why.

Financial market participants, who anticipate fiscal and monetary policy changes that ultimately affect interest rates, stock prices, and the dollar exchange rate, need to know how to dissect the indicators and search for anomalies. If these economic indicators are misinterpreted, then their market reaction will be wrong and their best guess on future Federal Reserve policy will also be incorrect. For example, perceiving a strong economy, because nonfarm payroll employment posted a large gain, would lead to rising interest rates. This, however, would actually hurt the economy if activity were anemic and the rise in payrolls was due to one or more special factors such as auto workers returning to work after a protracted labor dispute. Policymakers could also misinterpret the economic figures if they did not pay attention to the occasional quirks in the data and policy decisions would be based on incorrect information about the current and future state of the economy. For instance, a healthy employment scenario might cause the Federal Reserve to worry about inflationary pressures and induce unwarranted tightening measures. Rest assured that policymakers and economists at the Federal Reserve do closely scrutinize each economic indicator and are aware of the potential quirks.

Government policymakers in Congress as well as bureaucrats at federal agencies, and state and local government agencies should also have a healthy understanding of current economic conditions. They, too, can misinterpret economic figures when they do not pay attention to quirks in the data that, in turn, lead to bad decision making. State and local government leaders need to understand the interest rate environment because municipalities need to borrow money and issue tax-exempt securities.

The proper interpretation of economic news is not just limited to the players in the financial market and policymakers. Business students who study economics still do not see the connection between economic theory and the real world from their courses. Journalists, too, need to understand economic information before imparting it to the general public (who often only rely on the media for the information that they use to make their economic decisions).

This book serves three functions for its audience. It describes economic indicators and the nuances associated with them and it explains market reactions to those consumers, investors, government officials, and the like

who are not directly participating in the financial markets. It also shows individual investors that they can use economic indicators to their advantage in making long-term strategic investment decisions.

Each chapter explains the economic indicator, the different market reactions to it whether the fixed income, foreign exchange, and stock markets, and key points to look for in the particular series. Economic indicators are divided by sectors of the economy such as consumer, investment, and inflation. If you are a sophisticated financial market participant, the “Market Reaction” sections may seem simplistic. However, even sophisticated market players will find useful information in the specific indicator section. The “Watch Out!” sections are crucial, too, for pointing out common and uncommon quirks along with potential special factors.

Chapter 1 links economic indicators to the financial markets. It presents a basic description of cycles in the economy and markets that move within the cycles. This chapter also discusses the basics of market psychology and explains how we are all financial market participants in some way.

An overview of the macroeconomic framework is provided in Chapter 2, using the standard national income accounting methodology. It concentrates on GDP (gross domestic product) and explains the income side of the accounts from which corporate profits are derived. It also provides a framework for analyzing the economy. Chapter 3 features a discussion on the consumer sector, a major component of the U.S. economy. It includes the relevant indicators that reflect consumer behavior, which are reported monthly, quarterly, or more frequently. This section compares and contrasts indicators of consumer behavior so that you will recognize which series are more consistently reliable.

The investment sector of the economy is the subject of Chapter 4, which looks at investments in *physical* capital such as machinery or buildings as opposed to *financial* investments that include stocks or bonds. Monthly indicators that represent the investment sector typically fluctuate dramatically from month to month and need to be interpreted cautiously.

Since 1980, the United States has increased its trade with foreign countries and can truly call itself a global player. Chapter 5 investigates this, the foreign sector. You will learn how to make sense of the few available indicators to understand behavior in the foreign exchange market as well as in the domestic bond and equity markets. Chapter 6 considers government spending. Monthly or quarterly indicators are sparse even though the government accounts for one-fifth of gross domestic product. This chapter uncovers some hidden indicators.

Chapter 7 focuses on the familiar one of inflation—and its advantages and disadvantages. This chapter defines inflation and how we measure it. You will also learn that all inflation measures are not identical and that it is

important to distinguish between inflation in the market for goods, services, and labor.

Chapter 8 covers labor market indicators as reported by government statistics agencies and private institutions. The monthly employment situation, usually reported on the first Friday of every month, is the indicator that consistently causes the largest fluctuations in financial markets—including equity and bond markets overseas!

A variety of production measures are the subject of Chapter 9. These statistics, such as the index of industrial production and the ISM manufacturing survey are compiled by government agencies as well as by private organizations such as the Institute for Supply Management.

Chapter 10 gives an overview of the Federal Reserve System and how its monetary policy is implemented. Also included here is a revealing look into the evolution of Fed watching and how to interpret key indicators produced by the Fed such as the monetary aggregates, the *Beige Book*, and the flow of funds.

Chapter 11 looks at the Treasury securities market, the method by which the government borrows money. It also covers the monthly Treasury statement, which reveals the income and expenditures of the federal government. Here you will learn about Treasury International Capital, an indicator published for nearly 30 years but only recently “discovered” by financial markets.

Lastly, how individual investors can use economic indicators to make profitable investment decisions is the focus of Chapter 12. Day trading became popular in the late 1990s and early 2000s as online resources gave individual investors the ability to trade with professionals. Despite the Internet, most individual investors do not have the same resources available to professional investors and would do better by using economic indicators to make long-term investment decisions instead.

One final caveat: Statistical agencies in the public and private sector revise data frequently and sometimes revise their statistical methodologies. Some changes are minor while others are more consequential. To keep track of these changes and their importance, readers should check online at www.econoday.com.

Evelina M. Tainer

Tacoma, Washington
Autumn 2005

Acknowledgments

It is a pleasure to acknowledge people who have played a role in making this book better. To that end, I would like to thank Maurine Haver of Haver Analytics, Charles Steindel, now a Senior Vice President at the Federal Reserve Bank of New York, formerly a colleague from our days at The First National Bank of Chicago, and my friends at *Market News International*, particularly Terry Sheehan, Denny Gulino, and Tony Mace.

As always, economists from the government's statistics agencies were happy to provide not only unpublished data but answers to my questions despite their own publishing deadlines. Economists from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Census Bureau, and the Federal Reserve Bank of New York were particularly helpful.

While teaching a course at the University of Illinois–Chicago, several students provided constructive comments for the new chapter on using economic indicators to improve investment analysis. I would like to thank them and in particular Dan Heir, Wendy Ku, and Patrick O'Meara.

My friend and colleague Anne Picker has seen a couple of incarnations of this book already. I thank her for her encouragement and support over the years. My editor at Econoday, Mark Pender, kindly, perhaps recklessly, volunteered to read this manuscript. I thank him for his insightful comments along with his fabulous editing skills.

I am particularly grateful to my husband, Joe Loescher, who encouraged me and supported me in this endeavor. A motorcycle-riding attorney and avid investor—without the burden of a background in economics and finance—he has helped me see the investment process a little differently. There is no question that my best ideas have come from our discussions and debates!

Finally, I want to thank my editors at John Wiley & Sons, especially Bill Falloon, Laura Walsh, Todd Tedesco, and James Reidel who guided me through the process.

E.M.T.

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

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,

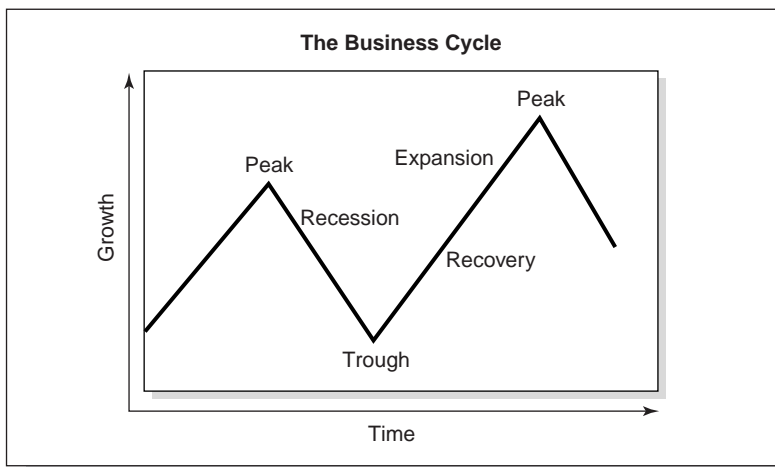


FIGURE 1.1 The Business Cycle: This is the classic example of an economic business cycle. The real world, however, does not move in a straight line.

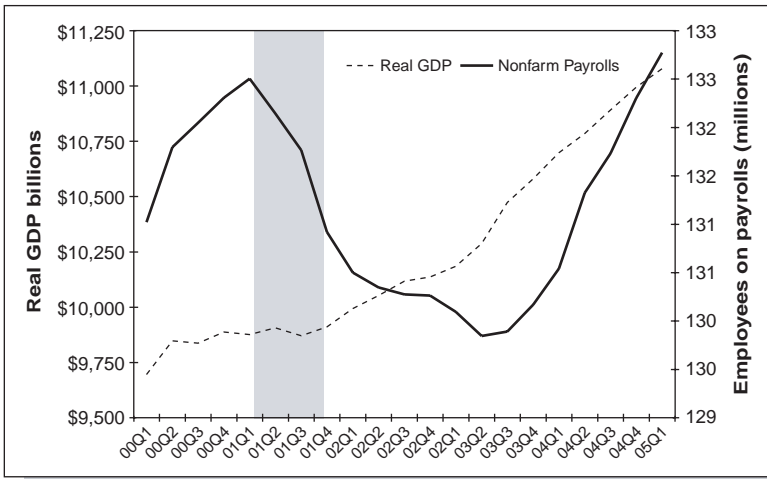


FIGURE 1.2 Gross Domestic Product and Employment: This is an example of a recent business cycle. Real GDP peaked in the first quarter of 2001 and reached its trough in the third quarter. It surpassed the previous peak in the fourth quarter of that same year, revealing a short and shallow recession. Contrast 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.¹

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 2001.²

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.³ 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,

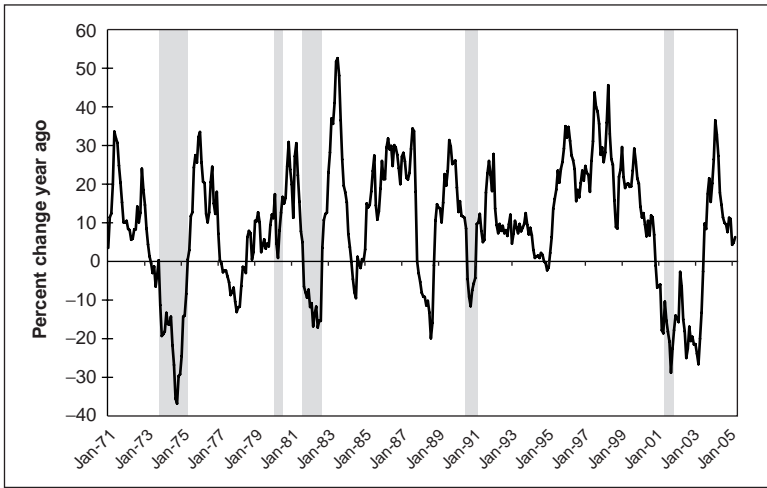


FIGURE 1.3 The Stock Market and the Business Cycle: Five economic business cycles are depicted here (recessions shaded) with the corresponding movements in the stock market, represented by Standard & Poor’s Index of 500 common stocks. *Source:* Standard and Poor’s and Haver Analytics.

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.⁴

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.

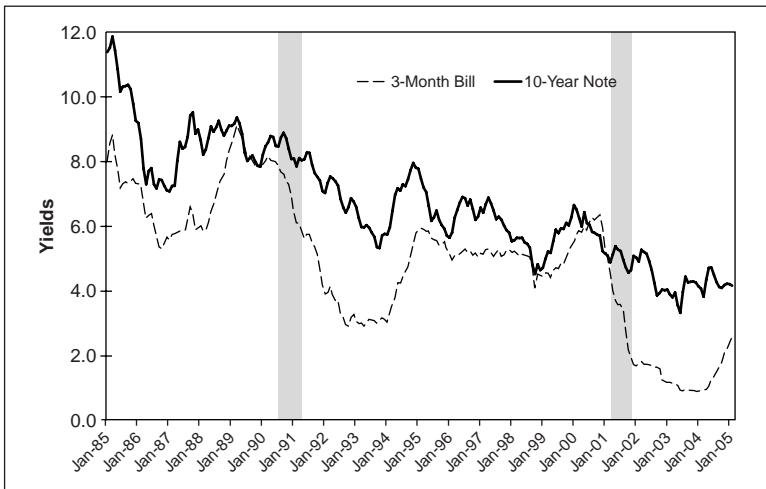


FIGURE 1.4 Short- and Long-Term Treasury Yields: Typically, long-term rates are higher than short-term rates. Note the flat yield curve (short-term and long-term rates were roughly identical) in 1989 before the Fed began its accommodative policy. The yield curve was briefly inverted in 2000 before the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

Source: Federal Reserve Board, Haver Analytics.

MARKETS

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

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

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.⁵ 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.⁶ 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.⁷ 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.

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.

National Income and Product Accounts

Introductory macroeconomics textbooks will tell you that gross domestic product, commonly known as GDP, is a dollar value measure of all goods and services produced in the United States during a given time period. More specifically, gross domestic product measures the value of goods and services used by the factors of production—land, labor, and capital—located in the United States no matter who owns these factors. Production of goods and services is difficult to measure directly, but an accounting system was devised: the National Income and Product Accounts (NIPA). This accounting system measures GDP by the goods and services purchased (the product side) or by income earned from the factors of production (the income side).

Although gross domestic product and national income are quarterly figures, the Commerce Department's Bureau of Economic Analysis (BEA) releases the information monthly in the form of an initial estimate and two subsequent revisions. The initial estimate for any quarter is available roughly four weeks after the end of that quarter, which means the first-quarter GDP is reported at the end of April. Not all data are actual at this point. BEA economists must forecast portions of this report. Some entire parts on the income side are not available until the first revision, which is released two months after the end of the quarter. The incomplete data include corporate profits and net factor income, the missing link between gross domestic product and gross national product. (Net factor income represents the difference between the payments that the United States makes to foreigners and those payments made to the United States for the use of labor and property supplied by the foreign country. This is explained in greater detail later in the chapter.)

Because the BEA does not have complete actual data when it first releases GDP, revisions can show totally different pictures of the economy

over a three-month period from the initial estimate to the final revision. Observers can certainly claim that history is rewritten after annual revisions are considered.

THE PRODUCT SIDE

Gross Domestic Product

It is more common to measure GDP by the product side, and one of the oft-repeated identities in macroeconomics is

$$GDP = C + I + G + (X - M)$$

That is, *GDP* is the sum of spending on consumer goods and services (*C*), investment goods (*I*), government goods and services (*G*), and exports (*X*) less imports (*M*), also known as net exports. Imports are subtracted from GDP because these goods and services are produced abroad, not in the United States. Table 2.1 shows the level of GDP in current dollars and in real 2000 chain-weighted dollars that are seasonally adjusted at annual rates (SAAR). Table 2.2 shows the relative importance of each of the major components in GDP.

Personal Consumption Expenditures Overall, personal consumption expenditures account for about 70 percent of gross domestic product. Consumption expenditures are categorized into services, nondurable goods, and durable goods. Consumer spending on services accounts for well over half of total personal consumption expenditures. Spending on this component is relatively stable over time, but its relative importance has trended upward in the past 40 years, as evidenced in Table 2.2. A more detailed breakdown of the category shows expenditures for housing, household operation, medical care, and transportation. Housing costs represent mortgage and rent payments, and household operations represent payments for utilities such as electricity and gas.

Purchases of nondurable goods contribute a little more than one-quarter of consumer spending. Although this component is not as stable as services from one quarter to the next, it grows at a fairly stable pace from year to year, accelerating during expansions and moderating during recessions. The major components of nondurable goods include food, clothing and shoes, gasoline and oil, and fuel oil and coal expenditures. Spending on both consumer nondurable goods and services is closely linked to income, and these factors typically increase and decrease in tandem. Nonetheless,

TABLE 2.1 Gross Domestic Product

	2002	2003	2004	Q1-04	Q2-04	Q3-04	Q4-04
Gross Domestic Product	10487.0	11004.1	11735.0	11472.6	11657.5	11814.9	11994.8
Personal Consumption Expenditures	7376.1	7760.9	8230.0	8060.2	8153.8	8282.5	8423.3
Durable Goods	916.2	950.7	994.0	976.3	975.5	1007.0	1017.0
Nondurable Goods	2080.1	2200.1	2377.0	2316.6	2354.6	2387.2	2449.7
Services	4379.8	4610.1	4859.0	4767.3	4823.8	4888.2	4956.6
Gross Private Domestic Investment	1579.2	1665.8	1927.3	1819.7	1920.7	1947.0	2021.9
Fixed Investment	1568.0	1667.0	1884.0	1783.5	1861.7	1915.4	1975.3
Nonresidential	1063.9	1094.7	1220.5	1158.8	1198.5	1238.5	1286.3
Structures	271.6	261.6	278.2	266.0	275.5	281.2	290.0
Equipment & Software	792.4	833.1	942.4	892.8	923.1	957.3	996.3
Residential	504.1	572.3	663.4	624.6	663.2	677.0	688.9
Change in Business Inventories	11.2	-1.2	43.4	36.2	59.0	31.6	46.7
Farm	-1.5	0.3	-1.1	1.0	-2.4	-0.2	-2.6
Nonfarm	12.7	-1.5	44.4	35.2	61.4	31.8	49.3
Net Exports of Goods and Services	-424.9	-498.1	-606.2	-546.8	-591.3	-611.8	-674.8
Exports	1005.0	1046.2	1175.5	1134.3	1167.6	1189.5	1210.4
Imports	1429.9	1544.3	1781.6	1681.2	1758.9	1801.2	1885.2
Government Consumption Expenditures & Gross Investment	1956.7	2075.5	2183.9	2139.5	2174.3	2197.2	2224.5
Federal	680.9	752.2	809.9	793.3	804.4	817.4	824.6
National Defense	437.4	496.5	547.9	534.1	541.2	557.0	559.4
Nondefense	243.5	255.8	262.0	259.1	263.2	260.4	265.2
State & Local	1275.8	1323.4	1374.0	1346.3	1369.9	1379.8	1399.9
Final Sales (GDP - Change in inventories)	10475.9	11005.3	11691.6	11436.4	11598.5	11783.3	11948.2

Gross Domestic Product

(Billions of chained 2000 dollars, seasonally adjusted at annual rates)

	2002	2003	2004	Q1-04	Q2-04	Q3-04	Q4-04
Gross Domestic Product	10074.8	10381.3	10841.9	10697.5	10784.7	10891.0	10994.3
Personal Consumption Expenditures	7123.4	7355.5	7632.6	7543.0	7572.4	7667.8	7747.0
Durable Goods	959.6	1030.6	1099.4	1075.5	1074.7	1118.3	1129.0
Nondurable Goods	2037.4	2112.4	2208.5	2187.3	2188.0	2213.2	2245.3
Services	4128.6	4220.3	4338.3	4291.7	4320.0	4352.4	4389.2
Gross Private Domestic Investment	1560.7	1628.8	1843.5	1764.5	1842.9	1853.9	1912.6
Fixed Investment	1548.9	1627.4	1794.4	1721.4	1778.3	1816.1	1861.9
Nonresidential	1075.7	1110.8	1228.6	1173.0	1207.9	1245.3	1288.3
Structures	251.6	237.4	240.7	237.7	241.7	241.0	242.3
Equipment & Software	826.5	879.2	998.6	943.7	975.5	1015.6	1059.5
Residential	470.1	511.2	560.7	542.5	563.6	565.9	570.6
Change in Business Inventories	11.8	-0.7	45.7	40.0	61.1	34.5	47.2
Farm	-1.6	0.3	3.4	5.1	3.0	3.8	1.7
Nonfarm	13.5	-1.1	42.4	34.5	58.8	30.4	45.9
Net Exports of Goods and Services	-472.1	-518.5	-583.7	-550.1	-580.3	-583.2	-621.1
Exports	1012.4	1031.8	1120.3	1095.4	1114.8	1131.1	1140.0
Imports	1484.4	1550.3	1704.0	1645.5	1695.1	1714.3	1761.2
Government Consumption Expenditures & Gross Investment	1857.9	1909.4	1946.6	1935.8	1946.5	1949.9	1954.0
Federal	646.6	689.6	721.7	713.3	718.1	726.6	728.8
National Defense	414.7	451.8	484.9	477.6	479.9	491.5	490.7
Nondefense	232.0	237.6	236.4	235.4	237.9	234.7	237.7
State & Local	1211.4	1219.9	1224.8	1222.4	1228.3	1223.2	1225.1
Final Sales (GDP - Change in inventories)	10063.3	10379.8	10794.6	10655.8	10722.3	10854.7	10945.5

Source: Bureau of Economic Analysis and Haver Analytics.

TABLE 2.2 Components of Real GDP and Relative Shares

Gross Domestic Product Shares	1960s	1970s	1980s	1990s	2000–04
Personal Consumption Expenditures	63.1%	65.8%	66.8%	67.5%	70.1%
Durable Goods	4.2%	5.2%	5.9%	7.0%	9.5%
Nondurable Goods	24.9%	23.3%	21.7%	20.3%	20.2%
Services	34.4%	37.6%	39.6%	40.4%	40.5%
Gross Private Domestic Investment	11.5%	12.7%	13.2%	14.2%	16.4%
Fixed Investment	11.2%	12.5%	13.1%	13.8%	16.2%
Nonresidential	6.2%	7.3%	8.5%	9.5%	11.4%
Structures	5.0%	4.6%	4.7%	3.2%	2.7%
Equipment & Software	2.7%	3.7%	4.7%	6.5%	8.8%
Residential	6.0%	5.9%	4.7%	4.4%	4.8%
Change in Business Inventories	0.7%	0.5%	0.3%	0.5%	0.2%
Farm	NA	NA	NA	0.0%	0.0%
Nonfarm	NA	NA	NA	0.4%	0.2%
Net Exports of Goods and Services	-0.8%	-1.1%	-1.3%	-1.1%	-4.6%
Exports	3.7%	4.9%	6.0%	9.4%	10.4%
Imports	4.5%	6.0%	7.3%	10.6%	15.0%
Government Consumption Expenditures & Gross Investment	28.4%	23.3%	21.7%	19.7%	18.1%
Federal	14.8%	9.7%	9.5%	7.6%	6.3%
National Defense	12.0%	7.0%	6.9%	5.2%	4.1%
Nondefense	2.9%	2.7%	2.6%	2.4%	2.2%
State & Local	13.4%	13.7%	12.1%	12.1%	11.7%

Source: Bureau of Economic Analysis and Haver Analytics.

some goods and services are necessities and are unlikely to be curtailed when income suffers. Table 2.2 shows a downward shift in relative importance for consumer nondurables and an upward shift in durable goods from the 1960s to the 1990s. The long-term trend could reflect a shift in spending habits from any number of factors including demographics to significant changes in relative prices. Consider the increased purchases on such goods as cell phones, digital cameras and printers, desktop PCs and laptops, PDAs, MP3 players, iPods, and portable DVD players.

Consumer durable goods account for one-eighth of consumer spending, but most of its volatility. Durable goods are very sensitive to the business cycle—rising rapidly during expansions and falling dramatically during downturns. Like the other two spending components, growth in durable goods spending mirrors growth in income. But, in contrast to services and nondurable goods, spending on durables is also highly sensitive to interest rates. Large-ticket items, such as automobiles and furniture, cost large sums of money and they are often purchased on credit. Motor vehicle sales surged in October 2001, when automakers introduced zero-percent financing in order to spur sales that were weakened by a recession and the aftermath of the September 11 terrorist attacks on the World Trade Center towers in New York and the Pentagon in Washington, D.C. Zero-percent financing lost its punch over time as consumers came to expect it. Nevertheless there is no question that its initial impact was phenomenal as motor vehicle sales jumped 31.5 percent in one month.

Even though consumer spending on durable goods is a much smaller portion of total consumer spending than spending on nondurable goods or services, it can increase or decrease so sharply that it can cause violent swings in consumer spending patterns on a quarter-to-quarter basis. However, its impact is much smaller from year to year. Other than automobiles and light trucks, the durable goods category includes furniture, household appliances such as refrigerators and stoves, and jewelry. Table 2.2 shows a sharp upward shift in the share of durable goods spending since the 1960s.

Private Domestic Investment Investment spending is a much smaller portion of GDP, about one-sixth, but it is a highly volatile sector. Investment is categorized into nonresidential fixed investment, residential investment, and the change in business inventories. Nonresidential fixed investment is made up of structures (such as factories, office buildings, and utilities) and equipment and software (such as information processing equipment and software, industrial equipment and transportation equipment). Spending on business fixed investment is highly sensitive to the business cycle. As the economy expands, corporate profits surge. This leads producers to expand capacity by investing in new equipment or structures. However, when

economic activity moderates or declines, producers are faced with excess capacity and low profits, so they cut back their investment spending of factories, commercial buildings, and machine tools. Corporate profits are analogous to consumers' disposable income, but with higher peaks and deeper troughs. Unlike the large portion of personal consumption expenditures that continues to be necessary, a substantially smaller portion of investment spending is deemed essential during a recession. Consequently, nonresidential investment will expand many times more rapidly than GDP during expansions and will decline many times more rapidly than GDP during downturns. Table 2.2 shows that business fixed investment was on a rising trend from the 1960s through the current period measuring decade averages. Yet, business fixed investment fell as a percentage of GDP in 1991–1992. This is due partly to the recession environment in the early 1990s and partly due to an attempt to absorb the overbuilding of the 1980s. Investment spending as a share of GDP peaked in 2000, yet it went down in the years spanning 2001 to 2004.

Residential investment includes single-family homes and multifamily structures such as townhouses and apartment buildings. Additions and alterations to current structures are also in this category. Whether a consumer buys a dwelling or a real estate developer puts up a high-rise apartment complex, both purchases are considered “investment.” And they are equally sensitive to the business cycle. When the economy is expanding rapidly, consumer (and business) incomes increase at a healthy pace making it easier to purchase a house or a condominium. As economic activity weakens and consumer disposable income growth is curtailed, homes become less affordable. Table 2.2 shows a downward shift in the relative importance of residential investment spending from the 1960s through the 1990s. Changing demographics played a key role during this broad period, although housing's sensitivity to the business cycle would be seen in various years within the decades. The majority of baby boomers had already entered the housing market by the mid-1980s. The group following the baby boom generation, known as the baby bust cohort, was smaller. As they began to form new households in the late 1980s, it became evident that they would need less housing than the previous generation. In early 1992, the National Association of Home Builders accurately predicted that the baby bust cohort would dampen housing activity through the mid-1990s. The stock market crash of 2000 along with the subsequent bear market and low interest rate environment boosted housing demand in 2001 through 2004 and the residential investment share of GDP increased again. Once investors were burned in the stock market, they decided to shift their investment dollars elsewhere. Low interest rates propelled housing investment, a more tangible asset than stocks or bonds.

Other factors besides the business cycle affect a consumer's decision to purchase a home and a producer's decision to invest in capital goods. Most notably, interest rates affect investment decisions. Interest rates and investment spending are inversely related: A decline in interest rates lowers the cost of borrowing and in turn increases investment spending. Historically, residential and nonresidential investment spending were considered counter-cyclical because low interest rates during recessions spurred housing activity. However, investment in structures would slow down when interest rates rose sharply during expansions. Since the 1980s, the shift toward a greater availability and acceptance of adjustable rate loans dampened this effect. Nonetheless, housing activity still leads the economy during the latter stages of recession since low interest rates spur construction.

Tax laws can affect investment decisions as well. For example, the interest deductibility of mortgage payments makes homeownership more desirable when tax rates are high but less favorable when tax rates are low. Similarly, the tax incentives introduced in 1981 offset high real interest rates and made capital spending on equipment and structures more affordable in the early stages of the economic recovery in 1983. According to the American Council for Capital Formation, the investment tax credit was first instituted in 1962, suspended in 1966; reinstated in 1967, and eliminated in 1969. An investment tax credit was then reinstated in 1971 and was increased in 1975 before being eliminated in 1986.

Did You Know?

The investment tax credit was eliminated in 1986 because it really did provide powerful incentives for the purchase of equipment and changed business behavior in the process. For example, the investment tax credit was available for building movable partitions in offices rather than walls, leaving workers without privacy. In factories, detachable moving lights were eligible for tax credits, but not permanent ceiling lighting.

Despite the drawbacks of economic distortions induced by the investment tax credit, many economists still favor tax credits to boost the economy, at least as a temporary measure. "If it's temporary," comments Northwestern University economist Robert Eisner, "an investment credit gives you a big bang for your buck."¹

The third major component of investment is inventory investment. Actually, the change, rather than the level of business inventories, enters gross domestic product. *This component makes GDP a measure of production*

rather than of sales. If production exceeds sales, inventories increase; if production is less than sales, inventories decline. Business inventories are divided into farm and nonfarm sectors. Nonfarm inventories are categorized into three components: manufacturing, wholesale trade, and retail trade. Inventory changes can be highly volatile even in the best of times, especially at turning points in the business cycle. In fact, recessions are exacerbated by inventory cycles.

Generally, producers aim for a desired level of inventories consistent with sales expectations. During an economic expansion, they are likely to increase their inventories as sales increase; and, conversely, producers try to keep inventories low during a business downturn, not necessarily replacing stocks as soon as sales pick up. Yet even with computerized inventory maintenance, it remains difficult to discern the correct level at turning points. As economic conditions deteriorate, producers find they are accumulating stocks of unsold goods, but they keep production levels high because they are unsure of the economic environment. When inventory exceeds the desired level by a wide margin, producers trim production, thus beginning the moderation, or decline, in economic activity. To get rid of excess goods, producers deplete inventories in subsequent periods, thereby accentuating the business cycle.

Inventory cycles continue to parallel economic business cycles even if and when inventories are lean. In the early 1980s, many economists postulated that the United States was unlikely to undergo another inventory-led recession because easy access to computers and just-in-time inventories were the dawn of a new era in inventory maintenance. “Short” and “mild” were the code words of the 1990–1991 recession for the very reason that inventories were lean. Notwithstanding the barebones inventory levels, Figure 2.1 clearly shows the inventory cycle during this period and even a more dramatic cycle in 2001. When consumers unexpectedly stop spending, retailers unexpectedly are going to end up with full shelves. The pattern of inventory change during the two most recent recessions mirrors the 1981–1982 experience despite alleged benefits of high tech inventory management.

Government Spending Government spending on goods and services accounts for less than one-fifth of GDP. Federal government spending is composed of defense and nondefense purchases of goods and services. Federal defense spending is self-explanatory: bombers and aircraft carriers, along with the salaries of military and civilian workers in the armed forces. Non-defense expenditures, besides ranging from paper clips to computers to automobiles, cover the salaries of civilian workers (including the statistical agencies that compile all the economic numbers).

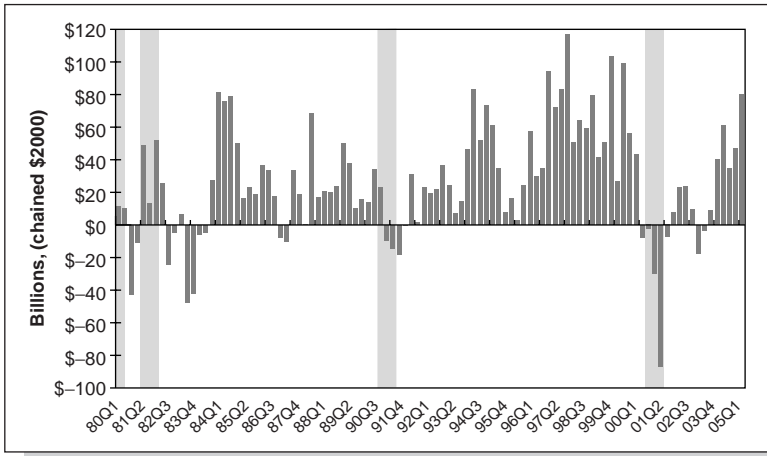


FIGURE 2.1 Inventory Changes over the Business Cycle: Just-in-time inventory management did not eradicate the inventory cycle in the 1990s or in 2001.
Source: Bureau of Economic Analysis, Haver Analytics.

When the Bureau of Economic Analysis did an overhaul of the national income and product accounts in 1995, one of the changes included a new way of classifying government spending. A distinction is made between consumption and investment spending. Table 2.3 shows that a major portion is consumption; this stems from the fact that employee compensation accounts for more than half of total government expenditures which are classified under consumption of services. Examples of non-durable goods consumption would include purchases of such items as fuel and stationary products. Durable goods consumption includes replacement parts of large-ticket investment goods. For instance, a fleet of vehicles is counted as investment. Replacement parts, however, such as car batteries are considered consumption of durable goods within nondefense consumption. Even bombers and tanks need replacement parts and these are considered durable goods consumption within the national defense component.

Federal government spending moves in cycles, even though it is not necessarily related to the business cycle. Nondefense purchases have increased steadily over the past 30 years—meanwhile defense spending has ebbed and flowed. A sharp downward trend in military spending began in 1991 and this bottomed out in 1999. National defense expenditures began to accelerate even before the 2001 terrorist attacks and the Iraq War in 2003. In the NIPA, government purchases only incorporate spending on goods and services that measure production but do not include government spending on

TABLE 2.3 Government Consumption Expenditures and Gross Investment

	Billions of current dollars				Q1-04	Q2-04	Q3-04	Q4-04
	2002	2003	2004					
Government Consumption Expenditures & Gross Investment	1,956.6	2,075.5	2,183.9		2,139.5	2,174.3	2,197.2	2,224.5
Federal	680.8	752.2	809.9		793.3	804.4	817.4	824.6
National Defense	437.4	496.4	547.9		534.1	541.2	557.0	559.4
Consumption Expenditures	382.0	436.1	477.5		465.2	473.6	487.1	484.0
Gross Investment	55.4	60.4	70.4		69.0	67.6	69.8	75.3
Nondefense	243.4	255.7	262.0		259.1	263.2	260.4	265.2
Consumption Expenditures	210.7	222.5	227.0		225.9	226.6	225.9	229.5
Gross Investment	32.7	33.2	35.0		33.2	36.5	34.5	35.7
State & Local	1,275.8	1,323.3	1,373.9		1,346.3	1,369.9	1,379.8	1,399.9
Consumption Expenditures	1,016.5	1,058.5	1,099.7		1,079.8	1,091.8	1,105.5	1,121.6
Gross Investment	259.3	264.9	274.3		266.4	278.0	274.3	278.3
	Billions of chained 2000 dollars							
Government Consumption Expenditures & Gross Investment	1,857.9	1,909.4	1,946.5		1,935.8	1,946.5	1,949.9	1,954.0
Federal	646.6	689.6	721.7		713.3	718.1	726.6	728.8
National Defense	414.6	451.8	484.9		477.6	479.9	491.5	490.7
Consumption Expenditures	358.2	390.3	415.0		408.5	412.5	422.1	417.0
Gross Investment	56.6	61.6	70.6		69.9	67.7	69.8	74.9
Nondefense	232.0	237.6	236.4		235.4	237.9	234.7	237.7
Consumption Expenditures	199.0	204.0	201.4		201.8	201.5	200.2	202.3
Gross Investment	32.9	33.5	35.2		33.6	36.8	34.6	35.6
State & Local	1,211.4	1,219.8	1,224.8		1,222.4	1,228.3	1,223.2	1,225.1
Consumption Expenditures	962.2	969.0	973.7		971.5	971.5	974.6	977.3
Gross Investment	249.2	250.9	251.1		251.0	257.1	248.6	247.8

Source: Bureau of Economic Analysis and Haver Analytics.

transfer payments or entitlements such as Social Security, Medicare, and Medicaid.

State and local government spending is relatively stable and has also risen over the past 30 years. Spending can accelerate somewhat during economic expansions as state and local government benefit from income and sales tax revenues. Spending activity moderates slightly during cyclical downturns when weakening consumer demand and rising unemployment hurt income and sales tax revenues. State and local governments spend most of their funds on salaries of employees, followed by expenditures on infrastructure such as highway and street construction.

Net Exports The foreign sector grew rapidly in the past 45 years increasing its share of gross domestic product. Since 1983, when the strong dollar and the U.S. economic recovery caused imports to surge, the foreign sector has become an integral part of the U.S. economy. Simply put, net exports are total exports of goods and services less total imports of goods and services. Table 2.2 shows that the sum of exports and import accounted for 25.4 percent of GDP between 2000 and 2004, up sharply from the 13.3 percent share in the 1980s and the 8.2 percent share in the 1960s. As an example of what that means to the U.S. economy, a 10 percent decline in exports from one year to the next would reduce GDP growth by 1 percent; similarly, an increase of 10 percent in imports from one year to the next would reduce GDP growth by 1.5 percent. This differential represents the fact that imports account for 15 percent of GDP while exports account for just over 10 percent.

Just like other sectors of the economy, exports and imports are sensitive to the business cycle. As the economic expansion progresses, imports will grow because U.S. consumers and businesses have more money to spend, and will use some of the extra cash for imported merchandise. These goods can include petroleum from Saudi Arabia, automobiles from Japan, and leather goods from Italy. When the U.S. economy is in recession, the drop-off in total demand for goods and services will include a decline in the demand for foreign goods, so that the decrease in domestic production is mitigated to the extent that consumers had previously bought foreign goods and services. One of the reasons cited by some economists for the mildness of the 1990–1991 recession was the fall-off in consumer demand included a decline in imported goods. In fact, import demand decreased not only during the 1990–1991 recession but the 2001 recession as well. Since importers now hold a greater share in the U.S. economy than they ever did, they would theoretically suffer more now during a U.S. downturn than in previous recessions. When foreign economies are experiencing healthy growth, they will demand more foreign goods and

U.S. exports will grow. These goods can include agricultural commodities, airplanes, electrical machinery, and consulting services. Conversely, when economic activity abroad cools off, countries demand fewer foreign goods, so U.S. exports decline.

Consumers sometimes view strong import demand negatively because they fear job losses will develop if foreign-produced goods are favored over domestically-produced goods. Most economists agree that free trade tends to lower costs of consumer products. In the mid-1990s, the availability of imports helped to curb inflation as the U.S. economy grew faster than its potential late in the decade. If foreign producers had not met demand, domestic price inflation would have heated up rapidly during that period.

Both exports and imports are sensitive to exchange rates. As the exchange value of the dollar increases relative to foreign currencies, U.S. exports will decline and imports from abroad will increase. Conversely, if the exchange value of the dollar declines relative to foreign currencies, U.S. exports will increase and imports to the United States will decline because foreign goods are now more expensive.

Did You Know?

Foreigners do not limit their purchases to just goods and services. They also invest in housing. On March 9, 2005, the *Wall Street Journal* reported that foreigners were snatching up “bargain” real estate from New York City to Florida.²

Final Sales Although GDP is an important overall measure of production, economists sometimes prefer to look at sales growth. Final sales are equal to gross domestic product less the change in business inventories. At turning points of the business cycle or when the direction of the economy is unclear, it is useful to gauge final sales rather than GDP. Final sales measure aggregate demand and are a good indicator of future production. If the growth in final sales exceeds the growth in gross domestic product for an extended period (at least two quarters), it indicates strong demand and signals a pickup in production. Conversely, growth in final sales that is much less than the growth in GDP indicates soft demand and a rising level of undesired inventories. That combination generally signals moderating production growth.

NET EXPORTS AND GDP: NOT ALWAYS A DRAG

It is easy to see why a negative net export balance is a drag on GDP. The larger the net export deficit that must be added to personal consumption expenditures, investment spending, and government purchases, the larger is the negative number that must be subtracted from the total. The following example illustrates that the larger deficit in *Case 1* causes GDP to be smaller than in *Case 2*, which has a smaller deficit.

	Case 1	Case 2
C + I + G	\$1,000	\$1,000
Net Exports	-50	-25
GDP	\$ 950	\$ 975

The following step shows how a continuously smaller net export deficit, even though it remains negative, can contribute to GDP growth over a period of a year. For simplicity's sake, the example does not show any change at all in C + I + G over the year.

	Q1	Q2	Q3	Q4
C + I + G	\$5,000	\$5,000	\$5,000	\$5,000
Net Exports	-100	-90	-70	-40
GDP	4,900	4,910	4,930	4,960
Percent change*	NA	0.8	1.6	2.5

*SAAR.

From the first quarter to the second quarter, net exports improved by \$10. From the second quarter to the third quarter, net exports improved by \$20, allowing the quarterly growth rate in GDP to accelerate from 0.8 percent to 1.6 percent. Finally, net exports improved by \$30 in the fourth quarter and GDP accelerated to a 2.5 percent rate of growth.

This process can work in reverse. The net export deficit can go from a smaller to a larger number, deteriorating the growth rate instead of improving it.

Real versus Nominal Production measures physical output. In discussing economic growth, we want to measure the actual physical output over time. Gross domestic product is a measure of output but is denominated in dollars. Because we want to compare GDP over time (measure economic growth from one year to the next), we have to deal with the problem of price changes. When we discuss *real* GDP, we are removing the effects of price increases in our dollar-denominated output measure. That is simple enough.

But, measuring *real* GDP is not as simple as it sounds. Using different methods of measurement yields different growth rates. Accurately describing economic activity in the country is not an insignificant matter since economic activity impacts interest rates, stock prices, exchange rates, political elections, and government policies that affect consumers and businesses.

In the old days—before 1995—the Bureau of Economic Analysis deflated current (nominal) dollar GDP to a common base year which was revised roughly every five years. The base year was 1987 in the years between 1991 and 1995. Real GDP was equal to nominal GDP deflated by a price index based on 1987 prices and quantities. In the second half of the 1980s, the base year was 1982. The choice of a base year affects economic growth rates when prices of goods and services change at different magnitudes over time. Since the 1980s and 1990s, the high tech sector has contributed a larger share of output while prices have fallen steadily and dramatically—in sharp contrast to prices of other goods and services.

This substitution from higher priced goods to lower priced goods was not reflected in the fixed weight price index because it measured price changes for a fixed basket of goods and services. Consumers and businesses, however, tend to shift their spending toward lower priced goods and services over time. Because of this substitution bias, future economic growth was overstated the further away it got from the base year. Past economic growth was understated the farther away it got from the base year.

The BEA could move up the benchmark, or base year, every five years to alleviate the problem of overstatement in the future. Yet this does not solve the problem of understating historical growth rates. In the 1991 comprehensive revision, the base year was changed from 1982 to 1987; and the 1995 revision shifted the base year to 1992. Economic history was rewritten every five years or so because the entire history of GDP was recalculated on a new base year.

To more accurately measure output growth over the full history of the series, the BEA turned to a chain-weighted measure of GDP to eradicate substitution bias. Unlike the fixed-weight index, the chain-weighted index by its definition changes the benchmark year more frequently. Thus, output prices in 2005 would be roughly an average of 2004 and 2005 values.

Computers would be valued at current prices so investment on current technology would not be overestimated as we move forward in time. (Technically speaking, the chain-weighted index is a geometric average of two fixed-weight weighing schemes known in the literature as LaSpeyres and Paasche indexes. The consumer and producer price indexes are fixed-weight LaSpeyres indexes.)

Unquestionably, chain-weighted real GDP is a more accurate measure of economic activity. But it is not without its faults. In the first part of this chapter, GDP is described as the sum of consumption, investment, net exports, and government expenditures. This identity does not change. However, the chain-weighted GDP measure is constructed as an index, not a dollar value. Clearly, one cannot add index values. And we are accustomed to seeing real GDP in dollar form. The BEA converts the index values to what they call chain-weighted 2000 dollars. But herein lies the problem. The index numbers do not have additive properties. Spending on consumer durables, nondurables and services do not exactly add up to total personal consumption expenditures. In the near term period close to the base year, the dollar differences between total GDP derived by the index or summed from the components will be small. However, the further it gets from the base period, the larger the dollar difference in the residual, which can be positive or negative in any given quarter. Despite these issues, most analysts still favor dollar-denominated GDP rather than quantity index values. The BEA releases both in their quarterly estimates.

Market Reaction

The financial market reaction to GDP is not necessarily what the casual observer would expect. The average person, not professionally involved in the financial market, generally favors strong economic growth coupled with a low unemployment rate because that promotes a rising standard of living. In contrast, participants in the fixed income markets will react negatively and view healthy GDP growth as signaling either inflation or tight monetary policy from the Fed. A negative reaction means that bond prices will fall and bond yields or interest rates will rise. When GDP growth is low or negative, it indicates sluggish economic activity or outright recession. In this case the market reaction is likely positive: Bond prices rise (and interest rates fall). In the fixed income markets, good (economic) news is bad news and bad (economic) news is good news based on the perception that robust economic growth tends to increase demand for all goods and services. When demand cannot be satisfied, prices must rise to choke off some of that demand. This perception that healthy economic growth brings inflationary pressure is based on the “demand-pull” theory

GROSS NATIONAL PRODUCT VERSUS GROSS DOMESTIC PRODUCT

Several years have elapsed since the Commerce Department shifted the focus from gross national product to gross domestic product. GDP, not GNP, is more closely aligned with other economic indicators such as industrial production, employment, productivity, and investment in structures and equipment and makes a better measure of current economic activity. However, GNP may be preferable for analyzing the sources and disposition of income because receipts from and payments to the rest of the world, which are not part of GDP, may be a relevant total.

The difference between GNP and GDP is relatively minor. Gross national product covers the goods and services produced by labor and property supplied by U.S. residents living here or *abroad*. Gross domestic product covers the goods and services produced by labor and property located in the United States. Table 2.4 shows that receipts of factor income from the rest of the world are added to GDP, while payments of factor income to the rest of the world are subtracted from GDP, to arrive at GNP. Factor income payments to foreigners are the goods and services produced in the United States using labor and property supplied by foreigners. Conversely, factor income receipts from foreigners represent the goods and services produced abroad using labor and property supplied by U.S. residents. In sum net factor income measures the difference between these receipts and payments. For that reason the production of Toyota and Honda cars assembled in Kentucky and Ohio is included in domestic product, not in national product. The profits that accrue to the Japanese manufacturers are also included in

TABLE 2.4 Relationship between GDP and GNP (Billions of current dollars, seasonally adjusted at annual rates)

	1960	1970	1980	1990	2000	2004
Gross Domestic Product	526.4	1,038.5	2,789.5	5,803.1	9,817.0	1,1735.0
Plus: receipts of factor income from rest of world	4.9	12.8	79.1	189.1	382.7	405.8
Minus: Payments of factor income to the rest of world	1.8	6.4	44.9	154.3	343.7	361.9
Gross National Product	529.5	1,044.9	2,823.7	5,837.9	9,855.9	1,1778.9

Source: Bureau of Economic Analysis and Haver Analytics.

GROSS NATIONAL PRODUCT VERSUS GROSS DOMESTIC PRODUCT *(Continued)*

gross domestic product and not in gross national product. The production of Ford and GM cars assembled in Europe is not included in gross domestic product even though it is included in gross national product. Profits for Ford and GM coming from abroad are part of GNP, but they are not GDP. Over time these two measures tell the same story and growth rates are quite similar from quarter to quarter.

of inflation. Producers do not have the necessary resources to make enough goods to satisfy consumers, so prices must be bid up, and inflation reigns.

In a period of soft economic growth, or the early stages of recovery, it would be foolish to believe that rising GDP growth will be accompanied by inflation. Indeed, inflationary pressures tend to moderate further in the first year of recovery as producers benefit from higher worker productivity. In this case, participants in the fixed income markets fear that the Federal Reserve will no longer be accommodative and ease interest rates. Thus healthy economic growth may simply signal the end of a friendly Fed and the end of falling interest rates rather than inflationary pressures.

The equity market reaction will make more sense to the reasonable observer. Participants in the stock market prefer to see healthy economic growth because it spurs gains in corporate profits, whereas a weak economic environment renders poor earnings. Stock prices fall on economic (GDP) weakness and rise on economic (GDP) strength, assuming that inflationary pressures do not accompany GDP growth. If it is accompanied by rising prices, participants in the equity markets are as unhappy to see robust economic growth as are the fixed income market players. Equity investors are concerned with interest rate levels. Consequently, falling bond prices (that is, rising yields) would be unfavorable for stocks.

Foreign exchange market participants favor a healthy economic environment to appreciate the dollar as long as strong economic activity points to rising interest rates and increases the demand for the dollar. However, if strong economic activity signals inflationary pressures, the dollar will not appreciate. Weak economic activity leads to falling interest rates and a decline in the demand for the dollar. For that reason a negative reaction in the fixed income market is a positive reaction in the foreign exchange market.

There is an exception. If GDP increases because inventories are rising at the same time that final sales are falling, participants in the fixed income market view the figures as signaling weakness and interest rates will not rise. Final sales reflect aggregate demand in the economy. A decline in demand combined with rising inventories indicate that the inventory buildup is undesired and production cuts are in order. Neither stock prices nor the foreign exchange value of the dollar will rise on such news and may post declines instead.

Watch Out!

The key elements to watch for in the GDP figures are final sales and the change in business inventories. As mentioned earlier, those give you a clue on the next quarter's activity. In addition, keep in mind that the advance or initial GDP report for any quarter is based partly on forecasts of business inventories and net exports. If these two categories show unexpected activity (in either direction of weakness or strength), it is best to be cautious and wait for the next revision of GDP before committing to a view.

GDP revisions are common. According to the Bureau of Economic Analysis, real GDP was revised by an average absolute value of 0.6 percentage points from 1978 and 2003, between the advance and final estimates. Two-thirds of the revisions ranged from a decrease of 0.6 percentage points to an increase of 0.9 percentage points.³

Sometimes the estimates made by the BEA leave total growth virtually unchanged whereas the composition of GDP is changed. Revisions in the total growth rate are more relevant than revisions to the composition of growth unless the change comes from inventories. As mentioned previously, the inventory changes, coupled with final sales growth, give clues on future production gains or cuts. For example, the BEA initially estimated that real GDP grew at a 3.1 percent rate in the fourth quarter of 2004. The first revision showed an upward revision in the growth rate to 3.8 percent and the second revision showed no change, although some of the components posted different growth rates in the final estimates relative to the preliminary report. As expected, a large revision between the initial report and the final revision came in net exports; large revisions were also seen in the investment categories. Table 2.5 summarizes the advance, preliminary, and final growth rates of GDP and its components for the fourth quarter of 2004. It is also useful to check what portion of final sales gains was due to increases in the private sector relative to the public sector. Put differently, did GDP rise because private investment and consumption expenditures increased, or were the gains coming from increased spending by the govern-

TABLE 2.5 Annualized Real Growth Rates for Fourth Quarter 2004

Released on:	Advance 1/28/05	Preliminary 2/25/05	Final 3/30/05
Gross Domestic Product	3.1	3.8	3.8
Personal Consumption Expenditures	4.6	4.2	4.2
Durable Goods	6.7	3.1	3.9
Nondurable Goods	5.8	6.1	5.9
Services	3.7	3.4	3.4
Gross Private Domestic Investment	9.2	13.4	13.3
Fixed Investment	6.7	9.7	10.5
Nonresidential	10.3	14.0	14.5
Structures	-4.1	1.2	2.1
Equipment & Software	14.9	18.0	18.4
Residential	0.3	2.1	3.4
Change in Business Inventories (\$ billions)	\$45.8	\$51.0	\$47.2
Net Exports of Goods and Services (\$ billions)	-\$631.9	-\$623.4	-\$621.1
Exports	-3.9	2.4	3.2
Imports	9.1	11.4	11.4
Government Consumption Expenditures & Gross Investment	0.9	1.2	0.9
Federal	1.6	1.7	1.2
National Defense	0.0	-0.3	-0.6
Nondefense	5.1	6.3	5.3
State & Local	0.6	0.8	0.6
Final Sales (GDP—Change in inventories)	2.7	3.2	3.4

Source: Bureau of Economic Analysis.

ment sector? Not only is government spending dependent on fiscal policy, it could also bunch up from time to time. There is no reason to expect smooth increases or decreases in government expenditures from quarter to quarter. As a result, a first-quarter rise could easily be followed by a second-quarter drop.

THE INCOME SIDE

National income is to the income side of the accounting system what gross domestic product is to the product side. While familiar to the economist,

national income does not have a famous identity associated with it, as does the product side. The income side of the accounts measures the income accrued to the factors of production of U.S. residents whether they are located here or abroad. While the Commerce Department shifted its focus from national product, it did not shift its focus away from national income. Consequently, we are concerned with the income accruing from the use of American-owned land, labor, and capital whether it is located in the United States or abroad.

National Income

The national income identity can be summarized as follows: national income (*NI*) is the sum of compensation to employees (*COMP*), proprietors' income (*PROP*), rental income (*RENT*), net interest income (*NETINT*), and corporate profits (*PROF*). This equation would read as follows:

$$NI = COMP + PROP + RENT + NETINT + PROF$$

It makes sense that national income should equal GDP because people have to “earn” the money to be able to spend it. Furthermore, GDP measures output and national income shows what was “spent” to produce that output. Theoretically, at least, national income equals national product. While this linkage is very clear in the introductory textbooks, it is not totally true in the real world because many factors cannot be assumed away as they are in the classroom. As a result, national income is a few steps removed from GDP. Add net factor income to GDP to get back to GNP, subtract consumption of fixed capital (depreciation of durable goods and structures), and then subtract the statistical discrepancy—and voila, national income. Table 2.6 shows relative shares of the major components of national income.

Compensation Compensation of employees is by far the largest component of national income accounting for 64.3 percent in 2004. Compensation can be divided into its component parts: wage and salary accruals and supplements to wages and salaries that include such fringe benefits as employers' contributions to pension funds.

Compensation is cyclical. Wages and salaries grow at a slower pace when economic activity moderates and workers are either laid off or work fewer hours. Usually we do not see outright declines in total compensation because it is conventional to look at national income (and its components) in current dollars rather than real (inflation-adjusted) dollars. Conversely, when economic activity is expanding, compensation growth

TABLE 2.6 National Income and Corporate Profits, Relative Shares

	1960s	1970s	1980s	1990s	2000–2004
National Income					
Compensation of Employees	62.6%	65.9%	65.8%	65.1%	65.7%
Wage and Salary Accruals	56.8%	56.5%	54.4%	53.6%	54.1%
Supplements to Wages and Salaries	5.8%	9.4%	11.5%	11.5%	11.5%
Proprietors' Income with IVA and CCAdj	9.7%	8.3%	7.0%	7.8%	8.5%
Rental Income of Persons with CCAdj	3.0%	1.5%	1.1%	1.7%	1.8%
Corporate Profits with IVA and CCAdj	12.1%	9.9%	8.7%	10.1%	9.5%
Net Interest and Miscellaneous Payments	3.0%	5.3%	8.9%	6.4%	6.0%
Taxes on Production and Imports less Subsidies	8.9%	8.6%	7.8%	8.0%	7.7%
Business Current Transfer Payments	0.5%	0.5%	0.8%	0.8%	0.9%
Current Surplus of Government Enterprises	0.2%	–0.1%	0.0%	0.1%	0.0%
Corporate Profits with IVA and CCAdj	12.1%	9.9%	8.7%	10.1%	9.9%
Less: Taxes on Corporate Income	4.7%	4.0%	2.9%	3.1%	2.5%
Corporate Profits After Tax with IVA & CCAdj	7.4%	6.0%	5.7%	7.0%	7.5%
Net Corporate Dividends	2.9%	2.5%	2.8%	4.0%	4.2%
Undistributed Corporate Profits with IVA & CCAdj	4.5%	3.5%	3.0%	3.1%	3.2%
Corporate Net Cash Flow with IVA & CCAdj	9.3%	9.7%	10.3%	10.6%	11.3%
Undistributed Corporate Profits with IVA & CCAdj	4.5%	3.5%	3.0%	3.1%	3.2%
Consumption of Fixed Capital	4.7%	6.2%	7.3%	7.5%	8.0%
Less: Inventory Valuation Adjustment	–0.2%	–1.2%	–0.4%	0.0%	–0.1%
Corporate Net Cash Flow	9.5%	10.9%	10.7%	10.6%	11.4%
Addendum					
Corporate Profits Before Tax	11.2%	11.0%	7.8%	9.5%	8.7%
Corporate Profits After Tax	6.5%	7.0%	4.9%	6.4%	6.3%
Corporate Inventory Valuation Adjustment	–0.2%	–1.2%	–0.4%	0.0%	–0.1%
Corporate Capital Consumption Adjustment	1.1%	20.0%	1.2%	0.7%	1.3%

Source: Bureau of Economic Analysis and Haver Analytics.

will accelerate. However, even though workers are laid off during recessions, compensation's share of national income rises relative to the profits' share of national income because producers do not tend to lay off as many workers as the decline in production dictates. This leads to a drop in productivity per worker and a plunge in corporate profits. The reverse is true during economic upturns. Productivity per worker increases when the pickup in production is greater than the increase in employment. Profits rebound smartly. Compensation's share of national income was higher in 1990–1991, recession years, than in 1996 and 1997, boom years for corporate profits. (One might argue that other factors were holding down wages in the 1990s. For instance, Federal Reserve Chairman Alan Greenspan often talked about worker insecurity curtailing wage demands in 1996 and 1997 as major corporations continued to downsize their work force in the midst of an expanding economy with robust corporate profits.) From 1997 to 2001, compensation's share of national income

increased while profits' share dropped. Perhaps workers became more secure and began to demand higher wages.

Proprietors' Income Proprietors' income accounts for nearly nine percent of national income. This includes income of farmers, the self-employed, and small business owners who are sole proprietors or in partnerships. The earnings of tax-exempt cooperatives are included here as well as income-in-kind. Proprietors' income is also cyclical, rising more rapidly during economic expansions and more slowly during recessions. Proprietors' income is more stable than corporate profits over the business cycle. Historically, government subsidies to farmers caused sharp monthly fluctuations in this component and sometimes in overall personal income as well. Since 2001, the BEA now interpolates and extrapolates these subsidies to a quarterly and monthly basis. According to Nicole Mayerhauser who supervises the national farm income and value added estimates, the new methodology removes some of the volatility in this series.⁴

Rental Income Rental income is the third component of national income and accounts for less than 2 percent of the total. This category includes the income of persons from the rental of real property, except the income from property of those in the real estate business. It also includes the imputed net rental income of owner-occupants of nonfarm dwellings.

Changes in rental income are caused by any number of factors. For example, devastation in U.S. property from natural disasters: Hurricane Hugo and the San Francisco area earthquake in 1989 dampened rental income in the second half of that year. Similarly, a sharp depreciation of housing values in the late 1980s in many regions of the country reduced the imputed value of income. The uninsured losses of residential and business property from hurricanes Andrew and Iniki in the third quarter of 1992 reduced rental income of residents and business by a combined \$9 billion. In the fourth quarter, rental income grew by \$19.1 billion recouping the loss. In 2004, hurricanes Charley, Frances, Ivan, and Jeanne devastated Florida and other Gulf states and rental income fell by \$18.8 billion during the quarter and only recuperated \$7.5 billion in the subsequent quarter. Between Hurricanes Katrina and Rita, rental income plummeted \$77.5 billion between the second and third quarters of 2005. It remains to be seen, at this writing, how much rental income will recuperate in 2005's fourth quarter. Rental income is a small component of personal and national incomes; but it obviously causes monthly and quarterly fluctuations in the aggregated series due to special factors.

Net Interest Income Net interest income accounts for about 6 percent of national income. Net interest income is equal to interest paid by business less interest received by business, plus interest received from foreigners less interest

paid to foreigners. Interest payments on mortgage and home improvement loans are counted as interest paid by business, because homeowners are treated as a business in the national income and product accounts. This category also included imputed interest payments as counter-entries to imputed charges in the product side of the NIPA.

Net interest income is strongly affected by interest rates. It grows rapidly when interest rates are high or rising and moderates significantly when rates are declining. To a lesser degree, the strength of the economy also impacts this figure as more homes are purchased during economic booms than during recessions. The share of net interest income relative to national income dropped sharply in the 1990s and between 2000 and 2004, bringing its share to those levels reached in the 1970s.

Corporate Profits Corporate profits are the final major component of national income. There are several measures of profits including “corporate profits with inventory valuation and capital consumption adjustment,” “profits before taxes,” and “profits after taxes.” The profit measure can be summarized quite simply by saying it includes the income of organizations treated as corporations in the national income and product accounts. The capital consumption adjustments deal with differences in depreciation allowances used for accounting purposes and income tax purposes. Similarly, the inventory valuation adjustment (IVA) deals with the difference in measuring the cost of inventory replacement. Thus, subtracting the inventory valuation and capital consumption adjustments from the first profit measure gives the second profit measure, which is often termed “book profits.” Profits that include inventory valuation and capital consumption adjustments are called “operating” or “economic” profits. They are the profits from current production.

Profits are highly sensitive to the business cycle. They grow during economic expansions and fall sharply during recessions. Profits, like the other income measures, are analyzed in nominal dollars so an inflationary environment will show an increase in measured profits. Profit gains due to price increases are not the same as those due to volume increases. A drop in profits share of national income illustrates the sensitivity of profits to the business cycle in the recession year 2001 to 8.5 percent from a high of 11.9 percent in 1997. Profits recovered following the recession and the share increased to 11.4 percent in 2004.

When converting income figures to the national concept, which incorporates the property of U.S. residents wherever they live, the corporate profits figures are related to production on which U.S. residents have a claim. Profits shown on a domestic basis would include the income earned in the United States by foreigners but would exclude the income earned by American corporations operating abroad.

COMPARING NIPA AND S&P 500 PROFITS

Several differences exist between NIPA profits and S&P 500 earnings including differences in purpose, definitions and methodologies. Given the large set of differences, one marvels that the measures, at least most of the time, move in the same direction.

Corporate profits are the income earned from current production by corporations. National income is defined as the income of U.S. residents. It includes income earned abroad by U.S. corporations, but not income earned in the United States by foreign corporations. Income is defined as receipts (excluding capital gains or dividends) less expenses (excluding bad debts, depletion, and capital losses).

Estimates on corporate profits are derived from data supported by two sets of accounting principles: financial accounting and tax accounting. Financial accounting reflects “generally accepted accounting principles” and these are compiled for stockholders and government regulatory agencies. Corporate income tax returns follow tax accounting guidelines. The differences between these two systems are how receipts and expenses are defined, and the timing of how they are recorded.

The Internal Revenue Service publishes tax accounting measures, but only annually and with a long delay—these are the primary but not the only source for NIPA profits. Due to the delay, financial accounting measures are used to generate quarterly estimates of corporate profits.

Neither tax accounting nor financial accounting, however, conceptually fit the exact NIPA definition of profits, which compounds problems in estimation. As a result, the procedures for estimating NIPA corporate profits “mainly consist of adjusting, supplementing, and integrating the two measures,” according to Kenneth A. Petrick of the BEA.⁵

The adjustments to the NIPA are primarily concerned with bad debt expenses as well as capital gains and capital losses. Capital gains and losses are not included in NIPA profit measures because they are not a result of current production; they reflect sales and the revaluation of existing assets. Bad debt expenses are not deducted from the NIPA because these are a “rearrangement of assets and liabilities” rather than a cost of current production.

S&P 500 earnings reflect the total after-tax earnings of corporations that compose the S&P 500 stock index. These are measured on

a financial accounting basis. Operating earnings are reported earnings that exclude the impact of cumulative accounting changes, discontinued operations, extraordinary items, and special items.

It is important to remember that the S&P 500 stock index is intended to value changes of leading companies in leading industries. It is not a broad based sample of all U.S. companies large and small. Furthermore, the S&P 500 universe is frequently changed because corporate actions such as mergers and acquisitions, bankruptcy, or restructuring cause old names to be deleted and new ones to be added. Thus, S&P 500 earnings measure a shifting market basket of corporations. As a result, the reported and operating earnings are discontinuous over time (in contrast to the continuous times series of NIPA profit measures). The growth estimates from these series reflect changes in the composition of the index as well as changes in actual earnings.

The differences between corporate profits from the NIPA and S&P can be summarized in five broad categories.

- **Coverage.** The IRS corporate income tax data include all incorporated business that are publicly traded and privately held for all industries. The S&P 500 is a compilation of large publicly traded firms. Profits of small cap and midcap companies do not necessarily move in tandem with their large cap brethren. Quarterly and yearly growth rates in NIPA profits may differ from growth rates in S&P earnings.
- **Changing shares.** The composition of the S&P 500 changes frequently. Consequently, the share of total earnings that are accounted for in these corporations can vary dramatically. Since the S&P 500 supposedly measures earnings of the most profitable companies in the United States, it could be a misleading indicator for the nation as a whole.
- **Industry representation.** The S&P 500 only measures publicly traded companies and excludes entire industries in the U.S. economy where companies are largely privately held—including construction, legal services, and medical services. In addition, it can over-weight economic sectors that are growing rapidly—such as high tech in the 1990s. The industry representation in the S&P 500 does not match the industry representation of the United States.

(Continued)

COMPARING NIPA AND S&P 500 PROFITS (Continued)

- **Accounting principles.** The definition of some receipts and expenses, along with the timing in which these are recorded, are affected by accounting principles. S&P earnings are measured by financial accounting while NIPA profits are measured by a combination of tax accounting with adjustments.
- **Seasonal adjustment.** NIPA profits are adjusted for seasonal variation but S&P earnings are not. This affects quarterly profit estimates but not annual profit estimates. However, market players are generally interested in quarterly data, not annual data, making this a relevant item to keep in mind.

NIPA corporate profits can vary sharply from S&P 500 earnings. However, S&P 500 profits are available with a shorter delay than NIPA profits some of the time and are therefore useful for investors to follow. Given that the two profit estimates are not measured in the same way, it is not appropriate to say that one is better than the other. They are simply different. However, the NIPA profits are more comprehensive and a better overall gauge of the nation's profit picture. Nevertheless, it is useful to look at S&P profits when they are reported earlier to get at least some sense of the direction of profits. But one must use caution since year-over-year changes in these two profit estimates can vary by a wide margin.⁶

The description of national income was simplified in this text by mentioning only major components. There are some subcategories among major components, which are shown in Table 2.7, but these are not necessary to understand economic indicators.

You will note one major difference in this discussion of national income versus gross domestic product. The former is always analyzed in current or nominal dollars. Users of national income data do not look at the inflation-adjusted figures even though they do look at “real” disposable income. On the other hand, they typically ignore current dollar gross domestic product and always discuss real (inflation-adjusted) figures.

One would think that it would make sense to either monitor all real (inflation-adjusted) data, or all nominal (current dollar) data, but in fact, sometimes users monitor dollar flows and other times monitor inflation-adjusted flows. Primarily, “convention” determines how economic series are monitored in the financial markets.

TABLE 2.7 National Income and Corporate Profits (Billions of current dollars, seasonally adjusted at annual rates)

	2002	2003	2004	Q1-04	Q2-04	Q3-04	Q4-04
National Income	9,225.4	9,679.6	10,320.6	10,128.1	10,262.0	10,294.7	10,597.6
Compensation of Employees	6,069.5	6,289.0	6,632.0	6,489.4	6,578.5	6,687.4	6,772.5
Wage and Salary Accruals	4,976.3	5,103.6	5,355.7	5,240.7	5,311.4	5,403.0	5,467.8
Supplements to Wages and Salaries	1,093.2	1,185.5	1,276.3	1,248.8	1,267.2	1,284.4	1,304.7
Proprietors' Income with IVA and CCAdj	769.6	834.1	902.8	872.1	901.4	902.9	934.9
Rental Income of Persons with CCAdj	170.9	153.8	165.1	172.8	172.6	153.8	161.3
Corporate Profits with IVA and CCAdj	874.6	1,021.1	1,181.6	1,165.6	1,173.9	1,118.0	1,268.8
Net Interest and Miscellaneous Payments	532.9	543.0	549.5	554.5	548.5	546.7	548.2
Taxes on Production and Imports less Subsidies	724.4	751.3	800.6	782.9	796.3	803.5	819.9
Business Current Transfer Payments	80.9	77.7	82.1	82.7	83.5	76.0	86.3
Current Surplus of Government Enterprises	2.8	9.5	6.9	8.1	7.4	6.5	5.7
Corporate Profits with IVA and CCAdj	874.6	1,021.1	1,181.6	1,165.6	1,173.9	1,118.0	1,268.8
Less: Taxes on Corporate Income	183.8	234.9	269.2	256.5	271.2	253.3	295.7
Corporate Profits After Tax with IVA & CCAdj	690.7	786.2	912.4	909.1	902.7	864.7	973.0
Net Corporate Dividends	390.0	395.3	443.9	403.4	413.2	424.0	534.7
Undistributed Corporate Profits with IVA & CCAdj	300.7	390.9	468.5	505.7	489.5	440.7	438.3
Corporate Net Cash Flow with IVA & CCAdj	1,058.5	1,173.4	1,264.6	1,279.1	1,273.4	1,271.8	1,234.1
Undistributed Corporate Profits with IVA & CCAdj	300.7	390.9	468.5	505.7	489.5	440.7	438.3
Consumption of Fixed Capital	757.8	782.5	796.1	773.4	783.9	831.2	795.8
Less: Inventory Valuation Adjustment	-1.2	-14.1	-42.9	-37.0	-47.8	-37.8	-49.1
Corporate Net Cash Flow	1,059.8	1,187.5	1,307.5	1,316.1	1,321.2	1,309.6	1,283.2
Addendum							
Corporate Profits Before Tax	758.0	874.5	985.3	962.4	988.3	932.8	1,057.9
Corporate Profits After Tax	574.2	639.6	716.2	705.9	717.1	679.5	762.1
Corporate Inventory Valuation Adjustment	-1.2	-14.1	-42.9	-37.0	-47.8	-37.8	-49.1
Corporate Capital Consumption Adjustment	117.8	160.8	239.1	240.2	233.3	223.0	260.0

Source: Bureau of Economic Analysis and Haver Analytics.

Market Reaction

Participants in the financial markets typically do not react strongly to figures for national income or its components, although they might take a look at profits. Incidentally, the profits measured in the national income accounts do not always move in the same direction or by the same magnitude as earnings reported by the companies independently. Equity market players are concerned with corporate profits (even these reported by the government's statistical agency), and stock prices are likely to rise on positive economic news. Participants in the foreign exchange and the fixed income markets have their hands full with the GDP data and are unlikely to react to these profit measures alone.

Watch Out!

Growth in national income closely approximates the growth in nominal or current dollar gross domestic product. If there are going to be any quirks in the data, they will appear in some of the components of national income.

Fixed consumption of capital (not a component of national income, but a factor subtracted from gross national product to get national product) typically runs at about 12 percent of GNP. The depreciation of fixed capital in the country is relatively stable over time. However, destruction of residential and nonresidential structures from national disasters must be reflected in the national income accounts. Hurricane Andrew, which devastated parts of Florida in August 1992, and Hurricane Iniki, which devastated parts of Hawaii in September 1992, caused capital consumption to jump 11.2 percent (quarter-to-quarter) in the third quarter of 1992. In 2004, four hurricanes (Charley, Frances, Ivan, and Jeanne) played a major role in devastating large parts of Florida and other states near the Gulf of Mexico. This led to an 8.9 percent surge in capital consumption in the third quarter of that year. And Hurricanes Katrina and Rita also helped to boost capital consumption 11.1 percent in the third quarter of 2005.

Why is this important? First, it is useful to know to which extent such events damaged the economy and its infrastructure. However, this also impacts corporate profits for the quarter. If the capital consumption eats a larger share of the national product, less is left over in terms of net national product and national income from which corporate profits are derived.

Another factor could affect corporate profits: compensation. When compensation rises, profits fall, and vice versa. But compensation and profits are both cyclical—growth accelerates during an economic expansion and declines during a recession. More significant are the quirks here. Employers' contributions to social insurance taxes are included in total com-

pensation. In the past 30 years, increases in social insurance taxes were concentrated in the first quarter of the year. Thus, whenever the employers' share of social insurance taxes is increased, profits are likely to suffer.

Finally, economists and market participants usually look at quarterly growth rates in the components of the national income accounts: GDP, personal consumption expenditures, national income; whereas they view corporate profits on a year-over-year basis because the quarterly pattern tends to be highly volatile.

KEY POINTS

- Gross domestic product (GDP) is the most comprehensive measure of goods and services produced on U.S. soil (regardless of who owns the factors of production).
- GDP is measured by spending on personal consumption expenditures, investment, net exports, and government.
- Financial market players typically react more dramatically to the advance GDP estimate than the preliminary and final figures which can be viewed as “old” news.
- Breaking this figure down to final sales and inventories could point to changes in economic activity in future quarters.
- National income measures the income accruing to the factors of production owned by U.S. residents living either here or abroad.
- National income is equal to compensation of employees, proprietors' income, rental income, net interest income, and corporate profits.
- Fixed income investors are less likely to monitor the income side of the accounts, although stock market investors do look at corporate profits data.

The Consumer Sector

Consumer spending accounts for 70 percent of GDP. Consequently, it is reasonable to expect government and private agencies to publish an abundance of indicators detailing aspects of personal consumption expenditures. The majority of consumer sector indicators are reported monthly although a few are available weekly. Financial market participants prefer more frequent indicators—even if they are not as accurate as monthly series—and require more careful interpretation. Equity, fixed income and foreign exchange prices are constantly changing as traders revise their expectations of economic activity based on economists' forecasts, market rumors, or actual economic data. As a result, the more frequent the economic report, the more readily the financial markets can incorporate new information into their price structure.

This chapter describes indicators of consumer behavior closely monitored by financial market participants, the media, and government policy-making agencies such as the Federal Reserve.

WEEKLY INDICATORS

ICSC-UBS Chain Store Sales Index

Weekly retail sales reporting has a long and checkered past. Suffice it to say that the Commerce Department does not want to be burdened with this task. Two private firms report separate chain store sales series every Tuesday. The International Council of Shopping Centers (ICSC) and the investment bank UBS compile the ICSC-UBS weekly chain store sales index that shows how much sales increased or decreased relative to the previous week and versus the same week a year ago. The ICSC-UBS index is based on a sample of major retailers' weekly sales and is benchmarked to the ICSC's monthly chain store index, a tally of 75 to 80 chain stores. It is a weighted sample since a store like Wal-Mart, which is larger than Target, would have a larger weight.

According to Michael Niemira, chief economist at the International Council of Shopping Centers, and who began the original work on this series in the early 1990s, the ICSC series is a “comparable” store sales measure, and should be viewed as a timely “running picture” of industry performance.¹ It is intended to proxy the ICSC monthly chain store index, not the Commerce Department’s retail sales figures (also described in this chapter), which are reported with about a two-week lag. General merchandise store sales accounted for roughly 12 to 13 percent of total retail sales between 2000 and 2004. Niemira suggests that the ICSC index should be compared with the Commerce Department’s GAFO sales: stores that sell items normally sold at department stores (general merchandise, clothing, furniture and electronics, sporting goods, and office supplies and stationery stores). He believes the difference stems from the fact that the ICSC index only includes “comparable stores,” whereas the Commerce Department data encompasses all stores, including new stores open less than one year.

New York Federal Reserve economists Ethan S. Harris and Clara Vega evaluated weekly chain store sales as predictors of consumer spending. They did not find them very useful for a variety of reasons—including the volatility of the weekly numbers. Based on my many years of experience forecasting retail sales, I found that changes in the ICSC chain store index do move in the same direction as nonauto retail sales most of the time, albeit not by the same magnitude.

Did You Know?

The Commerce Department started publishing weekly retail sales in 1962. It discontinued the series in 1978 because of the reporting burden and user complaints that revisions were too frequent.

Redbook

Redbook reports its weekly sales figures on Tuesday morning about one hour after the ICSC-UBS figures. Its reporting method is slightly different from the ICSC series. The Redbook captures about 80 percent of department store sales reported by the Commerce Department. (Remember that department store sales account for only 10 percent of total retail sales.) Their stores do not report dollar sales each week, but same-store annual growth rates—that is, the percentage difference between sales that week and sales during the equivalent week of the previous year for stores open in

both periods. Given this information, Redbook generates weighted averages and monthly changes. The key point for users of this data is that “sales growth rates are applied to a seasonally adjusted sales base to produce dollar sales estimates, from which monthly changes are derived.”² Two problems are noted by Redbook. First, most companies in the retail sample end the retail week on Saturday, but some report to Friday or Wednesday. The “latest week” is thus open to interpretation. Retail months are either 28 days or 35 days (four or five weeks), so they map *roughly* to the secular calendar.

Instead of reporting weekly changes, the Redbook reports the current month’s change relative to the previous month. For example, in the first week of September the Redbook would report the change relative to the month of August. When two weeks of September data are available, the percentage of those two weeks relative to August is reported. Thus, the Redbook gives a cumulative change in chain store sales relative to the previous month.

Market Reaction

Bond traders react marginally to the ICSC chain store sales index and the Redbook data, so it is worth keeping an eye on the two series. If retailers post higher sales, suggesting healthy or improving economic growth, bond prices will fall and yields will rise; a weak report signals economic sluggishness and allows interest rates to fall. Retail stocks are more affected by these indicators. Increases bode well for retail stock prices, while declines in these indicators could cause declines in retail stocks. The market reaction appears muted compared with more established series. For the most part, the magnitude of the reaction depends on market factors, such as general psychology and if more important series are available on that day. After all, these two series focus on the retail industry, so these indicators would be more meaningful for investors in this market sector.

Watch Out!

Weekly series tend to be more volatile than monthly or quarterly ones, even when they are seasonally adjusted. Thus, be cautious using these series. Although they are correlated with the Commerce Department’s retail sales report, neither perfectly predicts monthly retail sales, but the ICSC-UBS chain store index is more useful than the Redbook.

MONTHLY INDICATORS

Motor Vehicle Sales

Until the mid-1990s, automakers reported sales of cars and trucks every 10 days (initially to satisfy the U.S. War Control Board in the 1940s). But despite easier reporting mechanisms with computer technology, automakers are now reporting only once a month. Domestic and foreign producers of cars and light trucks generally report on the first (or second) business day of the month for the preceding month.

Car and truck manufacturers report their raw sales data, which is then seasonally adjusted by factors calculated by the Commerce Department's Bureau of Economic Analysis. Every July, the BEA recomputes the seasonal adjustment factors for the next 12 months when they revise the national income and product accounts. Typically, raw numbers are divided by the seasonal factor and multiplied times 12 to arrive at an annualized rate. The seasonally adjusted annual rate—or SAAR—makes it easier to compare monthly sales. Auto and truck sales are actual figures, not estimates or from sample surveys, and the unadjusted data are never revised.

The introduction of minivans and sport utility vehicles made monthly data for light trucks as important as auto sales in the 1990s. When making historical comparisons, one will note a sharp drop in auto sales since the 1990s, relative to the 1960s and 1970s. However, total motor vehicle sales that include minivans, the station wagon of the 1990s and the new millennium, show a different picture. In 2000, light truck sales surpassed the selling pace of autos—and have continued to climb ever since. Figure 3.1 shows how shares of cars and light trucks have changed between the early 1980s and early 2000s.

The 1990s differed from the 1980s in another important way. The relationship between domestic and foreign car sales got muddled. In the 1980s, a strong dollar spurred Japanese car sales to the detriment of the big three U.S. automakers, but foreign produced cars are a much smaller fraction of the total in the 1990s and 2000s. Is the U.S. love affair with foreign cars over? Not at all: Honda, Toyota, Nissan, and other foreign auto producers now manufacture cars in the United States and many of their models are classified as domestic makes.

Market Reaction

Participants in the fixed income or bond market, who are forever on the lookout for a bond rally that raises bond prices and lowers interest rates, prefer to see anemic motor vehicle sales that signal economic weakness.

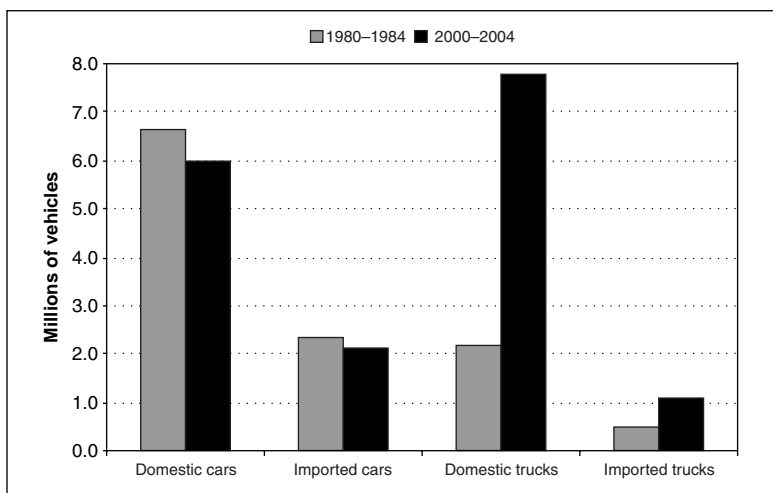


FIGURE 3.1 Motor Vehicle Sales: The market shares of domestic auto and truck producers increased dramatically between 1980–1984 and 2000–2004, primarily because many foreign automakers are now producing a variety of cars and trucks in the United States. Also note the increased share of light truck purchases—due to popular SUVs.

Source: Bureau of Economic Analysis and Haver Analytics.

Strong vehicle sales can provoke bond market participants to push up interest rates and thereby push down bond prices.

Players in the stock and foreign exchange markets prefer to see vehicle sales rise. In the case of the stock market, strong vehicle sales signal a healthy economy and good earnings in auto, truck, and related industries as well as companies in general. The foreign exchange market favors strength because rising interest rates increase dollar demand.

Watch Out!

Cars and trucks are big-ticket items that are highly sensitive to interest rates. A drop in interest rates will spur vehicle sales. When auto makers see their inventories build, they often offer cut-rate financing deals to consumers. In the mid-1980s, when these were first introduced, they had a significant impact on sales. In the 1990s, consumers became more accustomed to rebates (although they still do the trick with respect to sales). In 2001,

(Continued)

Watch Out! (Continued)

zero-percent interest financing loans were born. Whenever sales surge, be on the lookout for rebate programs or cut-rate financing. Higher sales stemming from incentives are not bad. However, if consumers need incentives to buy vehicles, it suggests underlying demand may be low. It could imply future cutbacks in auto and truck assemblies down the road.

The other major factor to affect the timing of auto sales is weather. Unseasonable or unusual weather prevents buyers from coming into the showrooms. Severe blizzards hit the East Coast in January 1996 and ultimately hampered vehicle sales. A 2003 blizzard over Presidents Day weekend had a similar impact. According to the *Washington Post*, “area car dealers spent most of the day scraping snow off their inventory and plowing their lots.” The *Boston Globe* reported that “The snowstorm put an early finish to what is usually the biggest weekend of the year for New England car dealerships.”³

In the 1990s, auto leasing gained popularity among individual consumers in the same way that it had been popular for businesses. Leases count as new sales. When the lease term is up, usually three years later, vehicles become part of the used car market. Since three-year old cars can be in good condition, this sometimes cannibalizes the new car market.

Chain Store Sales

Major department stores report their sales in the first week of the month for the most recent four- or five-week period. For example, May sales would be reported in early June. Notice that sales cover the “most recent four- or five-week period,” not a calendar month. The chain stores report the sales levels relative to the previous year. For a retail equity analyst making stock recommendations of specific retail stores, the annual comparison might be useful. However, if you are using the store sales to give you a more general outlook on current consumer spending behavior, the year-over-year comparison is not always helpful and can sometimes even be misleading. Also, if you are waiting for chain store sales as they are released, do not expect the data to be reported in the aggregate. Each chain store will report their company’s figures during the course of the morning. You will have to calculate the aggregate level of sales yourself.

Because special factors can so easily affect a month’s sales, it is difficult to make sense of the yearly comparison. For example, natural disasters in major metropolitan areas can suppress sales. For instance, Hurricane Katrina devastated New Orleans and several coastal cities in late August 2005. Most likely, consumers were not yet replacing items and boosting retail sales in September.

September 2005 sales could be lower than usual. When September 2006 comes along, and normal sales occur, they could show substantial year-over-year gains. Aside from retail stock analysts, financial market participants only look at the chain store sales to preview the total retail sales report that will be released by the Commerce Department a week or two later. Department store sales account for about 10 percent of total retail sales. It seems a long shot to use chain store sales to predict retail sales. The main problem with this practice is the difficulty in translating raw store sales into seasonally adjusted department store sales. In fact, they often do not match from month to month. However, if you are using the chain store sales simply as a guideline, they may be useful. For example, an exceptionally strong rise in chain store sales might indicate that consumers went on a shopping spree during the month. It could point to strength in all retail categories. Similarly, weak chain store sales could point to general consumer apathy. Because chain store sales are raw figures reported by stores, the data are never revised.

Did You Know?

The difference between chain stores and department stores is that chain stores are department stores that have the same ownership and sell the same merchandise, such as Target and Wal-Mart. Department stores can be single-location stores found only in one town or city. Chain stores are a subset of department stores.

Market Reaction

The reaction to chain store sales is similar to other consumer indicators: Strong sales portend a healthy economy and rising interest rates, whereas sluggish sales suggest a weak economy and falling interest rates. The strength of the market reaction to chain store sales depends on market sentiment and the availability of other economic indicators. If more reliable indicators are reported that same day, the market reaction to chain store sales will be muted. Participants in the fixed income and stock markets monitor chain store sales more closely than foreign currency traders.

Watch Out!

Like a trader who keeps a close eye on chain store sales reports as they roll off the screen, be wary of trading the figures because they can be mislead-

(Continued)

Watch Out! (Continued)

ing. To make sense of the year-to-year comparison, you must know exactly what happened a year ago. Retailers often issue the annual gain over “comparable stores” if the number of stores increased or decreased since the previous year. Nevertheless, the figures remain murky. Chain store sales will be more useful when all stores are moving in tandem and by a similar magnitude.

An additional problem is that the same report can make for contrasting analyses from economists and retail analysts. Retailers are always disappointed with their sales figures—if department store sales increase 5 percent from a year earlier, the retailers would have preferred a 10 percent rise; if sales increased 10 percent, retailers would have liked 15 percent. Chain store sales figures will only be useful if you are interested in taking an equity position in one or more retail stocks. Otherwise, this report is just another minor indicator.

Retail Sales and Food Services

The Commerce Department’s Census Bureau reports monthly sales between the ninth and eleventh business day of each month for the previous month for establishments classified in the retail trade and food services industries. Because sales figures come from a sample and not all businesses report their sales in a timely fashion, they are subject to substantial revision for several months after the initial report. In addition, annual revisions take place every spring for the previous five years. Finally, new samples are chosen roughly every five years. On March 31, 2005, the Census Bureau released revised monthly retail sales estimates based on the results of the 2003 Annual Retail Trade Survey and the preliminary results of the 2002 Census of Retail Sales. The advance estimates (the first report for any given month) are based on a subsample of roughly 5,000 retail and food services firms. These sales are weighted and benchmarked to represent the complete universe of more than three million retail and food service establishments.

Retail sales are reported in current, or nominal, dollars; that is, they are not adjusted for inflation. Sales at auto dealers constitute the largest single component of retail sales, nearly 25 percent of the total. Monthly motor vehicle sales are volatile, and the wild fluctuations can obscure the underlying trend. The dollar value of auto and truck sales reflects the quantity sold as well as the price of the vehicle. The changing mix of expensive versus less expensive vehicles gets reflected here, an important factor because price times quantity equals dollar value. Even when the quantity of auto sales increases, the price can be low if consumers are buy-

ing inexpensive rather than luxury cars or trucks. When the price times quantity equals a low dollar value, it holds down the growth in retail auto sales. Conversely, fewer vehicles may be sold, but if consumers purchase high-end models instead, this puts upward pressure on the dollar value of sales. Monthly changes in unit auto and truck sales frequently do not correspond exactly to monthly changes in the dollar value of sales.

That is why economists and financial market participants talk about *retail sales excluding autos*. By removing the volatile component of the series, one can assess the underlying spending behavior of consumers. The auto sales portion of retail sales also includes truck sales. Such sales were not an important consideration during the 1970s, but the introduction and popularity of minivans in the 1980s and 1990s have contributed to the significance of light truck sales as more than a statistical quirk. So “retail sales ex autos,” really means retail sales excluding autos *and trucks*, because it refers to the category “auto dealers.” Incidentally, light truck sales accounted for 55 percent of motor vehicle sales (including domestic and imports) in 2004, up from a 40.2 percent share in 1994 and a 26.8 percent share in 1984. (Light truck sales surpassed auto sales in September 2000 for the first time in postwar history and began to consistently outpace auto sales in 2001.) This is relevant because light trucks tend to cost more than cars. This will affect the price times quantity value.

Sales are categorized by types of stores, not by types of goods. For example, DVD players and clothing purchased at department stores are both classified as department store sales even though one is a durable good and the other is a nondurable good. This has some repercussions when trying to convert retail sales into personal consumption expenditures, which are classified as durable goods, nondurable goods and services. Clearly, the entire department store category does not fit in nondurable goods since department stores can sell large home appliances, tools, or toilet paper. The major retail sales categories are:

- Furniture and home furnishing stores
- Electronics and appliance stores
- Building materials, garden equipment, and supplies dealers
- Food and beverage stores
- Health and personal care stores
- Gasoline stations
- Clothing and clothing accessories stores
- Sporting goods
- Hobby, book, and music stores

- General merchandise stores (department stores fall under this category)
- Miscellaneous store retailers (includes pet and pet supply stores, and florists)
- Nonstore retailers (include infomercials, catalogs, in-home demonstration)
- Food services and drinking places

Table 3.1 lists these categories with their relative shares.

Because retail sales are reported in nominal or current dollars, unusual price increases or decreases can affect monthly changes in retail sales. For example, when gasoline prices are skyrocketing or plunging, total retail sales

TABLE 3.1 Retail Sales by Kind of Business (Millions of dollars, seasonally adjusted at annual rate)

	Relative Importance	Oct-04	Nov-04	Dec-04
Retail Sales & Food Services, total	100.0	332,280	332,392	336,583
Excl Motor Vehicles & Parts Dealers	77.4	257,274	258,316	259,384
GAFO*	25.9	85,445	85,324	85,498
Total Retail Sales (except food services)	90.2	299,882	300,005	303,731
Excl Motor Vehicle & Parts Dealers	67.6	224,876	225,929	226,532
Motor Vehicle & Parts Dealers	22.6	75,006	74,076	77,199
Motor Vehicle Dealers	20.9	69,315	68,345	71,259
Automotive Parts, Acc & Tire Stores	1.7	5,691	5,731	5,940
Furniture/Home Furnishings & Elect/Appliance Stores	5.1	16,672	16,712	16,724
Furniture & Home Furnishing Stores	2.7	8,743	8,703	8,788
Electronics & Appliance Stores	2.4	7,929	8,009	7,936
Appliance, Television, and Camera Stores	1.9	6,377	6,430	6,405
Computer & Software Stores	0.5	1,552	1,579	1,531
Building Materials, Garden Equipment & Supply Dealers	7.8	25,617	25,783	26,301
Building Materials & Supply Dealers	6.9	22,525	22,661	23,136
Food & Beverage Stores	12.8	42,034	42,255	42,324
Grocery Stores	11.5	37,770	37,981	38,096
Beer, Wine, & Liquor Stores	0.8	2,701	2,677	2,645
Health & Personal Care Stores	5.3	17,310	17,392	17,352
Pharmacies & Drug Stores	4.5	14,795	14,849	14,676
Gasoline Stations	8.2	28,502	28,805	28,400
Clothing & Accessory Stores	4.9	16,180	16,030	16,012
Clothing Stores	3.5	11,682	11,630	11,561
Men's Clothing Stores	0.2	801	818	819
Women's Clothing Stores	0.9	3,032	2,984	2,959
Shoe Stores	0.6	2,030	1,968	2,007
Sporting Goods, Hobby, Book, & Music Stores	2.1	6,664	6,626	6,591
General Merchandise Stores	12.9	42,688	42,735	43,023
Department Stores excl Leased Departments	5.5	18,067	18,083	18,137
Other General Merchandise Stores	7.4	24,621	24,652	24,886
Warehouse Clubs & Super Stores	6.3	21,311	21,314	21,518
All Other Gen Merchandise Stores	1.0	3,310	3,338	3,368
Miscellaneous Stores Retailers	2.8	9,101	9,263	9,167
Nonstore Retailers	6.0	20,108	20,328	20,638
Electronic Shopping & Mail Order Houses	3.8	12,579	12,700	12,868
Food Services & Drinking Places	9.8	32,398	32,387	32,852

* GAFO represents sales at stores that sell merchandise normally sold in department stores. It includes the following kinds of businesses: general merchandise stores, clothing and clothing accessories stores, furniture and home furnishings stores, electronics and appliance stores, sporting goods, hobby, book, and music stores, and office supplies, stationery, and gift stores.

Source: Census Bureau and Haver Analytics.

will react accordingly. For instance, in July 2001, retail sales fell 0.4 percent, spurred by a 4.4 percent drop in sales at gas stations. As it turns out, gasoline prices (as measured in the CPI) plunged 11.1 percent that month. By excluding auto and gas station sales, retail sales rose a moderately healthy 0.5 percent in July. Similarly, sharp price changes in food can cause large increases or decreases in food store sales where the real (inflation-adjusted) movement is minor. Real (inflation-adjusted) retail sales data are available with a one-month lag, but the figures are not officially reported, although they are available. The Bureau of Economic Analysis, rather than the Census Bureau, calculates real retail sales in chained 2000 dollars.

Market Reaction

Players in the fixed income market favor a drop in retail sales, or at least weakness in the figures because that points to a sluggish economy. Interest rates decline and boost bond prices. If retail sales rise sharply, bond market participants push up interest rates and push down bond prices.

Equity market professionals prefer to see retail sales increase. Strong consumer spending figures indicate a healthy economy and that bodes well for corporate profits. Stock prices, especially those related to the retail sector, are likely to rise on this. If retail sales decline, or show only a paltry gain, stock prices will likely fall.

Foreign exchange market participants also favor a healthy spurt in retail sales because it points to a strong U.S. economy and suggests a rise in interest rates. If U.S. interest rates are increasing relative to the rest of the world, dollar demand perks up. If retail sales decline, however, interest rates are likely to drop, and the softer demand then causes the dollar to fall. Moreover, retail sales could be reflecting higher sales of imported goods, too. A greater demand for imports signals an increased demand for foreign currency at the expense of the dollar.

Did You Know?

A trend toward purchasing gift *cards* for the holidays, rather than gifts, may depress measured retail sales. However, Michael Niemira, chief economist at the International Council of Shopping Centers notes: “MasterCard and Visa numbers are usually stronger than in-store sales because they include gift-card purchases and Internet shopping.” U.S. accounting laws force retailers to count gift card sales when the cards are redeemed, not when they are purchased.⁴

Watch Out!

Look at the detailed retail sales report to see if any single category was the major culprit for the rise or fall in total retail sales. Retail sales excluding autos can provide a first approximation in ignoring volatile components. A broadly based increase or decrease in retail sales is a good indication of the strength or weakness in the consumer sector. There is one warning, however. If the broadly based increase follows a broadly based decline from the previous month, problematic seasonal adjustment factors could be the culprit. In that case, take the average of the two months to gauge consumer spending. Examining at least a three-month trend is wise. Never take one month's report at face value. Look at the current three- and six-month trend after accounting for all revisions. Looking at a three- and six-month trend in retail sales is useful because, even after excluding the auto portion of the report, you still find some volatility in the figures. Always check gas stations, food stores, building material stores, and furniture stores for "lumpy" behavior.

New trends could cause problems with seasonal adjustment. Because so many more shoppers are purchasing gift cards rather than sweaters and ties and toys, the Christmas season is partly reflected in January sales in the 2000s. This could mean old seasonal factors will depress December sales and overstate January sales. This seasonal adjustment problem would not last forever, but until new trends are incorporated in the seasonal adjustment process.

SEASONAL ADJUSTMENT

The seasonal adjustment process can be relatively complicated because it uses complex statistical methods. Although it is not imperative to understand the actual computational methods, the theoretical concept of seasonal adjustment is relevant and crucial.

An obvious example is that retail sales spurt in November and December when consumers shop for Christmas gifts. Even taking the after-Christmas discounted sales into account, retail sales plunge in January and February. A report of unadjusted data that retail sales rose 2 percent in December would not tell you much about consumer spending because you would not know exactly how much of that rise was due to normal seasonal influences.

SEASONAL ADJUSTMENT (Continued)

If you know that retail sales rise every year in December and decline every year in January, you could take sales out of December, and add them to January. The monthly fluctuations would be smoother and you would know if Christmas sales were stronger or weaker than *normal*.

The term “normal” is associated with a complex mathematical formula that essentially takes into account the most recent five years of data and gives appropriate weighting to various years during that five-year period. The process is ongoing; seasonal factors are adjusted annually to reflect new information.

It is most difficult to determine seasonal factors for frequently reported data such as weekly numbers including the monetary aggregates and new claims for unemployment insurance.

What about structural changes in the economy? These can play havoc with seasonal adjustment factors also. For example, the baby boom generation of the postwar years led to a baby bust generation. The changing demographic structure caused blips in the employment statistics. During the 1960s and 1970s, many teenagers entered the labor force in May and June when school let out and dropped out of the labor force in August or September when school re-opened. Many years of this same pattern caused seasonal adjustment factors to expect sharp labor force increases in May and June, and equally sharp decreases in August and September to reverse the process.

Baby boomers were all in the labor force by the early 1980s. At this point, the baby bust generation, a much smaller group, began entering the labor force. Thus, fewer people than expected were entering the labor force in May and June, and the seasonally adjusted labor force would decline during those months. A drop in the labor force often meant a corresponding drop in the unemployment rate. The reverse would happen in August and September. The seasonally adjusted labor force would rise again, and this would lead to a rise in the unemployment rate.

Cyclical variation might also affect seasonal adjustment factors. Imagine an economic downturn that begins in the second half of the year and lasts through the end of the following year. In terms of retail sales, spending tends to increase the closer we get to Christmas. Since the economy is in recession, retail sales remain suppressed in the second half of the year for two years. Because the seasonal adjustment

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SEASONAL ADJUSTMENT *(Continued)*

process utilizes five years of data to calculate seasonal factors, the two years of anemic retail sales during the recession will suppress the seasonal factors for the second half of the year. Thus, in the coming years without recession, seasonal factors will be lower, thereby increasing the seasonally adjusted level of sales.

Unseasonable behavior can cause problems with all sorts of figures. A warm January will create a housing boom, while a rainy July can create a housing bust. And there is no doubt that global warming may change long-term trends in climate around the country because it may potentially impact business activity.

Personal Consumption Expenditures

The Commerce Department's Bureau of Economic Analysis releases personal consumption expenditures four to five weeks after the end of each month (e.g., January data are released about the fourth week of February). The BEA reports consumption expenditures in current (nominal) and real (inflation-adjusted) dollars. These are seasonally adjusted and annualized—creating the moniker SAAR already introduced in this chapter.

Personal consumption expenditures are derived partly from the Census Bureau's retail sales report, although a significant number of additional sources also provide input. These figures are then fed directly into GDP; that is, they are the C portion of the $C + I + G + X - M$ equation. Just as in the quarterly figures, personal consumption expenditures include durable goods, nondurable goods, and services. Unpublished BEA reports show more detail and can make interesting party chatter. For obvious reasons, motor vehicles, furniture, and appliances are durable goods, as are boats and pleasure aircraft, jewelry, watches, books, and maps. But, oddly enough, "durable" toys are also included in this category. Table 3.2 shows the primary categories.

Chapter 2 mentions that food, clothing, and shoes, gasoline and oil, fuel oil, and coal are among the components of nondurable goods. In addition, there are tobacco products, cleaning supplies, drugs, and reassuringly, "nondurable" toys, and sports supplies. This list is not exhaustive, but it gives a flavor of the detail.

Because services account for more than half of consumer spending, it is

TABLE 3.2 Personal Consumption Expenditures

	Oct-04	Nov-04	Dec-04
Current Dollars, Billions, SAAR			
Personal Consumption Expenditures	8,375.3	8,409.9	8,484.6
Durable Goods	1,004.4	1,001.4	1,045.1
Nondurable Goods	2,442.4	2,451.8	2,454.8
Services	4,928.5	4,956.6	4,984.7
2000 Chain Dollars, Billions, SAAR			
Personal Consumption Expenditures	7,712.7	7,728.0	7,800.3
Durable Goods	1,114.9	1,111.5	1,160.5
Nondurable Goods	2,237.3	2,243.7	2,255.1
Services	4,375.1	4,386.4	4,406.0
Price Deflator (Chain-type index 2000 = 100)			
Personal Consumption Expenditures	108.596	108.827	108.777
Durable Goods	90.049	90.050	90.018
Nondurable Goods	109.176	109.281	108.862
Services	112.652	113.004	113.139

Source: Bureau of Economic Analysis and Haver Analytics.

not surprising that the number of minor classifications equals durables and nondurables combined. Under the major category of housing, you will find spending on hotels and college dormitories in addition to rent. The major category of household operation incorporates electricity, gas, telephone, domestic service, personal property insurance, and postage among others. The transportation category includes road and bridge tolls, motor vehicle repair, car insurance, railway, bus, and airline flights. Medical care is relatively self-explanatory including services of physicians, dentists, hospitals, and nursing homes. In addition, health insurance is included in the category. Personal care services include cleaning, storage, and repair of apparel as well as barbershops, beauty parlors, and health clubs. Personal business services includes brokerage charges and investment counseling, bank service charges, expense of handling life insurance, legal services, and funeral and burial expenses. Trade union dues and employment agency fees also fall under the category of personal business services.

Economists like to see the personal consumption expenditures data because these figures are directly incorporated into GDP (although even most economists do not bother analyzing the vast detail). Since consumer spending is 70 percent of GDP, economists have 70 percent of their (GDP)

forecast. Financial market participants are more enamored with retail sales than personal consumption expenditures, because the former is reported earlier in the month, but the latter provides extra detail that is not included in retail sales. Spending on services tends to be less volatile than spending on durable or nondurable goods. You can think of services as taking care of everyday business: You take your clothes to the dry cleaners; you get a haircut periodically; you pay your annual insurance premiums; you ride the train to work each day. You are unlikely to deviate from these daily tasks and habits. As a result, spending on consumer services is more stable and consistent than spending on nondurable or durable goods: People do not purchase clothing and automobiles daily. There is, however, a more practical explanation for the monthly stability. The BEA, which compiles the data, does not have actual figures for many of these categories, and must estimate them using a judgmental trend. It would be pointless to induce volatility in the service component unnecessarily.

A few components in the services category do change from month to month because the BEA is able to collect timely data from various sources. Spending on electricity and spending on brokerage commissions are two such major categories. The first is related to the weather. If it is extraordinarily warm in the summer, people use their air conditioners more frequently and this increases electricity usage. If it is very cold during the winter, more natural gas is consumed for heating. Brokerage commissions are dependent on the stock market. For example, unusual activity in the stock market in the form of a strong bull market or a strong bear market such as the stock market crash of 1987 and the 1997 “correction” can induce high volumes. Periods surrounding the 2000 market bubble and subsequent crash also saw high stock volumes.

The other components of consumer services spending do not really reflect actual monthly purchases but are BEA estimates of housing costs, transportation costs, medical costs, and so forth. Therefore, monthly spending gains in this category tend to be quite smooth. As a major component of total consumer expenditures (more than half), services spending makes total consumer spending gains positive from month to month on a nominal (current) dollar basis.

Market Reaction

All in all, financial market participants (either in the fixed income, equity, or foreign exchange markets) do not tend to react as forcibly to personal consumption expenditures due to its predictability, as they do to retail sales. But if consumption expenditures are stronger (weaker)

than expected, bond yields will rise (fall) and equity prices will rise (fall).

Watch Out!

The most noteworthy aspects of this report are the following: auto sales, electricity usage, and stock volume. Auto sales, as part of durable goods, match unit sales figures, not retail sales volume. This factor causes differences between monthly retail sales and personal consumption expenditures. If you were to add the durable and nondurable goods component of personal consumption expenditures and compare it with retail sales, the monthly changes would not necessarily match. Excluding autos from both series improves the relationship.

Spending on services will blip when electricity usage is unexpectedly different from its normal seasonal behavior. Stock volume will blip in bull or bear markets. These figures are known before the BEA publishes consumption expenditures and are usually taken into account by economists who forecast the data. Check for aberrations in these components when changes in personal consumption expenditures are different from expectations.

Personal Income

The Bureau of Economic Analysis releases personal income together with personal consumption expenditures about four to five weeks after the end of the month. Personal income is seasonally adjusted and annualized and quoted in nominal dollars—even though personal disposable income is also available in real, inflation-adjusted dollars.

Personal income comprises several components: wages and salaries (the largest component), supplements to wages and salaries (employer contributions for social insurance and employee pension and insurance), proprietors' income (farm and nonfarm), rental income, dividend income, personal interest income, and transfer payments. Payments for Social Security insurance are subtracted from wages and salaries. Table 3.3 illustrates the relative importance of each category.

Transfer payments and government wages and salaries are two categories that cause occasional blips in personal income. Transfer payments include Social Security payments to retirees. Each January, Social Security recipients receive a cost-of-living adjustment, which is tied to the yearly

TABLE 3.3 Personal Income and Its Disposition

	Oct-04	Nov-04	Dec-04
Personal Income	9,803.4	9,844.4	10,213.5
Compensation of Employees, Received	6,752.0	6,766.1	6,799.5
Wage and Salary Disbursements	5,454.7	5,461.7	5,487.1
Private Industry	4,523.1	4,528.2	4,552.3
Goods-Producing Industries	1,066.5	1,067.8	1,073.8
Manufacturing	700.2	700.1	703.5
Service-Producing Industries	3,456.6	3,460.4	3,478.5
Trade, Transportation, & Utilities	905.2	905.9	909.6
Other Service Industries	2,551.4	2,554.5	2,568.9
Government	931.6	933.5	934.7
Supplements to Wages and Salaries	1,297.3	1,304.3	1,312.4
Employer Contributions to Employee Pensions and Insurance	891.3	897.9	904.5
Employer Contributions to Government Social Insurance	406.0	406.4	408.0
Proprietors' Income with IVA and CCAAdj	921.2	933.8	949.8
Farm	18.6	22.8	25.7
Nonfarm	902.5	911.0	924.0
Rental Income of Persons with CCAAdj	163.2	160.8	159.9
Personal Income Receipts from Assets	1,382.4	1,392.5	1,700.8
Personal Interest Income	953.9	960.5	967.2
Personal Dividend Income	428.5	431.9	733.6
Personal Current Transfer Receipts	1,418.7	1,426.3	1,441.7
Government Social Benefits to Persons	1,389.5	1,397.1	1,412.5
Old-Age/Survivors/Disability/Health Insurance Benefits	791.2	795.6	807.5
Govt Unemployment Insurance Benefits	31.3	31.0	31.0
Other Government Social Benefits to Persons	567.0	570.5	574.0
Other Current Transfer Receipts, from Business [Net]	29.2	29.2	29.2
Less: Contributions for Government Social Insurance	834.1	835.0	838.2
Less: Current Personal Taxes	1,064.9	1,068.5	1,075.3
Equals: Disposable Personal Income	8,738.5	8,775.9	9,138.2
Less: Personal Outlays	8,687.7	8,725.9	8,804.2
Personal Consumption Expenditures	8,375.3	8,409.9	8,484.6
Personal Interest Payments	196.5	199.5	202.5
Personal Current Transfer Payments	115.9	116.5	117.1
to Government	72.9	73.5	74.1
to Rest of World [Net]	43.0	43.0	43.0
Equals: Personal Saving	50.8	50.0	334.1
Personal Saving Rate (%)	0.6	0.6	3.7

Source: Bureau of Economic Analysis and Haver Analytics.

change in the consumer price index for wage earners ending October of the previous year. Government employees also receive cost-of-living adjustments in January, and this will add to total wages and salaries.

Historically, rental income has been a relatively stable component of personal income from month to month, unless some region of the country suffers a major natural disaster. In 2004 rental income dropped sharply

with destruction caused by hurricanes Charley, Frances, Ivan, and Jeanne in the summer of that year. As large as the damage was faced in 2004, it was nothing compared to the damage in 1989 and 1992. In all cases, rental income rebounded in months following the disasters.

Although personal income gives market participants an idea how much money consumers have to spend on necessities and luxuries, *disposable personal income* is a better indicator. Disposable income equals personal income less income taxes.

Personal income is a coincident indicator of the economy because growth accelerates with expansions and decelerates with business cycle downturns. Personal income is reported in nominal (current) dollars, but disposable income is usually monitored in real (inflation-adjusted) dollars. It is also a coincident indicator of the economy. Real disposable income typically rises with expansions and declines with contractions. When real disposable income *declines* during a recession, it makes sense that *consumer spending* should also decline during the period, but that is not always the case. Consumers often drip into their savings when income growth is sub par.

Market Reaction

Financial market participants are likely to respond mildly to personal income data. Increases in personal income generally point to increases in consumer spending and gains in economic activity overall. That bodes poorly for the fixed income market because bond traders fear that economic expansions are inflationary. Consequently, bond prices are likely to fall and yields to rise. Decelerating or falling personal income growth portends weakness in consumer spending and is favorable news to bond traders because it suggests recession and a deceleration of inflationary pressures or potential Fed easing. This would cause rising bond prices and declining yields.

Stock market participants view personal income as well as personal consumption expenditure growth favorably. Strong consumer spending points to healthy corporate profits. For this reason, stock prices are likely to rise when personal income growth increases and fall when personal income growth declines.

The foreign exchange professional will take the same perspective as the equity trader. Rising personal income growth bodes well for the economy pointing to higher interest rates and therefore an increase in dollar demand. This raises the exchange value of the dollar. Sluggish gains, or outright declines (which are unusual), in personal income clearly portend economic weakness. Consequently, interest rates would fall and lead to a drop in dollar demand (pushing down its value in the foreign exchange market).

Watch Out!

Special factors, which can skew growth in personal income, come mainly from two government-related sources. Every January, government workers and Social Security recipients receive cost-of-living adjustments. Economists and financial market participants have learned to anticipate these annual adjustments.

As mentioned earlier, natural disasters can skew rental income. Look to this component as a source of volatility as well, in periods of hurricanes and earthquakes. (You do not need to predict earthquakes! The personal income data is reported with a lag, remember?)

Finally, when workers of major corporations or industries receive unexpected bonuses, it will boost income in the wages and salaries component. For example, Microsoft paid out a cash dividend in December 2004, which led to a 70 percent spurt in dividend income during that month. There was a subsequent 40 percent drop in January 2005. These special situations are usually announced in advance and do not come as a surprise to market players.

Personal Saving Rate

Economists also search for clues of shifts in spending behavior by the personal saving rate, a byproduct of the income and consumption data that is released at the same time. Although this rate is an important indicator of the consumer sector, it is not very reliable on a monthly basis. Personal savings are calculated as a residual; that is, savings are simply the difference between disposable income and personal outlays. (Personal outlays are equal to personal consumption expenditures, interest paid by consumers to business, and transfer payments to foreigners.) It makes sense then that whatever is not spent is saved. However, the use of credit causes the reported saving rate to be understated. Automobile purchases, for example, are generally financed, and the BEA enters the full purchase price of the car plus the interest payments amortized over the life of the loan as spending on consumer durables in a specific month. When motor vehicle sales surged in October 2001, with the advent of zero-percent interest rate financing, the saving rate fell to -0.2 percent from 4.2 percent in September. As motor vehicle sales went back to normal levels, the saving rate rose to 2.8 percent by March 2002. Similarly, the Microsoft dividend payout brought the saving rate to 3.6 percent in December 2004, but it fell back to 1 percent in January 2005.

In the same vein, unusual income or tax payments can cause aberrant behavior in the saving rate. In January, when Social Security recipients re-

ceive increases in their monthly payments, the saving rate is higher for a few months until spending stream absorbs the extra income. Tax payments can affect the saving rate in reverse: Often in April, tax payments surge and the saving rate falls.

There are more problems in measuring the personal saving rate according to Susan M. Sterne, president and chief economist of Economic Analysis Associates. In the July 2005 issue of *Business Economics*, she reminds us that capital gains are not included in income (so they can't flow to personal savings), but capital gains tax receipts are indeed included in personal taxes (and therefore lower disposable income). In addition, personal income includes contributions into pension plans (removing income from current flows), but does not include pension benefits paid out.⁵

Market Reaction

Financial market participants do not react to the saving rate. Even after accounting for its monthly volatility from its residual status, people can be unsure how to deal with increases or decreases in the saving rate. For example, the saving rate falls when consumers are feeling confident about the economy and are spending fast and furiously. The saving rate will rise when consumers lose confidence in the economy and stop spending.

Watch Out!

When the saving rate falls sharply, look for unusual gains in durable goods spending or a spurt in tax payments. Several factors can cause the saving rate to rise sharply: a decline in durable goods spending, a cost-of-living adjustment in government wages and salaries, a cost-of-living adjustment in Social Security payments, and a jump in tax payments. Since the saving rate is a residual, never take one month's level at face value (see Figure 3.2).

One should remember that the saving rate does not measure personal wealth. During the bull market of the 1990s, consumer spending surged because consumers who owned stocks felt (and were) wealthier even if they could not retrieve these funds from their pension plans.

Because the stock market crashed in 2000 and household wealth from equities was lost, a shift toward real estate wealth took place from 2000 to 2005. Because a greater number of consumers own homes than own stocks, it is likely that more people are benefiting from the increased wealth stemming from housing appreciation. (The quarterly Flow of Funds data featured in Chapter 10 shows wealth figures in great detail.)

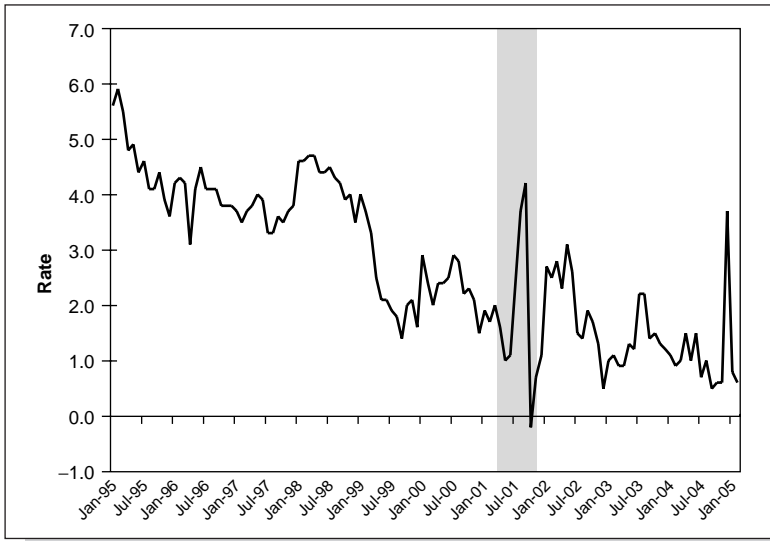


FIGURE 3.2 Personal Saving Rate: The personal saving rate has trended lower over time. The sharp fluctuations during the 2001 recession are related to the boost in auto sales in October 2001 spurred by zero percent interest financing by automakers. Since the personal saving rate is a residual after income, the spurt in consumer durable spending in October of that year caused the saving rate to become negative.

Source: Bureau of Economic Analysis and Haver Analytics.

Consumer Installment Credit

The net change in consumer installment credit is reported by the Federal Reserve Board between five and six weeks after the end of the month. This series is based on data from monthly surveys from several sources: commercial banks, finance companies, savings institutions, and credit unions. The figures are reported in current dollars and on a seasonally adjusted basis. Unadjusted data are also readily available. From one month to the next, consumer installment credit is revised substantially and the series also undergoes annual benchmark and seasonal adjustment revisions.

Changes in credit outstanding are available by major credit type (revolving and nonrevolving), or by major credit holder (commercial banks, finance companies, credit unions, savings institutions, nonfinancial business, federal government and Sallie Mae, and pools of securitized assets). Table 3.4 shows the relative importance of each category. With the release of the August 2003 figures, the Federal Reserve Board began to include student loans extended by the federal government and by SLM holding

TABLE 3.4 Consumer Credit Outstanding

	<i>\$ Billions, Seasonally Adjusted</i>	Levels			Monthly Changes		
		Oct-04	Nov-04	Dec-04	Oct-04	Nov-04	Dec-04
Consumer Credit Outstanding		2,099.4	2,100.9	2,109.6	14.4	1.5	8.7
Revolving		789.8	790.4	796.0	4.6	0.6	5.6
Nonrevolving		1,309.5	1,310.5	1,313.6	9.6	1.0	3.1
	<i>\$ Billions, Not Seasonally Adjusted</i>						
Consumer Credit Outstanding		2,103.9	2,112.7	2,151.4	17.1	8.8	38.7
Held by Commercial Banks		669.6	667.4	697.4	0.8	-2.2	30.0
Held by Finance Companies		363.8	373.5	365.6	11.1	9.7	-7.9
Held by Credit Unions		216.4	217.0	217.8	1.4	0.6	0.8
Held by the Federal Government and Sallie Mae		99.3	98.6	98.4	0.1	-0.7	-0.2
Held by Savings Institutions		89.9	90.6	91.3	0.7	0.7	0.7
Held by Nonfinancial Businesses		60.7	61.5	73.9	0.8	0.8	12.4
Held by Pools of Securitized Assets		604.2	604.2	607.1	2.2	0.0	2.9

Source: Federal Reserve Board and Haver Analytics.

(the parent company of Sallie Mae). Historical data have been revised back to 1977 to incorporate student loans.

To some extent, the change in consumer installment credit could reflect consumer spending, consumer confidence, and consumer debt burdens, but how does a person distinguish among these factors? Not easily. In the early 1980s, the Fed reported the extension of new credit, and the liquidation of old credit to reflect a net change in total consumer installment credit. In that case, an increase in extensions would surely indicate increases in consumer spending and probably a degree of consumer confidence. Individuals would extend their credit obligations only if they anticipated being able to repay their debts. A slowdown or decline in repayments would suggest that consumer incomes were being stretched to their limit and a drop in spending might soon follow. Unfortunately, the Federal Reserve Board was unable to continue to publish this detail and has reported only the net change in consumer installment credit for over 20 years. That leaves market participants with the problem of having to *assume* that changes in credit are due to more credit usage (and greater spending) or a drop in repayments.

For the most part, when consumer credit increases, it suggests gains in consumer spending and a sense of optimism about the economy. This will happen during economic expansions. When consumer credit decreases, it suggests decreased consumer spending, possibly coupled with a sense of pessimism about future economic activity. This often happens during recessions. Without the breakdown on extensions and liquidations of credit, it is necessary to look at consumer installment credit data in conjunction with other economic indicators for better analysis. For example, increases in consumer credit coupled with increases in auto sales and retail sales clearly point to consumer optimism and healthy economic activity. Conversely, if retail sales and auto sales decline, but consumer credit increases, consumers may not be repaying their debt as rapidly. It could signal lackluster economic activity along with some cautious consumer behavior. Finally, declines in consumer credit coupled with increases in retail sales or motor vehicle sales, suggest that consumers are repaying their loans more rapidly than they are undertaking new loans. This could also indicate squeamishness about the economy.

Another measure that can be helpful in interpreting changes in credit outstanding is the ratio of consumer installment credit to disposable income, more commonly known as the debt-to-income ratio. (The terms *consumer credit* and *consumer debt* are used interchangeably.) The debt-to-income ratio will rise during expansions as consumers feel comfortable about their future financial obligations and use more credit. The debt-to-income ratio will stabilize or decline during recessions as consumer spending, especially on durable goods, falls sharply. Figure 3.3 shows the rising trend of the debt-to-income ratio over the past 40 years as credit usage has become increasingly more popular due to a variety of incentives offered by credit card issuers.

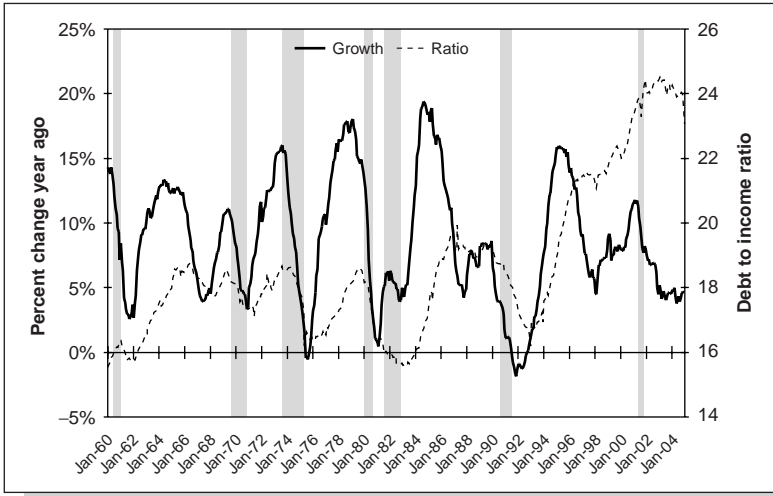


FIGURE 3.3 Consumer Credit Growth versus Debt-to-Income Ratio: Consumer installment credit declined briefly in 1975 and more sharply in 1991, even though the rate of growth moderated often during recessions—and expansions. In the 2000s, the debt-to-income ratio is high by historical standards, but it reflects convenience usage of credit cards.
Source: Federal Reserve Board, Bureau of Economic Analysis, and Haver Analytics.

Market Reaction

Financial market participants do not usually react to this economic indicator. It is old news by the time it is reported, having followed all the other consumer indicators. Other economic indicators would have already revealed whether the economy had weakened or strengthened during the month. Also, the indicator is reported late in the afternoon and generally goes unnoticed by market participants who are getting ready to go home.

Since tax laws were changed in the late 1980s, and interest on consumer credit was no longer tax deductible, a greater number of consumers started using home equity loans (which do have a tax advantage). Housing appreciation has increased the number of homeowners who can tap into their home equity to borrow money for anything from vacations to autos to education. And many homeowners refinance their homes simply to tap into this resource to pay off credit card debt. This makes the consumer credit report less useful than it would be otherwise. (Home equity loan figures are available in the Flow of Funds report discussed in Chapter 10.)

ARE YOU INTERESTED IN MORE INDICATORS ON CONSUMER CREDIT?

Debt Relief Clearinghouse, a debt management placement company, sponsors the Cambridge Consumer Credit Index, a measure that tracks attitudes toward consumer credit. The survey is conducted as a monthly telephone poll of roughly 800 randomly selected American consumers. The index is intended to gauge whether consumers are anticipating taking on more debt or paying off their debts. This index is released on the fifth business day of the month to coincide with the Fed's release on consumer installment credit but is timelier since it covers the current month.⁶

Consumer Attitudes

Two private institutions undertake monthly surveys of consumer confidence: The Conference Board and the University of Michigan Survey Research Center. The Conference Board releases its information on the last Tuesday of the month, whereas the Survey Research Center reports twice a month, roughly the second and fourth Fridays. Incidentally, the University of Michigan Survey Research Center does not officially release their results, giving them only to their paying clients, who in turn provide these results to the financial press.

You might think that consumer sentiment is consumer sentiment and the two measures of consumer confidence should be identical. Actually, the two surveys are somewhat different in their approaches as well as in their technical calculation. In general, consumers are asked about their current attitudes toward the economy as well as their opinions about the outlook for the economy six or twelve months hence. In addition, they are asked if they intend to invest in housing or to purchase such major items as cars and household appliances. The Conference Board's Consumer Confidence Index and the Survey Research Center's Index of Consumer Sentiment tend to move together over the business cycle. The series will diverge at economic peaks and troughs, however, with The Conference Board series posting greater confidence at peaks and more pessimism at troughs. When the economy fell into recession in 2001, the Consumer Confidence Index fell more sharply than the University of Michigan's Index of Consumer Sentiment because of its job market questions.

University of Michigan Survey The Survey Research Center at the University of Michigan has conducted the Surveys of Consumers since 1946. Initially, the surveys were annual events but soon became quarterly and finally monthly since 1978. Each month, the survey contains 25 core questions that cover three broad areas of consumer sentiment: personal finances, business conditions, and buying conditions. The population samples are designed to be representative of all U.S. households except Alaska and Hawaii. Every month, the Survey Research Center interviews 500 consumers by telephone. The scores of questions are summarized and developed into three indexes: the Index of Consumer Sentiment, the Index of Consumer Expectations, and the Index of Current Economic Conditions.

The Index of Consumer Sentiment is derived from the following five questions:

1. We are interested in how people are getting along financially these days. Would you say that you (and your family living there) are *better off* or *worse off* financially than you were *a year ago*?
2. Now looking ahead—do you think that *a year from now* you (and your family living there) will be *better off* financially, or *worse off*, or just about the same as now?
3. Now turning to business conditions in the country as a whole—do you think that during the *next twelve months* we'll have *good* times financially, or *bad* times, or what?
4. Looking ahead, which would you say is more likely—that in the country as a whole we'll have continuous good times during the *next five years* or so, or that we will have periods of widespread unemployment or depression, or what?
5. About the big things people buy for their homes—such as furniture, a refrigerator, stove, television, and things like that. Generally speaking, do you think now is a *good* or *bad* time for people to buy major household items?

The Index of Current Economic Conditions uses Questions 1 and 5; the Index of Consumer Expectations uses Questions 2, 3, and 4. The Survey's three main indexes are based to January 1966 = 100. The Index of Consumer Expectations is one of the 10 series in The Conference Board's index of leading indicators.⁷

Some of the questions asked by the Survey Research Center concern consumer expectations of interest rates, unemployment, consumer price inflation, assessments of changes in the national economy, buying conditions for homes, and buying attitudes for motor vehicles (cars and light trucks).

According to their research, correlations between consumer expectations and actual figures are at least 0.75, and sometimes higher. This means that the survey series and the actual data move together 75 percent of the time. Typically, consumer expectations lead the actual data by roughly two quarters. With respect to the national economy, there was no lead time.⁸

The Conference Board Surveys The Conference Board surveys, *Consumer Attitudes* and *Buying Plans*, were first produced in 1967 on a bimonthly basis and then, in 1977, began to appear each month. The Conference Board survey is 10 times larger than the University of Michigan's Survey covering a representative sample of 5,000 households. The survey is conducted by NFO Research, Inc., which mails a questionnaire to an entirely different sample of individuals each month, representing all geographic regions, age groups, and income levels. The survey consists of two segments. One segment reflects consumers' appraisal of current conditions and their expectations of the future. Three series come from these questions: the Consumer Confidence Index, the Present Situation Index, and the Expectations Index. Another section deals with plans to buy homes, autos, and major household appliances yielding the Buying Plans Index as well as the percentage of households intending to make such purchases the next six months. The Conference Board also releases separately consumer confidence information for nine major geographic regions. The Board uses a base year of 1985 = 100. In contrast to the Michigan Survey, The Conference Board seasonally adjusts all the statistical series included in its survey.

The Consumer Confidence Index combines an appraisal of the present situation along with an appraisal of conditions six months in the future. For the Present Situation Index, consumers are asked questions regarding business conditions and employment: Are jobs plentiful; are jobs not plentiful; are jobs hard to get? The Expectations Index asks the same questions about business conditions and employment and adds a question about income: Will business conditions be the same, better, or worse in six months? Will there be more jobs, fewer jobs, or the same number of jobs six months in the future? Do you expect your income to increase, decrease, or remain the same in six months?

The Buying Plans Index includes plans to buy automobiles, homes, or appliances. Consumers are also asked whether they intend to take a vacation within the next six months. It makes sense to ask consumers about their plans to buy durable goods because these are relatively infrequent purchases. Similarly, vacations are generally high-expense items that require some planning (even though the expenditure would probably be classified under the services portion of consumption expenditures). Vacation plans are not incorporated in the Buying Plans Index. The home purchase

component is weighted half as much as the intentions to buy cars or home appliances because of its greater volatility.

Consumer confidence is a coincident indicator of the economy. Typically, consumers feel confident about the economy during an expansion and pessimistic about the economy during a recession. According to Fabian Linden of The Conference Board, the Confidence Index “only suggests the general direction and approximate degree of likely changes, but not the precise magnitude . . . it also fails to indicate with any precision the time frame of changes.” Thus, the claim by some economists that consumer confidence can predict consumer spending on a month-to-month basis is not supported by the expert opinion of the architect of these series. Linden also stated that the Buying Plans Index “has failed to demonstrate a convincing capacity to forecast consumer demand for specific products included with a consistency sufficiently reliable to allow for marketing decision-making.” Furthermore, he claimed, “the aggregate buying intentions index should be considered only as a broad gauge of general shifts in the consumers’ disposition to spend.”

When consumer spending and consumer confidence are plotted on the same chart, they are likely to show similar dips and wiggles as a trend. A more detailed monthly chart will show that they do not move in tandem or by the same magnitude every month as shown in Figure 3.4.

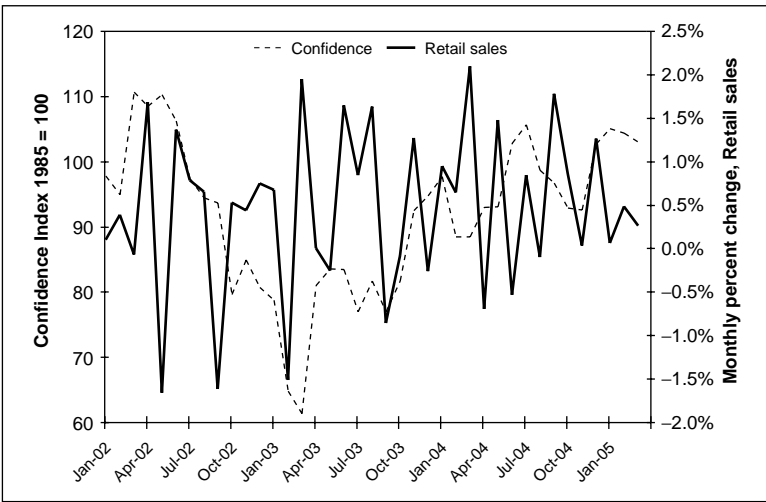


FIGURE 3.4 Confidence and Retail Sales: While some similar behavioral trends between confidence and spending can be shown, The Conference Board’s Consumer Confidence Index cannot predict month-to-month changes in retail sales. *Source:* The Conference Board, Census Bureau and Haver Analytics.

The consumer confidence series first became popular just a few months after Alan Greenspan began his term as chairman of the Federal Reserve when the stock market crashed in October 1987. Greenspan indicated that he would closely monitor consumer confidence surveys to see whether consumers would respond to the crash. In fact, both consumer confidence measures fell in November, but rebounded in December. When a Federal Reserve chairman talks, market participants listen. This was only the first of many economic indicators that Greenspan would mention—and that would later become market movers.

Did You Know?

Many economists agree that consumer confidence surveys do not tend to predict the economy. According to Goldman Sachs economist Jan Hatzius, this is due to the fact that most people do not have the information they need to appropriately answer many of the questions in the consumer confidence surveys such as what business conditions will be like in six months. As a result, they tend to respond based on the latest news headlines. However, when it comes to the job market, they have a better sense of the local situation.¹⁰

Market Reaction

In the past few years, the markets have reacted strongly to consumer confidence surveys. This reaction is similar to that of actual consumer spending. Bond traders favor a drop in consumer confidence because it signals a weaker economy and points to lower bond yields (but higher bond prices). Conversely, bond prices will drop (and yields will rise) if consumer confidence increases.

Equity investors favor a rise in consumer confidence because it signals stronger corporate profits. Higher corporate earnings should lead to increases in stock prices.

A pessimistic consumer will not make a foreign exchange market participant happy, either. Pessimism signals a weak economy and low interest rates, leading to a drop in the dollar. An optimistic consumer is favorable in that interest rates will rise and dollar demand will rise.

Watch Out!

Every monthly change in consumer confidence numbers is not mirrored in actual spending figures such as retail sales, personal consumption expenditures, or housing starts. Look at the trend in the direction of consumer confidence surveys rather than at single month changes. Moreover, both the Michigan Survey (the Index of Consumer Sentiment) as well as The Conference Board's Consumer Confidence Index tend to move in similar directions over time, but may diverge in any one month. The Conference Board series tends to increase more rapidly at business cycle peaks when employment prospects improve. Also, The Conference Board surveys an entirely different group of individuals each month. The consistency would not be the same as in the Michigan Survey, which talks to the same group each month.

Wait for actual spending data to cement your views on the economy. True confidence shows up at the cash register, either at a department store or at the auto dealer. For instance, both consumer attitude surveys were falling in 2005 from January to April because consumers faced sharply rising prices at the gas pump. Nevertheless, retail sales were rising steadily during this period—suggesting that consumers do not always stop shopping when they are depressed!

ARE YOU INTERESTED IN MORE CONSUMER CONFIDENCE SURVEYS?

ABC and the *Washington Post* release a weekly comfort index that describes consumers' optimism about current conditions. This indicator is available every Tuesday after the market closes and covers the week that just ended on Sunday.

Investors Business Daily (IBD) in conjunction with the Techno-Metrica Institute of Policy and Politics (TIPP) launched the Economic Optimism Index in 2001. This index is a bit different from most of the other confidence measures because it not only considers consumer expectations of the economic outlook and personal financial situation, but also takes a look at consumers' satisfaction with current federal economic policies.¹¹

QUARTERLY INDICATOR

Retail E-Commerce Sales

In 2001, the Census Bureau began to release its quarterly estimate of e-commerce sales with data back to the fourth quarter of 1999. Insufficient data points made it impossible to adjust these figures for seasonal adjustment until the third quarter of 2004. Now, the Census Bureau publishes adjusted and unadjusted e-commerce sales about seven weeks after the end of each quarter. Fourth quarter figures would be available roughly the third week of February.

The Census Bureau describes e-commerce sales as those goods and services where an order was placed by the buyer, or price and terms of sale are negotiated over an Internet, extranet, Electronic Data Interchange (EDI) network, electronic mail, or other online system. It is not necessary for payments to be made online in order for the sale to be categorized as e-commerce. These e-commerce sales are estimated from the same sample used for the Monthly Retail Trade Survey to estimate preliminary and final sales. Advance retail sales are estimated from a subsample of the MRTS sample, and it is not large enough to measure changes in retail e-commerce sales.

Market Reaction

While e-commerce sales are becoming increasingly more important over time, they are not yet attention grabbers in the financial market.

KEY POINTS

- Some consumer indicators are more volatile than others. It is always preferable to analyze the trend in the series rather than a one-month change.
- A strong consumer sector signals a healthy economy, which can lead to inflation and higher interest rates.
- Consumer indicators that point to robust spending are bearish for the fixed income market; bullish for the stock market; and favor a strong exchange value of the dollar.
- Consumer indicators that point to sluggish spending are bullish for the fixed income market, bearish for the stock market, and unfavorable for the foreign exchange value of the dollar.

- Personal consumption expenditures are the most comprehensive and appropriate indicator of consumer spending when you are monitoring just one indicator.
- Major market moving indicators must be timely—and retail sales fit the bill.
- Consumer attitude surveys might reflect consumer spending behavior over time, but monthly changes do not predict monthly changes in retail sales.

Investment Spending

There are nearly as many indicators measuring investment as there are measuring consumer spending. Investment spending reflects only about one-sixth of GDP. However, changes in investment spending, which are significant, exacerbate the business cycle. Growth in investment expenditures outpaces GDP growth during cyclical upswings, while declines outpace GDP during contractions.

This chapter describes major economic indicators monitored by financial market participants, the media, and policymakers in the federal government. Not all indicators get the same amount of attention.

WEEKLY INDICATOR

The MBA Weekly Mortgage Application Survey

The Mortgage Bankers Association (MBA) publishes the *Weekly Mortgage Application Survey* every Wednesday morning for the previous week ending Friday. The survey covers all types of mortgage originators, including commercial banks, thrifts, and mortgage banking companies. The survey covers purchase applications and refinance applications. Conventional and government applications are monitored as well as product type (fixed rate, adjustable rate). According to the MBA, its survey covered about 50 percent of all U.S. retail mortgage applications in 2004. Altogether, 16 indexes are calculated on a seasonally adjusted and unadjusted basis. Clearly, these indexes are not all relevant for financial market participants interested in economic conditions. Undoubtedly the purchase index—a subset of the comprehensive market index—is a useful leading indicator of housing starts and home sales. The purchase index includes all mortgage applications for the purchase of single-family homes. It covers conventional and government loans and fixed and adjustable rate loans. This index is available both on a seasonally adjusted and unadjusted basis. Users focus on seasonally adjusted data.

The MBA derives this index by calculating the number of mortgage applications (not the dollar amount) to determine the index level and rates of change. The index levels for the unadjusted series are calculated from the same data gathered from lenders. Weekly rates of change are applied to the previous week's index level. The statistical methodology accounts for seasonal, calendar, and holiday effects. Index levels are calculated by using only common respondents of consecutive weeks so as to not bias the results. For instance, if a lender participates in weeks one and three, but not in week two, he is not included. If the lender reports applications data later, the index number is revised. Historical data for these series are available back to 1990 with all indexes equal to 100 for the week March 16, 1990 as shown in Figure 4.1.

Brian Carey and Irene Chao of the MBA's Economic Division published research in the *Mortgage Financial Review* that shows the leading indicator qualities of the purchase index. According to Carey and Chao, "[T]he purchase index is a natural indicator of existing home sales since mortgages are used in approximately 90 percent of home sales . . . yet, not all applications will lead to a home sale."¹ Apart from other discrepancies such as timing and reporting by the National Association of Realtors®, the purchase index still does a good job of predicting existing home sales.

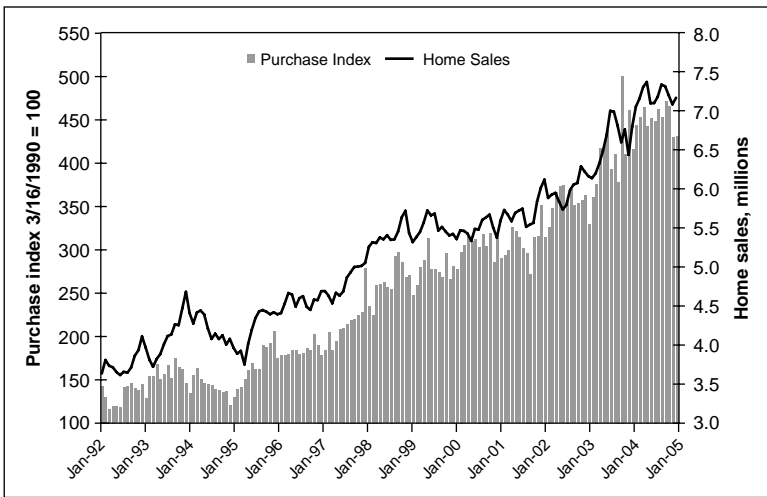


FIGURE 4.1 MBA Purchase Applications Index versus Home Sales: The applications index leads home sales.

Source: Mortgage Bankers Association, National Association of Realtors, Census Bureau, and Haver Analytics.

In 1990, the MBA refinance index was low. Then in the mid-1990s, a time of falling interest rates, refinance activity gained momentum as homeowners realized that they could swap their old high-rate mortgage for a much lower one. From a high of 9 percent in late 1994 to a low of 7 percent in late 1998, consumers were able to shave 2 percentage points on 30-year fixed mortgage loan rates by refinancing. Rates headed back up to 8 percent in 2000, but fell to just over 5 percent by 2003. Homeowners were prepared to refinance—and refinance again and again as long as interest rates continued to fall. Refinancing activity is an important economic variable to measure because it tells investors how much extra money consumers will have in their pockets to spend on other goods and services.

Market Reaction

Financial market participants monitor this index, although not all traders and investors are up and running at 7:00 A.M. Eastern time when these figures are reported. Nonetheless, significant changes in either purchase applications or the refinance index are indeed acted upon by the bond market and sometimes the stock and foreign exchange markets. And there is no question that the heavy refinancing activity has helped this index to gain market prominence in the past 10 years.

MONTHLY INDICATORS

On the whole, indicators that reflect investment spending tend to be less stable than consumer indicators. It is useful to remember that these are large-ticket items (airplanes, houses, factory plants) that must be financed, not goods that are paid in cash.

Advance Durable Goods

The Census Bureau produces an advance report of manufacturers' shipments, inventories, new orders, and unfilled orders of durable goods between 17 and 19 business days after the end of each month. Shipments, inventories, new orders, and unfilled orders are seasonally adjusted and denominated in current dollars. (That is, they are not adjusted for inflation.) Unlike many other economic indicators, the figures are not annualized either: Reported new orders and shipments are monthly levels. An annualized rate is derived by multiplying the monthly level by 12. Inventories (at market value) and unfilled orders are reported for end-of-month. New orders are net of cancellations and reflect orders filled and shipped during the

month, as well as orders for future delivery. Orders are generally defined to include those with binding legal agreements. Shipments represent net selling values, after discounts, and they exclude freight charges and excise taxes. Inventories are collected on a current cost basis. Unfilled orders include those orders that have not yet been shipped. The Census Bureau defines unfilled orders at the end of the reporting period as equal to unfilled orders at the beginning of the period plus net new orders received less net shipments.

The advance report is compiled from results of the Manufacturers' Shipments, Inventories, and Orders (M3) survey that include a panel of 4,000 reporting units. The companies in this panel ship \$500 million or more in goods.

These data include (new and unfilled) orders, shipments and inventories for such categories as primary metals, fabricated metal products, machinery, computers and electronic products, electrical equipment, appliances and components, transportation equipment, and all other durable goods. Within the computer and electronic products component, only shipments of semiconductors, which fall within the computer industry, are available. New orders and unfilled orders are not available for this component because the manufacturing report is voluntary and the semiconductor industry no longer felt they could provide accurate information on new and unfilled orders. Inventories of semiconductors are included in the computer and electronic products figures, but are not broken out separately even though data of other categories have the detail.

This report is called "advance" because it is an early release of the manufacturers' shipments, inventories, and orders release including information on nondurable goods as well as durable goods. The revisions of this "advance" report can be significant and might alter the initial economic scenario depicted by the figures. A preliminary estimate might show lackluster performance in the manufacturing sector, whereas the revised data might show a more robust economy. For example, on November 24, 2004, new orders for manufacturers' (advance) durable goods were initially reported to have fallen 0.4 percent in October. One week later, the more complete manufacturers' report showed a 1.1 percent drop. On December 23, 2004, November figures were released, but October data were revised once again to reflect a 0.9 percent drop. The initial estimate thus showed a modest drop but after the revisions it was learned that there was less strength during the period than initially thought.

The durable goods report is divided into broad categories such as defense and nondefense goods; capital goods and noncapital goods; nondefense capital goods and defense capital goods. One can also compare the nondefense capital goods with and without aircraft—a key component that is constantly fluctuating. Nondefense capital goods, including such diverse

items as blast furnaces and computers, are an indicator of capital spending. Noncapital goods are generally of the household variety: automobiles, refrigerators, and other appliances. As mentioned in Chapter 2, however, automobiles are classified in all sectors of GDP, including capital spending. Portions of new orders for durable goods are included in The Conference Board's index of leading indicators.

New orders for durable goods jump around from month to month, as shown in Figure 4.2. Economists often joke that it is easy to forecast durable goods orders: See what happened last month and reverse the sign. During economic expansions, the increases are larger than the declines and during recessions the declines are larger than the gains. The main reason for this erratic pattern of behavior is that durable goods include many sectors, such as transportation equipment, in which the order of even one piece of equipment is so large that an absence or noncontinuation of that order makes a big difference to the total. The transportation category, for example, includes military and civilian aircraft, which are high-dollar items. Moreover, when placing such orders, companies generally purchase more than one plane at a time. If 20 planes are ordered in February, for example, and no airplanes are ordered in March, February orders will surge, but March orders will plummet.

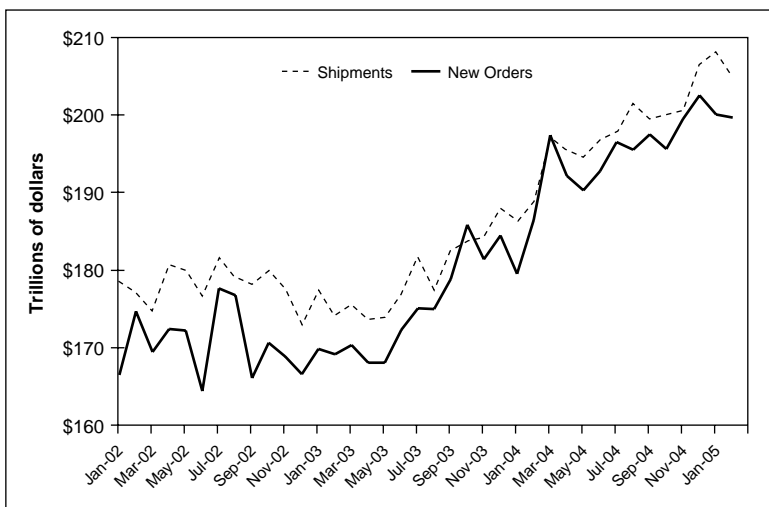


FIGURE 4.2 Manufacturers' Durable Orders and Shipments: Note that orders and shipments move in tandem over time, but shipments are less volatile.
Source: Census Bureau and Haver Analytics.

Economists prefer to exclude a volatile component from the series and analyze orders excluding that component. Over the course of several years, economists have persuaded financial market participants and the financial press to look at durable goods orders excluding transportation; durable goods orders excluding defense; nondefense capital goods orders; and non-defense capital goods orders excluding aircraft. Excluding transportation or defense removes the unstable components and makes underlying investment trends more discernable. Nondefense capital goods orders generate attention because they are a leading indicator for capital spending (see Figure 4.3).

Shipments of durable goods can be divided into the same categories as orders. Whereas orders are leading indicators of production two to six months hence, shipments (also known as sales) are indicators of current production. Shipments tend to be more stable than orders. Companies can order multiple products; but producers make them one at a time. In terms of production, therefore, an order for 20 airplanes can get spread over a few months.

Unfilled orders do not always attract attention, even among economists. When unfilled orders are rising, it suggests that manufacturers are busy and are not producing fast enough to keep pace with incoming or-

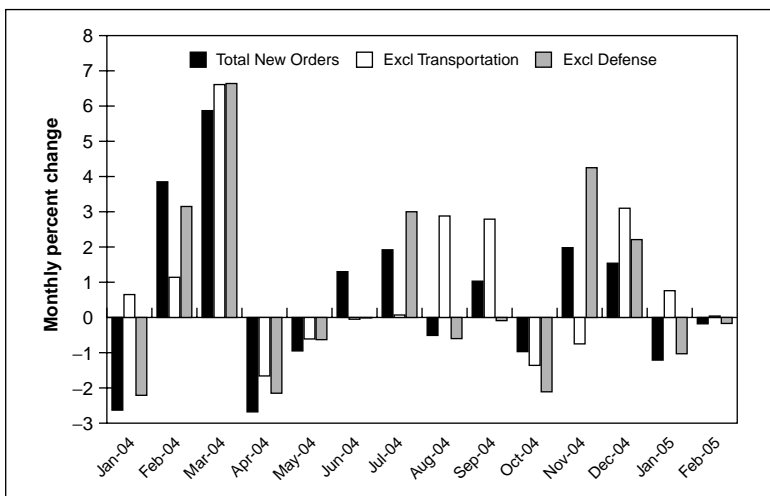


FIGURE 4.3 Variations in Durable Goods Orders: Variations in defense and transportation orders can give misleading views of underlying economic activity. *Source:* Census Bureau and Haver Analytics.

ders. On the other hand, a falling level of unfilled orders suggests that manufacturers are producing more quickly than new orders are coming in. Unfilled orders tend to rise when the economy is expanding and to decline when the economy is contracting. The level of unfilled orders never goes down to zero; a backlog exists even during a recession. Luckily, the availability of a backlog can keep production going even when new orders fall off.

Market Reaction

Strictly speaking, fixed income market participants consider a rise in orders and shipments indicative of economic strength; a decline in durable orders and shipments signals weakness. As a result, strong orders and shipments lead to rising interest rates, whereas weak orders and shipments portend lower rates. Shipments, which reflect the present, are less relevant to traders and investors than orders, which reflect the future.

Equity market players, along with foreign exchange market traders, prefer economic strength to weakness and would favor strong durable orders over declines. Those in the stock market are looking for growth in corporate profits, whereas those in the foreign exchange market are looking for factors that push up interest rates. A decline in orders could lower the value of the dollar if interest rates fall.

Economic growth is unfavorable to fixed income market professionals because it either signals inflationary pressures (during economic expansions) or the end of Federal Reserve easing (during recoveries). Neither foreign exchange nor equity market professionals want to see economic growth accompanied by inflation. But, foreign exchange traders tend to prefer high interest rates, so they would be relieved to see the end of a period of Federal Reserve easing.

Financial market participants certainly know that durable goods orders move in a sawtooth pattern. Because economists have bombarded them with various exclusions to keep in mind, market participants also realize that they could look at subcomponents of the report. As a result, the market reaction to durable goods orders is often inconsistent. That is, sometimes the markets trade on these figures and sometimes they do not. It depends on their *mood*. If the market psychology is negative (bond prices are falling, bond yields are rising), fixed income market professionals may view a rise in durable goods orders negatively as it confirms their view that the economy is strong. If market psychology is positive (bond prices are rising, bond yields are falling), they may ignore a gain in durable goods orders and cite instead the data's inherent volatility. Whenever possible, traders will focus on the portion of the report that confirms their view: total

orders excluding transportation; or total orders excluding defense; or orders of nondefense capital goods.

Watch Out!

Analyze the advance report for special factors. Defense orders are typically erratic even if they are generally following a downward trend or an upward trend. Check these first. You really want to see how the private economy is growing. Defense spending depends on fiscal policy. You can get a better feel of fiscal policy by looking at the federal budget balance. If the unusual spurt or plunge in durable orders is not due to defense, check the transportation sector for aircraft orders. Market participants remove these, not because they are meaningless, but because they are uneven. It is unusual to see aircraft orders continuously rise month after month: The pattern is not sustainable. Even though aircraft orders were generally strong between 1997 through 2000, with the greatest level of orders in 2000, increases did not occur in each and every month during that four-year period.

For the most part, durable goods orders are a good indicator of future production and shipments—with one exception. New orders, shipments, and production of automobiles occur simultaneously in the same month. Because data on auto production are available before the advance durable goods release, there is less interest in orders and shipments of cars than of items in other categories. Because autos are in the transportation category, this is another good reason to exclude transportation from the total.

Also, be sure that you analyze shipments and unfilled orders in addition to new orders.

A single-month's data of durable goods orders are useless. It is more prudent to analyze the figures over a three- or six-month period. If you do look at the long-term trend of orders and shipments, then do not exclude the volatile categories such as aircraft because they also add to domestic production and economic growth. Put the durable goods report in a broader perspective by comparing these figures with other economic indicators, such as industrial production or the ISM manufacturing index.

At a secondary level of importance, determine whether the increase in total orders was concentrated in noncapital goods or capital equipment. Both sectors help the manufacturing sector when they are in an increasing mode and hurt the manufacturing sector when they are in a declining mode. However, investment goods can expand the productive capacity of the United States, essentially increasing the nation's economic pie. Put dif-

ferently, increases in investment can raise our standard of living in the long run. In that case, you would prefer to see increases in nondefense capital goods over increases in noncapital goods because the noncapital goods are consumer goods for current consumption. Noting that August durable goods orders had jumped in 1997, Steven H. Reynolds, chief investment officer at Zurich Kemper Investments in Chicago, told the *New York Times* that technology spending “decreases production costs. You get good economic growth because of high productivity, but little inflation.”²

ARE YOU INTERESTED IN MORE ORDERS DATA?

Boeing releases monthly figures on its orders and shipments before the advance durable goods report. But be careful—the monthly changes in Boeing’s new orders do not always correlate with the aircraft orders figures from the advance durable goods report.

Manufacturers’ Shipments, Inventories, and Orders

About one week after the advance (and partial) report on durable goods, the Census Bureau releases the entire report on manufacturers’ goods. This monthly survey of Manufacturers’ Shipments, Inventories, and Orders (M3) includes about 4,000 reporting units with \$500 million or more in shipments and a limited number of smaller companies. According to the Census Bureau, this survey is voluntary and represents about 60 percent of the shipments estimates at the total manufacturing level. This complete report includes figures on nondurable goods as well as durable goods. Nondurable goods, comprising a little less than half of the total, tend to be more stable than durable goods. No single category in the nondurable goods component could cause a monthly spike such as that caused by aircraft orders. Petroleum, however, is a nondurable goods category that can cause monthly fluctuations, in nominal terms, because of price changes. As shown in Table 4.1, only the total value of nondurable goods new orders are available; the details are not published. Notice that several nondurable goods components of shipments were also volatile over this three-month time period.

In addition to a more complete and detailed report of shipments, new orders, and unfilled orders, the manufacturers’ release also includes a more

TABLE 4.1 Value of Manufacturers' Shipments and New Orders for Industry Groups

	Relative Importance	Shipments, Oct-04	Monthly Nov-04	% Change Dec-04	New Orders, Oct-04	Monthly Nov-04	% Change Dec-04
All Manufacturing Industries	100	1.6	0.4	1.2	0.9	1.4	0.5
Excluding transportation	85.4	2.1	0.6	0.8	1.0	0.0	1.0
Excluding defense	97.4	1.5	0.5	1.3	0.4	2.5	0.8
With unfilled orders	36.5	0.8	-0.5	2.7	-0.8	2.0	0.3
Durable Goods Industries	53.5	0.3	0.2	3.0	-1.0	2.0	1.5
Wood products	2.5	-5.2	0.2	5.8	NA	NA	NA
Nonmetallic mineral products	2.1	1.9	3.7	1.7	NA	NA	NA
Primary metals	3.7	-0.7	2.8	3.0	-1.7	5.1	1.1
Iron and steel mills	1.8	-0.4	3.2	3.4	-3.2	8.7	0.0
Aluminum and nonferrous metals	1.6	-1.7	2.6	2.5	-0.5	1.6	5.4
Ferrous metal foundries	0.4	1.8	1.7	3.4	0.1	3.8	0.5
Fabricated metals	6.2	-1.3	2.0	0.5	2.2	-0.5	-7.7
Machinery	6.7	2.7	-3.8	6.6	3.0	-4.2	13.7
Farm machinery	0.5	9.4	-7.0	5.5	NA	NA	NA
Construction machinery	0.7	0.3	5.0	5.3	4.1	2.0	0.5
Mining, oil field, and gas field machinery	0.2	1.8	-1.7	-2.5	1.8	11.7	-7.7
Industrial machinery	0.9	17.3	-28.5	20.7	2.0	-29.6	13.7
Photographic equipment	0.2	3.0	5.0	-7.3	5.4	2.1	-5.5
Ventilation, heating, air-conditioning and refrigeration equipment	0.8	-1.6	2.9	4.9	-3.1	5.7	10.6
Metalworking machinery	0.6	-8.2	5.2	30.7	-7.3	5.6	38.2
Turbines, generators, and other power transmission equipment	0.9	1.5	-4.0	1.3	0.7	-2.9	7.2
Material handling equipment	0.4	1.6	3.4	1.1	1.8	7.0	-8.7
Computers and electronic products	10.6	3.4	0.2	0.7	-6.8	-5.8	8.2
Computers	1.5	11.3	-5.5	2.1	-15.7	7.8	14.0
Computer storage devices	0.4	-2.5	-2.7	11.4	NA	NA	NA
Other peripheral equipment	0.4	9.3	1.9	-6.5	NA	NA	NA
Nondefense communications equipment	1.7	-0.4	1.1	-3.9	0.8	-8.1	2.0
Defense communications equipment	0.1	46.2	-37.9	63.6	17.5	-89.6	323.2
Audio and video equipment	0.2	8.5	6.3	3.2	NA	NA	NA
Semiconductors	1.9	5.9	1.0	-4.3	NA	NA	NA
Electronic components	1.2	0.2	6.9	4.7	-6.0	13.3	11.6
Nondefense search and navigation equipment	0.2	0.2	0.1	-0.8	-38.6	47.4	12.2
Defense search and navigation equipment	0.7	-0.4	3.0	-2.4	-7.6	2.1	-14.0
Electromedical, measuring, and control instruments	1.8	-1.8	0.6	2.3	-17.4	10.0	-0.9
Electrical equipment, appliances & components	2.4	0.2	1.4	-0.7	-3.1	4.9	-6.9
Electric lighting equipment	0.3	-2.2	1.4	-1.1	-3.5	6.8	-24.4
Household appliances	0.6	-2.8	2.8	3.7	-5.8	11.3	-10.3
Electrical equipment	0.7	3.4	0.4	-2.4	0.4	-0.6	-1.8
Batteries	0.1	-1.2	-0.2	-4.7	NA	NA	NA
Transportation equipment	14.6	-1.1	-0.6	3.8	0.1	9.4	-2.3
Automobiles	2.0	-5.9	3.1	4.7	NA	NA	NA
Light trucks and utility vehicles	3.1	-0.7	1.8	7.4	NA	NA	NA
Heavy duty trucks	0.3	-3.2	10.3	-1.7	NA	NA	NA
Motor vehicle bodies, parts, and trailers	5.0	-1.6	-0.3	3.8	-5.1	1.9	3.7
Nondefense aircraft and parts	1.6	-0.8	-12.0	7.3	5.0	64.7	-16.7
Defense aircraft and parts	1.0	1.8	-3.3	-6.0	37.2	-3.7	-39.5
Ships and boats	0.6	5.3	0.3	1.8	38.0	21.0	18.8
Furniture and related products	1.7	2.6	1.7	3.5	2.3	3.2	0.7
Miscellaneous durable goods	3.1	-1.5	2.6	5.5	NA	NA	NA
Nondurable Goods Industries	46.5	3.1	0.7	-0.7	3.1	0.7	-0.7
Food products	11.0	2.3	-1.0	0.9	Not Available		
Grain and oilseed milling	0.9	1.0	-25.2	25.0			
Dairy products	1.7	3.8	3.1	0.0			
Meat, poultry, and seafood products	3.3	0.8	0.6	1.1			
Beverage and tobacco products	2.5	-0.7	-0.5	-0.1			
Beverages	1.6	-0.8	-0.1	-1.2			
Tobacco	0.8	-0.6	-1.2	2.1			
Textile mills	0.9	-2.6	0.9	1.5			
Textile products	0.9	1.0	-0.4	1.3			
Apparel	1.3	-0.9	0.6	-2.9			
Leather and allied products	0.2	-2.9	0.6	-12.2			
Paper products	3.9	0.3	1.5	0.4			
Pulp, paper, and paperboard mills	1.6	0.9	1.0	2.0			
Paperboard containers	1.0	0.4	3.0	1.1			
Printing	2.1	-0.7	-0.5	1.4			
Petroleum and coal products	7.6	9.3	1.4	-4.4			
Petroleum refineries	7.0	9.7	1.1	-5.0			
Basic chemicals	11.4	4.6	1.2	-0.7			
Pesticides, fertilizers, and other agricultural chemicals	0.5	0.8	-1.9	-2.8			
Pharmaceuticals and medicines	2.6	13.4	0.7	-4.8			
Paints, coating, and adhesives	0.7	-1.6	1.5	2.2			
Plastics and rubber products	4.6	-0.4	2.7	0.8			

Source: Census Bureau and Haver Analytics.

complete set of inventory figures by sector and by stage-of-fabrication. Inventories tend to grow with the economy, accelerating with healthy sales growth and moderating with slower sales demands. The key factor in inventory investment is to distinguish between intended and unintended inventory buildup. One way to monitor inventories is to look at the relationship between inventories and sales (shipments). Otherwise, there is no way of knowing whether the current inventory buildup is sufficient for the current pace of sales. The inventory-to-sales ratio is a common indicator of inventory management that provides this perspective. A rising inventory-to-sales ratio in an expanding economy can be viewed favorably, whereas a rising ratio during a recession signals production cutbacks.

The Census Bureau publishes inventories by stage of fabrication: materials and supplies, work-in-process, and finished goods. They each account for roughly one-third of total inventories, although finished goods are the largest category (about 38 percent in 2004), followed by materials and supplies (about 33 percent in 2004), and work-in-process (about 29 percent in 2004). A sharp and sustained rise in inventories of finished goods can signal unintended inventory accumulation coming from a decline in consumer demand.

Market Reaction

Typically, financial market participants keep their eyes on the durable goods orders data reported in the previous week. It is not unusual to see revisions to the figures even after only one week. As shown in an earlier example, revisions can result in wild swings for durable goods orders.

Once again, shipments get less attention. Market participants watch unfilled orders mostly to justify their positions. Economists tend to be more vigilant of the unfilled orders series. Even then, however, you will not hear many economists comment on these in the financial press.

Financial market participants tend to look at the inventory data at turning points in the economy. If the economy is expanding and demand is rising, then increases in inventories point to continued growth and signal a desired buildup. If the economy is contracting and demand is falling, then increases in inventories point to an undesired buildup. Traders in the fixed income market rally on the bond market whenever they see signs of economic contraction (bond prices rise, yields fall) because it could signal the beginning of Federal Reserve easing. In contrast, they do not like signs of healthy economic growth (bond prices fall, yields rise) because the Fed stops easing when the economy shows clear signs of upward momentum. Also, inflationary pressures could potentially arise.

Players in the equity market much prefer economic growth because it

spurs corporate earnings. As a result, stock prices will increase when orders, shipments, and inventories are rising. Foreign exchange market professionals also like to see healthy economic growth because interest rates rise and the foreign exchange value of the dollar tends to increase. The dollar then rises with increases in shipments, inventories, and orders. If increased growth in the manufacturing sector is accompanied by inflation, neither stock prices nor the dollar are likely to rise.

Watch Out!

Check for revisions to durable goods orders and shipments. If either rises or falls by 5 or 10 percent, a revision of 1 percent will not be meaningful—so do not worry about it. However, if orders or shipments only moved 1 percent in either direction, a revision of that magnitude is certainly significant. In addition, look at the pattern or trend of growth in orders. It is interesting how convention determines the mode of analyzing figures. Headlines reported on the news wire services will release the percent change in orders, shipments, and inventories. With inventories and unfilled orders, that is fine because the series tend toward some stability from month to month. With respect to the trend growth rate in new orders, it would be more beneficial to see a three-month moving average of the level. Monthly growth rates are too volatile to be meaningful. Unfortunately, no one reports headlines that reflect three-month moving averages.

Look at the inventory-to-sales ratio to see if there are signs of unintended stockpiling. The inventory-to-sales ratio will rise as shipments moderate. One-month changes are not significant, but look for developing trends.

Monthly Wholesale Trade

The Census Bureau reports wholesale trade inventories, sales, and inventory-to-sales ratios by kind of business about five weeks to six weeks after the end of the month based on a sample survey. The Monthly Wholesale Trade Survey covers wholesale merchants such as distributors, jobbers, and import/export merchants as defined by the 2002 NAICS.

These figures are virtually ignored by traders and investors—and rightly so because they reveal little new information about the economy. However, wholesale trade inventories do account for one-quarter of total business inventories and this is a component of gross domestic product. That is, the change in inventories is a defining portion of GDP growth in any given quar-

NAICS

NAICS—which in economics parlance rhymes with “cakes”—stands for the North American Industry Classification System and replaces SIC or Standard Industrial Classification codes. Historically, the SIC system was updated roughly every 10 years or so since it was first instigated in the 1930s. The shift to NAICS, first announced by the Office of Management and Budget on April 8, 1997, is much broader. In addition to identifying new industries, the new classification also attempted to reorganize the system in a way more consistent with economic principles. The NAICS classify industries according to types of production activities performed, rather than a mixture of production-based and market-based categories in the SIC. The service sector became more detailed. The system was redefined jointly with Canada and Mexico to obtain comparable data for the three NAFTA trading partners. While the Census Bureau began to utilize NAICS in the late 1990s, by 2005, all major statistical agencies in the federal government had converted to this system.

Clearly, NAICS created new industry classifications in the high-tech sector: fiber optic cable manufacturing, satellite communications and the reproduction of computer software. But some decidedly non-tech industries were also created: bed-and-breakfast inns, environmental consulting, warehouse clubs, pet supply stores, credit card issuing, and diet and weight reduction centers. The NAICS groups the economy into 20 broad sectors—twice as many as the SIC system.

ter. Economists look at wholesale trade inventory figures to help predict total business inventories, which are released three to five business days later.

Business Sales and Inventories

The Census Bureau reports business sales and inventories about six to seven weeks after the end of the month. Business sales are the sum of manufacturing shipments, retail sales, and wholesale trade sales that have already been reported earlier in that month. Consequently, the sales portion of this release is old news. Parts of the business inventories figures are new, though retail trade inventories are reported for the first time with this release. They correspond to the retail sales data discussed in Chapter 3.

Market Reaction

The market reaction to this report is mild, although at business cycle turning points, trader response in some of the financial markets may be more noticeable. Inventory accumulation during a sluggish economic period suggests producers will have to unload unwanted inventories and production will suffer. Declines in production are favorable news for bond market participants because they indicate possible recession and lower interest rates. Production declines are not favorable news to either stock market participants or to foreign exchange players looking for a strong dollar. A weak economy means lackluster earnings. Low interest rates that indicate capital flows to the United States will be reduced and a drop in demand for the dollar will ensue.

Inventory liquidation portends future rebuilding of inventories and increases in production. Bond market participants will not be happy as interest rates climb while bond prices sag. In contrast, stock market players view the potential rise in production favorably as corporate earnings move upward. Similarly, foreign exchange players favor the potential for upward momentum in the economy and in the dollar.

Watch Out!

At this point, most data in this report have been analyzed and taken apart several times. It is hard to find new quirks. The only portion of the release that is new relates to retail trade inventories, so look at the breakdown between total retail inventories and retail inventories excluding autos. A large auto buildup could portend a drop in auto production or possible rebates.

The only other time this report is interesting is after the Bureau of Economic Analysis has reported its advance GDP estimate that incorporates a partial estimate for inventories. Once you know the BEA assumptions for inventory change and the actual monthly inventory change, you can estimate the potential revision to the GDP figures that will be forthcoming in the next scheduled release.

Construction Expenditures

The Census Bureau reports construction expenditures about five weeks after the end of the month. These data are revised dramatically in subsequent months (significantly more than durable goods orders) and move

easily from the positive to the negative and back again. Just like durable goods orders, construction expenditures are more descriptive when they are broken down into smaller categories: private residential construction, private nonresidential construction, and public construction. (The public sector is reviewed in Chapter 6.) As shown in Table 4.2, this information is reported in current dollars (not adjusted for inflation). Like most economic indicators, the figures are seasonally adjusted and annualized.

In the past, nonresidential construction expenditures were somewhat pro-cyclical. Yet they lagged other sectors of the economy—that is, spending on nonresidential structures would begin to recover after the overall economy recovered. In the expansion following the 1981–1982 recession, nonresidential construction grew rapidly early in the recovery, partly because of tax laws implemented in 1981. The potential impact of tax law changes on investment in nonresidential structures could be just as large as the impact from interest rate changes. A rapid and early recovery of nonresidential structures was not repeated after the 1990–1991 recession. Overbuilding from the late 1980s curtailed the growth in nonresidential structures into the second half of the 1990s. But then, activity was on a solid growth path until the recession of 2001. Through the beginning of 2005, nonresidential construction spending had still not recovered from the 2001 recession. Incidentally, while the overall economy had a mild recession in 2001, the recession in the nonresidential sector ended much later—in 2003.

Historically, residential construction was countercyclical—that is, spending on residential structures would increase when interest rates were relatively low near the trough of a business downturn. Since 1980 residential construction has become more closely aligned with the business cycle. It can begin to recover a bit sooner than the overall economy, because interest rates are lower when demand for capital equipment is still low or declining and the Federal Reserve gives the economy a jump start by easing monetary policy. Although there is no question that construction expenditures are still highly sensitive to interest rate movements, the impact is muted somewhat because potential homeowners now often switch between adjustable rate loans and fixed rate loans depending on which is a better deal. In the past, consumers were tied to 30-year fixed rate mortgage rates only. Now they can purchase homes in periods of high interest rates knowing that refinancing is an easy available option as rates decline. Low interest rates spurred residential investment to dizzying heights from 2001 to 2005.

TABLE 4.2 Value of Construction Put-in-Place by End Usage (SAAR)

	Monthly % change		
	Oct-04	Nov-04	Dec-04
Total Construction	0.4	1.0	0.9
Residential	-0.3	1.4	1.6
Nonresidential	1.3	0.5	0.1
Lodging	2.5	-1.1	-5.0
Office	2.7	0.1	0.8
Commercial	0.5	0.1	-1.8
Health Care	-0.9	1.2	-1.8
Educational	-0.8	0.4	0.4
Religious	-3.7	0.1	2.5
Public Safety	-8.1	6.0	0.3
Amusement & Recreation	-1.9	-0.3	-0.4
Transportation	4.2	-1.4	-2.7
Communication	6.3	-3.6	5.0
Power	3.0	-0.1	1.9
Highway & Street	4.7	2.2	0.8
Sewage & Waste Disposal	0.8	0.3	-0.3
Water Supply	-7.3	0.0	1.7
Conservation & Development	-2.8	-7.0	-9.1
Manufacturing	7.9	7.8	7.0
Total Private Construction	0.3	0.9	1.3
Residential	-0.2	1.3	1.7
Nonresidential	1.4	-0.1	0.3
Lodging	2.5	-3.0	-3.2
Office	1.9	-0.3	0.8
Commercial	0.5	-0.5	-1.6
Health Care	-1.8	2.3	-2.8
Educational	2.6	-2.7	-2.1
Amusement & Recreation	-3.7	-0.1	2.7
Transportation	2.9	-4.4	0.4
Communication	-0.4	-0.2	1.8
Power	7.1	-3.9	5.2
Manufacturing	1.5	1.6	1.6
Total Public Construction	0.7	1.3	-0.3
Residential	-9.8	6.9	-4.6
Nonresidential	1.1	1.1	-0.1
Office	4.7	1.1	0.8
Commercial	1.3	8.7	-4.8
Health Care	2.5	-3.0	2.1
Educational	-1.6	1.0	0.9
Public Safety	-8.5	6.8	0.6
Amusement & Recreation	-5.9	3.4	-1.1
Transportation	5.8	-1.8	-4.2
Power	7.9	-5.7	3.0
Highway & Street	4.7	2.3	0.8
Sewage & Waste Disposal	1.0	0.1	-0.4
Water Supply	-7.1	0.9	2.2
Conservation & Development	4.5	-7.0	-11.2

Source: Census Bureau and Haver Analytics.

Market Reaction

On the whole, financial market participants ignore construction expenditure data, which have a reputation for instability and frequent revision. Unlike durable goods orders, which market players closely monitor, construction expenditures are old news. They do not have any element of an economic leading indicator. Although residential structures tend to pick up before the rest of the economy during a recession, and moderate before the rest of the economy during an expansion, other indicators report the same information in a more timely fashion. Housing starts, for instance, come out roughly three weeks earlier.

Watch Out!

Keep an eye on the pattern of growth in private nonresidential structures. The Bureau of Economic Analysis directly incorporates these figures into GDP even though they undergo frequent revisions. If you follow this pattern, you will not be surprised by changes in this component of gross domestic product. In addition, these figures help you decipher the direction of GDP revisions. The BEA does not have a complete set of data when putting together its advance GDP report. As a result, analysts must make some assumptions for the last month of each quarter, and these assumptions are publicly available. This way you can incorporate the revisions as actual data are released. Finally, these are the only statistics available for nonresidential structures on a monthly basis—it is this news or no news.

For the same reason that you monitor nonresidential construction spending, you should watch residential construction. The pattern of growth in residential construction is also fed directly into gross domestic product. Keeping track of the monthly pattern helps you to gauge residential investment spending when the quarterly numbers are reported. However, other housing statistics (described in the following section) used for estimating the strength of the housing sector are somewhat timelier and usually show smaller revisions.

Housing Starts and Permits

Housing starts are a good monthly indicator of housing activity. The Census Bureau reports housing starts and permits between the 12th and 14th business day of the month. Permits are *considered* to be a leading indicator

of starts and the economy in general, and are included in The Conference Board's index of leading indicators. *Actually*, housing starts and permits tend to move in tandem from month to month, and only rarely do permits lead starts by any significant amount. Since 2004 the figures on housing starts and permits have come from a universe of 20,000 places in the United States that require construction permits.

Housing starts and permits include single- and multi-family units. Single-family housing starts comprise the lion's share of the total, as shown in Figure 4.4. Historically, single-family housing starts were more sensitive than multi-family housing starts to changes in interest rates. Multi-family housing units, which include townhouses, condominiums, and apartment buildings, are also affected by subsidized housing, changes in tax laws, and speculative investment building. If housing permits lead starts at all, it would be for the multi-family sector. Technically, a start is defined as "an excavation beginning for the footing or foundation of a residential building." In plain English, a housing start is nothing more than the first shovel of dirt to break ground. A brick does not have to be laid.

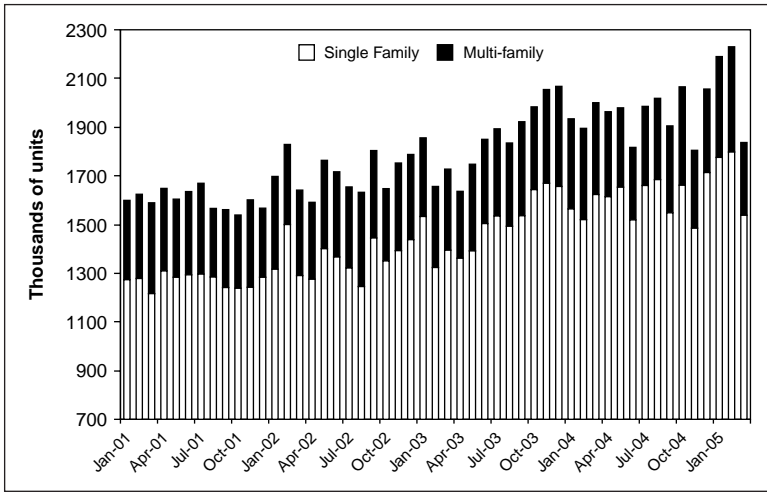


FIGURE 4.4 Housing Starts: The share of multi-family housing construction was relatively stable between 2001 and 2004; the bulk of the growth in housing took place in the single-family housing sector.

Source: Census Bureau and Haver Analytics.

The Census Bureau expanded this definition with the release of the September 1992 figures reported in October of that year. According to a Census Bureau statistician, the revised definition also includes a dwelling that is being totally rebuilt on an existing foundation.³ A house that has lost part of its superstructure, such as a roof, would not be counted as a new start. The changed definition was inspired by reconstruction of housing after natural disasters.

The multi-family sector is divided into two groups: houses of two to four units, and buildings with five or more units. The latter sector holds a larger share. In addition, housing starts and permits are available on a regional basis.

Market Reaction

Participants in the fixed income market view a rise in housing starts unfavorably because it signifies economic growth. Housing starts push down bond prices and push up yields. When housing starts decline, bond and money market traders view this favorably because it entails prices rising and yields falling.

In contrast, an increase in housing starts will cheer equity market professionals. A healthy economy provides potentially robust corporate earnings. Similarly, foreign exchange market professionals will favor the rise in housing starts that brings about the bond market reaction of higher interest rates. Even though rising interest rates are unfavorable for bond market professionals, they are a positive factor for the foreign exchange markets because they push up the foreign exchange value of the dollar. A drop in housing starts bodes poorly for stock prices and for the dollar because it signals weak domestic growth.

Financial market reaction to housing starts data is not as strong as the reaction to some other figures, but it can move the markets when the changes are significant and compatible with market psychology. Housing starts typically lead the economy out of recession, so they are closely monitored at turning points of the business cycle: at the early stages of recovery, when market participants assess the magnitude of strength of the recovery; and at expansion peaks, when market participants anticipate declines in housing activity. In the middle of an expansion or a recession, housing starts may get less attention. The housing sector played a major role in the economy from 2001 to 2005, however, and housing starts were market movers more often than not.

Watch Out!

Look at the gain in the single-family market separately from the increases in the multi-family market. The single-family sector reflects consumer demand, whereas building in the multi-family sector may be more speculative. The single-family sector is more stable from month-to-month. Historically, “special factors” dogged the multi-family (rather than single-family) sector. In the 1970s and early 1980s, subsidized housing boosted the total, but the level of such housing fell sharply later in the 1980s. The effects of tax law changes mainly affected buyers of apartment buildings for speculative or investment purposes rather than resident homeowners. Tax law changes in the mid-1980s made speculative housing investment less profitable pushing down further the level of multi-family units.

Demographic factors such as age and marital/family status of the population play a major role, with long-term impacts on total housing construction. Consequently, these will not change from month-to-month, but over a period of years. The housing boom of the late 1970s could not have been repeated in the early to mid-1990s because of the altered structure of the population. Yet, stronger housing demand in the past decade was once again justified by shifts in demographics. Housing experts note that 1.2 million additional housing units are needed each year for new families, roughly 400,000 units need to be replaced annually for obsolescence, and 300,000 units are constructed for second or vacation homes. This brings us a total of 1.9 million units a year. In 2004, 1.952 million homes were started. The pace in the first four months of 2005 was much faster, suggesting a phase of overbuilding.⁴

Once you have looked at the breakdown by type of structure, you will also want to check the regional distribution if starts jump unexpectedly or plunge sharply. Housing starts have a strong seasonal component, and during the winter months, construction comes to a standstill in many parts of the country. For this reason a large increase during one of the winter months should be viewed skeptically, especially if it occurs in the Midwest or Northeast. Similarly, a rainy July could curtail starts in the summer.

Vagaries in the weather can cause the growth in housing permits to exceed starts. If bad weather prevents housing construction, but not paperwork, an increase in permits portends a rise in starts in the subsequent month. Multi-family construction adds a domino effect: A contractor gets a permit for a 50-unit apartment complex in July, but heavy rains prevent excavation from starting until August—a 50-unit building counts as 50 starts.

Economists at the Census Bureau are well aware that weather patterns distort economic activity. However, they do not have any methods for analyzing the actual impact. One unidentified official was quoted as saying that

“every so often we contact the Weather Service to see if anything out of the ordinary has happened in a particular area.”⁵

Also look at the detail in the housing statistics and distinguish between long-term trends and one-time aberrations. With unexpected increases or decreases, see whether the movements are broadly based among the regions as well as by type (single- versus multi-family units). Starts that increase in only one region of the country might indicate a strong regional economy while suggesting weakness in the rest of the country. The regional variation in economic activity is easily visible by the activity in the housing sector. For instance, starts fell in the Midwest in 2004, but rose in all other regions of the country. Could the Midwest be acting as a leading indicator, or was business activity and housing demand simply slower in that region?

Whether you are interested in aggregate housing activity or regional breakdowns, look at more than one month's housing figures: These can be volatile from month to month for the reasons discussed earlier. Note that much of the monthly movement is noise. The Census Bureau reported that starts inched up 0.5 percent in February 2005 to a seasonally adjusted annualized level of 2,195,000 (plus or minus 9.4 percent)—but within a 90 percent confidence band such that starts could have ranged from a level of 1,989,000 to 2,399,000. According to the Census Bureau, if the given range includes a zero, it means that the level was not significantly different than the previous month's level and they warn that it could take six months to establish an underlying trend in total starts.⁶

Did You Know?

It is widely debated whether the stock market bubble of the late 1990s beget the housing bubble that began in 2000 and was still growing at this writing in 2005. Since its 1991 trough, residential construction spending grew threefold in nominal dollars. Nominal GDP only doubled during this period! A low interest rate environment coupled with fear stemming from equity investments gone haywire propelled consumers to invest in housing. Whether a housing bubble or not, however, housing bubble stories were a dime a dozen in newspapers and magazines in 2004 and 2005.

New Single-Family Homes Sales

The Census Bureau releases new single-family home sales between 17 and 20 business days after the end of the month. Sales are reported on a seasonally

adjusted basis at an annualized rate. The report issues figures on the number of homes sold, homes for sale, and the month's supply of unsold homes. New homes are considered sold with the signing of a sales contract or the acceptance of a deposit. According to the Census Bureau, the house can be in any stage of construction, from not yet started to completed. About one-quarter of new homes are sold at completion.

There are not too many breakdowns for analysis of single-family homes, but looking at the level of sales on a regional basis will show some regional disparity. For instance, total new home sales rose 9.8 percent in 2004, but sales were strongest in the West (12.2 percent) and Midwest (11.3 percent) followed by the South (8.6 percent) and Northeast (4.1 percent).

The other information in this report is the median and average sales price of new homes. One would expect home sales to decline as prices increased because rising prices make it more difficult for potential buyers to enter the market. However, rising home prices signal housing appreciation—which increases the homeowners' wealth. Thus, potential buyers might be more interested in purchasing a home as prices rise to take advantage of the appreciation. At some point, however, rising prices may limit affordability and price out young buyers (see Table 4.3).

Market Reaction

New single-family home sales are reported late in the month—about two weeks after housing starts and thus may see limited market reaction by financial market players. Home sales often move in the same direction as single-family housing starts, so if the latter have already shown market participants that the demand for housing has increased or decreased during any given month, home sales are less relevant. In a bear

TABLE 4.3 Selected Figures from the Monthly New Home Sales Report (SAAR)

	Oct-04	Nov-04	Dec-04
New Single-Family Homes Sold: Total (SAAR, thousands)	1,304	1,173	1,226
Northeast	103	83	68
Midwest	248	162	238
South	533	592	610
West	420	336	310
New Single-Family Houses For Sale: Total (SA, thousands)	412	419	423
New Single-Family Houses For Sale: Months' Supply (SA, Ratio)	3.8	4.3	4.1
New Single-Family Houses: Median Sales Price	\$229,200	\$224,500	\$230,200
New Single-Family Houses: Average Sales Price	\$289,600	\$283,200	\$284,100

Source: Census Bureau and Haver Analytics.

(bond) market, however, bond investors may view increases in home sales as confirmation of bad news. Keep in mind, though, that home sales reflects housing demand. Housing starts reflects demand as well, but in a booming market, speculative construction becomes a factor. Consequently, home sales may decline before housing starts when economic activity stumbles.

Watch Out!

The combination of new home sales with the stock of unsold new homes can indicate future housing construction. When home sales are rising strongly and the stock of unsold new homes is falling, it signals a need to replenish the supply of new homes, and starts could pick up in ensuing months. Conversely, if new home sales are declining, while the stock of unsold new homes is increasing, it portends a drop in new housing construction in coming months.

Home sales, like housing starts, tend to be more meaningful during turning points of the economy. For example, home sales will recover before other economic sectors when interest rates are low near the trough of the business cycle.

Watch for unexpectedly large changes. Home sales tend to follow the same seasonal pattern as housing starts. As a result, unusually warm weather during winter months can cause a temporary spurt in home sales, especially in the Midwest or Northeast. Similarly, unusually rainy seasons in the spring or summer months can hold down home sales temporarily. In addition, it can be useful to put the home sales data in perspective with the housing starts figures as well as the current level of mortgage rates.

ARE YOU INTERESTED IN *MORE* HOUSING INFORMATION?

The Census Bureau reports monthly shipments of manufactured homes (formerly called mobile homes) from a survey sponsored by the Department of Housing and Urban Development. These figures are released with a two-month lag; January figures would be available at the end of March. This is not a market-moving indicator, but real estate investors and equity investors in housing-related industries should find this information useful.

Existing Home Sales

The National Association of Realtors (NAR) releases existing home sales between 16 and 20 business days after the end of the month. Existing home sales are reported on a seasonally adjusted basis at an annualized rate. In 2005, the NAR redefined existing home sales to include condos and co-ops as well as single-family (freestanding) homes and provided three years of history to boot. In 2004, condo and co-op sales accounted for roughly 12 percent of the total. In contrast to new home sales that are counted at the signing of a sales contract, existing home sales are counted when the sales contract is closed. The mortgage loan process can easily take four to six weeks to complete so that a home resale typically involves a contract that was signed one or two months previously.

The reports issue figures on the number of homes sold, homes for sale, and the month's supply of unsold homes. In terms of existing home sales, the supply is almost infinite. Technically, anyone can decide to sell his or her house if offered the right price even if the home is not officially on the market at the time. The median sales price is also available for total existing home sales, single-family home sales, and condo and co-op sales as shown in Table 4.4.

TABLE 4.4 Selected Figures from the Monthly Existing Home Sales Report (SAAR)

	Oct-04	Nov-04	Dec-04
Existing Home Sales, Total (SAAR, thousands)	6,840	6,980	6,810
Northeast	1,140	1,130	1,090
Midwest	1,570	1,550	1,470
South	2,640	2,550	2,650
West	1,640	1,580	1,590
Median Price	\$185,400	\$188,100	\$188,900

Source: Census Bureau and Haver Analytics.

Market Reaction

Home sales can be old news to the market by the time they are reported, and they often move in the same direction as housing starts. Nevertheless, financial market participants may view increases or decreases in home sales as confirmation of good or bad news depending on whether they are bond or equity investors.

Watch Out!

Existing home sales, like housing starts, tend to be more meaningful during turning points of the economy. Sales are likely to recover before other economic sectors when interest rates are low and the business cycle is near its trough. Watch for unexpectedly large changes. Home sales tend to follow the same seasonal pattern as housing starts. As a result, unusually warm weather during winter months can cause a temporary spurt in home sales, especially in the Midwest or Northeast. Similarly, unusually rainy seasons in the spring or summer months can hold down home sales temporarily. In addition, it can be useful to put the home sales data in perspective with the housing starts figures as well as the current level of mortgage rates. Remember that existing home sales will not necessarily move in tandem with new home sales since they are defined differently (sale at contract versus sale at closing).

Pending Home Sales Index

Roughly at the same time that the NAR redefined their existing home sales data to incorporate condo and co-op sales, they also began to release a new indicator called the Pending Home Sales Index. It is released in the first week of each month for the month previous. So, February data are released in April. The NAR developed this index as a leading indicator of housing activity. As such, it is a leading indicator of existing home sales, not new home sales. A pending sale is one in which a contract was signed, but not yet closed. It usually takes four to six weeks to close a contracted sale.

ARE YOU INTERESTED IN MORE HOUSING INFORMATION?

The National Association of Realtors publishes a quarterly report on housing affordability. The index measures the ability of a family earning the median income to buy a home at the median price, based on current interest rate levels using conventional housing with a 20 percent down payment. This index is useful in gauging affordability even if the majority of new homeowners no longer make a 20 percent down payment on their homes.

This index was released for the first time in March 2005. It has not generated much market buzz yet. Nevertheless, it could very well turn out to be a reliable index over time. New indexes are not always monitored closely because market players do not know their inherent value. This index could be akin to the Mortgage Bankers' Association's purchase applications index since one would expect to file a mortgage application as soon as a contract is signed. This index targets existing home sales, though, while the MBA purchase applications index also incorporates new homes. According to the NAR, their sample shows that 80 percent of all pending home sales are settled within a two-month period and the majority of the rest close in three or four months. Most likely, this index will be a good leading indicator for existing home sales.

NAHB/Wells Fargo Housing Market Index

The National Association of Home Builders produces a housing market index based on a survey in which respondents from this organization are asked to rate the general economy and housing market conditions. The housing market index is a weighted average of separate diffusion indexes: (1) present sales of new homes, (2) sale of new homes expected in the next six months, and (3) traffic of prospective buyers in new homes. Responses are rated on two scales including good, fair, and poor; and very high to high, average, and low to very low. The diffusion indexes are then set to a scale of 0 for poor and 100 for good and then variations for the middle responses. A level of 50 means that the number of positive or good responses received from the builders is about the same as the number of negative or poor responses. Obviously, levels above 50 reflect good activity and levels below 50 reflect poor activity.

ARE YOU INTERESTED IN *STILL MORE* HOUSING MARKET INFORMATION?

The Census Bureau publishes a quarterly report on residential vacancies and homeownership. It is released about four weeks after the end of the quarter and covers information on rental and homeowner vacancy rates for the United States and by region; estimates of the total housing inventory for the United States; and homeownership rates for the United States and by region. This is not a market-moving indicator by any stretch of the imagination, but is a useful report for real estate investors.

Market Reaction

This index is reported on the day before housing starts and for that reason can attract some market attention. However, so many indicators are released in the same week as housing starts that this one seems to often fall through the cracks. In contrast to most indicators that are released at either 8:30 A.M. or 10:00 A.M. Eastern time, this one is released at 1:00 P.M. Afternoon releases do not get as much attention as morning releases (except for Fed-related news). Perhaps traders are caffeine-deprived in the afternoon.

KEY POINTS

- Volatility is the main characteristic shared by investment indicators.
- Revisions occur with great frequency in these investment series. Make sure to look at the trend in the data rather than at a one-month change.
- Financial market reaction to indicators of investment is somewhat more restrained than reaction to other economic indicators such as those tracking the consumer sector or inflation.
- Investors who must limit the indicators they monitor will find it best to keep track of housing starts and total manufacturers' shipments, inventories, and orders.
- Increases in any of the investment sector indicators are considered good news for the equity and foreign exchange markets, but bad news for the bond markets. Strong economic numbers lift equity prices, but also bond yields.
- Decreases in any of the investment sector indicators are bad news for equity investors and the foreign exchange markets, but good news for bonds. Weak (or declining) economic news will sink stock prices and bond yields are likely to drop.

The Foreign Sector

In 1980, real exports accounted for 6.3 percent of real gross domestic product, and real imports accounted for 6 percent. The U.S. trade balance was in surplus, and the foreign sector was not considered a consequential sector of the economy: Total trade in goods and services between the United States and foreigners accounted for 12.3 percent of GDP.

Fast forward to 2004. Real exports accounted for 10.3 percent of gross domestic product and real imports reached 15.7 percent. The increase of both imports and exports as a share of gross domestic product suggests that the foreign sector is now substantially more significant than it was 25 years ago. Its contribution has more than doubled to 26 percent! The growth in trade continues to be strong and shows how the United States has developed into a more open and global economy over the past 25 years. U.S. consumers and businesses now purchase roughly one-seventh of their goods and services from foreigners. As a consequence, the trade balance for 2004 was in deficit, a common occurrence in the prior two decades. Although the foreign sector has become more relevant to U.S. markets, the list of indicators that highlight the international statistics is very short.

This chapter describes the two international statistics available for scrutiny by financial market players, the media, and government policy-makers.

MONTHLY INDICATOR

U.S. International Trade in Goods and Services

The Bureau of the Census and the Bureau of Economic Analysis (BEA) release the trade balance on goods and services six weeks after the end of the month. It is seasonally adjusted, and the figures are available in current and inflation-adjusted dollars. The figures are not annualized but can be converted by multiplying each monthly amount by 12. Total goods and

services are reported on a balance of payments basis (calculated by the BEA), but commodity and country detail are reported on a census basis (compiled by the Census Bureau). Exports are calculated on a free-along-side-ship (FAS) basis. This means that transportation costs to the port of export are included, but other transportation costs and loading fees are not. Imports are reported based on the customs value. Costs for insurance and freight (CIF), essentially shipping costs, are not reflected. The customs value represents the price actually paid or payable, for merchandise at the foreign port of exportation. Excluding the costs of insurance and freight from the import figures lowers the value of imports and thereby lowers the trade deficit. However, the main rationale for measuring the trade balance in such a way is that transportation costs are considered a service and not a good.

According to the Census Bureau and the BEA, monthly data include actual month's transactions as well as a small number of transactions for previous months. Figures can be revised substantially in any given month. A preliminary estimate, along with the previous month's revision is released monthly. No further changes are made to a revised month's figures until more data become available in March, June, September, and December. At these times, figures are revised for six months. The March release contains revisions for all months of the previous year and aligns seasonally adjusted data with annual totals. The June release incorporates annual revisions that reflect updated source data and also changes in estimated methodologies.

The international trade balance is among the last reports available for each month, and is not known for its timeliness. For most reports, the government releases statistics that describe the previous month's transactions; but in this case, it describes transactions for two months back. Perhaps to make up for its lack of timeliness, the published report is rich with information. The Census Bureau and the BEA provide 18 exhibits listed in Table 5.1. You can be sure that macroeconomists working for banks and investment houses are not likely to scrutinize each of the tables in minute detail. Some tables are not relevant; others are partially useful. As a general rule, economists prefer to discuss inflation-adjusted figures rather than current dollar data because they give a better picture of the state of affairs. But convention plays a major role in determining which information financial market participants find interesting. News services that provide the economic data to subscribers in the financial markets have learned to report those figures in summary tables that make it more convenient to users (economists and market participants). Given the 18 exhibits provided, about half the tables have immediate relevance to financial market players.

TABLE 5.1 Table of Contents from Monthly International Trade Balance Release**Seasonally Adjusted**

Exhibit 1	International Trade in Goods and Services
Exhibit 2	U.S. International Trade in Goods and Services Three-Month Moving Averages
Exhibit 3	U.S. Services by Major Category—Exports
Exhibit 4	U.S. Services by Major Category—Imports
Exhibit 5	U.S. Trade in Goods
Exhibit 6	Exports and Imports of Goods by Principal End-Use Category
Exhibit 7	Exports of Goods by End-Use Category and Commodity
Exhibit 8	Imports of Goods by End-Use Category and Commodity
Exhibit 9	Exports, Imports, and Balance of Goods, Petroleum and Non-Petroleum End-Use Categories
Exhibit 10	Real Exports, Imports of Goods by Principal End-Use Category (2000 chain-weighted dollars)
Exhibit 11	Real Exports, Imports, and Balance of Goods, Petroleum and Non-Petroleum End-Use Categories (2000 chain-weighted dollars)

Not Seasonally Adjusted

Exhibit 12	U.S. Trade in Goods
Exhibit 13	Exports and Imports of Goods by Principal End-Use Category
Exhibit 14	Exports, Imports, and Balance of Goods by Selected Countries and Areas
Exhibit 15	Exports and Imports of Goods by Principal SITC Commodities
Exhibit 16	Exports, Imports, and Balance of Advanced Technology Products
Exhibit 17	Imports of Energy—Related Petroleum Products, Including Crude Oil
Exhibit 18	Exports and Imports of Motor Vehicles and Parts by Selected Countries

Information on Goods and Services

Source: Census Bureau and Bureau of Economic Analysis.

First, seasonally adjusted data is always preferable to unadjusted data. Among the 11 seasonally adjusted figures, Exhibit 1 (a summary of exports, imports and the balance on a balance of payments basis); Exhibit 5 (difference between the balance of payments and Census versions of the data); Exhibits 6 and 10 (summarized details of principal categories in nominal real dollars); and Exhibits 9 and 11 (petroleum versus nonpetroleum trade in nominal and real dollars). Among the unadjusted data, look at Exhibit 14 which shows trade flows by country. The country detail shows information on North America, Europe, the Pacific Rim, South and Central America, OPEC, Africa, and other countries. Figure 5.1 shows trade shares with major countries. Current U.S. trade policies make the country detail relevant for political reasons. For example, pundits worry about our trade deficits with Japan and China, but our deficit with Canada was nearly as large as with Japan. And total trade with Canada and Mexico is significant for the United States.

Monitoring the inflation-adjusted data is more useful since monthly fluctuations in the foreign exchange value of the dollar, or in the prices of various goods could obscure the underlying trend. For instance, large variations often come from changes in oil prices. Given its large relative share

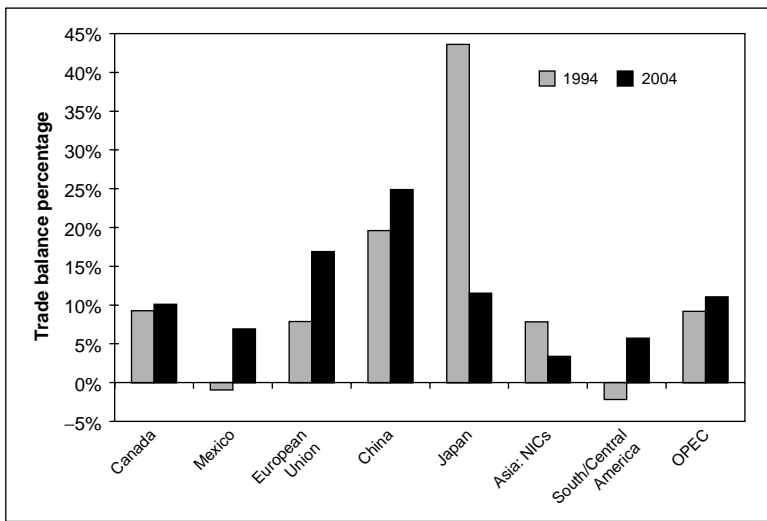


FIGURE 5.1 Trade Deficit Shares by Selected Countries: Notice that the U.S. bilateral trade deficit with Japan fell sharply relative to other countries between 1994 and 2004, most notably, China.

Source: Census Bureau, Bureau of Economic Analysis, and Haver Analytics.

among total merchandise imports, a sharp rise or fall in oil prices could easily swing the monthly trade balance by a few billion dollars in any given month. In 2004, the monthly trade deficit averaged \$51.5 billion while the petroleum deficit averaged \$13.7 billion per month.

The commodity detail divides total exports and imports by agricultural commodities, manufactured goods, mineral fuels, and all others. And the end-use commodities are sorted by: foods, feeds, and beverages; industrial supplies and materials; capital goods excluding autos; autos and parts; consumer goods excluding autos; and “other.” Each group is sorted by both imports and exports.

Among the service component: export and import demand for travel, passenger fares, other transportation, royalties and license fees, other private services, transfer under U.S. military sales contracts (exports only), direct defense expenditures (imports only), and U.S. government miscellaneous services. Travel and other private services are the major components of service exports and imports. This latter category includes such diverse items as education, financial, medical, and advertising services.

One should note that the service trade balance is fairly stable on a monthly basis. This is because monthly figures are not available and the BEA must estimate data based on quarterly, annual and benchmark surveys. Only partial information is generated monthly. As a result, the lion’s share of monthly fluctuations in the total trade balance is due to changes in exports and imports of merchandise. Incidentally, the United States is running a surplus in services, but the size of the 2004 surplus was half of the 1996 surplus.

The detail allows users to scrutinize monthly changes in the trade balance by component. Did the trade deficit worsen because exports fell, or imports rose? Are *consumers* buying more foreign goods or are *manufacturers* purchasing more capital goods from overseas? Although an increase in imports always worsens the trade balance, a rise in capital goods imports is viewed more favorably than a gain in consumer goods because the former can increase the productive capacity of the country, but the latter are only for current consumption.

It is well recognized that the United States depends on oil imports—and they account for 11 percent of the goods import bill. Many analysts look at the trade balance excluding oil, but other categories could be excluded as well. Real (inflation-adjusted) petroleum trade imports totaled \$138.8 billion in 2004. Our real import bill for automotive vehicles and parts amounted to \$223 billion during the same period. Why don’t we exclude this sector as well? The fact of the matter is that economists can get a bit carried away in excluding components from variables. If one of the pol-

icy goals of the United States is a balanced trade account, and we know that oil will always be a large share of our import bill, should we not decrease the level of imports in other categories, such as capital equipment and automobiles? (We could or could not have this as a policy goal—I merely want to show the futility of always excluding “special factors” from our headline series.)

The nature of foreign trade makes this indicator rather volatile from month to month. For example, the United States exports aircraft. A purchase of this size can skew the figures in any one month (as shown with durable goods orders and shipments). And even oil purchases, a non-durable good, tend to be uneven because producers need to replenish reserves from time to time. Looking at the trade balance on a moving average basis is more practical.

Import growth is procyclical; that is, as the domestic economy expands and consumers have more income, they are more likely to spend some of the extra money on foreign goods. Holding all other factors constant, the trade balance tends to deteriorate during economic expansions. When foreign countries are experiencing rapid economic growth, their imports (our exports) should increase at a faster pace. An increase in the growth of our exports will cause the trade deficit to narrow or a surplus to widen. Economies across the globe sometimes experience economic expansions simultaneously. In that case, whose exports and imports will grow most rapidly? That depends on several factors based on the sensitivity of import demand to income. Historically, the sensitivity of import demand of U.S. residents has been stronger than the sensitivity of foreigners’ import demand to income. As a result, we can predict that U.S. imports will probably grow faster than exports, and our trade balance will worsen.

Just like the demand for any product or service, consumer and business demand for imports depends on more than just income and the business cycle. The prices of imported goods or services also affect the demand for them. The price of imports can change in one of two ways: The actual price of the good or service can rise or fall; or the exchange value of the dollar can rise or fall.

The exchange value of the dollar relative to other currencies is an important factor in trade flows. As the value of the dollar increases, imports become less expensive and, therefore, more desirable. At the same time, our exports become more expensive to foreigners and their demand tends to decline.

The picture can be muddied further. The marketing strategy of foreign corporations might be to hold prices firm when the value of the dollar has declined, effectively making their products more expensive. Conversely, they can follow that same strategy when the value of the dollar is increasing. In this case, the price of the import may not necessarily rise as it would

if it were simply responding to the foreign exchange value of the dollar. During the mid-1980s, the value of the dollar rose, so foreigners took advantage of their competitive edge and established their products in the United States. The merchandise trade deficit reached a peak in December 1985. Earlier, when the value of the dollar started to decline in mid-1985, economists had expected that imports would drop sharply, albeit with a time lag of about a year, in response to higher import prices. But importers did not rush out to raise their prices, preferring to hold on to their market share. As a result, imports did not decline with the drop in the value of the dollar, although the rate of growth slowed significantly. The lower value of the dollar did make American products more competitive overseas, and export growth started to climb in 1987. The trade deficit improved for several years, and then once again widened until it reached a new peak in 1995. Since 1995 (and through 2004), the trade deficit has widened each year and reached new highs each year with only one exception: 2001, a recession year.

Rough rules of thumb exist for various changes in the economic environment. First, the demand for imports moves in tandem with the business cycle, meaning that imports grow during expansions and decline during recessions. At the same time, exports move in tandem with the business cycles of foreign economies, so demand for our exports grows when our major trading partners are expanding but contract or grow more slowly when foreign economies are in recession.

The second rule of thumb is that trade flows are sensitive to exchange rates. Whenever the value of the dollar increases in the foreign exchange market, consumers and businesses demand more imports because they have become relatively cheaper. The flip side of the coin is that foreigners demand fewer U.S. exports because our goods and services have become more expensive. A *decrease* in the value of the dollar will soften our demand for imports because they are more expensive. American exports benefit from a decline in the value of the dollar because their products become more competitive overseas. *Bloomberg* columnist John Berry noted in 2005 that economists have found “changes in exchanges rates seem to have a much smaller effect on prices of exports than was true in the past, and Fed economists who have studied the matter are not entirely sure why.”¹

It is important to keep in mind that the value of the dollar in the foreign exchange (FX) market may not move in tandem across all currencies. The dollar peaked against the euro and the Japanese yen at roughly the same time at the end of 2001 and then depreciated sharply through the end of 2004. However, during this same period, the dollar exchange rate with the Chinese yuan has remained unchanged since this currency is fixed,

rather than floating, in the FX market. (In mid-2005, China announced that it would abandon its peg to the dollar in favor of a basket of currencies and allow the yuan to float within a narrow band.) Because China is a major exporter of goods to the United States, we have not seen a narrower trade deficit, but rather a wider gap over the past few years, as China has become a larger force in the international arena.

The third rule of thumb also has to do with prices. When prices of American goods rise more rapidly than prices of foreign goods, the demand for domestically produced goods declines both in the United States and abroad. As a result, U.S. inflation bodes poorly for exports. On the flip side, inflationary pressures in foreign economies that lead to increases in the prices of imported goods should lead to reduced import demand.

Market Reaction

During much of the 1980s, financial market participants eyed the net merchandise trade balance (always a deficit during the period) and reacted to changes in the balance. Since the 1990s, market participants are dissecting the data with more sophistication by looking at the gory details. That is, they monitor monthly changes in exports and imports, and even distinguish between imports of capital goods and consumer goods.

Participants in the fixed income market favor a deteriorating balance coming from weak exports because that points to a sluggish economy. However, they do not necessarily favor an increase in imports because that weakens the foreign exchange value of the dollar. A deteriorating dollar can lead to inflationary pressures as well as a rise in the demand for exports down the road.

Participants in the equity markets favor an improving trade balance with a robust demand for exports coupled with a lackluster demand for imports. That points to strong gains in domestic production and also bodes well for domestic sales and corporate earnings. The only stipulation is that export growth should not be strong enough to incite inflationary pressures in the domestic economy. No one likes inflation.

Foreign exchange market professionals also favor an improving trade balance caused by healthy export growth. A demand for exports points to a demand for dollars that is independent of the demand for dollars from higher interest rates. If exports grow too rapidly, fixed income market players may worry about credit demands in an expanding economy that could cause interest rates to rise. The foreign exchange market reacts more strongly to this report than either the bond market or the stock market.

Did You Know?

During the 1990s, the United States enjoyed a surplus in advanced technology products. In November 2004, the United States had a record trade deficit of \$5.8 billion in this category—and a 12-month record deficit of \$36.9 billion. In contrast, the United States saw a surplus in “scrap and waste” with a 12-month total surplus of \$8.4 billion. Exports in this category are up 31 percent from a year earlier. “What is effectively rubbish,” said John Lonski, Moody’s chief economist, “serves as one of the United States’ fastest-growing export categories.”²

Watch Out!

Market expectations surrounding the figures should give you an idea of whether higher exports are good or bad for the markets. Depending on other economic indicators, the interpretation may change. There are a few special factors that you should watch for in the trade deficit. First, as mentioned previously, you should always determine whether the change in the trade balance comes from exports or imports. Second, look at the pattern of growth in each series. A one-month blip in imports or exports is not necessarily a problem or the beginning of a new trend. Therefore look at a three-month moving average of each series (imports and exports). Oil imports and agricultural exports occasionally cause monthly blips. Auto shipments from overseas can also cause occasional distortions. These have become smaller, however, because many producers of foreign cars now manufacture in the United States. Aircraft shipments spur exports from time to time.

When the dollar is in a declining mode, the nominal trade balance will get worse before it gets better. This phenomenon is called the *J-curve effect*. When the dollar declines, economic theory suggests that we should sell more exports and buy fewer imports. But, since imports are dollar-denominated, we need more dollars to pay for current import levels. Suppose that the value of the dollar depreciated by 10 percent in March. It would take several months for consumers and producers to change their demand based on the weaker dollar. At the same time, all the goods that were bought in March would now cost 10 percent more; the initial impact of a drop in the value of the dollar would be to worsen the U.S. trade deficit. Conversely, when the foreign exchange value of the

(Continued)

Watch Out! (Continued)

dollar appreciates, economic theory suggests that we should purchase more imports. Consumers and producers, however, would take a few more months to respond to a rise in the value of the dollar. For that reason, a 10 percent appreciation in the dollar in March would lead to a drop in the trade bill. In this case, the initial impact of a dollar rise would be to improve the deficit.

This is one of the reasons that inflation-adjusted data does not lead you astray when determining underlying trends in the data. In adjusting the merchandise trade balance for inflation, the J-curve is not visible.

QUARTERLY INDICATOR

Current Account

The current account, a comprehensive measure of a country's trade balance in goods, services, and unilateral transfers, is widely used in international comparisons of countries' relative strengths and weaknesses in international transactions. The Bureau of Economic Analysis releases current account information nearly three months after the end of the quarter. The data are released as quarterly levels (not annualized), but they are seasonally adjusted. The account is denominated in current dollars. It is not adjusted for inflation and never discussed in real terms—unlike the international trade balance, which is analyzed in current and real dollars.

More specifically, current account transactions include exports and imports of merchandise, investment receipts and payments, net military, transportation, travel, and other services. Unilateral transfers are imputed transactions. The balance of payments uses double entry bookkeeping. Consequently, exports of goods or services that are not paid for in goods, services, or income become transfers. Examples of unilateral transfers are U.S. government grants and remittances, and pensions. For instance, if a company pays a pension to a former U.S. resident who now lives in a foreign country permanently, it is a transfer from the U.S. accounts to that foreign country. In the same way, a person who previously lived and worked in a foreign country, but now permanently resides in the United States, may receive a pension from the foreign country. These are all added together to arrive at a net balance for unilateral transfers. Table 5.2 lists the major categories of the current account.

TABLE 5.2 International Transactions

	1960s	1970s	1980s	1990s	2000-04
Balance on goods	\$4,081.9	-\$10,383.3	-\$94,112.1	-\$173,912.9	-\$515,105.2
Balance on services	-\$896.6	\$2,169.7	\$9,473.9	\$68,295.8	\$59,834.4
Balance on goods and services	\$3,185.4	-\$8,213.6	-\$84,638.5	-\$105,617.1	-\$455,270.8
Balance on income	\$4,877.0	\$14,762.1	\$26,361.0	\$19,213.3	\$21,734.4
Unilateral current transfers, net	-\$4,729.4	-\$6,863.2	-\$19,507.8	-\$33,123.7	-\$60,402.8
Balance on current account	\$3,332.5	-\$314.7	-\$77,785.0	-\$119,527.4	-\$493,939.2

Source: Bureau of Economic Analysis and Haver Analytics.

Market Reaction

Not all financial market participants will react to these international transactions statistics. In fact, until 2004, players in the stock and fixed income markets were likely to ignore them altogether. The news is old—at least three months old—and nothing in this report is forward-looking. However, the current account deficit has grown so large in the past several years that financial market players have become more concerned about the ramifications of the deficit. As usual, market players were not worried until 2004, when Federal Reserve Chairman Alan Greenspan shared his concerns that the current account deficit was growing rapidly and could potentially become a problem for the United States.

Foreign exchange market professionals find the data more interesting because of dollar implications. If the current account balance is deteriorating (a widening deficit), it means that U.S. businesses and consumers are purchasing more goods and services from overseas than foreigners are purchasing from the United States. This suggests a greater demand for foreign currencies, rather than a demand for U.S. dollars, causing the dollar to depreciate in the FX market. When the current account balance is improving (a smaller deficit or a surplus), it means that foreigners are demanding more American goods and services than we are demanding foreign products. Given the latter scenario, the dollar would increase.

Watch Out!

Always search for special factors that could skew the underlying trends in the data. In 1991, several foreign countries reimbursed the United States for its military hardware during the Persian Gulf War. The billions of dollars that were paid resulted in a U.S. current account surplus of \$3.7 billion in 1991, compared with a deficit of \$79 billion in 1990. These payments obscured the

(Continued)

Watch Out! (Continued)

underlying trends in the current account. It is true that the current account was improving during this period as the gap narrowed on the merchandise trade balance. However, the United States still had quite a bit of red ink.

Because the current account deficit is in nominal dollars—and the nominal amount will likely increase at least with inflation—it is more useful to look at the current account balance as a share of GDP. This allows one to make comparisons over time. For instance, the current account deficit widened sharply in the 1980s—and the share of the current account to GDP rose to a high of nearly 4 percent. This percentage was surpassed in 1999 and kept on flying to 6 percent by the end of 2004 as shown in Figure 5.2.

Look at long-term trends in the current account to assess the relative competitiveness of the United States versus foreign countries. Also, these trends indicate where our standard of living is headed. During the 1980s, the trade deficit and the federal budget deficit were termed the “twin deficits.” Spending by consumers, businesses, and government led to significant deficit borrowing and little saving. As a result, the U.S. federal budget deficit had to be financed by foreigners. How does that hurt the United States? It means

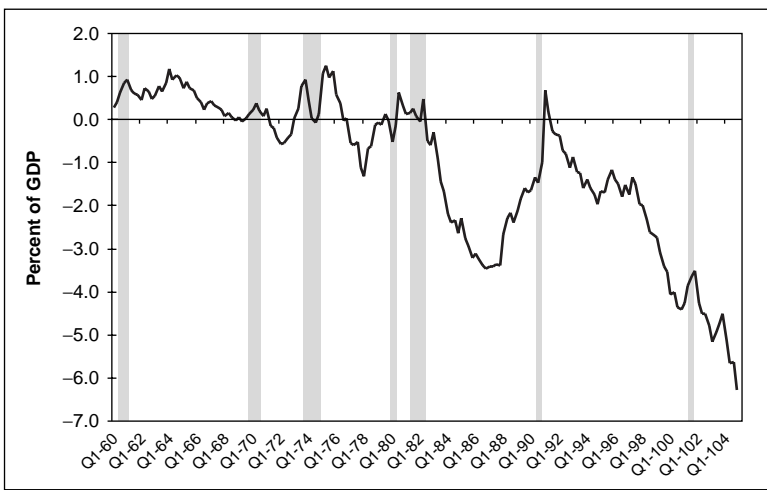


FIGURE 5.2 Current Account as Percent of GDP: The U.S. current account deficit was large, as a share of GDP, in the 1980s, but there is no question that the deficit worsened dramatically in the 2000s.

Source: Bureau of Economic Analysis and Haver Analytics.

that interest payments are made to foreigners, not American residents. Funds leave our economy and become income abroad. Eventually, the income loss through high deficit payments leads to lower living standards here.

KEY POINTS

- The U.S. economy has steadily increased its reliance on trade with foreign countries since the 1980s.
- Indicators describing foreign trade in goods, services, and capital expenditures are sparse relative to economic indicators describing other sectors of the economy.
- Indicators of foreign trade are the least timely of all economic series.
- A positive or improving trade balance is bullish for the foreign exchange market—it means a strong value of the dollar.
- A positive or improving trade balance is also bullish for the stock market because it portends strong domestic corporate profits.
- A positive or improving trade balance is bearish for the fixed income market because it suggests healthy domestic production and portends inflationary pressures.

The Government Sector

Government expenditures on goods and services account for roughly 18 percent of gross domestic product. This category of GDP does not incorporate transfer payments and funds going to entitlement programs such as Social Security payments, unemployment insurance compensation, or food stamps and housing subsidies. As mentioned in Chapter 2, the government spending category can include such items as office equipment, military hardware, or the salaries of civilian and military workers, which are payments for services rendered. However, transfer payments cannot be counted in GDP because they do not represent production of a good or service.

Government spending is different from other sectors of the economy. Consumer spending and investment expenditures depend on such economic factors as income and interest rates. The foreign sector depends on these as well and on the foreign exchange value of the dollar. Government spending on goods and services is not directly dependent on the economy in the same manner. Consequently, you cannot establish the same rules of thumb when government expenditures grow or decline as you would when other economic indicators post gains or declines. For instance, consumers spend much of each additional dollar they earn. When disposable income increases by one percent, most likely, consumer spending will increase by nearly the same amount.

Instead, government expenditures are determined by fiscal policy. In short, fiscal policy is the federal government's plan to purchase goods and services, pay out transfers in income or in-kind, and determine tax policy. The government may decide to spend more during recessions in order to spur economic activity; the government may decide to spend less during expansions to prevent inflationary pressures. These decisions, however, must be actively decided by the President's administration and Congress; there are no automatic mechanisms that increase government expenditures on goods and services as the economy falls into recession, nor are there mechanisms that curtail government expenditures when the economy is expanding at a

good clip. Fiscal policy impacts economic growth. Through the multiplier effect, increases in government spending eventually lead to increases in consumer income and spending.

While there is a lack of automatic expenditures on goods and services that are counted as government spending in GDP, the government has automatic mechanisms in place that move counter to the business cycle. These automatic stabilizers work on the income side as well as the expenditure side of the federal government budget. The expenditures are not those counted in GDP because they are transfer payments. For example, when the economy slides into recession, the government pays more unemployment compensation or gives more subsidies such as food stamps to those in need. At the same time, federal government coffers also suffer from a decline in revenues stemming from lower income and corporate taxes. The U.S. tax system is such that those individuals in lower income brackets pay fewer taxes. When workers earn less money by working fewer hours during a week, or fewer weeks in a year, they also have a smaller tax bill.

State and local governments also experience this decline in tax revenues during downturns and subsequent increases in tax revenues when the economy recovers. While the federal government has not clearly worked in the direction of a balanced budget, state and local governments have tended to operate in that direction. In fact, state and local government budgets have been in surplus for the past 30 years with only minor exceptions. As a result, state and local government spending is more closely tied to the business cycle than federal spending as sales and income tax revenues drop during recessions and rise with expansions.

In this way, the government sector of the economy is affected by the business cycle—and Congress and the administration determine whether they wish to offset declines in the private sector by beefing up the public sector. Undoubtedly, the decision-making process is beset by many lags so that a spending boost may not always come about when it is needed most. Many may remember President Ford's tax rebate in the first half of 1975. As it turned out, the economy was already coming out of recession by the time that Congress had approved a tax rebate to stimulate consumer spending and the economy. Many economists believe that a poorly timed fiscal stimulus could instigate or exacerbate inflationary pressures. Oddly enough, not all taxpayers were happy to get a rebate introduced by President Bush in July and August 2001. Many people did not think that it would have an impact on their financial lives, and many realized it was not a true rebate, but an advance on their refunds due in the coming year. Nonetheless, a spurt in disposable income over those two months did lead to a small spurt in personal consumption expenditures as well. And tax

rates were indeed reduced in 2001, and the marginal added funds in the hands of taxpayers might have helped spur a little spending. On the whole, it was not a big impact and the recession was pretty much over by the fall of that year, anyway.

In looking at government spending as a GDP entity, we do not have many indicators that reveal the direction of this expenditure category each month. No one indicator exists in the same way that shows us how retail sales are related to personal consumption expenditures or the merchandise trade balance is related to the foreign sector. However, a few indicators, subcategories of series that have already been mentioned for other sectors of the economy, do suggest the pace of government spending for the current period.

In contrast to most economic statistics, most of the ones described in the following sections do not have a media following, nor do financial market participants closely monitor them. To the extent that federal policymakers such as the Federal Reserve want to monitor developments in both the private sector and the public sector, they keep an eye on figures that are called here “hidden indicators.”

The only release describing government spending that is scrutinized by players in the financial markets is the monthly estimate of the federal budget, discussed in Chapter 11.

HIDDEN INDICATORS

Three hidden indicators can be found in the employment report, construction expenditures, and durable goods orders and shipments.

Government Employment

The first indicator reported during the month is the employment situation. The Labor Department’s Bureau of Labor Statistics releases the employment situation for the previous month only one week after the end of the month. The establishment survey which measures nonfarm payroll employment includes seasonally adjusted monthly levels for federal and state and local government.

The federal government portion includes only civilian federal employees in the establishment survey. In terms of the federal government, compensation is a small portion of total purchases. Changes in payrolls, however, often correspond to changes in federal government spending in the GDP data. With respect to the state and local government sector, compensation is a large portion of state and local government purchases, so

changes in employment could have a significant impact on total spending. Year-over-year changes in employment at the state and local level generally correspond with year-over-year changes in state and local government spending as measured in gross domestic product (see Table 6.1).

The household survey, which measures total employment and is the source of the nation's unemployment rate, gives information on military employment. However, these figures are no longer reported in the monthly news release with other household data. The figures are available in the monthly *Employment and Earnings* publication of the Bureau of Labor Statistics.

Until the early 1980s, beset by recession and high unemployment rates, the Bureau of Labor Statistics regularly reported only the civilian unemployment rate. During that time, many economists conducted studies that suggested it would be proper to include the military in the monthly labor force statistics. Indeed, the Commission for Employment and Unemployment Statistics had already recommended that it be done in 1979. By definition, all military personnel would be counted as employed and in the labor force. By adding these figures to the civilian labor force, it would put downward pressure on the total unemployment rate, because you would be adding employed workers to the labor force. The total unemployment rate, which included military personnel, was always 0.1 or 0.2 percentage points less than the civilian jobless rate. The rationale behind the inclusion of military personnel is that choosing to work in this sector is a viable choice as long as young men and women are not being drafted. Despite the government's attempt to highlight the total unemployment rate rather than the civilian unemployment rate, it just did not

TABLE 6.1 Government Payrolls

	Oct-04	Nov-04	Dec-04
Government	21,700	21,706	21,700
Federal Government	2,723	2,728	2,706
Federal Govt Except Postal Service	1,940	1,946	1,940
U.S. Postal Service	783	781	766
State Government	5,007	5,015	5,020
Educational Services	2,268	2,271	2,278
Excluding Educational Services	2,738	2,743	2,742
Local Government	13,970	13,963	13,974
Educational Services	7,811	7,806	7,811
Excluding Educational Services	6,159	6,157	6,163

Source: Bureau of Labor Statistics and Haver Analytics.

work. Financial market participants and the media continued to pay attention to the civilian jobless rate. Finally, the Bureau of Labor Statistics stopped releasing the total unemployment rate monthly.

All in all, the employment figures are a good indicator of monthly spending in state and local government. While the data are virtually ignored by the markets, they can be a useful forecasting tool for economists.

Watch Out!

You might already keep an eye on government employment growth to discern whether the total rise in nonfarm payrolls was due to the private sector or the public sector. Gains in government employment are not necessarily smooth each month, despite the ever-present seasonal adjustment mechanism. For example, during election years, local governments hire extra polling workers, which will show up only as a temporary blip. If teachers go on strike at the start of the school year, it affects local government employment because teachers tend to return to school in large numbers in August and September—and the seasonal adjustment factors expect them.

The major blip in government sector employment occurs during the decennial Census years (1980, 1990, 2000, etc.). The last census was undertaken in 2000, so you will not have to worry about this particular aberration until the year 2010. In any case, census workers were hired during the first half of the year, raising monthly estimates of nonfarm payrolls. These same workers were fired in the second half of the year, lowering estimates of nonfarm payrolls by a similar magnitude.

Remember to check employment trends in addition to the monthly figures. Just as with all other economic data, the level or rate of growth can be erratic from one month to the next.

Public Construction Expenditures

Construction expenditures are also reported monthly. As you may remember from Chapter 4, the Census Bureau reports construction expenditures about five weeks after the end of the month. The series is made up of private residential spending, private nonresidential spending, and public expenditures.

Public expenditures include several categories that are also seen in private construction: office buildings, commercial buildings, healthcare, amusement and recreation, transportation, and power. The largest components are educational buildings and highways and streets. Most highway

and street construction is financed by state and local governments (even when it is subsidized by federal government funds). This component gives a clue on monthly state and local government spending on structures. These figures are also ignored by the financial markets but are useful by economist standards in assessing spending on structures by state and local government as measured by GDP.

Watch Out!

The detail on public construction expenditures is not necessarily useful on a piecemeal basis. Nonetheless, you should always check spending on highways and streets. That is among the largest categories, and the one subject to more volatility due to weather and seasonal adjustment problems.

Defense Orders, Shipments, and Inventories

The advance durable goods report along with the more complete manufacturer shipments, inventories, and orders report also include figures for defense. Defense orders and shipments that illustrate spending on ships, tanks, and aircraft, are highly volatile from month to month. These figures do not correlate well with government spending figures as measured by gross domestic product. (I spent several years keeping track of the data just in case!) These figures are also ignored by the financial markets and rightly so. Despite the fact that we could look at the level of orders, shipments, inventories, and unfilled orders of defense goods, this indicator is probably the least useful. Enough said about it.

KEY POINTS

- Increases in government spending are unfavorable to the fixed income market because increased borrowing needs causes interest rates to rise. Higher U.S. interest rates are favorable for the value of the dollar, but not for stock prices.
- Hidden indicators, reflecting government spending, do not affect the financial markets because participants do not monitor them.

Inflation

Seldom can you put several people in a room and find them on the same side of an issue. You can, however, put a bond trader, a stock trader, a foreign exchange trader, and even several economists together and all would agree that inflation is bad. Government administration officials, governors of the Federal Reserve Board, and Congress also believe that no good comes from inflation together with a broader constituency of consumers, which includes lawyers, doctors, teachers, retailers, and homemakers among others.

Indeed, most people are of one mind: Inflation needs to be wiped out.

Even with this much agreement, people who read about inflation in the popular press, bandy the term about, and seem to be well versed on the topic, are often not talking about the same thing. So what is inflation, anyway?

A well-coined phrase describes it as “too much money chasing too few goods.” The economic description is not quite so succinct. It defines inflation as an increase in the general level of prices. When I was a bank economist, a bank customer called to inquire about inflation. She obviously did not know what it meant, and when I explained that inflation was caused by rising prices, she berated me for getting off the subject and huffily asked what prices had to do with inflation, anyway.

When we talk about economic growth, we can point to gross domestic product as a comprehensive measure of economic activity in a country and can easily describe GDP by the sum of its components. Unfortunately, even though we can define inflation as an increase in the price level, there are no easy equations to memorize, nor is there a single measure of inflation that everyone will agree is a comprehensive and acceptable industry standard. Depending on the index, or the goods or services being measured, different rates of inflation abound. Inflation can be measured with a fixed-weight or variable-weight basket. Analyzing commodity prices, wages, or prices of services will yield not only different inflation rates, but also varying degrees of response to the environment.

Some commodity prices are so sensitive to the economic environment that a recession or weak growth can actually cause them to decline. Inflation then becomes *deflation*. The Reuters-CRB Futures Price Index, a commodity index, plunged nearly 19 percent between December 2000 and October 2001, just before and during the 2001 recession. In contrast, a recession might affect wages and prices of services by slowing down their rate of increase. For instance, workers might receive annual wage increases of 3 percent a year rather than 6 percent. The employment cost index, a measure of wage inflation, rose 4.5 percent rate in the second quarter of 2000 (a year before the economy fell into recession), but increased 3.4 percent in mid-2002, a year after the recession ended. As long as prices continue to rise, inflation is not dead. This process of smaller price gains is a moderation in the rate of inflation. When prices were slowing in the mid-1980s, the term *disinflation* became popular. That term, however, implies a lack of inflation when prices are simply rising more slowly. Annual increases in the consumer price index averaged 6.6 percent in the first half of the 1980s, 3.7 percent in the second half of the 1980s, 3.5 percent in the first half of the 1990s, and 2.5 percent in the decade spanning 1995 through 2004. That does not, however, mean inflation was wiped out, only that it moderated. True deflation occurs when prices decline outright. The last time the United States experienced extended price deflation was during the Great Depression in the 1930s. (In the postwar period, the consumer price index declined marginally on an annual basis only twice: in 1949 and 1954.)

Did You Know?

Deflation became a hot topic in 2003 when the core CPI (excluding food and energy prices) was averaging monthly gains of 0.09 percent. It caused the Fed to reduce the federal funds rate target to 1 percent, its lowest rate in 45 years!

In the labor market, a slower rate of inflation occurs, rather than outright declines in wages, because wage increases are contractual and often institutionalized. Moreover, wage contracts are long term, based on past inflation rates. Until the 2000s, it was uncommon to see someone's nominal wage decline, but more common to see prices of goods decline. Rapid technological change in the 1980s and 1990s led to sharp declines in the prices of computers, calculators, and TVs, for example. Between 2000 and 2005, several airlines faced bankruptcy. Unions for pilots and flight attendants, among others, were forced to accept wage cuts for their members.

Did You Know?

Real wages decline when annual increases in wages do not match annual increases in prices. Average hourly earnings, adjusted for inflation, declined steadily after peaking in 1973. Real average hourly earnings increased in 1994 for the first time in 21 years and then rose more rapidly than the CPI during much of the 1990s and early 2000s. A better indicator of employee compensation comes from the employment cost index that showed that annual compensation growth surpassed annual increases in the CPI every year since 1981, except 1987, 1990, and 1996.

In addition to behavioral dissimilarities in inflation attributable to product differences such as goods versus services, the rates vary because measurement processes are not identical. The consumer price index and the producer price index are *fixed-weight* measures of inflation, meaning that the same basket of goods is analyzed each month. The chained GDP deflator is a *variable-weight* measure of inflation, which means that the basket of goods and services being priced depends on what was produced during a particular quarter.

Why is inflation bad?

We all agree that inflation is bad, but why? In fact, inflation does not hurt everyone, so it is a wonder that everyone feels it is such an evil. Yet it is easy to see how inflation hurts the public in general. Rising prices reduce purchasing power. For instance, when gasoline prices rise by 10 cents a gallon, a weekly 10-gallon fill-up means that you are one dollar poorer—not a great deal, but it can mean the cost of a candy bar or a soft drink at lunch. Between 2002 and 2004, gasoline prices doubled—having a noticeable impact on consumers' budgets. People on fixed incomes are hurt more by inflation than individuals whose wages rise with inflation. If your salary increases three percent and consumer prices rise three percent a year, then you are neither better nor worse off. But a rise in consumer prices will hurt your standard of living if wages do not increase at all, or if your wages increase less than overall consumer prices.

Inflation creates instability in the economy and distorts economic decisions. Debtors should love inflation. Consumers who borrow to buy a house and students who take out loans to finance their education are able to repay their loans in dollars whose value is lower than at the time of borrowing. Moreover, as their wages increase with inflation, their monthly loan payments become less onerous. Congress should love inflation. It pushes people up into higher tax brackets and increases tax revenues without imposing

new tax laws that would be unfavorable with constituents. Nonetheless, Congressional tax reform in the 1980s indexed some exemptions to inflation and reduced the tax bite. Creditors are key losers in times of unexpected inflation as those who borrowed money return it in its reduced value. Company pensions are not adjusted for inflation although Social Security payments are adjusted annually by the consumer price index.

In periods of escalating inflation, consumers and businesses may buy items they do not really need to avoid future price increases. Under different circumstances, funds might be put to better use. Bondholders are big losers as bond prices decline sharply when interest rates are rising. Such increases in rates occur to partly compensate lenders. Those who hold property, such as real estate, are winners in an inflationary environment. Collectors of gold, silver, and antiques might also benefit.

Did You Know?

Gold was a poor investment in the 1990s as prices generally declined during most of the decade. Prices began to turn around in 2001 just before the peak in the foreign exchange value of the dollar. As the dollar plunged in the FX market, gold prices soared. Despite the turnaround in gold prices, at roughly \$450 per ounce in late 2004, they were still well below 1980s prices when gold peaked at more than \$800 per ounce.

Some people argue that it is only unexpected inflation that causes problems, not anticipated inflation rates. After all, if we knew that we had to live with inflation, then we could take it into account when conducting transactions. Wages could be indexed (as many already are); and interest rates could be indexed (similar to adjustable rate loans or inflation-linked bonds). The tax reform actions of the mid-1980s indexed tax brackets so that consumers would not automatically be shifted to a higher tax bracket when their salaries were merely keeping up with inflation. However, indexing economic transactions embeds inflation more deeply into the system. If wages are indexed to inflation, producers may be tempted to raise their product prices to cover increased wage costs (which are three-quarters of business costs).

If “too much money chasing too few goods” causes inflation, then we need only to prevent the spread of “too much” money. That happens to be the job of the Federal Reserve, which keeps track of the money supply in the financial system. When the Fed eases monetary policy, interest rates de-

cline and promote economic growth through the interest-sensitive sectors. For instance, lower mortgage rates spur home sales, which invite spending on appliances and furniture. When the Fed tightens monetary policy, interest rates rise and hinder economic growth. The total expense of purchasing motor vehicles, furniture and appliances, and new homes increases when interest costs rise, reducing their demand.

If inflation is bad, does that mean deflation is good? In 2002 and 2003, Fed policymakers worried that the U.S. economy would enter a deflationary spiral. In some ways, deflation is worse than inflation because it can lead the economy into a severe recession. If consumers expect prices to be reduced tomorrow, why would they buy anything other than bare necessities? If producers wanted to make capital investments, they would also be encouraged to wait until prices and interest rates declined even further. A significant weakening in demand leads to substantial unemployment—or severe declines in wages and salaries. This vicious cycle then causes further reduction in consumer demand. The Japanese economy of the 1990s is cited as a textbook example of deflation and its consequences.

Inflation indicators described in this chapter are as abundant as indicators of consumer spending discussed in Chapter 3. Some of the high-frequency indicators favored by financial market participants are not necessarily worthwhile indicators for individual investors who take the long view in their personal investing style. The monthly and quarterly indicators of inflation are all reasonable to follow, although some may have more bugs than others on a month-to-month basis. There is no question that inflation is important to financial market participants and government policymaking officials.

HIGH-FREQUENCY INDICATORS—COMMODITY PRICES

In anticipating inflationary pressures, oil and food prices are closely scrutinized commodities. Oil, as a source of energy or a natural resource in the production of goods, is a vital component of economic activity used in manufacturing and used by consumers. Food is indispensable in every person's budget.

Crude Oil Prices

Crude oil is traded at the New York Mercantile Exchange (NYMEX). Both spot and futures prices of crude oil are determined in the market.

The spot price reflects the current value of the commodity, whereas the futures price reflects the price at some point in the future such as three or six months hence. If the spot price of (Texas) crude oil is \$40 per barrel, you can purchase Texas crude today for \$40 per barrel. But if the futures price of crude oil is \$45 per barrel, you can purchase Texas crude today at the price of \$45 per barrel for delivery three or six months hence.

Market Reaction

Financial market participants in the fixed income, equity, and foreign exchange markets consider crude oil futures prices a leading indicator of inflation. As a group, traders react to actual economic and political events as well as rumors of these events. While traders in the financial markets are reacting to crude oil futures prices, commodity traders are making prices in the futures and spot markets. Furthermore, commodity traders can be as reactionary as stock, bond, or foreign exchange traders. Rumors that Saudi Arabia will sharply curtail oil production will cause a surge in spot and futures prices.

Did You Know?

Spot and futures prices do not have to move in tandem. The market is in “contango” when the spot price is below the futures price. As the *Economist* recently explained: “In bull markets, this is often a sign that prices are on the turn. Oil stocks are likely to rise, because purchasers will load up at today’s lower prices rather than wait, thereby easing prices in a few months’ time. Alan Greenspan, chairman of the Federal Reserve, recently cited the contango as a reason why he was relaxed about oil prices.”¹

When financial market traders react negatively to the change in crude oil prices, bond prices, stock prices, and the value of the dollar all decline. A few minutes later, commodity traders may learn that the rumor was false and prices may fall back down. Bond prices, stock prices, and the value of the dollar then shoot back up. In the meantime, millions of dollars have switched hands in the financial and commodity markets, creating many winners and losers.

Watch Out!

Oil is an important commodity in the U.S. economy. Rising or falling crude oil prices might indicate price increases or decreases for other commodities as well. Because supply-and-demand considerations cause volatility in crude oil futures prices, getting caught up in hourly price movements is not useful in terms of long-term inflationary expectations.

Economic theory tells us that interaction of supply and demand determines the prices of all goods and services. Because of OPEC (Organization of Petroleum Exporting Countries), however, supply plays a greater role than demand in the determination of crude oil prices. For more than 40 years, OPEC has controlled prices by turning the oil spigot off and on. Although changes in oil prices affect the pattern of inflation, they should not affect the underlying rate of inflation unless the price change of crude oil is sustained for an extended period. In that case, it would be factored in all stages of production and consumption behavior. A short-term increase in the price of oil is most likely to affect a change in relative prices, not the price level. Only the Federal Reserve can create inflation through an overly accommodative monetary policy. When the Fed does not ratify oil price hikes with easy credit conditions, prices of other goods or services have to decline. For that reason, oil price increases alone cannot cause inflation; they can only cause higher gasoline and fuel oil prices. (In the short run, they might also lead to higher prices in those products or services that use oil as a major component—such as air travel or cabs.)

Financial market participants realize that the Fed ultimately controls inflation. Nonetheless, they constantly monitor changes in oil prices as a precursor of inflationary pressures in the economy. Small changes in spot or futures prices do not usually affect players in the fixed income, stock, or foreign exchange markets, even though every dip and wiggle was felt in 2004 and early 2005 when crude oil prices approached \$60 per barrel. Large changes will certainly impact all markets. Prices in all markets will decline when oil prices spurt up; all prices will increase when oil prices drop.

Traders certainly must track changes in oil prices because someone is bound to react to them. It is worth noting, however, whether changes are coming from rumors or actual events. Moreover, the changes will not be automatically reflected in other inflation indicators such as the consumer price index or the producer price index. Even when price increases or decreases in the spot market are sustained and translated in those indexes, a few months will probably elapse because crude oil is not a processed commodity, which it needs to be for inclusion in the indexes.

(Continued)

Watch Out! (Continued)

Individual investors find that major movements in the spot or futures price of crude oil are more meaningful than hourly price changes. Checking the nightly closing price can keep you adequately informed. If you decide to track crude oil prices daily, logging the daily close will allow you to monitor longer-term trends. Figure 7.1 illustrates how variations within the month could be large (June and September), but smaller from one month to the next (average change from August to September).

Food Prices

Financial market participants also closely monitor food prices. Though no equivalent to OPEC intervenes in crop or livestock markets, food is nonetheless affected by supply factors—largely natural disasters or bountiful harvests. (Farm support programs have diminished sharply in importance not only in the United States, but in many European countries as well.) Literally speaking, supply shocks can come and go with the tides.

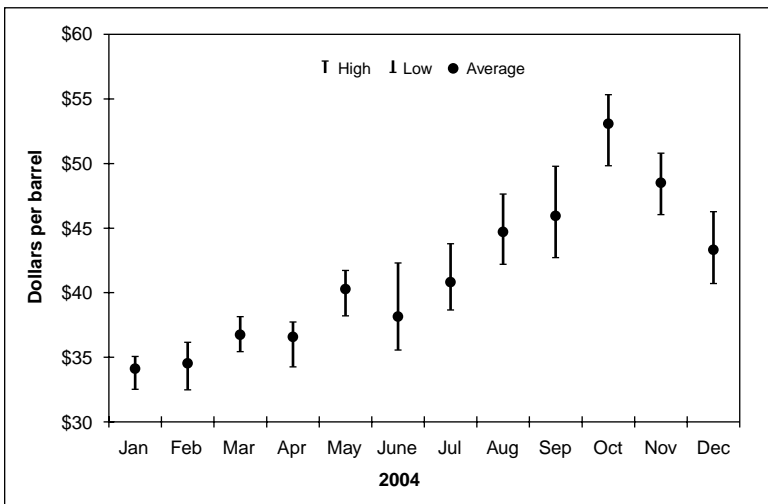


FIGURE 7.1 Crude Oil Prices: This chart depicts the average monthly level of crude oil futures prices, along with the highs and lows for the month. Notice that the variation is wider in some months than in others.

Source: Bloomberg.

The most famous food-price hike came on the heels of *El Niño* in 1973, which killed the anchovies off the coast of Peru, among other things (see the “El Niño” article below). Over the course of several years, droughts and bumper crops smoothed price fluctuations out. Food price changes, like changes in the price of oil, tend to affect *relative* prices, rather than the price level. Historically, the consumer price index shows that food prices do not tend to accelerate sharply during droughts if the overall economy is experiencing only modest inflation. However, when consumer prices of all other goods and services accelerate sharply, droughts or natural disasters can cause food prices to spike as well.

EL NIÑO

Now commonly called *El Niño*, Peruvian fishermen in the late 1800s originally dubbed this warming of surface waters of the Pacific Ocean off South America *Corriente del Niño*. Translated directly, it means “Current of the Christ Child.” In 1892, scientist Camilo Carillo was referring to the unseasonably warm weather at Christmas time that ruined fishing in the Peruvian port of Paita. Although the term might have been coined then, similar warming conditions were found in ship captains’ logs 100 years earlier.

In 1992 weather phenomena across the globe were blamed on *El Niño*: drought in southern Africa, blizzards in Greece, and the warmest U.S. winter in nearly a century. How is this relevant to the U.S. economy? Strange weather patterns in the spring of 1992 threatened the corn and soybean crops in Illinois, part of the major grain-growing region in the United States. A reduction in crops leads to higher food prices.

How seriously should the market participant take *El Niño*? In 1983, its last major occurrence, U.S. fishermen netted 22 million pounds of anchovies, down from 103 million pounds in the previous year.

But in 1997, timely rains in November suggested that it would not be a problem even though the media started warning consumers of *El Niño* in early spring. Steve Bruce, a commodities trader with ED&F Man International said, “So far this year, El Niño has been El Dud.”²

Reuters-CRB Futures Price Index

The Commodity Research Bureau (CRB) publishes an index that reflects the prices of 17 commodities, divided into six groups. The Reuters-CRB index is not just an unweighted average of prices across 17 commodities, but also incorporates the average of prices across time, within each commodity. The index is based to 1967 = 100.

The index extends six to seven months into the future depending where one is in the current month. Each series must have a minimum of two, and a maximum of five, contract months. The CRB index is calculated with both arithmetic and geometric averaging techniques in order to benefit from the most favorable properties of these techniques. Consequently, percentage changes in a component's price do not alter the component's relative weight in the index. The 17 commodities are equally weighted in the index: No single month or single commodity has undue impact on the index. The commodity groups are listed here:

1. Energy (17.6%): crude oil, heating oil and natural gas
2. Grains (17.6%): corn, soybeans, wheat
3. Industrials (11.8%): copper and cotton
4. Livestock (11.8%): live cattle, lean hogs
5. Precious Metals (17.6%): gold, platinum, silver
6. Softs (23.5%): cocoa, coffee, orange juice, sugar

Research shows that the CRB Futures Price Index does not predict month-to-month changes in either the consumer price index or the producer price index. However, the CRB index tends to move in the same direction as the PPI or CPI over the course of a year, in the same way that all inflation indicators move in the same general direction. Figure 7.2 shows that changes in magnitude and direction are not correlated monthly.

Market Reaction

Financial market participants monitor the CRB index as a precursor of inflation, just like spot and futures prices of crude oil. Another resemblance to crude oil futures is that this is a fluid index and there is no set time of day for market reaction: Anything can happen at any time of day. Going along with the premise that accelerating inflation is unfavorable, a sudden sharp increase in the CRB index causes bond prices to fall (and yields to rise), stock prices to fall, and the value of the dollar to fall in the foreign exchange market. A drop in the index causes the reverse

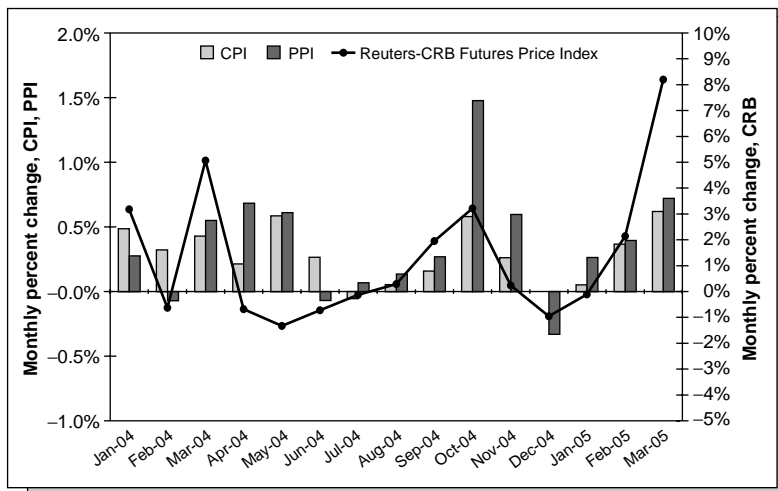


FIGURE 7.2 Price Changes—CRB, PPI, CPI: The Reuters-CRB posts larger monthly changes than either the PPI or the CPI. The three series move in tandem only part of the time.

Source: Reuters-Commodity Research Bureau, Bureau of Labor Statistics, and Haver Analytics.

reaction: Interest rates fall (bond prices rise); and stock prices and the dollar rise.

Watch Out!

Keep track of the various CRB index subcomponents. While it was designed so that no one commodity would cause significant changes to the total index, sharp fluctuations in single components can cause the total index to fluctuate as well. Extraordinary events such as actual or potential droughts would significantly alter grains prices and these increases could add significantly to the overall index. In 2004, a good chunk of market fluctuations stemmed from accelerating oil prices.

On the whole, it is not cost efficient to look at hourly changes in the CRB index. If you want to monitor this index—even though it is not necessary given all the other monthly indicators of inflation—keeping a log of the daily closing price allows you to consider the long-term trend rather than short-term aberrations.

MONTHLY INDICATORS

Index of Prices Received by Farmers

The Department of Agriculture releases the Index of Prices Received by Farmers, more commonly known as “farm prices,” at the end of the month for the current month, but the preliminary estimates reflect price changes for a three- to five-day period near the fifteenth of the month. This index is not adjusted for seasonal variation.

The index of prices received by farmers comprises all crops and livestock and products. For the most part, the price changes are based on average prices for all grades and qualities at the point of sale (such as the local market) about the middle of the month. All the prices are then revised in the following month when averages are calculated for the entire month for some of the commodities.

Is this price index related to other inflation indicators? Although it is related to food price changes in the producer price index and the consumer price index, it can vary significantly over time. First, farm prices are not adjusted for seasonal variations, although the food components in both the CPI and the PPI *are* seasonally adjusted. Second, farm prices measure prices at the first point of sale and are based on average prices for all grades. The producer price indexes and the consumer price index typically adjust for quality and grades. Finally, all the crops and livestock are weighted differently in each of the three series.

Market Reaction

Farm prices are reported late in the afternoon and get little attention from financial market participants. However, an unexpectedly large rise in the index can spur a drop in bond prices if market psychology is already negative. Conversely, an unexpectedly large drop in the index may lead to a rise in bond prices if market psychology is positive. The foreign exchange and stock markets ignore this index altogether. Commodity market participants may find this series interesting, although they are more likely to keep a close watch on the CRB index, which is always available. If the United States were to suffer a major drought, this series would get more attention, particularly if tight labor markets already suggested that inflationary pressures were on the horizon.

Producer Prices

The Producer Price Indexes (PPI) are reported between the eighth and sixteenth (mostly between the tenth and twelfth) business day of the month

for the previous month by the Labor Department's Bureau of Labor Statistics (BLS). The three indexes for finished goods, intermediate goods, and crude materials are seasonally adjusted. All the PPIs are fixed-weight measures of inflation. Monthly percentage changes are typically monitored, but annualized data are also viewed in context, or comparisons are made on a year-to-year basis. Seasonally adjusted data is revised annually in February (with the release of January data) for the previous five years. Unadjusted figures are revised only once, four months after original publication. Revisions are usually small.

The producer price index for finished goods is regarded as "the" measure of producer price inflation. Producer prices are measured by stage of processing: The other two indexes reflect prices of intermediate goods and crude materials. The producer price index for finished goods gets all the attention and is considered a leading indicator of consumer price inflation. Actually, each index might be viewed as a leading indicator for the next stage of production. For that reason, the producer price index for crude materials could portend price changes in the producer price index for intermediate goods, which subsequently could indicate price changes in the producer price index for finished goods.

While these various measures of inflation show overall correlation, it is important to know which specific goods are actually priced and how they are weighted. The producer price index for finished goods is heavily weighted toward consumer goods (74.1 percent) rather than capital equipment (25.9 percent). Therefore, it might be more worthwhile to look at subcomponents of the intermediate goods index to forecast subcomponents of the finished goods index. It certainly would not make sense to use prices of construction supplies to indicate the direction of apparel prices.

Since January 2002 these indexes are calculated with more than 3,000 commodities and the statistical agency processes current prices of more than 100,000 items to represent the movement of goods prices in manufacturing, agriculture, forestry, fishing, mining, gas, and electricity. The universe includes all goods that are domestically produced for sale in commercial transactions in primary markets in the United States. The output of the service sector is conceptually included in the PPI universe, although coverage is incomplete. The PPI program publishes data for selected industries from transportation to health services to business service industries including the U.S. Postal Service.

Finished goods are commodities that do not undergo further processing and are ready for sale to the ultimate user (either consumer or business firm). They are further divided into three main categories: capital equipment, consumer goods less foods, and consumer foods. Capital equipment includes civilian aircraft, automobiles and trucks, farm equipment, and

machine tools. Consumer goods include gasoline and fuel oil, apparel, tobacco products, cars, and furniture. Consumer foods include unprocessed foods such as eggs and fresh vegetables as well as processed foods such as bakery products and meats. Excise taxes are not included in the PPI.

Because economists like to exclude unstable components from economic series, it has become common practice to look at the producer price index excluding food and energy prices, and this is considered a proxy for the core rate of inflation. In this manner, we can assess the underlying trend in producer prices without having to worry about aberrations in food and energy prices. From one month to the next, it is reasonable to ignore a sharp rise in food or energy prices because these could easily be reversed in the subsequent month. Over a period of six months or a year, however, it is important to consider food and energy prices because they are a major consumer expense.

Intermediate materials, supplies, and components are commodities that have been processed but require further processing before they become finished goods. Examples are flour, cotton yarns, steel mill products, and motor vehicle parts. This index tends to be slightly more volatile than the finished goods index, so it is better to look at the pattern of growth than at a one-month change. Broadly speaking, changes in this index could predict price changes in the finished goods index. One can look at the intermediate goods index excluding food and energy just like for the finished goods PPI.

Crude materials for further processing include products that have not been manufactured or fabricated but will be processed before becoming finished goods. Crude foods and feeds include items such as grains and livestock. Examples of crude nonfood materials include natural gas, crude petroleum, and raw cotton. Because this index includes items that are largely affected by supply—oil and food—monthly price fluctuations can be highly erratic. This index might predict price changes in the other two, over the long term, but not from one month to the next. In a similar fashion to the other two PPI indexes, the crude materials index also can be monitored by looking at the nonfood, nonenergy component. Incidentally, this only encompasses 21 percent of the crude materials index; that is, 79 percent of the index comprises food and energy products. In contrast, the core PPI for finished goods is 62 percent of the index and the core PPI for intermediate goods is 78 percent of the index.

Price data are generally collected monthly, primarily by mail questionnaire. Respondents are asked to provide net prices reflecting applicable discounts. Although the Bureau of Labor Statistics attempts to base the producer price indexes on actual transactions prices, the change in the price of an uncollected data point will be estimated by averaging the price changes for the other items within the same product group for which prices

were received. Prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the thirteenth of the month, the pricing date can range from the ninth to the fifteenth.

The Bureau of Labor Statistics attempts to price commodities that are identical in quality. Adjustments are made for quality differences. For example, when new model year cars are introduced with additional features, the BLS estimates the price adjustments of the new features. Producer price indexes are designed to measure real price changes—those changes not due to quality adjustments, quantity, or terms of sales. For the most part, producer price indexes are national, rather than regional in scope.

Are producer price indexes related to other inflation indicators? Some economists tend to extrapolate PPI changes to the consumer price index on a month-to-month basis. That is not a good idea, even conceptually. Even though the PPI for finished goods is heavily weighted toward consumer goods rather than capital equipment, the PPI weights are extremely different from those weights used in the CPI. Also, the producer price index for finished goods incorporates limited prices of services, in contrast to the consumer price index, where it accounts for more than half of the index. Finally, seasonal adjustment patterns differ between the two series.

Table 7.1 shows the major components of the producer price index for finished goods along with their relative importance as of December 2004. Minor variations in weights are made annually in the PPI based on the total shipment values of those goods for the year. Benchmark revisions, which would incorporate major structural changes, are made infrequently.

Weights versus Relative Importance As of January 2002, weights are derived from the total net selling value of commodities reported in the 1997 economic census. The BLS does not publish the weight but the relative importance. The relative importance represents its basic value weight, multiplied by the relative price change from the weight date to the date of the relative importance calculation, expressed as a percentage of the total value weight for all commodities category. The BLS calculates the relative importance figures for December of each year. These relative importance data change from one December to the next simply because of changes in relative price movements. For example, the relative importance of a commodity rises if prices increase faster than the all commodities index. The published relative importance data are not used to calculate the PPI each month. Each commodity's actual weight fluctuates monthly based on its previous price movements. Nonetheless, for all practical purposes, you can assume the relative importance of the previous December is similar to the current month if you are attempting to forecast the PPI.

TABLE 7.1 Producer Price Index—Finished Goods (Relative Importance, December 2004)

Capital Equipment	25.939
Consumer Goods less Foods	53.164
Nondurable goods less foods	37.330
Electric power	6.995
Residential gas	4.460
Gasoline	3.679
Fuel oil	0.709
Tobacco	3.024
Durable goods	15.834
Passenger cars	3.305
Trucks	3.036
Consumer Foods	20.897
Ex Food & Energy	62.006
Energy	17.097
Total PPI	100.000

Source: Bureau of Labor Statistics.

Market Reaction

Financial market participants strike when producer price indexes are reported. Participants in the fixed income market obviously prefer to see low inflation to high inflation. Thus, the larger the monthly rise in the PPI, the more negative the impact in the bond market. High inflation leads to high interest rates. Low inflation points to declining interest rates.

Participants in the equity and foreign exchange markets also view accelerating inflation negatively. Stock prices may decline and the value of the dollar might drop when producer price increases are large and accelerating.

Here, financial market participants often look at the producer price index for finished goods excluding food and energy prices as well as the total PPI in determining the rate of inflation. Increases in food and energy prices are often discounted because of their transitory nature. Large spurts in these components are less likely to cause negative market reactions than increases in the core rate. Market players also began to pay more attention to the intermediate and crude materials indexes in the mid-1990s expecting that these indexes would reveal price pressures in the pipeline.

Watch Out!

First, look at the change in the Producer Price Index for finished goods excluding food and energy prices. Second, beware of special factors that can cause the PPI to rise or fall sharply. For example, tobacco prices tend to spurt several times a year putting upward pressure on the PPI. As shown in Table 7.1, tobacco has a fairly hefty weight in the index. Car and truck prices tend to pick up in the autumn when auto manufacturers introduce new model year cars. Apart from food, energy, tobacco, autos, and trucks, none of the other categories have large enough weights to singularly impact the price index.

The current dollar value of shipments for the previous year determines the relative importance of the components of the PPI. Although the volume of tobacco products has declined over the years, prices have risen sharply. As a consequence, the current dollar value of tobacco shipments has risen, causing tobacco products to gain a greater share of the PPI. As a result, financial market participants often discount increases in the PPI that are due to tobacco products.

Other factors that could cause blips in the PPI include changes in rebate programs or low interest financing by auto manufacturers, as well as any sales promotion that affects prices even temporarily. At times pharmaceutical prices jump sharply and lead to blips in the index.

With respect to the intermediate and crude materials indexes, keep track of their long-term trend. Both of these series also have an energy and food component that overshadows the underlying rate. Long-term trends reveal more about inflationary pressures than one-month aberrations. It is always worthwhile to check three-month, six-month, and twelve-month changes in these indexes.

Consumer Prices

The Consumer Price Index (CPI), which is compiled monthly by the Bureau of Labor Statistics, measures price changes for a fixed basket of goods and services of constant quantity and quality purchased by all urban consumers and wage earners. Unlike the producer price indexes, which only price data around the middle of the month, the CPI captures price changes throughout the month, including the last business day. The CPI is reported between the ninth and seventeenth business day after the end of the month. It is seasonally adjusted. The base year remains 1982–1984 = 100. Two fixed-weight versions of the CPI are published: for all urban consumers (CPI-U) which covers 87 percent of the noninstitutional population, and

for wage earners and clerical workers (CPI-W) which covers only 32 percent of the noninstitutional population. The CPI-W has a longer history and is often used for labor contracts. The differences between the two series are usually minor from month to month since the CPI-W is a subset of the CPI-U.

One variable weight index is now published monthly: the chained CPI (C-CPI-U). This index has a short history since it was first published in August 2002 with data back to December 1999. As a relatively new index, the history was not sufficiently long through 2005 to establish a seasonal pattern and these figures are available only on an unadjusted basis. Eventually, the BLS will have sufficient data to adjust this index for seasonal variation. While the chained CPI uses the same source price data as the CPI-U and CPI-W, it is constructed with different formulas and weights. Also, the chained CPI figures are preliminary when they are released, whereas the unadjusted CPI-U and CPI-W are final figures.

Beginning with the January 2004 data, the weights attributed to categories in the Consumer Price Index are determined by the 2001–2003 Consumer Expenditure Survey. The weight updates occur every two years so that they are more timely than in the past when weights were updated much less frequently. Eight major expenditures groups include: food and beverages, housing, apparel, transportation, medical care, recreation, education and communication, and other goods and services. The CPI has four additional levels of classification hierarchy with increasingly detailed categories: From major group to intermediate aggregates, to expenditure classes to item strata and finally entry-level items. Several entry-level items are found in each of the item strata; expenditure classes could have more than one item strata as in the example below.

Major expenditure group	=	Food and beverages
Intermediate aggregate	=	Food at home
Expenditure class	=	Bakery products
Item strata	=	Bread; fresh biscuits, rolls, muffins; cakes, cupcakes, cookies, and other bakery products

Agents collect prices from a probability sample of about 23,000 retail stores and other outlets in 87 urban areas. These outlets include department stores, independent stores, specialty shops, and public utilities that have been selected to represent the population. Prices are also collected from physicians and dentists, hospitals, beauty parlors, repair people, and service contractors. Rental rates are collected from renters as well as homeowners. Goods and services are adjusted for quality differences in the CPI,

as they are in the PPI. In the past, BLS field representatives collected all price information through visits or telephone calls. The 1998 revision instituted an improved computer-assisted telephone interview. Not only does this improve the sample rotation of products and outlets in the CPI, it also hastens the introduction of new goods and outlets. In the past, the CPI was more likely to overstate the underlying inflation rate when it utilized out-of-date products and lagged in introducing new ones.

The national CPI, also referred to as the U.S. City Average, is not the only index published monthly. Data for the four U.S. regions (Northeast, Midwest, South, and West), and for urban areas classified by population size are also available each month. Three major metropolitan areas are published monthly (Chicago-Gary-Kenosha; Los Angeles-Riverside-Orange County; New York-Northern NJ-Long Island), and 11 additional metropolitan areas are available every other month.

Although the major weights of the expenditure categories are not generally replaced from year to year, adjustments in the more detailed entry-level items do cause minor variations in the relative importance every year. Historically, major overhauls were done roughly every 10 years. The 1998 CPI revision was the sixth in the history of this index, which was developed during World War I. Revisions and improvement are an ongoing process at the BLS. For instance, some important improvements were made between the 10-year overhauls. Many improvements have been completed since the 1998 revision—such as the addition of the chained consumer price index in 2002 and the decision to update the consumer expenditure weights every two years instead of every 10 years.

Changes in the sample rotation along with more frequent updating of weighting schemes help to reduce the overstatement of inflation by this measure. One problem is that consumers change their buying patterns as new products are introduced and relative prices change to supply and demand. Unless expenditure weights are revised more frequently, the CPI would not reflect an accurate measure of price level changes. This is especially true with the large number of technology-laden goods that have a history of significant price reductions over short life spans.

The Consumer Price Index is often dubbed the country's "cost-of-living" index. It is used to compute annual increases in many contracts—including salary negotiations and rental agreements. Despite these uses, the CPI-U and CPI-W are *not* true cost-of-living indexes because they do not include changes in federal, state, and local income taxes (but they do include sales taxes and other indirect taxes such as excise taxes on tobacco products and alcoholic beverages). Also, they measure the same basket of goods regardless of changing prices. A true cost-of-living index would allow consumers to substitute goods that were less expensive but equally satisfying. The

chained CPI-U gets closer to a cost-of-living index that the BLS is striving to measure. It does allow consumers to shift their spending to achieve the same standard of living from alternative sets of goods and services. While it is still not a perfect measure, it is headed toward that direction more than its fixed-weight cousin, the CPI-U.

In the same way that people think of the Consumer Price Index as a cost-of-living measure, they often use the metropolitan and regional indexes to compare price levels among regions. That is not appropriate because these indexes are not constructed to compare regional differences in living costs. The different indexes simply represent varying price changes from month to month relative to a base year. There is no guarantee that the cost of living was equivalent in all regions during the base year. The base period could have been different in each of the urban areas, and this is not reflected in the index. The cost-of-living concept would need to account for varying state income taxes.

On another note, the homeownership component of the consumer price index gets a lot of attention because it is heavily weighted. In the past, home prices and mortgage rates were directly incorporated to estimate changes in housing costs. Since 1983 the homeownership component has been calculated as a rental equivalent. Homeowners are asked to estimate how much rent they would have to pay if they were renting their home instead of owning it. The Bureau of Labor Statistics prices housing units in areas where actual rental units are abundant to corroborate these estimates. The investment cost of the home, therefore, is not incorporated in the Consumer Price Index. In switching from the house price/mortgage rate rule to the rental equivalent, the CPI now reflects a flow-of-services concept in this component. As a result, the run-up in home prices and mortgage rates of the early 1980s was incorporated into the index. The subsequent drop in mortgage rates, however, was not. In addition, it took a lot longer for the drop in the value of housing across the country in the late 1980s to be reflected in the CPI as a rental equivalent than if home prices had been included. Both factors caused the Consumer Price Index to be overstated in the second half of the 1980s and the early 1990s.

Even though the homeownership component was revised more than 20 years ago, this change in methodology remains controversial. Recently, critics complained that the CPI missed the run-up in home prices in the 2000s. The BLS counters that the rental equivalent measure is a better gauge of monthly costs. After all, their intent is not to measure home price appreciation.³

The weights for the main components of the Consumer Price Index are detailed in Table 7.2. These show why it is inappropriate to utilize monthly changes in the PPI to predict monthly changes in the CPI. As shown in

TABLE 7.2 Consumer Price Index (Relative Importance, December 2004)

Food and Beverages	15.291
Food at home	8.183
Food away from home	6.113
Alcoholic beverages	0.996
Housing	41.993
Shelter	32.686
Rent of primary residence	6.113
Owners' equivalent rent	23.158
Lodging away from home	3.008
Fuels & utilities	4.951
Household furnishings & operations	4.355
Apparel	3.841
Transportation	17.414
Private transportation	16.385
New vehicles	4.692
Used cars & trucks	2.037
Motor fuel	3.969
Public Transportation	1.029
Medical Care	6.132
Recreation	5.733
Education & Communication	5.846
Other Goods & Services	3.750
Tobacco & smoking products	0.804
Personal care	2.946
All items	100.000
Excluding food & energy	77.714
Commodities	40.239
Services	59.761

Source: Bureau of Labor Statistics.

Table 7.2, the share of services in the CPI stands at 59.8 percent, whereas the share of goods stands at 40.2 percent. Thus, roughly 74 percent of the PPI for finished goods correlates with 40 percent of the CPI.

As a general rule, monthly changes in the Consumer Price Index tend to be more stable than monthly changes in the producer price index for finished goods because the CPI is heavily weighted toward services. Prices of services tend to be sticky, although even inflation in the service industry can moderate given enough sluggish economic activity. Food and energy

prices at the consumer level can be just as volatile as at the producer level. Consequently, economists point to the Consumer Price Index excluding food and energy as a proxy for the core rate of inflation, but this is only relevant on a monthly basis when special factors include transitory movements. It is more appropriate to include food and energy prices in the CPI when analyzing annual inflation rates. Consumers, after all, cannot purge food and energy spending just because prices have increased.

Market Reaction

Financial market participants anxiously await the consumer price index because it propels much activity in the marketplace. The fixed income, equity, and foreign exchange markets all react adversely to sharp increases in inflation. Interest rates rise, stock prices fall, and the value of the dollar declines in the foreign exchange market because the rise in interest rates is due to price increases, not economic expansion. Market participants, in a similar fashion to their approach with the producer price indexes, discount increases in food and energy prices. A sharp increase in the CPI, excluding food and energy prices, brings a more negative reaction than an increase in the total CPI.

Watch Out!

Look at the core rate of inflation, measured by the CPI excluding food and energy prices, just as you did with the producer price indexes. Once again, you should be watching for special factors that could cause unusual spurts or dips in the monthly index. In the past, tobacco prices, education costs, and apparel prices often spurted in one month with subsequent offsets in the following months.

Long-term trends are usually more important than monthly blips. Keep an eye on the rate of inflation for the most recent three months, six months, and year. Look at the total CPI as well as the index excluding food and energy prices. The only time to ignore an increase in food and energy prices totally is when you are certain prices will reverse in coming months. Food and energy prices make up about 25 percent of consumer expenditures. It would be foolish to ignore big price changes in those categories because they could potentially have important ramifications with respect to inflation, economic activity, and Federal Reserve policy.

The following cautionary note will remind you of the adage, “Statistics don’t lie, but people do.” When the December CPI is reported in January, the Bureau of Labor Statistics also publishes the annual inflation rate. The BLS calculates the annual inflation rate by averaging the monthly price in-

dexes to get an annual average of the CPI. It then takes the percentage change from the previous year's average of the monthly indexes. Depending on the pattern of inflation, the annual average change in consumer prices may be vastly different from the yearly change in consumer prices as calculated by the percentage change from December to December. The December-to-December percentage change more accurately reflects the inflation rate over the course of the year. Government administration officials, however, tend to cite the measure that shows a lower rate of inflation (what a surprise). Beware of politicians! The BLS is an apolitical agency and always reports both measures with equal attention.

HEDONICS: FRIEND OR FOE?

The debate over whether the Consumer Price Index accurately measures inflation has no end. Sometimes economists will claim that the CPI overstates inflation; at other times they will claim that the CPI understates inflation. In 2005, more and more analysts claimed that inflation is understated in the CPI because of *hedonics*. Hedonics accounts for the changing quality of products when calculating price changes. Technological advances allow consumers to get more for their money—and this would not be fully reflected without hedonics.

Within the Bureau of Labor Statistics, commodity specialists determine how prices truly affect the CPI when the product has changed and is no longer identical to the product that was measured the month before. According to the BLS, hedonics is used in only seven of 211 product categories in the CPI.

Hedonics was initially a key feature in measuring computer prices since rapid technological changes led to an overstatement of price increases in computer goods in the CPI. By allowing for quality improvement, price increases turned into price declines. According to the BLS, however, computers are no longer priced by hedonics because prices are commonly available for all the components that make up a computer. The BLS can directly measure the costs of memory chips, processing, motherboards, or monitors and keyboards.

BLS officials note that hedonics could just as easily lead to price increases as price decreases. For instance, a BLS commodity specialist Tim LaFleur found that the price of a 57-inch television dropped

(Continued)

HEDONICS: FRIEND OR FOE? (Continued)

14.7 percent from \$2,238.99 to \$1,909.97. But Mr. LaFleur noted that the price of a high definition tuner, built into the higher-priced model, but not in the lower-price model, was valued at \$513.69. After factoring this in, the 14.7 percent *drop* in price turned into a 10.7 percent price hike.

Another television was treated differently. A 27-inch TV was registered at the same price as the previous month. Due to the fact that the latest model had a flat screen and a 10-watt stereo (instead of 6-watt), it was clearly a better value. As a result, this model reflected a price decline.⁴

Given that it is difficult to measure the true value of any economic situation, one should be happy if long-term trends are captured appropriately and not worry about month-to-month fluctuations, right? Actually, the CPI is used in so many contracts that impact the bottom line that it needs to be as accurate as possible. For instance, the federal government uses the CPI to make annual cost-of-living adjustments to Social Security recipients. The lower the CPI, the better off is the government. Similarly, income tax brackets are adjusted by the CPI. If inflation is truly higher than being measured, consumers are being shifted into higher tax brackets and are not truly compensated for actual inflation.

Import and Export Prices

The Bureau of Labor Statistics publishes import and export price indexes between six and fourteen business days after the end of the month. February data then will be released in mid-March. In contrast to other key inflation indicators, neither the import price index nor the export price index is adjusted for seasonal variation. Both goods and services are included in these indexes.

The BLS began to publish this information quarterly in the 1980s, but moved to a monthly format in 1990. The primary purpose of these indexes is to use them in deflating the Census Bureau's monthly international trade figures. These indexes, therefore, were constructed with those data in mind and conform to the same data format as the international trade statistics.

According to the BLS, price indexes for merchandise goods are re-weighted annually with a two-year lag in the weights. Three classification indexes are published for the merchandise price indexes: the Harmonized System, the Bureau of Economic Analysis End-Use System, and the Standard International Trade Classification. Two definitions are used to present price indexes for internationally traded services: Balance of Payments and International. Most of the published series are based to 2000 = 100.

The BLS targets all goods and services sold by U.S. residents to foreign buyers (exports) and purchased from abroad by U.S. residents (imports) for import and export price indexes. Actual transactions prices in the foreign trade market are used for these indexes. Voluntary respondents are asked to provide prices for actual transactions as close as possible to the first business day of the month. Preferably, import price information is f.o.b (free on board) foreign port. This price is before the costs of insurance, freight, or duty (c.i.f). However, the c.i.f. prices are used when the others are not available. The preferable export price is f.a.s. (free along ship), which would be the price at the U.S. port of embarkation. Data collected by the U.S. Energy Department are used to calculate the crude petroleum import price index.

The primary use of the trade figures is to deflate trade data whether it is the monthly international end use figures, the quarterly figures in the National Income and Product Accounts, or the Balance of Payments data. The Bureau of Labor Statistics also considers these figures to be good for measuring U.S. industrial competitiveness.

Market Reaction

Financial markets have not always been fond of these data. Although economists have looked at these figures since they first became available monthly in the early 1990s, it was not until 2004 that financial market players have considered them a leading indicator of inflation. Because imports have played an increasingly larger role in U.S. demand for goods and services, the direction of import prices plays a bigger role in determining the direction of domestic inflation. Since one can look at petroleum and nonpetroleum import prices, these figures help to predict the direction of key price movements. Indeed, the energy component of the PPI and the petroleum import index move in the same direction, though not by the same magnitude (see Figure 7.3).

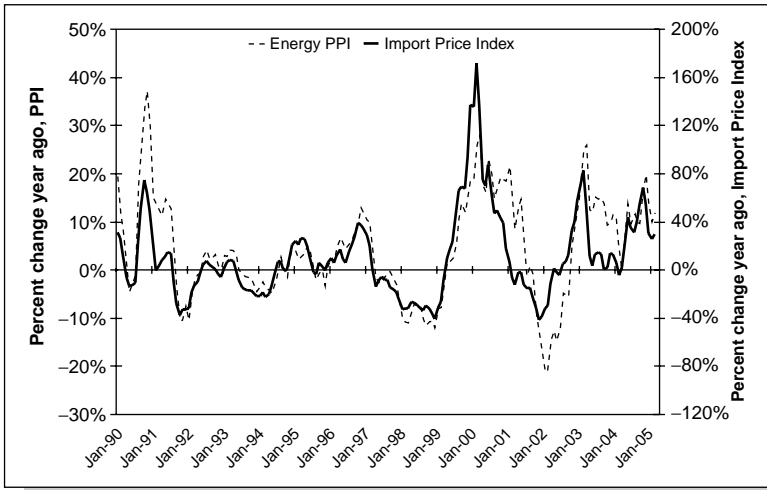


FIGURE 7.3 Import Petroleum Price Index versus Energy Prices from the PPI: The year-over-year change in the energy component of the import price index is dramatically larger than for the similar component of the PPI. Note, though, that they are in close alignment most of the time.

Source: Bureau of Labor Statistics and Haver Analytics.

Watch Out!

We are generally accustomed to analyzing seasonally adjusted data that removes seasonal quirks from the monthly figures. In fact, these figures are not adjusted for seasonal variation, so it is important to look at more than one month's figures to determine underlying inflation.

Personal Consumption Expenditure (PCE) Deflator

The Commerce Department's Bureau of Economic Analysis reports the PCE deflator at the same time as personal income and outlays each month, roughly four weeks after the end of the month. The figures are seasonally adjusted.

In one form or another, the PCE (personal consumption expenditure) deflator has been available for eons. Yet, market players did not often closely monitor it. In the late 1990s, Federal Reserve Chairman Alan Greenspan said that he preferred the PCE deflator to the CPI because it gave a more accurate assessment of consumer inflation because it was a

variable rather than a fixed basket of goods. In addition, the PCE deflator is a chain-weighted index that adds to its allure as a cost-of-living index that more accurately reflects the “truth” rather than the fixed-weight CPI.

It is important to keep in mind that the PCE deflator is based on the CPI. The Bureau of Economic Analysis uses many specific price indexes for goods and services that are compiled by the Bureau of Labor Statistics. They then incorporate these lower level price indexes to incorporate the chain-type measure that eventually becomes the PCE deflator. In August 2002, the BLS introduced the chained CPI, which is akin to the PCE deflator, although not identical. The two often move in the same direction, but not always by the same magnitude.

Because consumers are constantly adjusting their spending patterns based on price levels and changes, there is no question that the PCE deflator shows a slower rate of inflation than the CPI-U or the chained CPI. While this reflects more of what consumers are paying, it may not reflect a true cost-of-living because consumers may not be equally well off when they change their spending based on prices (see Figure 7.4). Sometimes we change our spending patterns toward lower priced goods because we are forced to (due to income constraints), not because we think that eating manufactured crab product is better than eating real crabmeat.

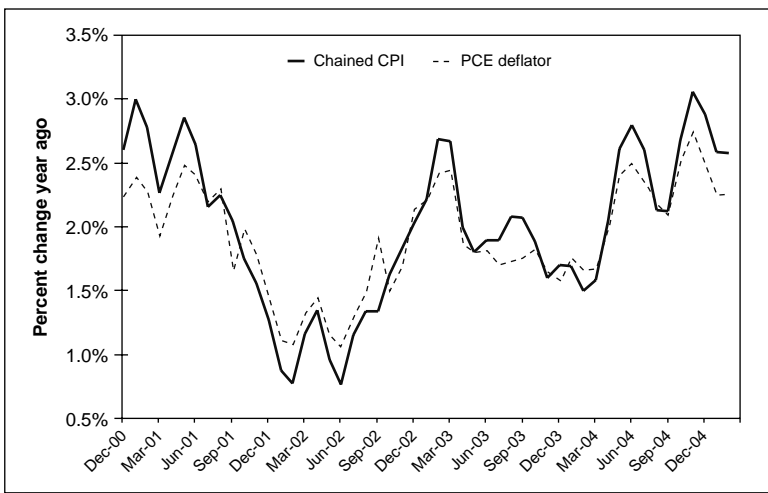


FIGURE 7.4 Chained CPI versus PCE Deflator: Year-over-year changes in the chained CPI are closely aligned to the PCE deflator. Nonetheless, the two do not always move in tandem due to the different basket of goods being measured. *Source:* Bureau of Labor Statistics, Bureau of Economic Analysis, and Haver Analytics.

In any case, the Federal Reserve now incorporates their expectations of the PCE deflator, excluding food and energy, in their semiannual monetary policy outlook to Congress. Again, the Fed wishes to determine the core, underlying rate of inflation, not the inflation rate that jumps around month by month.

In 2004, another subcomponent of the PCE deflator became popular: the market-based PCE and the market-based PCE excluding food and energy. According to the BEA, it is based on household expenditures for which there are observable price measures. It excludes goods and services prices that are not directly measured.

Market Reaction

Financial market participants appear to be more interested in the PCE deflator than the personal income and personal consumption expenditure data that accompany it. Of course, the indicator *du jour* always depends on the current state of the economy. When inflation is not on the horizon, investors are less worried about monthly changes. When the economy is experiencing a healthy expansion, inflation fears abound.

QUARTERLY INDICATOR

GDP Deflator

The GDP deflator is a comprehensive measure of inflation because it encompasses price changes in all sectors of the economy: consumer products, capital goods, the foreign sector, and government. While all indicators of inflation move in the same direction over time, there is no strict correlation between the GDP deflator, the Consumer Price Index, and the producer price indexes on a quarter-to-quarter basis even though sub-components of the CPI and the PPI are used to deflate some of the disaggregated GDP series. The Bureau of Economic Analysis releases the GDP deflator together with gross domestic product and national income about four weeks after the end of the quarter. The figures are seasonally adjusted.

The GDP deflator is calculated on a chain-weight basis, and its calculation and explanation are a bit complicated. When a fixed weight measure is used to calculate growth, it becomes a less accurate measure the further it gets away from the base year—overstating the future and understating the past. The BEA tried to alleviate this problem by rebasing GDP every five to ten years. History got re-written, but the past was still inaccurately measured.

The chain-price index is a “Fisher-ideal” index. The index is constructed with the geometric average of two valuation methods, known as Paasche and

LaSpeyres. One valuation (the Paasche method) holds prices fixed in year one, and looks at the hypothetical expenditures in year two given year one prices. The other (LaSpeyres) method looks at the actual expenditure in year two given the hypothetical expenditure in year one with year two prices. The two valuations are best averaged by taking the square root of the sum of the two results. The BEA calculates this Fisher-ideal chain-price index annually, but not quarterly. The quarterly measure closely approximates the second valuation method. The actual chained-dollar weights are lagged one year.

In principle, quarterly changes in the GDP deflator should show little variance to quarterly changes in the CPI and the PPI since the Bureau of Economic Analysis uses several subcomponents of the CPI and the PPI to deflate components of GDP.

Typically, the inflation rate measured by the GDP deflator is lower than that measured by the Consumer Price Index because prices of capital goods, which are in GDP but not in the CPI, are less expensive than consumer goods. Also, capital equipment reflects many more high-tech goods and these have fallen sharply over time. In the long run, the measures move in the same direction. When the Consumer Price Index and the producer price index show a more moderate rate of inflation, so does the GDP deflator. Figure 7.5 shows the chain-weighted GDP deflator compared with the

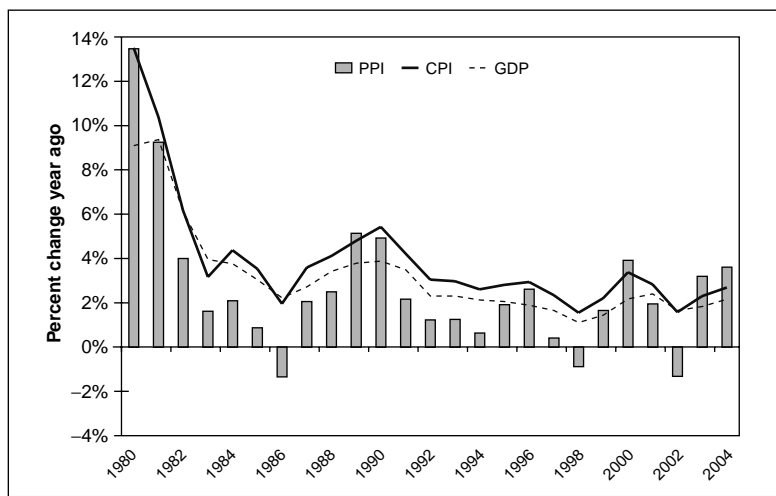


FIGURE 7.5 Alternative Inflation Rates: Alternative measures of inflation often move in the same direction, but not by the same magnitude.

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

Consumer Price Index for all urban consumers and the producer price index for finished goods.

Market Reaction

Financial market participants eagerly await the GDP deflator. An acceleration in the deflator is unfavorable news to all markets. Stock prices decline, bond prices fall (and yields rise), and the value of the dollar also decreases. A moderation in any of the inflation measures creates the opposite effect: Stock and bond prices and the foreign exchange value of the dollar increase.

Watch Out!

Less frequent reports, such as this quarterly deflator, might be less volatile than more frequently reported monthly indicators, but the GDP deflator can be quirky from time to time. As always, monitoring a trend is preferable to taking the headline at face value. For example, government pay raises typically occur in the first quarter, boosting the deflator in the government sector and possibly the total deflator as well. Seasonal adjustment factors cannot be utilized to account for the annual pay raise because the magnitude of increase is not identical from one year to the next.

Changes in oil prices or other imported goods have major impacts on the deflator, and these are not always intuitive or reasonable. Mostly, they indicate an accounting problem that one can solve by looking at the price deflator over a two- or three-quarter period. When import prices rise sharply, the GDP deflator moderates substantially because goods and services not produced in the United States are subtracted from GDP. When prices rise, a greater dollar value of imports is subtracted from GDP. Higher import prices should really be reflected in the higher prices paid by consumers and businesses, but sometimes a lag occurs between the prices importers pay and the prices consumers pay. Thus, a quarter with high import prices (and a small rise in the GDP deflator) is likely to be followed by a quarter with stable import prices (and a large rise in the GDP deflator). Changing import prices come not only from changes in the prices of goods and services but also from movements in the exchange value of the dollar.

Wage Inflation

In looking at commodity prices, producer price indexes, the Consumer Price Index, or the GDP deflator, we are looking at prices paid for goods and services. There is another side to the inflation picture. Instead of looking at product prices, we can look at the major cost of doing business—labor. Wages are a form of prices and therefore are another indicator of inflation. When wages rise without corresponding increases in productivity, producers' costs increase, and the prices consumers pay will have to rise as well.

The following sections describe three measures of wage inflation that are readily available and are monitored by financial market participants and federal government policymakers.

MONTHLY INDICATOR

Average Hourly Earnings

The Bureau of Labor Statistics releases average hourly earnings one week after the end of the month with the employment situation. These monthly payroll figures from the Establishment Survey are reported before deductions for taxes, social insurance, and fringe benefits. They include pay for overtime, holidays, vacation, and sick leave, but exclude retroactive pay or bonuses unless they are earned and paid regularly each pay period. The figures are seasonally adjusted.

Average hourly earnings for workers in private industry are derived by dividing total nonfarm payrolls by total hours reported for each industry except government employees. The hourly earnings figures reflect changes in basic hourly rates as well as increases in premium pay because of overtime hours worked. For example, if employees worked a 40-hour workweek, no premium would be paid for overtime, but if they worked 42 hours in a given week, they would be paid time and a half for the extra two hours. However, the true hourly wage rate would remain unchanged. The calculated figure for average hourly earnings is misleading because hourly wages did not increase on the whole. Changes in the number of employees in low-paid work versus high-paid work also affect the hourly earnings figures. This is akin to the variable versus fixed basket problem. Suppose manufacturers hire skilled machinists one month, and substitute them with apprentice machinists the next month. The month in which the skilled workers were hired shows a larger gain in hourly earnings than the month in which the apprentices were hired.

Seasonally adjusted average hourly (and weekly) earnings are available

for mining, construction, manufacturing, transportation and public utilities, wholesale trade, retail trade, finance, insurance and real estate, and services. The Bureau of Labor Statistics even estimates average hourly earnings for manufacturing excluding overtime by assuming that the overtime hours are paid at time and a half. In addition, the BLS estimates total private average hourly earnings in constant (1982) dollars by deflating the current dollar figure by the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Because of the inconsistency in the series from changes in employment or overtime, you should not place a lot of weight on average hourly earnings; they do not represent employers' labor costs. Just as other inflation measures tend to move in tandem, so do wage inflation measures. This is the only monthly indicator of wage inflation, so it is a good proxy for other measures that are calculated quarterly but adjusted for occupation or industry shifts and overtime pay.

Market Reaction

Despite its volatility, financial market participants pounce on the average hourly earnings data: It is the first inflation news for the month. A spurt in hourly wages is negative for all markets—stocks, fixed income, and foreign exchange—because it signals inflationary pressures.

Watch Out!

You must never take the one-month change in hourly earnings at face value. The mix effect due to employment or overtime changes makes this series erratic even though it is seasonally adjusted. It is conventional to look at year-over-year changes in hourly earnings to reduce the month-to-month volatility. Look at the long-term trends of this volatile series.

If the monthly rise in average hourly earnings is particularly large, you might check whether overtime hours increased in the manufacturing sector. Finally, this series is frequently revised. Always check the revisions to the previous months' figures. An initial gain of 0.6 percent in one month, which would be worrisome in terms of signaling inflationary pressures, could easily be halved two months later.

Remind yourself that you are focusing on the long term. Though you should not discount entirely one-month blips in average hourly earnings, do not worry about them too much. Look at a three-month moving average of the monthly changes in this series in addition to the year-over-year change shown in Figure 7.6).



FIGURE 7.6 Average Hourly Earnings: Average hourly earnings are so volatile from month-to-month that even the year-over-year changes are bumpy. Most series show smoother patterns on a year-over-year basis.

Source: Bureau of Labor Statistics and Haver Analytics.

QUARTERLY INDICATORS

Employment Cost Index

The Employment Cost Index (ECI), which is released quarterly by the Bureau of Labor Statistics, measures the rate of change in total employment compensation including changes in wages and salaries as well as changes in employers' costs for benefits. The Employment Cost Index measures the change in the cost of labor free from the influence of shifts among occupations and industries, which is a problem with the average hourly earnings data that are available monthly. The survey is conducted quarterly for the pay period including the twelfth day of the four months: March, June, September, and December. Data is usually released on the last Friday in the month following the survey. The figures are adjusted for seasonal variation.

The Employment Cost Index covers wage and benefit data in all establishments and occupations in the private nonfarm and public sectors. On the wage and salary side, it is not affected by changes in the labor force since it looks at costs of employing a fixed set of labor inputs. (It is similar to the Consumer Price Index and the producer price indexes in that it is a

fixed weight index.) However, the benefit cost component is not fixed. It provides the change in the cost of benefits for a fixed labor force. They are not reflecting changing prices for the same basket of benefits. Consequently, the benefit cost index changes if the price of benefits changes (higher pay for holidays), or if changes in benefits (an additional holiday) occur.

Each quarter, straight-time average hourly wage and salary rates, and benefits data are collected from a probability sample of about 43,000 occupations with 9,700 sample establishments in private industry. About 3,500 occupations with 800 sample establishments are surveyed for state and local governments. Specific job categories are selected to represent broader occupational definitions.

Wages and salaries are defined as the hourly straight-time wage rate. (If workers are not paid hourly, it is the straight-time earnings divided by the corresponding hours.) Straight-time wages and salaries are total earnings before payroll deductions. They exclude premiums for overtime, shift differentials, and nonproduction bonuses in lieu of wage increases. Production bonuses, incentive earnings, commission payments, and cost-of-living adjustments are included in straight-time wage and salary rates.

Benefits covered by the Employment Cost Index are numerous. They include paid leave (vacations, holidays, sick leave); supplemental pay (for overtime and shift differentials and nonproduction bonuses); insurance benefits (life, health, sickness, and accident); retirement and savings benefits (pension, savings, and thrift plans); legally required benefits (Social Security, railroad retirement and supplemental retirement, federal and state unemployment insurance, worker's compensation, and other legally required benefits); and other benefits such as severance pay and supplemental unemployment plans.

The geographic coverage of the index includes all states and the District of Columbia. Statistics are published for metropolitan areas as well as the total U.S. average. The employment cost index is similar to the CPI in that it allows for regional differences.

In calculating percentage changes in quarterly data, figures are typically annualized for easier comparisons. That is not the case with the Employment Cost Index, as seen in Table 7.3. Remember to note that a simple quarterly rate is reported for the ECI, along with the year-over-year change.

The wages and salaries portion of the ECI is somewhat correlated to the average hourly earnings figures released monthly with the employment release. However, the average hourly earnings figures can be skewed by changes in the composition of occupations or industries, whereas the ECI adjusts for that. Seasonal adjustment factors also may be different in the two reports.

TABLE 7.3 Employment Cost Index

	3-month Change, SA				12-month Change, NSA			
	Mar-04	Jun-04	Sep-04	Dec-04	Mar-04	Jun-04	Sep-04	Dec-04
Compensation	1.1	0.9	0.9	0.7	3.8	3.9	3.8	3.7
Wages and Salaries	0.6	0.6	0.7	0.4	2.5	2.5	2.4	2.4
Benefit Costs	2.4	1.8	1.1	1.4	6.9	7.2	6.8	6.9

Source: Bureau of Labor Statistics and Haver Analytics.

The Labor Department, which designed and conducts the survey, cautions users to the limitations of this index. The Employment Cost Index is not a measure of change in the total cost of employing labor. For example, it does not estimate training costs, nor does it report retroactive pay. The index does not cover all employers and employees in the United States, but it covers nearly all workers in the civilian nonfarm economy. For obvious reasons, it does not cover the self-employed.

Market Reaction

Financial market participants react to the Employment Cost Index as they would to any other inflation measure. It has become particularly relevant since 1995 when several Federal Reserve governors, including then Vice Chairman Alan Blinder and Chairman Alan Greenspan said that they monitored these series. Tight labor markets in the mid-1990s promoted much interest in labor costs as a leading indicator of inflation.

Watch Out!

Look at the quarterly pattern of change in the ECI. Even with seasonal adjustment, occasional blips will occur. A jump in employment costs in a stable or rising trend is potentially worrisome and should be considered as such. A jump in costs in a declining trend is more likely to be an aberration. Look at price changes in wages and salaries as well as benefits. Wages and salaries adjust more quickly to cyclical downturns. For that reason, a slower rate of increase is more likely in wages and salaries than in benefits, even after a prolonged and deep recession. Benefits include costs for medical care insurance, which had continued to rise rapidly long after inflation abated overall. Conversely, a moderation in the rate of health care costs from 1995 through 1999 helped to hold down the total ECI.

Productivity and Costs

Productivity and costs are compiled and published by the Bureau of Labor Statistics. These quarterly figures are made available after the Bureau of Economic Analysis releases gross domestic product and national income. Most economic reports are released monthly or quarterly at about the same time each month, but the productivity and costs figures are released six times a year in the second or third weeks of February, March, June, August, September, and November. Productivity and costs are seasonally adjusted and percent changes are calculated at annualized rates.

Productivity and costs figures are available for three categories: business, nonfarm business, and manufacturing. The manufacturing sector can be divided further into durable and nondurable goods. The data sources and methods used to calculate the manufacturing data are different from the business and nonfarm business series making these measures not directly comparable. The business and nonfarm business data come from the Bureau of Economic Analysis and based on gross domestic product. The manufacturing measures are based on industrial production from the Board of Governors of the Federal Reserve System. The generic title of productivity and costs represents three sets of figures. Productivity is equal to output per hour. Costs represent compensation per hour and unit labor costs. In contrast to the earnings series described previously, productivity and costs data represent true business costs.

Productivity describes the relationship between output and the amount of labor time incurred in its production. Simply put, it is the ratio of output to hours worked. Though the output produced per hour depends on many factors such as capital investment, changes in technology, capacity utilization, managerial skills, and the characteristics of the work force, these influences are not distinguished in the productivity index. To arrive at the output per hour measure, the Bureau of Labor Statistics needs to calculate labor input and output in the business sector. The primary source of hours and employment data is the monthly Establishment Survey used for the employment situation. The weekly hours data are adjusted to the “hours at work” definition using the BLS Hours at Work Survey, conducted for this purpose. The Household Survey provides data for the farm sector; and the national income accounts are used for government enterprises, proprietors, unpaid family workers, and paid employees of private households. Business output is equal to real gross domestic product (in 2000 dollars) less general government, nonprofit institutions, and private households. Labor inputs that correspond to these categories are also excluded. Business output was 78 percent of GDP and nonfarm business output was 77 percent of GDP in 2000.

Total manufacturing measures are calculated by adding together the series in the nondurable and durable goods sectors. Durable goods manufacturing includes primary metals; fabricated metal products; industrial machinery and equipment; electronic and other electric equipment; transportation equipment; instruments; lumber and products; furniture and fixtures; stone, clay, and glass products; and miscellaneous manufacturers. Nondurable goods industries include textile mill products; apparel products; paper and allied products; leather and products; printing and publishing; chemicals and products; petroleum products; rubber and plastic products; and food and tobacco products.

Compensation per hour is calculated with data from the national income accounts adjusted by the Bureau of Labor Statistics to include an estimate of the value of the wages, salaries, and supplements attributed to proprietors' hours. Compensation includes wages and salaries (including shift differentials and overtime), payments in kind, commissions, supplements, and employer contributions to employee benefits plans and taxes. Weekly hours include all hours for which an employee was in pay status, including paid leave. Compensation costs are available in a current and real dollar index. The current dollar figures are adjusted by the Consumer Price Index for all urban consumers to arrive at the inflation-adjusted data.

Finally, *unit labor costs* are calculated by dividing compensation per hour by output per hour. Unit labor costs increase if compensation per hour rises without an offsetting gain in output per hour. This suggests that productivity is an important element in the wage-price relationship. As long as productivity increases, wages could rise without putting upward pressure on unit labor costs and inflation. During recession years, productivity typically declines as producers limit worker layoffs more than they curtail product. Figure 7.7 shows that productivity was positive during the two most recent recessions (1990–1991, 2001); nonetheless, productivity growth accelerated in the years following these recessions (1992, 2002). The early years of recovery saw meager job growth in both cases—less than average for the early stages of economic recovery following recession.

Market Reaction

Financial market participants seem less enthusiastic about quarterly statistics than monthly ones. Perhaps that is because the monthly data are more familiar. Nonetheless, they realize that increases in productivity are good for the economy and the inflation environment. Given that wage increases coupled with productivity gains are not considered inflationary, the tight labor markets of 1996 and 1997 made this report more relevant. Since then, market players have consistently followed this report.

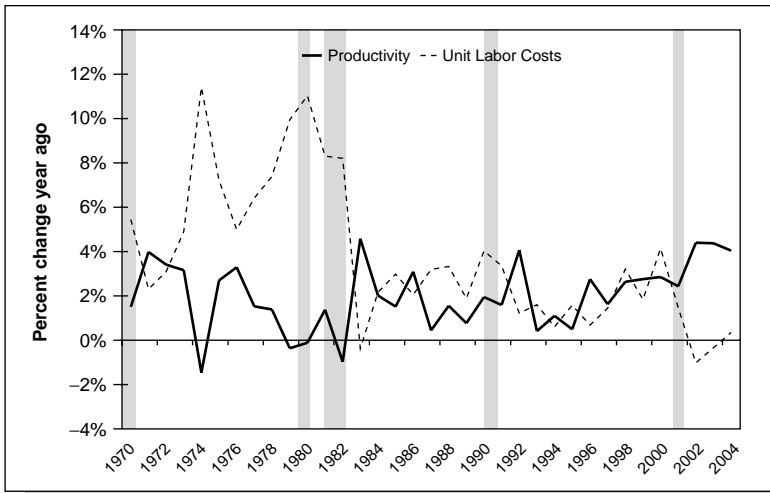


FIGURE 7.7 Productivity and Unit Labor Costs in the Nonfarm Business Sector: Productivity and unit labor costs vary over the business cycle. Trends in productivity and labor costs look more favorable in the 1990s and 2000s than earlier periods depicted here.

Source: Bureau of Labor Statistics and Haver Analytics.

Increases in compensation and unit labor costs bode poorly for inflation prospects. Inflation is negative for all markets—fixed income, equity, and foreign exchange—so they would all move in the same direction. Nevertheless, market reaction tends to be muted with this release, although traders might use it as an excuse to confirm current positive or negative market sentiment. You will just never know in advance whether these particular figures will be exciting or ho-hum.

Did You Know?

The productivity figures we are accustomed to monitoring measure *labor* productivity. David Owen, an economist at Dresdner-Kleinwort Wasserstein, suggests that *multifactor* productivity is a better indicator of the economy's return to capital. After all, productivity is also improved when new more efficient capital inputs are used, not just when labor resources are more highly trained. Alas, multifactor productivity is much more difficult to measure.⁵

Watch Out!

It is important to understand the normal, cyclical behavior of productivity. Productivity tends to decline during economic downturns when businesses are slow to lay off workers even though they have already curtailed production. When the economy begins to recover, productivity increased because producers initially raise production without rehiring workers.

Productivity and costs figures come from a variety of sources—national income and production accounts, industrial production from the Federal Reserve, employment surveys. As a result, revisions in any of the source data can lead to revisions in productivity, compensation, and unit labor costs. The major source of revisions comes from frequent changes in the national income accounts and the employment data.

Use the productivity and unit labor cost figures to get a better indication of the long-term implications of the inflationary environment. As long as unit labor costs stay low and productivity increases are healthy, prospects for accelerating inflation are small. Because labor costs constitute three quarters of total business costs, product prices will not have to be raised if unit labor costs remain moderate.

KEY POINTS

- Inflation is bad news for everyone. Stock prices, bond prices, and the value of the dollar will decline with accelerating inflation.
- A lower rate of inflation will cause stock and bond prices to rally and the value of the dollar to rise.
- Deflation is also bad news because it could rapidly spiral downward and cause a severe recession.
- Stable prices are best; but prices are usually considered stable at a measured annual rate of 1 to 2 percent in the CPI or the PCE deflator.
- Inflation indicators abound. Longer-term trends tell you more about inflationary pressures than daily blips in oil prices or the CRB index.

(Continued)

KEY POINTS *(Continued)*

- Most indicators of inflation move in the same direction, though they may not move by the same magnitude. Because some of the indicators (CPI, PPI) are used in the construction of other indicators (GDP and PCE deflators), that is not surprising.
- Increasing productivity is the key to holding down inflation: Higher productivity lowers producers' costs but allows workers' wages to rise.

The Labor Market

Key labor market indicators are closely monitored by financial market participants, federal government policymakers, and the media. Of course, not all of the indicators garner the same attention—some are obviously more important than others, particularly those that are most timely.

WEEKLY INDICATOR

Initial Claims for Unemployment Insurance

Initial claims for unemployment insurance are reported weekly. Every Thursday, the Labor Department's Employment and Training Division reports initial jobless claims for the previous week ending Saturday. The data represent actual claims filed and are compiled by state unemployment agencies in contrast to the monthly employment report, which is derived from a survey. This is an important distinction. Many people believe that the nation's unemployment rate is based on the number of people collecting jobless benefits. That is not so. These two separate indicators are only related in a theoretical, not a statistical sense.

The unemployment insurance programs cover all 50 states plus the District of Columbia, Puerto Rico, and the Virgin Islands. Even though new claims are seasonally adjusted, weekly data are highly erratic and it is not wise to emphatically declare a new trend with one week's figures because they could be especially misleading during holiday periods. Standard seasonal adjustment procedures typically use five years of past data to calculate the appropriate seasonal adjustment. However, since holidays do not always occur in the same week each year, the adjustment process is imperfect. The best way around this problem is to look at a four-week moving average of the series shown in Figure 8.1.

Over the long run, initial unemployment claims are closely related to monthly employment statistics released by the Labor Department's Bureau

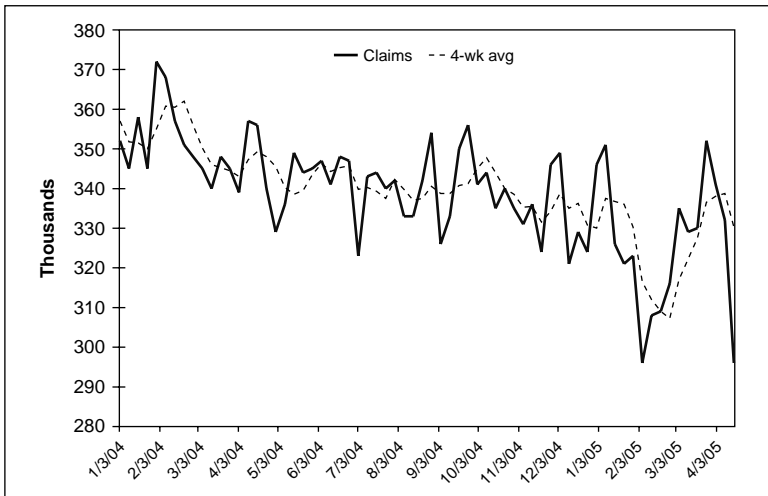


FIGURE 8.1 Initial Unemployment Claims: The four-week moving average of initial jobless claims reflects a more consistent trend than actual weekly fluctuations.

Source: The Department of Labor's Employment and Training Division and Haver Analytics.

of Labor Statistics. Often, market participants base their expectations of the employment situation on jobless claims, and many economists use initial claims to forecast nonfarm payroll employment. The success rate is mediocre. Because the figures come from two different sources, there are a number of reasons for the monthly differences between jobless claims and the employment situation, including different seasonal adjustment factors, different samples, and other statistical quirks.

The Employment and Training Division also releases continuing benefits. These figures are released at the same time as new jobless claims, but with a two-week instead of a one-week lag. As the number of persons collecting continuing benefits increases, it points to a soft labor market where jobs are hard to find. A drop in continuing benefits suggests that employment prospects are on the mend.

Market Reaction

As previously mentioned, financial market participants prefer frequent data. The more frequent the indicator, the more ammunition traders have to react to current economic conditions. Without the benefit of high fre-

quency indicators, traders would be more inclined to respond to forecasts or rumors. Given the choice, real data are preferable to predictions, even if the data is revised many times over. When the economy first fell into recession in 1990, market players anxiously awaited this report every week as the nascent recovery began in 1991. Market participants also kept a close watch on jobless claims in 1997, when labor markets tightened in the mature expansion and they anticipated inflation, and after the 2001 recession when GDP growth began to accelerate but nonfarm payrolls did not.

Participants in the fixed income market view a rise in jobless claims favorably because it points to a deteriorating labor market. A worsening economic environment coupled with a lack of inflationary pressure means interest rates will decline as the bond market rallies and yields fall. The economy might be weak enough to induce the Federal Reserve to ease credit conditions by lowering the federal funds rate.

Foreign currency traders will sell the dollar on this news because a languishing economy means low interest rates. As long as U.S. investment returns are lower than that of foreign countries, dollar demand drops, and the dollar depreciates in the FX market.

Stock prices will likely fall with a rise in jobless claims. Although declining interest rates are good for the stock market, a weak economy bodes poorly for corporate profits, the lifeblood of improving stock prices.

Watch Out!

Check for holidays in the reporting week. For example, Presidents' Day in February is a federal holiday for government workers. Claims offices are not open and workers at state unemployment offices have only four days in which to process claims during that week rather than the normal five. A shortened workweek could cause a decline of roughly 20,000 in new claims on a base of about 350,000. The week following a holiday usually posts a larger than normal rise in claims to compensate for the previous week's holiday. October marks the beginning of several holidays throughout the fall and winter seasons. Claims tend to be extremely erratic between October and through the end of February, so never take a week's number at face value. The four-week moving average of this series is more reliable throughout the year.

Special factors other than holidays can also impact weekly claims. For instance, auto retooling typically occurs every July. If automakers shift the week that retooling takes place, then the seasonal adjustment will be off during the month. Beware!

(Continued)

Watch Out! (Continued)

Do not fall into the trap of assuming that a decline in the number of reported initial jobless claims automatically means an increase in non-farm payrolls. Jobless claims are the direct result of layoffs. Just because fewer persons were laid off, does not mean employers increased hiring.

Always look at the trend rather than at a one-week figure even if you are looking at the four-week moving average of jobless claims. In a rising claims environment, you are likely to see falling interest rates, especially as the economy heads for recession. On the other hand, when jobless claims are in a downward mode, recovery may be at hand and rates will start increasing soon. Claims are a good lead indicator of economic activity, although the lead-time could be several months. Initial unemployment insurance claims are one of the 10 components of The Conference Board's index of leading indicators.

In periods of prolonged recession or high unemployment rates, the federal government can declare a state of emergency in the labor market allowing workers who have run out of benefits without finding a job to file for extended, or emergency benefits. Those unemployed workers eligible for extended benefits would refile under the new program, and the figures would be reported separately by the agency. The emergency benefits figures are not seasonally adjusted; benefits for unemployment insurance vary by state.

MONTHLY INDICATORS

The Employment Situation

The Labor Department's Bureau of Labor Statistics issues an employment report each month, just one week after the end of the month—usually the first Friday of the month. Several indicators are part of this BLS report and each is used for different analysis. Financial market participants love this report because it is so timely. Economists also love its timeliness but appreciate its rich detail of information even more. If I were forced to choose only one indicator to monitor, this one would be it!

Unemployment Rate

The unemployment rate is one of the most common economic indicators, possibly second only to the Consumer Price Index. The jobless rate rises during cyclical downturns and falls during periods of rapid economic growth. The nation's jobless rate comes from a survey of about 72,000 housing units

that generates a usable sample of 60,000 households conducted by the Commerce Department's Census Bureau (through the Current Population Survey) but analyzed by the Labor Department's Bureau of Labor Statistics. Respondents are interviewed by telephone about their own employment status and the status of everyone in their household over the age of 16, for the Sunday-to-Saturday calendar week that includes the twelfth of the month.

If the respondents were working in the week including the 12th, they are counted as employed and in the labor force. Workers do not have to be paid for work to be counted as employed if they worked at least 15 hours per week in a family-operated business. Workers who are in a labor dispute (on strike, locked out) as well as workers who are on unpaid leave for illness, bad weather, or personal reasons, are counted as employed and in the labor force. The self-employed and farm workers are included in this survey as well. Also included are citizens of foreign countries who live and work in the United States—but not those who reside on embassy premises. Respondents are asked more than whether they are employed. The interviewer asks individuals who were not employed during the relevant week whether they were actively seeking employment in the previous four weeks; were waiting to report to work to a new job within 30 days; or were waiting to be recalled to a job from which they were laid off. If one of these three situations holds, the worker is unemployed, but still a member of the labor force. Individuals are not in the labor force if they classify themselves as “engaged in own home housework,” “in school,” “unable to work” (because of long-term physical or mental disability), “retired,” and “other.”

Workers are classified as “discouraged” if the main reason that they were not looking for work was one of the following: believe no work is available in their line of work area; could not find any work; lack necessary schooling, training, skills or experience; employers think they are too old; or other types of discrimination. This was one of the areas in which the Current Population Survey (CPS) redesign in the 1990s helped to get more accurate data on this series since discussion of discouraged workers is often political dynamite. The CPS now specifies that the individual must have engaged in a job search in the past 12 months and must be currently available to take a job. Incidentally, the level of discouraged workers was halved by the new definition. The economy was on an improving trend from 1993 to 1994, but the old methodology showed more than 1.1 million discouraged workers in the fourth quarter of 1993, whereas the number plunged to 600,000 in January 1994 with the new methodology. By August 2000, when economic conditions were gangbusters, the number of discouraged workers fell to 203,000. The number began to climb again even before the recession began in March 2001. A high of 534,000 was reached in August 2004.

Once we know the number of people who are employed along with the number of people who are unemployed, we can calculate the unemployment rate. The labor force is the sum of employed plus unemployed individuals. The unemployment rate is equal to the number of unemployed persons divided by the total number of persons in the labor force.

$$\frac{\text{Unemployed}}{\text{Employed} + \text{Unemployed}} = \text{Unemployment Rate}$$

Either the numerator (number of unemployed) or the denominator (number in the labor force) can cause changes in the unemployment rate. The unemployment rate will increase whenever the labor force increases (barring an equal rise in the number of employed persons) and whenever the number of unemployed persons increases (barring any change in the labor force). Conversely, either a drop in the labor force, or a decline in the number of unemployed persons, will cause the jobless rate to decrease.

A person must be in the labor force before he or she can become employed (unless the job seeker is lucky enough to find employment on the first day of searching). Whenever people first start looking for a job, the labor force increases, by definition. Someone may enter the work force and find a job within a month. In that case, the labor force will increase by one, but so will employment. Thus, employment and the labor force could increase by similar amounts. Consequently, a rise in the labor force does not always lead to a greater number of unemployed persons.

The unemployment rate is considered a lagging indicator of economic activity. During a recession, many people drop out of the labor force (and possibly become discouraged workers, or attend school, or do their own housework) because they think they will not be able to find a job. If individuals are not in the labor force, they cannot be counted as unemployed. As a result, the unemployment rate may be understated during a recession. In the early stages of a recovery, labor force growth accelerates because more people reenter the labor force believing it will now be easier to find a job. For that reason, they start looking for work; but it may still take several weeks or months to find a job. In the meantime, they are counted as unemployed and in the labor force, whereas they had not been counted before.

Did You Know?

I am often asked which households get chosen to participate in the employment survey. According to a BLS economist, the Census Bureau has a universal list of all the households in the country that is derived from the

decennial census. It then establishes a sampling framework to ensure that all regions of the country are appropriately sampled. The director of the Census Bureau writes a letter to the intended participant and stresses the voluntary nature of the process. Only about 4 percent decline the “invitation”—and another 3 to 4 percent are not eligible for other reasons. The first interview is always a personal visit. The panel is in the survey for four months—out for eight months—and then back in for another four months and then out completely.¹

In attempting to measure the unemployment rate, the Bureau of Labor Statistics compiles a slew of statistics derived from the survey of households. Table 8.1 shows the civilian labor force and civilian employment for men and women over the age of 16. The employment detail is phenomenal, but it is not necessary to distinguish between unemployment rates of detailed age groups by gender or race in order to understand the macroeconomy. It is important, however, to distinguish between the employment behavior of adult men (aged 20 or more), adult women, and teens (16- to 19-year-olds). Their employment and labor force behavior tend to vary from month to month, which is relevant for seasonal adjustment purposes. Many adult women leave the labor force in June when the school year ends and reenter it in September when school starts again, so they can be on the same schedule as their children. The seasonal behavior of women in the labor force is more muted today than it was in the 1950s and 1960s, but the pattern remains, nonetheless. In the opposite flow, teens largely enter the labor force at the end of the school year, but leave it again at the start of the new school year. The seasonal adjustment mechanism can also take this factor in stride.

TABLE 8.1 Household Survey, Selected Data (Thousands, seasonally adjusted)

Civilian, 16 years and over	Oct-04	Nov-04	Dec-04
Civilian Labor Force	147,893	148,313	148,203
Civilian Participation Rate (%)	66.0	66.1	66.0
Civilian Employment Sixteen Years & Over	139,827	140,293	140,156
Civilian Employment/Population Ratio (%)	62.4	62.5	62.4
Unemployed, 16 Years & Over	8,066	8,020	8,047
Civilian Unemployment Rate (%)	5.5	5.4	5.4
Not in the Labor Force	76,299	76,109	76,437
Not in the Labor Force: Want a Job Now	5,338	5,087	5,021

Source: Bureau of Labor Statistics and Haver Analytics.

The cyclical behavior of employment among adult men, women, and teens can also diverge. Historically, men have suffered greater unemployment gains than women during recessions due to their greater numbers in manufacturing and construction industries, which are more prone to layoff than service industries. During expansions, the jobless rate of adult women has tended to be higher than that of adult men. The gap in unemployment rates between men and women narrowed significantly during the 1980s and 1990s. The unemployment rates of both groups, therefore, are now more similar during expansions and recessions, but some of the old patterns still persist. (See Figure 8.2.)

In addition to employment and labor force statistics of men and women by age, sex, and race, the household survey also includes employment by industry on a NAICS (North American Industry Classification System) basis, part-time versus full-time employment; unemployment by type of loss (quit versus layoff); and unemployment rates by duration. These statistics all serve to decipher the state of the U.S. labor market each month. Federal Reserve Chairman Alan Greenspan, to a gathering of the

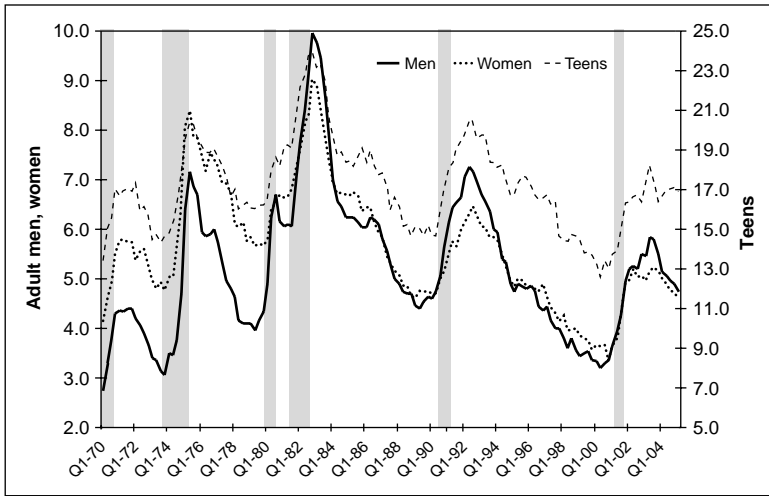


FIGURE 8.2 Unemployment Rates: Adult Men, Adult Women, and Teens: Since the 1980s the unemployment rate for adult men and women has moved closely in tandem. In prior years, when manufacturing and construction jobs were a larger share of the economy, men would suffer more during recessions than women. The unemployment rate for teens (16–19) remains dramatically higher than for adults over 20.

Source: Bureau of Labor Statistics and Haver Analytics.

National Association for Business Economics in Washington, D.C., in February 1997, explained that he follows the quit rate as an indicator of worker confidence. The next time the employment situation was released, all eyes turned to this indicator—which showed *absolutely nothing* due to its volatility. As it turns out, the Fed chairman was referring to a proprietary series calculated by his staff.

Market Reaction

The seemingly perverse behavior of fixed income market participants holds for the unemployment rate. A rising unemployment rate is associated with a weak or contracting economy and declining interest rates. Bond prices rally on the news. Conversely, a decreasing unemployment rate is associated with an expanding economy and potentially rising interest rates. Bond prices then fall—and professionals in the equity and foreign exchange markets appear more rational to the casual observer. Stock prices and the foreign exchange value of the dollar rise when the unemployment rate falls.

Watch Out!

Temporary aberrations could move the unemployment rate in either direction. Moreover, based on BLS analysis, the civilian unemployment rate must change by at least 0.2 percentage points in any single month before it can be considered statistically significant. Nevertheless, a 0.1 percentage point gain for six consecutive months that cumulatively increases the jobless rate by 0.6 percentage points is certainly significant even though the jobless rate did not increase by the requisite 0.2 points in any particular month. That said, I have seen some analysts calculate the unemployment rate to the third decimal point. Why? Who knows, because it cannot possibly reveal any useful information. Analyzing the unemployment rate to the second or third decimal point implies more accuracy than there could possibly be for this indicator.

Major aberrations can occur in the unemployment rate during summer months when teens end their school year and are job hunting. This pattern is well known and fully expected by seasonal adjustment factors. The only problem is that teens do not enter the labor force in the same numbers each May and June and then leave again in August and September. Long-term demographic trends play a major role here. For instance, the number of 16- to 19-year olds entering the labor force peaked in 1978, and then fell steadily until the mid-1980s when levels stabilized for about five years. Another sharp decline took place between 1990 and 1992. Levels began to turn around and rise steadily until 2000. Since the turn of the century, the labor force of 16- to

(Continued)

Watch Out! (Continued)

19-year olds once again declined through 2003, and stabilized in 2004. Do you see why it is difficult to seasonally adjust these figures? The trends are not stable over even short time frames. Typically, five years of data are required to establish a trend, but it appears that this age group easily shifts over five-year periods. When fewer-than-expected teens enter the work force in May and June, the seasonally adjusted labor force shrinks and this leads to a drop in the jobless rate. In August or September, when these student workers return to school, the unemployment rate will rise again. Consequently, view movements in the unemployment rate during summer months with a skeptical eye.

It matters to economists and policymakers whether changes in the unemployment rate are due to changes in the labor force or to changes in employment. A rise in the jobless rate due to a decrease in employment is worse news for the economy than a rise in the unemployment rate due to a greater number of persons entering the labor force. Labor force growth accelerates when individuals believe the job outlook is improved; it moderates significantly during recessions when job prospects appear poor. Although many economists tend to credit this phenomenon to discouraged workers, that theory does not explain all labor force behavior. Such behavior changes over the business cycle because people have many alternative ways to use their time. When the economy is in recession and wages are lower, the cost of unemployment declines and other options such as going to school or raising a family become more desirable. On the flip side, a business cycle expansion accompanied by rising wages makes it more costly to stay at home and raise children, attend school, or consider other options.

The unemployment rate is a lagging indicator of economic activity, so do not be unduly alarmed about jobless rate gains when other economic indicators show a more positive economic picture. Although economists accept the unemployment rate as a lagging indicator, a rising jobless rate can still be disconcerting. To a much greater degree than other economic indicators, the unemployment rate along with the inflation rate can have political ramifications because it affects consumers directly. As a result, the Federal Reserve keeps a close watch on the unemployment rate. If it rises too rapidly or too steeply, the Fed could be under pressure by the president or Congress to ease monetary policy (lower interest rates) in an effort to boost economic activity, thereby causing a decline in the jobless rate. The unemployment rate rose to 7.8 percent in June 1992, more than a year into a very mild recovery. Within an hour of the BLS report, the Federal Reserve cut the discount rate 50 basis points to 3 percent, bringing this rate to its lowest level since 1963. (Since 1994 the Fed no longer changes interest rates upon release of economic indicators, unless it is a national emergency. See Chapter 10.)

Watch Out! (Continued)

Federal Reserve officials and economic analysts also look at other data. For instance, the employment-to-population ratio tends to be more stable than the jobless rate and has the added benefit of not being tied to labor force movements. This series has risen steadily during the postwar period. It is procyclical since it declines during recessions and rises during expansions.

Did You Know?

The unemployment rate can be too low. Huh? In the mature phase of an expansion, the jobless rate declines to the point that it signals “tight” labor markets. This situation is known as “full employment,” and comes attached with a specific rate referred to as NAIRU (nonaccelerating inflation rate of unemployment). It means that employers will have a difficult time finding additional workers without raising wages. Accelerating wages are associated with inflationary pressures in the economy when they are not accompanied by equal gains in worker productivity. At this point, Fed policymakers would consider restricting monetary policy by raising the federal funds rate.

The NAIRU is a moving target, however. Most economists agreed that this rate was about 6 percent in the 1970s to early 1980s, decreased to 5.75 percent in the late 1980s and early 1990s, and fell to about 5.5 percent in the mid to late 1990s. Laurence Meyer, former Federal Reserve governor, forecaster extraordinaire, and author of *A Term at the Fed*, estimated a 5 percent NAIRU for the early 2000s. The jobless rate was falling between 1995 and 2000 and reached a low of 3.8 percent in the spring of 2000. While wages did indeed accelerate from 1996 to 1998, consumer prices were not accelerating at this time. The Fed did not budge from its policy stance, primarily because then Fed Chairman Alan Greenspan was not a big fan of the NAIRU concept. In his book, Meyer describes him as “skeptical.” “This leads to another problem about the NAIRU,” Meyer admitted. “The concept is about as controversial as global warming and possibly as emotional.”²

Nonfarm Payrolls

The unemployment rate and its slew of data are derived from a survey of households. Another set of statistics comes from a survey of over 400,000

establishments, officially known as the Current Employment Statistics Survey. The main figures from this survey are payrolls of nonagricultural business establishments and government agencies. Because this survey simply asks respondents to provide the number of workers currently on their payrolls, double counting occurs when individuals hold more than one job. For instance, when I had youthful energy and zeal, I was a full-time bank economist by day and taught evening courses part-time at two different universities for several months. Consequently, I was counted on three payrolls even though only one of my jobs was full-time employment. When I quit one of the university positions and went off its payroll, it appeared as a drop in employment. Table 8.2 lists some of the major categories of goods and services industries that make up the payroll data. A more complete list can be found in Table B-1 of the monthly employment situation published by the BLS.

Business establishments are asked to give their employment statistics

TABLE 8.2 Nonfarm Payrolls, Selected Data (Thousands, seasonally adjusted)

	Oct-04	Nov-04	Dec-04
Total Nonfarm	132,162	132,294	132,449
Total Private Industries	110,462	110,588	110,749
Goods-producing Industries	21,982	21,996	22,022
Natural Resources and Mining	595	599	602
Construction	7,043	7,060	7,086
Manufacturing	14,344	14,337	14,334
Production Workers	10,111	10,104	10,097
Durable Goods Manufacturing	8,960	8,954	8,957
Nondurable Goods Manufacturing	5,384	5,383	5,377
Service-providing Industries	110,180	110,298	110,427
Private Service-providing Industries	88,480	88,592	88,727
Trade, Transportation, & Utilities	25,581	25,621	25,620
Wholesale Trade	5,675	5,680	5,684
Retail Trade	15,057	15,081	15,077
Transportation & Warehousing	4,280	4,290	4,288
Utilities	570	570	571
Information Services	3,131	3,133	3,127
Financial Activities	8,093	8,107	8,128
Professional & Business Services	16,614	16,611	16,674
Education & Health Services	17,081	17,108	17,142
Leisure & Hospitality	12,546	12,571	12,589
Other Services	5,434	5,441	5,447
Government	21,700	21,706	21,700

Source: Bureau of Labor Statistics and Haver Analytics.

for the pay period that includes the twelfth of the month, although this does not necessarily correspond to the calendar week referenced in the household survey since companies have different pay schedules, such as weekly or biweekly, for their workers. In contrast to the household survey, which covers self-employed workers and unpaid family workers, nonfarm payrolls do not. Furthermore, workers involved in labor disputes (on strike) during the relevant week are not included in the figures, either. Laid-off individuals are not on the payroll even if the layoff period is only a week. However, if workers are paid for any portion of the pay period, then they are counted as employed even if they are on strike or unemployed for the rest of the period.

Earlier in the chapter, I noted that the unemployment rate and jobless claims are not statistically related. However, a relationship does exist between nonfarm payrolls and the data collected by State Employment Security Agencies as a byproduct of the unemployment insurance system. When the payroll data are benchmarked every year, that is, when a complete employment count is undertaken, the data from these agencies are used to adjust the establishment payroll figures since 97 percent of all employees are covered by unemployment insurance.

Nonfarm payrolls and household employment are uniquely defined making it impossible for them to change in the same direction or by the same magnitude from one month to the next. An increase in nonfarm payrolls coupled with a decrease in household employment in the same month and vice versa is not unusual. Remember that household employment includes farm workers as well as the self-employed. Also nonfarm payrolls do not include workers on unpaid leave as employed, while the household survey does. Finally, the establishment survey is not limited by age, while the household survey only looks at workers over 16.

Despite these differences, the two employment measures move together over the long run. The Labor Department publishes an employment measure based on the household survey that is compatible with the nonfarm payroll concept. The two move almost in tandem. Over a 10-year period, the biggest gap occurred in 1999 and 2000—a booming period of economic activity that could have easily compelled workers to take on additional lucrative jobs. As economic conditions worsened, the gap between the two series narrowed, and by 2004, household employment showed higher employment than nonfarm payrolls (see Figure 8.3).

Nonfarm payroll employment is often considered a better indicator of current economic conditions than household employment even though it double-counts employment and does not necessarily count everyone. The survey produces models of business births and deaths and updates actual figures from the unemployment insurance agency files. While the total of

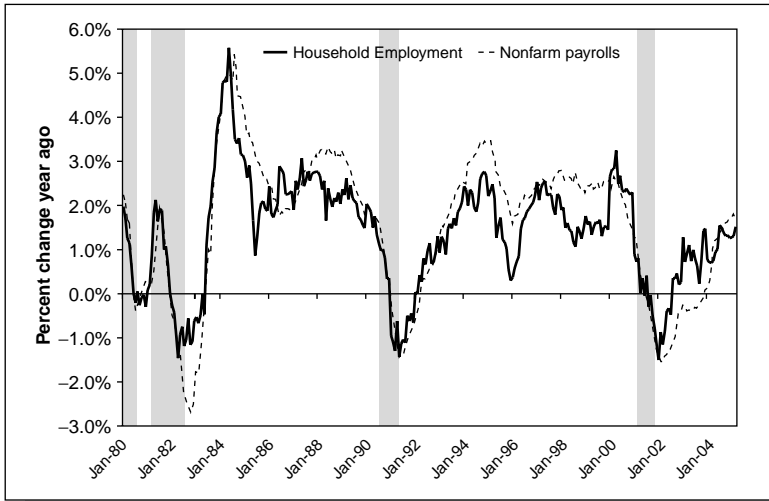


FIGURE 8.3 Employment: Payrolls versus Household: Over time, household employment and nonfarm payrolls move in the same direction. Because the two are defined differently, they can grow at different rates from month to month.
Source: Bureau of Labor Statistics and Haver Analytics.

business births and deaths can be a large number, the net contribution to the monthly estimates is typically small and stable according to the BLS.

Did You Know?

Components of the establishment survey are good predictors of personal income, which is released three weeks after the employment situation. Monthly percentage changes in average hourly earnings, the private average workweek, and private (excluding government workers) nonfarm payrolls provide a good estimate of the monthly percent change in private wages and salaries (nearly 50 percent of total personal income).

Market Reaction

Players in the fixed income market favor small increases or outright declines in nonfarm payrolls because they signal economic weakness. Economic weakness usually portends lower interest rates through decreased market demand for loans or Federal Reserve easing. The Federal Reserve eased on

September 4, 1992, by lowering the federal funds rate by 25 basis points to 3 percent—this on the heels of another report of mediocre nonfarm payrolls for the month. In 1994 the Fed began to make policy changes only after FOMC meetings, but this procedure is relaxed in periods of emergency. See Chapter 10 for more information on the Federal Reserve.

Conversely, robust increases in nonfarm payrolls could indicate a healthy economy and portend higher interest rates as credit demands pick up or the Federal Reserve tightens to prevent inflationary pressures. The potential for higher interest rates makes foreign exchange market participants eager for robust gains in nonfarm payrolls, as they will push up the value of the dollar. Participants in the equity market also favor healthy employment gains because a strong economy means healthy corporate profits, which is a boon for stock prices.

Watch Out!

There are many pitfalls to guard against when analyzing nonfarm payrolls. First, labor strikes affect the pattern of growth of nonfarm payrolls. If workers are on strike during the relevant pay period (including the 12th of the month), the rise in nonfarm payrolls will be understated. When workers return to their jobs, nonfarm payroll employment increases will be overstated. The telephone workers' strike in 1983 caused a 411,000 plunge in total nonfarm payrolls in August and a subsequent spurt of 733,000 workers in September when the labor dispute ended. Economic analysts discussed the effects of the telephone workers' strike in advance, so the initial plunge in payrolls did not cause financial market participants to anticipate an economic downturn and the subsequent burst did not lead them to anticipate an economic expansion with inflationary pressures. Incidentally, AT&T was still the nation's phone company in 1983—we have not seen a strike of this magnitude since then. The UPS strike of August 1997 only affected about 185,000 workers and caused a more moderate swing between August 1997 when nonfarm payrolls increased 52,000 and September 1997 when payrolls rose 300,000.

Discounting changes in payrolls because of known strikes may work against you, too. In 1989, Eastern Airlines workers went on strike. Unfortunately, they never returned to work because Eastern went bankrupt. An initial job loss of roughly 25,000 workers, which was glossed over because it was due to a labor dispute, turned into a permanent job loss—and market players did not even notice. Because the Bureau of Labor Statistics is well aware of the impact that changes in the employment situation have on

(Continued)

Watch Out! (Continued)

the financial market, it typically headlines especially large labor disputes or other special factors in reports. This practice quickly alerts financial market participants and the media to potential aberrations.

The changing nature of the economy induces temporary quirks in the monthly seasonal adjustment process. For example, just as retail sales have a strong seasonal component and tend to increase sharply in November and December, so does retail trade employment. Then when retail sales slough off in January and February, retail trade workers will be laid off.

In the mid- to late 1980s, retailers began to hire fewer workers before the holiday season because retail sales growth moderated. Because seasonal adjustment factors were expecting larger gains in employment, this hiring policy had the effect of depressing seasonally adjusted retail trade employment in November and December. Fewer workers were actually hired so this was appropriate.

The problem became apparent in January and February when the seasonal adjustment factors expected heavy layoffs (which never occurred). If retailers did not hire the workers to begin with, they certainly could not fire them. As a result, January and February retail trade employment was blown up and the January rise in nonfarm payrolls was substantially overstated (by 100,000 workers or more). This problem occurred for several years until the seasonal adjustment factors could take into account the smaller amount of seasonal hiring and firing.

Seasonal problems are not limited to retail trade. Construction employment also has a strong seasonal component that could be thrown out of whack by unusual weather patterns. For example, exceptionally warm weather during winter months could artificially boost construction employment between December and April. Unusually rainy weather during the spring and summer could understate employment then.

Apart from checking nonfarm payrolls for special factors, see if gains or declines in nonfarm payrolls are consistent across the board or are concentrated in a certain sector. For example, a broadly based rise in payroll employment shows better labor market conditions than a rise concentrated in just one sector. In the early 1980s, the service sector continuously posted robust gains in each month. Recovering from the 1981–1982 recession, a rapidly rising service sector seemed to hide modest manufacturing employment gains. An anemic goods-producing sector coupled with faster recovery in the service sector was repeated after the 1990–1991 recession and the 2001 recession.

Watch Out! (Continued)

Also, distinguish between increases in private nonfarm payrolls versus increases in government payrolls. The government sector has quirks of its own such as temporarily hired census workers once every decade. In 2000, federal government payrolls jumped more than 100,000 per month, on average from February to May. The bulk of these workers came off the payrolls between June and September, again averaging changes of more than 100,000 per month—this time in reverse.

In 2002, state government education payrolls increased largely in May and June but decreased in September. Similarly, in 2003, seasonal adjustment problems caused spurts in local government payrolls (education again) in June and sharp declines in September. The numbers are large and they can obscure underlying trends in employment conditions. One needs to be on the lookout for these types of quirks.

Average Workweek

The establishment survey, just like the household survey, provides a complete set of statistics. In addition to nonfarm payrolls, the establishment survey includes average weekly hours of production workers on nonfarm payrolls by industry; average hourly and weekly earnings of production or nonsupervisory workers on private nonfarm payrolls by industry (discussed in Chapter 7 as an indicator of inflation); and indexes of aggregate weekly hours of production of nonsupervisory workers on private nonfarm payrolls by industry.

Financial market participants have caught on to many of these indicators. Private average weekly hours, otherwise known as the average workweek, are a leading indicator of employment. Businesses tend to adjust total hours worked by increasing or decreasing the workweek before hiring someone new or laying someone off. The average workweek in manufacturing is one of The Conference Board's official leading indicators. This is a leading indicator of economic activity because producers tend to increase the number of hours worked before hiring new workers during a business upturn, or decrease the number of hours worked before laying off people during a downturn. The factory workweek also includes changes due to overtime hours. Since employment data are reported two weeks before production data (for the same month), the number of hours worked per week in manufacturing along with the number of workers on manufacturing payrolls is a good predictor of industrial production for the current month.

Market Reaction

The financial market's fascination with the average workweek began in 1991, long after they began to monitor payrolls in the mid-1980s. Fixed income market players see a rise in the workweek as a potential for future employment gains and therefore a healthy economy. It points to rising interest rates. Conversely, a decline in the average workweek suggests economic weakness and future employment declines. Bond market participants favor bad economic news and this could lead to falling interest rates. In contrast, foreign exchange market players prefer good economic news that pushes up interest rates—and then the dollar. Keep in mind that the average workweek is much less important than nonfarm payrolls or the unemployment rate. So market reaction to the average workweek tends to be more muted.

Watch Out!

The average workweek is very volatile from month to month. It has trended lower in the past 30 years as the share of workers in the service industry with greater part-time workers has increased, but the cyclical component remains true. The workweek is affected by holidays and weather. For instance, in January 1996, blizzards and snowstorms blanketed the East Coast during the employment survey week. As a result, the average workweek fell 1.2 percent for the month before rebounding back in February.

ARE YOU INTERESTED IN WORKER CONFIDENCE?

Hudson, a professional staffing, outsourcing, and human capital solution provider (<http://www.hudson.com>), has combined two key market elements: confidence and employment. Their monthly index measures work force confidence in the employment market. This index is based on about 9,000 telephone surveys of U.S. workers and tracks employment trends around career opportunities, hiring intentions, job satisfaction, and retention. This is a relatively new index and was not seasonally adjusted through 2005. Combining workers and confidence is an interesting twist. This indicator bears watching in the future.³

Index of Help-Wanted Advertising

The Conference Board releases its index of help-wanted advertising on the last Thursday of every month. That means May figures would be reported near the end of June. Because this indicator is released about three weeks after the employment situation, it is not useful to predict changes in the unemployment rate or nonfarm payrolls; but it can be helpful in assessing hiring attitudes at economic turning points.

The national index is a composite of 51 individual indexes for cities across the country. Only one newspaper is surveyed for each city. In Chicago, either the *Sun-Times* or the *Tribune* help-wanted advertising would be surveyed, but not both. Because the cities were chosen for their density of population, the largest urban areas in the country are included in this index, limiting the monthly survey to nonagricultural employment. Moreover, help-wanted advertising does not include the self-employed (who would have to place and answer their own ads), so on a monthly basis, the index corresponds more closely to the nonfarm payroll series of the Labor Department's establishment survey rather than to household employment, which gives us the unemployment rate.

Raw help-wanted advertising data are adjusted for two factors. First, each month is adjusted for the number of weekdays and Sundays. Sunday advertisements tend to be heavier so an extra Sunday in any given month would increase the help-wanted index if it were not considered. Second, like all good economic data, the figures are adjusted for seasonal variation. The 51 city indexes are adjusted for these two factors before each city index is multiplied by its appropriate weight in the national index. These weights are adjusted annually as population and employment shift among regions. The Conference Board also publishes regional indexes using the city indexes to compile them. Of course, the weights are different for each city relative to its region.

The composite help-wanted index has a pronounced cyclical pattern. The index rises during expansions as the demand for labor increases with gains in production and falls when the demand for labor declines in a contracting economy. Help-wanted advertising decreases because firms are hiring fewer workers. During economic expansions, help-wanted advertisements increase not only because new jobs are created, but also because there is greater turnover among the employed, who feel more comfortable about changing jobs in a strong labor market. During recessions, not only are fewer new jobs created—workers also tend to hold on to their jobs for fear of layoffs that are more likely to affect those with less seniority.

Even though the help-wanted index is reported late in the month, it

has properties of a leading indicator—at least near cyclical peaks. When the economy is approaching its cyclical peak, its rate of growth may slow. As a result, the rate of new hiring may also moderate leading to a decline in help-wanted advertising. Thus, the help-wanted index begins to decline even when the economy is still growing. Declines in the index could be fairly sharp as slowdowns spread across various industries. In postwar recessions, declines averaged roughly 40 percent.

The help-wanted index has not served as a leading indicator at cyclical troughs. Firms may first recall workers that were laid off before they hire new workers, in which case, they need not advertise. Another factor that can hold down advertising during periods of slack labor demand is the easy accessibility of workers. One week's ad may bring in hundreds of resumes. During tight labor markets, when the economy is near its peak, firms may have to advertise for several weeks to gather enough resumes for proper hiring decisions.

The help-wanted index fell sharply in 2000 before the recession, and in 2001 during the recession. The index continued to decline in 2002 after the economic recovery had already started and remained virtually unchanged at depressed levels in 2003 and 2004 even when other employment measures had improved. It is possible that this index of newspaper advertising has lost some of its value since so many more companies have begun to advertise online. (See Figure 8.4.)

Market Reaction

Financial market participants do not react very much to this indicator because it is lagged relative to other employment indicators. Although the help-wanted index is not necessarily useful to day traders who react to current news events, the series has greater significance to those investors who take a longer perspective of the economy.

Monster Employment Index

Monster Worldwide—which sponsors Monster.com, the employment and career services web site—has begun to publish the Monster Employment Index, a measure of help-wanted advertising online. It is generally published on the first Thursday of the month. In April 2004, Monster first released an employment index that is essentially akin to The Conference Board's help-wanted index. Rather than cull information from leading U.S. newspapers, the Monster research team decided to gather information from web sites that posted job availability. The new index has a short history that begins in October 2003. Because online advertising is

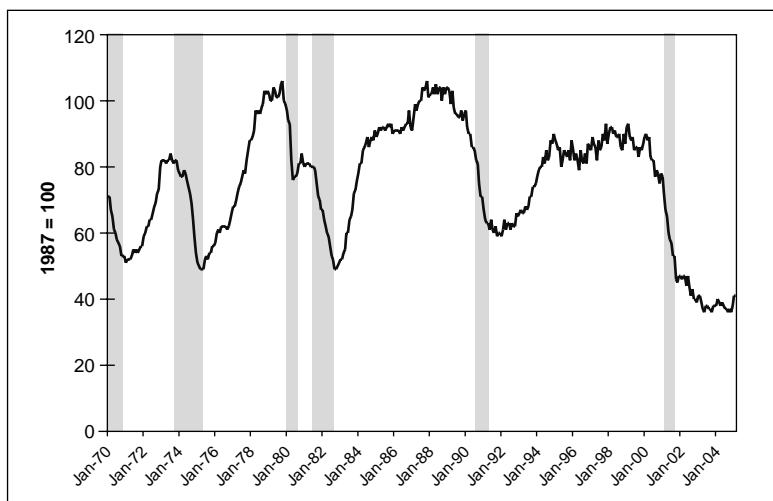


FIGURE 8.4 Help-Wanted Advertising: The help-wanted index has long served as a viable indicator of the labor market. It never recovered from the 2001 recession, however, even though other labor market indicators showed marked improvement in 2004 and early 2005. Perhaps newspaper advertising is not as popular anymore since online advertising is less expensive.

Source: The Conference Board and Haver Analytics.

more likely to increase than decrease in the future, it is likely that this index will eventually become more useful than The Conference Board's help-wanted index.

While this index would be valuable even if Monster's team of researchers simply monitored the Monster.com job site, they actually have reviewed millions of employer job opportunities from more than 1,500 web sites. These include corporate career sites, job boards and, of course, Monster. The Monster Index counts job postings—an indicator of employer demand for employees. Online advertisements placed by employers looking to fill one or more vacant, or recently created, job positions are considered job postings. As a new index, its main drawback is that historical detail is short and it is impossible to see how this index moves over the business cycle. Furthermore, there is insufficient data to create seasonally adjustment factors. The index is not adjusted for seasonal variation.

The Monster research team will be able to seasonally adjust this index with five years of data. In the meantime, monthly movements need to be interpreted cautiously. However, the unadjusted index remains valuable. For instance, one might compare year-over-year differences rather than

month-to-month changes. Keep in mind that the Institute for Supply Management also reported data that were not adjusted for seasonal variation in the initial years of release of the ISM non-manufacturing survey.

While the Monster Employment Index is a macroeconomic indicator of employment opportunities in the nation, the research team also compiled indexes for the nine U.S. Census Regions, 20 (NAICS) industries, 23 occupations, and all 50 states.

The Monster Employment Index follows the same conceptual framework as The Conference Board's help-wanted index—it monitors job availability. Instead of combing through top metropolitan newspapers in each state, the Monster research team collects data from web sites. While help-wanted advertising can still be found in newspapers, many companies are increasingly posting jobs primarily online. The Conference Board's help-wanted index might be understating demand for job positions in the post-2001 recession period as more employers shifted their hiring advertisements from the printed media to the Web.

Harry Hurt III writes in the *New York Times*, “Advocates say the online indexes better reflect how so many job hunters are migrating to the Web from newspapers and employment offices. Web sites accounted for 20 percent of all employment advertising in 2003, up from just three percent in 2000, according to Corzen (a provider of industry-specific indicators).”⁴

Market Reaction

This index is reported at 6:00 A.M. Eastern time—before U.S. markets are open. Consequently, there is no flurry of market activity at that hour. However, given that market participants are very interested in labor market conditions, as this new index gains credibility and history, we may see more reaction to it when trading begins for the day. And the release time is not set in stone—Monster could always decide to report later in the day. Bond investors would prefer declines in the Monster Employment Index while equity investors would favor healthy employment conditions and would prefer to see this index increase.

Challenger Job-Cut Report

Challenger, Gray & Christmas, an outplacement firm, releases a monthly report that covers layoff announcements by industry. The figures are released on the second or third business day of the month for the previous month, making the figures very timely. Unfortunately, the data are not adjusted for seasonal variation, and must be interpreted with caution. The series have a long history, however, so one can easily compare year-over-year changes to see whether seasonal patterns exist.

One main problem with this report is that a distinction is not made whether the announced job cuts are going to be effective immediately or in the future. For instance, some companies may announce substantial job cuts that will take place through attrition over a five-year period. Other companies might announce layoffs that will take place next week. There is no way of knowing which is the case.

That said, this report is a useful labor market indicator and correlates well with unemployment claims over time. But it is more beneficial to look at a three-month moving average of the level of job-cut announcements and to compare this over the previous year's level.

Market Reaction

The Challenger Job-Cut Report generates some attention when other indicators are not immediately available. It is not as useful to market players as weekly jobless claims. Declines in job-cut announcements are viewed in a positive light by equity investors, but less favorably by bond investors. Conversely, bond market players view increases in job-cut announcements favorably, while that is bad news for stock investors. This is shown in Figure 8.5.

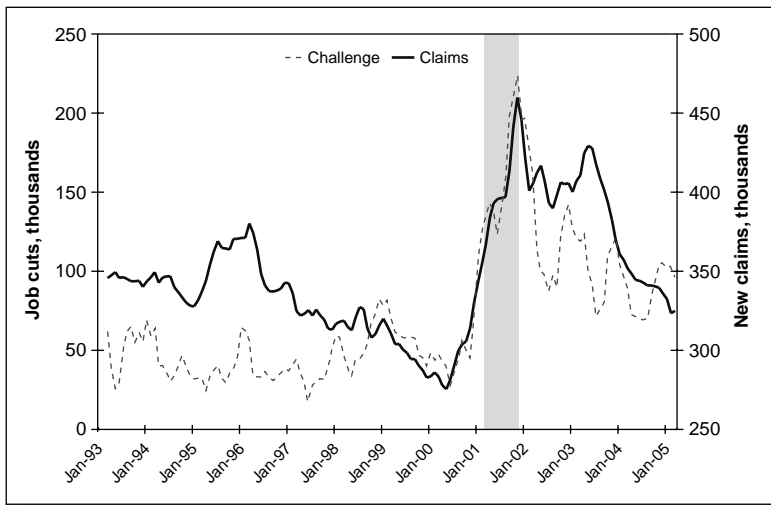


FIGURE 8.5 Challenger Job-Cuts versus Initial Jobless Claims: The Challenger job-cut report moves in line with new claims, but since the job cut figures are not adjusted for seasonal variations, one must interpret these figures cautiously. *Source:* Challenger, Gray & Christmas, Inc., Department of Labor’s Employment & Training Division, and Haver Analytics.

ARE YOU INTERESTED IN MORE LAYOFF INFORMATION?

The Bureau of Labor Statistics releases monthly data on mass layoffs. Data are reported three to four weeks after the month ends. These figures do not get much market attention, if any, probably because they are reported with such a delay. For instance, weekly new jobless claims are reported with only a one-week lag, and the Challenger job-cut report is available less than one week after the end of the month.

Job Openings and Labor Turnover Survey (JOLTS)

In 2003, the Bureau of Labor Statistics produced seasonally unadjusted data on *job openings and labor turnover survey* (JOLTS) with a substantial lag and with an erratic schedule. In the second quarter of 2004, the BLS began to release seasonally adjusted monthly reports on a regular schedule. Still, preliminary data are released with a two-month lag and final figures are released with a three-month lag.

The number of unfilled jobs is a measure of unmet demand for labor and is used to calculate the job openings rate. According to the BLS, this paints a more complete picture of the labor market than just the monthly employment situation because we now can look at the unemployment rate, which measures excess supply of labor, and the job openings rate, which measures demand for labor.

JOLTS comes from a probability sample of 16,000 establishments from a universe of over 8 million establishments. The program includes all employers subject to state unemployment insurance laws (UI) and federal agencies subject to unemployment compensation for federal employees (UCFE).

While nonfarm payrolls measure employment for the week that includes the twelfth day of the month, establishments submit job openings information for the last business day of the reference month. A job opening requires the following: A specific position exists and there is work available for that position; work could start within 30 days regardless of whether a suitable candidate is found; the employer is actively recruiting from outside the establishment to fill the position; full-time, part-time, permanent, short-term, and seasonal openings are all counted; Active recruiting requires the firm to take steps to fill the position by advertising in newspapers or on the Internet, posting help-wanted signs, and accepting applications.

When jobs are to be filled by internal transfers, promotions, demotions, or recall from layoffs, they will not be counted as job openings. Also, jobs that have start dates more than thirty days out will not be included in the openings data. If jobs are to be filled by employees from temporary help agencies, employee leasing companies, outside contractors, or consultants they will also be excluded from the openings data.

Market Reaction

Until now, this report has not generated any significant market reaction. However, as this index generates history and credibility over time, it will give us more useful labor market information at an opportune time.

KEY POINTS

- Employment indicators that show signs of economic strength cause bond prices to fall (yields to rise) and stock prices and the value of the dollar to increase.
- Employment indicators that portend weakness for the economy cause bond prices to rise (yields to fall) and stock prices and the value of the dollar to decline.
- Never take one month's data at face value. Look at monthly trends over a three- to six-month period, especially when blips occur.
- The Employment Situation (yielding the unemployment rate, nonfarm payrolls, and the average workweek) is rich with information and is more timely than most other economic indicators. If you were to choose only one indicator to follow regularly, this should be it.
- Employment conditions are important and thus several new indicators have been introduced in the past few years. When their histories become more established, they may generate more market attention.

Other Measures of Production

Many of the economic indicators discussed in the previous chapters describe spending: retail sales, manufacturing shipments, and the merchandise trade balance. These fit on the product side of the national income and product accounts. Other indicators directly assist in establishing the direction of the sector such as personal income and consumer sentiment, which determine personal consumption expenditures. Many of the indicators are used in the actual computation of GDP (retail sales) or national income (personal income). Nevertheless gross domestic product is a measure of production, not sales, and its major drawback is a quarterly release schedule.

This chapter describes other production indicators that are not all-encompassing but are reported either weekly or monthly and are more timely than GDP. Financial market participants, federal government policy-makers, and the media closely monitor these series.

WEEKLY INDICATOR

EIA Petroleum Status Report

The Energy Department's Energy Information Administration (EIA) releases many weekly and monthly reports. In 2004 a surge in crude oil prices led financial market participants to become engrossed with energy matters, primarily, inventories of crude oil and its many byproducts. Weekly inventory levels can easily fluctuate. For instance, if the East Coast is undergoing a cold snap, and crude oil inventories as well as heating oil inventories are down from the previous week, commodity speculators worry that crude oil prices will eventually rise. In any case, falling inventory levels amid healthy demand signal price increases. Conversely, rising inventory levels of crude oil point to falling prices.

Market players tend to look at this report only for its impact on crude

oil prices. However, if one were interested in predicting or assessing inventory levels for monthly business inventories, or for GDP, these would give a clue on one sector of the economy. Rising inventories would add to quarterly GDP growth while declining inventories would subtract from growth.

Market Reaction

In 2004 both the fixed income and equity markets were heavily influenced by rising and falling crude oil prices, which were in turn affected by inventory levels and oil refinery production. When crude inventories declined, crude prices rose and bond prices fell (and bond yields rose). Equity prices fell when crude oil inventories fell and prices rose because energy is a major factor of production and potentially inflationary. When inventory levels rose, crude oil prices fell, and this allowed bond yields to fall and equity prices to rise. As long as crude oil prices are high, this weekly indicator gets a lot of market attention. If and when crude oil prices stabilize or decline on a sustained basis, this indicator will fade to the background.

ARE YOU INTERESTED IN THE ENERGY MARKET?

The EIA also releases weekly information on natural gas stocks. This report can have a substantial impact on natural gas prices in the futures market, even though it did not become a market-moving indicator among all financial markets in 2004 and 2005 in the same way that the petroleum status report did.

MONTHLY INDICATORS

The Index of Industrial Production

The Federal Reserve Board compiles and publishes an index of industrial production each month. A preliminary estimate is released between the ninth and twelfth business day after the end of the month. This index, which covers manufacturing, mining, and utilities, is constructed from 300 individual series and basically accounts for about one-quarter of gross domestic product. The index of industrial production is seasonally adjusted with 1997 = 100. Although this series represents a relatively small portion of GDP, it accounts for a large portion of the goods that are cyclically sensitive to the economy, such as consumer durables and business equipment.

The index of industrial production is grouped by products. About 43 percent of the index covers production of final products including consumer durable and nondurable goods, business equipment, and defense equipment. Final products are generally purchased by consumers, businesses, or government for final use. Intermediate products such as construction and business supplies account for roughly 15 percent of the index. These products become inputs in nonindustrial sectors: construction, agriculture, and services. Production of materials, which covers about 42 percent of the index, includes such goods as consumer parts, basic metal materials, textile, pulp and paper, and chemical materials, and energy materials. These require further processing within the industrial sector. Table 9.1 shows selected sectors of production.

Industrial production is also grouped by industry to cover durable (43 percent) and nondurable (34 percent) goods manufacturing, mining (8 percent), and utilities (10 percent). A more detailed look includes lumber and products, fabricated metals, electrical machinery, apparel products, and electric utilities. According to the Federal Reserve Board, the total industrial production index since 1997 is constructed from 300 individual series based on the 2002 North American Classification System, discussed in detail in Chapter 4. Incidentally, the NAICS does not classify logging and newspaper, periodical, book, and directory publishing as manufacturing. However, these have traditionally been classified as such in the industrial production index and thus they remain in the manufacturing portion of the index. Printing, however *is* a NAICS manufacturing category. The Fed

TABLE 9.1 Industrial Production by Market Group (Seasonally adjusted, 1997 = 100)

	Oct-04	Nov-04	Dec-04
Industrial Production Index	116.6	116.9	117.9
Final Products and Nonindustrial Supplies	114.6	114.6	115.5
Consumer Goods	112.3	112.3	112.9
Durable Consumer Goods	126.2	125.7	126.1
Nondurable Consumer Goods	107.0	107.2	107.9
Business Equipment	122.7	122.1	123.6
Information Processing and Related Equipment	180.8	182.3	185.3
Defense and Space Equipment	113.8	114.5	115.2
Nonindustrial Supplies	113.4	113.7	114.6
Construction Supplies	108.3	107.8	108.2
Materials	119.4	120.1	121.1

Source: Federal Reserve Board and Haver Analytics.

TABLE 9.2 Industrial Production by Industry Group (Seasonally adjusted, 1997 = 100)

	2004 Proportion	Oct-04	Nov-04	Dec-04
Industrial Production Index	100.00	0.8	0.3	0.9
Manufacturing (Non-NAICS)	81.91	1.1	0.1	0.5
Manufacturing	77.18	1.2	0.0	0.5
Durable Goods	42.78	1.2	0.1	0.7
Wood Products	1.55	3.3	-1.9	-0.1
Nonmetallic Mineral Products	2.22	0.1	0.2	2.0
Primary Metals	2.77	0.1	1.0	-2.2
Fabricated Metal Products	5.65	0.3	-0.2	0.2
Machinery	5.46	1.3	0.1	0.3
Computer & Electronic Components	7.36	1.0	0.8	1.5
Electrical Equip Appliances & Components	2.15	-1.2	0.4	1.9
Motor Vehicles & Parts	7.24	3.5	-0.5	1.2
Aerospace & Miscellaneous Transport Equip	3.55	1.0	0.4	0.9
Furniture & Related Products	1.70	0.6	-0.2	0.8
Miscellaneous Durable Goods	3.13	1.2	0.4	0.2
Nondurable Manufacturing	34.41	1.0	0.0	0.2
Food, Beverages, & Tobacco	11.44	1.1	-0.2	0.2
Textile & Product Mills	1.07	1.3	-1.8	-1.5
Apparel & Leather Goods	0.74	-0.6	1.0	-1.2
Paper	2.97	0.6	-0.6	0.3
Printing & Related Support Activities	2.17	-1.1	0.2	-0.2
Chemicals	10.46	1.4	0.1	0.4
Petroleum & Coal Products	1.98	1.9	1.7	1.4
Plastics & Rubber Products	3.57	1.4	-0.5	0.2
Other Manufacturing (Non-NAICS)	4.73	-0.2	0.6	1.6
Mining	8.28	-0.4	1.8	0.9
Utilities	9.82	-0.4	0.5	3.1
Electric	8.15	0.5	-0.3	3.0
Natural Gas	1.67	-4.8	4.2	4.2

Source: Federal Reserve Board and Haver Analytics.

publishes a total manufacturing and a NAICS manufacturing index each month to account for this discrepancy. See Table 9.2.

Although the Federal Reserve Board has actual production figures for some industries (such as auto assemblies), it generally bases its preliminary release on the number of total hours worked in manufacturing using the Labor Department's unadjusted data from the employment situation. With respect to the initial estimate, the hours data account for about 35 percent, actual physical product accounts for 24 percent, and the Federal Reserve staff estimates the remaining 41 percent of the index. The Fed's seasonal adjustment factors are different from the employment seasonal factors; however you can predict the initial change in production by calculating the

number of total hours worked in manufacturing. Simply multiply the average factor workweek times the number of employed workers in manufacturing for the current and previous month. Take the percentage change and you will have your forecast.

By the first revision, 40 percent of the index comes from physical product and only 14 percent from Fed estimates. By the third revision, 50 percent of the data reflects physical product and a mere 4 percent remains the Fed's estimate. The 35 percent estimate for production worker hours remains unchanged from the initial to the third revision. Industrial production figures are revised annually or with benchmark revisions that occur less frequently. Data for the annual and benchmark revisions come from various sources: *Census of Manufacturers and Mineral Industries*, *Annual Survey of Manufacturers*, the *Minerals Yearbook*, and the Department of Energy.

This indicator is procyclical; that is, it rises during economic expansions and falls during recessions. In fact, the index of industrial production is one of the four coincident indicators of economic activity compiled by The Conference Board. It is typically used as a proxy for GDP even though it only covers about one-fourth of total production in the country. The premise is that services and structures move in the same direction as the manufacturing sector. However, it also reflects the portion of the economy that has greater peaks during an expansion and deeper troughs during a recession.

Capacity Utilization Rate

The capacity utilization rate, closely linked to the index of industrial production, measures operating capacity relative to the idle resources in the economy. The Federal Reserve Board releases it at the same time as industrial production. Technically defined, the utilization rate for an industry is equal to an output index divided by a capacity index. Output is measured by the index of industrial production. The capacity measures the attempt to capture "sustainable practical capacity" as indicated by work schedules and the availability of inputs to operate machinery and equipment in place.

Generally, a capacity utilization rate of about 88 percent in the total manufacturing sector flashes strong warnings of capacity constraints. Factories are then practically at full capacity and inflationary pressures become evident. Capacity constraints arise at an operating rate of 85 percent to 88 percent because it is not usually efficient for factories to operate at full (100 percent) capacity. The costs of overtime pay might not generate sufficient profits to work at full capacity all the time. Note, however, that the most efficient usage rate varies by industry. Some may operate at 110 percent of capacity (working overtime in three shifts, perhaps) whereas others operate at 60 percent. Table 9.3 shows that not all factories are

operating at the same rate. In the fourth quarter of 2004, for example, petroleum products operated at 76.6 percent capacity while motor vehicle and parts operated at 82.5 percent. This does not mean that auto *production* was weaker than oil *production* during this period—in fact both were growing at nearly the same rate with motor vehicles and parts averaging monthly growth of 1.4 percent and petroleum and coal products averaging monthly growth of 1.6 percent. The capacity utilization rate for each industry reflects how much operating capacity there is and how much capital had been previously invested in each particular industry.

TABLE 9.3 Capacity Utilization Rates (Seasonally adjusted, 1997 = 100)

	Oct-04	Nov-04	Dec-04
Total Industry	78.5	78.7	79.2
Manufacturing (Non-NAICS)	77.5	77.5	77.9
Manufacturing	77.0	77.0	77.3
Durable Goods	75.1	75.0	75.4
Wood Products	79.5	78.0	78.0
Nonmetallic Mineral Products	80.2	80.4	81.9
Primary Metals	82.6	83.5	81.8
Fabricated Metal Products	70.1	70.0	70.1
Machinery	78.2	78.3	78.5
Computer & Electronic Components	71.0	71.0	71.4
Electrical Equip Appliances & Components	79.4	79.9	81.4
Motor Vehicles & Parts	82.6	82.1	82.9
Aerospace & Miscellaneous Transport Equip	65.2	65.4	65.9
Furniture & Related Products	73.4	73.3	74.0
Miscellaneous Durable Goods	77.0	77.3	77.4
Nondurable Manufacturing	79.8	79.8	80.0
Food, Beverages, & Tobacco	81.7	81.6	81.7
Textile & Product Mills	75.6	74.5	73.6
Apparel & Leather Goods	69.7	71.1	71.0
Paper	86.9	86.4	86.6
Printing & Related Support Activities	72.1	72.3	72.0
Chemicals	89.9	91.4	92.6
Petroleum & Coal Products	76.5	76.5	76.8
Plastics & Rubber Products	83.7	83.3	83.5
Other Manufacturing (Non-NAICS)	86.8	87.3	88.6
Mining	84.3	85.9	86.7
Electric & Gas Utilities	84.4	84.7	87.2
Addendum:			
Hi-Tech Industries	69.4	69.9	70.1
Computer & Peripheral Equipment	75.2	75.9	76.6
Communications Equipment	57.7	59.0	59.7
Semiconductors & Related Equipment	75.9	75.6	75.3

Source: Federal Reserve Board and Haver Analytics.

Depending on consumer and business demand, capacity constraints could set in for some industries, but not for others. The capacity utilization rate rises during expansions and falls during recessions. A high and rising operating rate signals the need for new investment in plant and equipment. It also signals potential inflationary pressures. The Federal Reserve closely monitored this series in the mid-1990s when the economy expanded rapidly in the mature phase of an expansion and when labor markets were getting tight. Yet, domestic capacity measures do not tell the whole story. The United States imported many goods from foreign countries; due to their excess capacity, price pressures were mitigated. In cases of the global marketplace, world capacity utilization is more relevant than domestic capacity usage.

Market Reaction

A rise in industrial production (and the capacity utilization rate) signals economic growth, whereas a decline in production indicates contraction. Fixed income market participants view a rise in industrial production as a warning of inflationary pressures. This means interest rates will rise. The flip side is that a drop in production (and utilization) portends economic weakness, allowing interest rates to decline as market participants anticipate Federal Reserve accommodation.

Players in the stock and foreign exchange markets favor gains in industrial production and the capacity utilization rate since they point to economic strength. Equity market professionals look toward increases in corporate earnings, whereas foreign exchange professionals look toward higher interest rates. High interest rates in the United States relative to other countries increase demand for U.S. securities and therefore U.S. dollars. This suggests an appreciating exchange value of the dollar.

Watch Out!

The index of industrial production and the capacity utilization rates are inextricably linked. It is not necessary to view them as two separate indicators. They always move in the same direction, and they always tell a similar story. However, they serve a different purpose. Industrial production signals economic growth. The capacity utilization rate reflects the extent of resources utilization and the point at which inflationary pressures set in. For example, a 1 percent rise in industrial production should not cause inflation fears when the operating rate is 78 percent, but could indicate inflation will accelerate when the utilization rate is near 85 percent.

(Continued)

Watch Out! (Continued)

For most economic indicators, economists can always point to quirks in the data or special factors that force market participants to take note. It is usually more difficult, however, to find quirks in the index of industrial production, which tends to be straightforward: An increase means economic growth; a decrease means weakness. Check to see whether the increase (or decrease) in production is broadly based or concentrated in one sector. Broadly based gains suggest a more solid foundation for economic growth. Increases in only one or two sectors could suggest some fragility in the economy. For example, strength might be exaggerated by increased production at utilities. Hot summer weather spurs air conditioner sales and pushes up electricity usage. This is not a sustainable trend, nor is it something on which to base growth. Natural disasters or severe weather conditions can also play havoc with the figures. The October 15, 2004 release of Industrial Production states: “The recent spate of hurricanes appears to have had a noticeable restraining effect on production last month.” This was in reference to the hurricanes that devastated much of Florida, Pennsylvania, and the mid-Atlantic that September.¹

ISM Manufacturing Survey

The Institute for Supply Management, a private organization, compiles a set of production and inflation data monthly. The most common of the set of indicators is a diffusion index known in the financial markets as the ISM manufacturing index but still billed by the ISM under its original name, the purchasing managers’ index or PMI. The data are reported on the first busi-

ARE YOU INTERESTED IN THE HIGH-TECH SECTOR?

Each month SEMI, a semiconductor equipment and materials industry organization, reports the book-to-bill ratio for this industry around mid-month. It is considered a key indicator for the semiconductor industry. In the past, this indicator caused sharp fluctuations—in both directions—in the Philadelphia Exchange Semiconductor Index.

The New York Federal Reserve publishes monthly the Tech Pulse Index, a summary statistic that tracks the health of the technology sector. Figures are released on the second Wednesday of each month based on information published by other statistical agencies. Some market players follow this index, but it is not a market-moving indicator.

ness day of the subsequent month (May figures are reported June 1), making this the most timely of all monthly indicators—its appearance could predate the employment situation by as much as a week. The figures are seasonally adjusted (as well as unadjusted). Unlike most other economic data, these figures are never revised from month to month. Every year, however, new seasonal adjustment factors are computed by the Commerce Department causing minor revisions of the ISM for the previous few years.

The ISM is a composite index of five series: (1) new orders, (2) production, (3) supplier deliveries (also known as vendor performance), (4) inventories, and (5) employment. Indexes for prices, new export orders, and import orders are not included in the composite but are also available. The Institute for Supply Management sends out a questionnaire once a month to more than 400 geographically diversified companies that are representative of the industry in their contribution to gross domestic product. Until 2005 the ISM surveyed 20 SIC (Standard Industry Classification) industries. According to an ISM spokesperson, they were switching to NAICS (North American Industry Classification System) by the end of that year.² According to Mark Pender, contributing editor at Econoday, contributing writer for *Market News International*, and an expert on ISM matters, they have been in the process of converting these data for the past couple of years. A further delay would not surprise him.³

The most important factor to keep in mind about the ISM, or any of the subindexes, is that you cannot read them like normal numbers. The series are set at a trigger rate of 50 percent. According to the Institute for Supply Management, an index level of 50 percent or more indicates that the economy as well as the manufacturing sector is expanding; an index level less than 50 percent but greater than 42.7 percent suggests that the manufacturing sector has stopped growing, but the economy is still expanding; a level less than 42.7 percent signals a recession both in the economy and in the manufacturing sector. For example, the ISM was in the low 40s during much of 2001 when the economy was in recession. The index also fell below 50, but remained above 42.7 for several months in 2003 when manufacturing activity moderated. Nonetheless, the economy overall continued to grow.

One more point: As this index increases from 51 to 52, it does not register a 2 percent gain. It simply reflects a *faster rate of increase* in the sector. Or, if the ISM falls from 49 to 48, it reflects a *faster rate of decline*. For the most part, you have to view the figures in the context of trends above or below 50 for growth or contraction. The further the index is above 50, the stronger the economy and vice versa. (See Figure 9.1.)

These figures are based on answers to straightforward questions. Purchasing managers are asked if their business situation is “better,” “same,” or “worse” than the previous month. Sometimes, the terms “higher” or “faster”

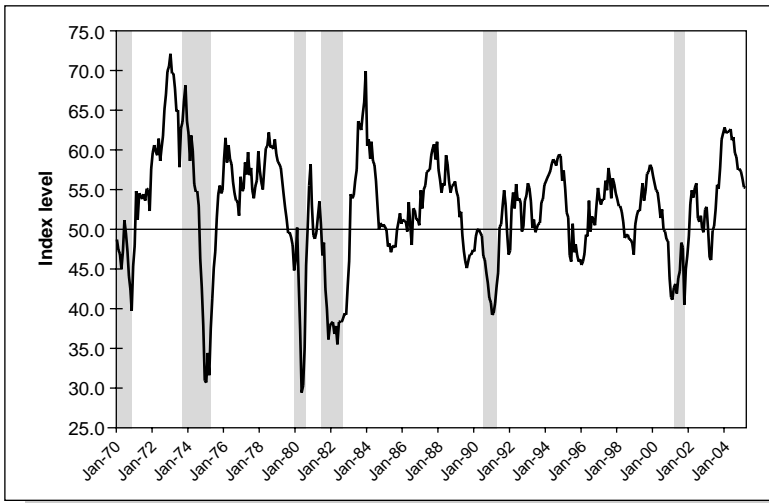


FIGURE 9.1 ISM Manufacturing Survey: This diffusion index reflects activity in the manufacturing sector—any level above 50 indicates growth.
Source: Institute for Supply Management and Haver Analytics.

are substituted for “better”; sometimes, “slower” is substituted for “worse.” The questionnaire does not ask for actual levels, just a *subjective* assessment of the company’s business prospects. The responses are then tallied: Those that are the “same” are cut in half and added to the responses for “higher.” This sum is equal to the unadjusted index. Seasonal adjustment factors, which are calculated by the Commerce Department, are applied to yield the seasonally adjusted index for those individual components that are adjusted. Put simply,

$$\text{Index} = \text{Higher} + \sim 0.5 \times \text{Same}$$

The rationale for incorporating the five components in the ISM is fairly straightforward. New orders are a leading indicator of economic activity. Changes in manufacturers’ orders lead to changes in production. Production reflects the current state of affairs and is a coincident indicator of the economy. As output expands, producers hire additional workers to meet the increased demands. Employment is also a coincident indicator. Inventories are typically a lagging indicator of economic activity. Inventory buildups usually continue into a cyclical downturn, as manufacturers are not sure whether the decline in demand is temporary or permanent. Inventories may decline early in a recovery as producers unload stocks that were built up during the reces-

sion. Supplier deliveries, also known as vendor performance, work in much the same way as unfilled orders. When producers slow down their deliveries, it means they are busy and cannot fill all the orders quickly. Supply shortages or transportation snafus may also prevent manufacturers from filling orders more quickly. Slower deliveries mean rapid economic growth. In contrast, faster deliveries suggest a moderating economy—producers are not busy if they can rapidly fill orders. Vendor performance is included in The Conference Board's index of leading indicators.

Market Reaction

Financial market participants have anxiously anticipated the ISM ever since Alan Greenspan once claimed, early in his tenure as Fed chairman, that he placed great emphasis on this report. Usually, equity and foreign exchange market players look forward to healthy figures, whereas fixed income market professionals prefer weakness. As the ISM moves in an upward direction, portending economic strength, bond market participants will anticipate inflationary pressures or the end of a favorable environment for Federal Reserve easing conditions. Conversely, a declining trend in the ISM will lead to a bond market rally.

Watch Out!

Do not interpret changes in the ISM like ordinary numbers. Anything above 50 signals economic growth as well as manufacturing strength. It is not surprising to see the index move up and down from one month to the next. The magnitude of increase in the ISM is not as relevant as the trend—is the ISM showing upward or downward momentum?

If the index begins to move downward (even when the level remains above 50), it could be signaling the beginning of an economic downturn, or at least moderating economic activity. When the economy is in recession and the index increases from 39 to 41, the economy is still very weak. However, if the ISM begins to move upward, it could be signaling a recovery.

You may want to monitor the components separately. Which part of the index is showing more strength: production, new orders, employment? A broadly based rise in the composite index is more favorable for a sustainable recovery. However, only the new orders and supplier deliveries series are leading indicators. Employment and production are coincident indicators of the economy, and inventories are somewhat lagging. So do not be alarmed in the early stages of recovery if only parts of the index are moving upward.

(Continued)

Watch Out! (Continued)

The price index is not part of the composite and is monitored separately. Inflation is a lagging indicator in that increases in the consumer price index tend to moderate further even into the first year of recovery. Conversely, the CPI may continue to accelerate in the early stages of recession. Yet, prices of sensitive materials that are used in the early stages of production are leading indicators of the economy. The price index in this survey measures prices used in the early stages of processing and consequently the ISM price index should start rising early in the recovery.

The new export orders index is useful to observe. The foreign sector has been an important factor in the U.S. economy since the 1980s. Rising export orders contribute to domestic production but can also compete for our resources and thus exacerbate inflationary pressures during an expansion. The new export orders index has moved closely in line with the dollar—particularly since the dollar was depreciating in the foreign exchange markets between 2001 and 2005.

The ISM Non-Manufacturing Survey

In 1997, the Institute for Supply Management began to issue a set of production and inflation data monthly for the non-manufacturing sector of the economy. It is akin to the manufacturing survey, but is slightly different in that it does not have a summary diffusion index. The data are reported on the third business day of the subsequent month, making this among the most timely of all monthly indicators along with its manufacturing cousin. The figures are available on a seasonally adjusted basis (as well as unadjusted). Unlike most other economic data, these figures are never revised from month to month, just like the manufacturing version of the survey. Every year, however, new seasonal adjustment factors are computed by the Commerce Department causing minor variations in the pattern of the various components from month to month for the previous few years.

Because there is no summary diffusion index, market players have become accustomed to monitoring the business activity index from this survey. It gets the same attention as the ISM manufacturing index, but it is really more closely aligned to the production index in the manufacturing survey. Other key components include new orders, employment, supplier deliveries, inventories, prices paid, backlogs of orders, new export orders, imports, and inventory sentiment. The Institute for Supply Management is well aware that the weighted diffusion index from the manufacturing survey is very popular, but several years of data are needed to compile one for the non-manufacturing sector. The ISM non-manufacturing survey is based

on questionnaires sent to 370 purchasing and supply executives in 62 (SIC) industries. (According to an ISM spokesperson, they are switching to NAICS by the end of 2005.)

Market Reaction

Market players closely monitor this timely survey, particularly since the Institute for Supply Management was able to adjust this survey for seasonal adjustment after it finally reached a five-year history. The business activity index and the price index are the two components that garner the most attention by financial market players. (See Figure 9.2.)

The NAPM-Chicago

The purchasing managers index of Chicago (NAPM-Chicago) is generally reported on the last business day of the month for the current month—and a day before the ISM manufacturing index. Historically, it was believed that the distribution of purchasing agents in the Chicago area was similar to the national distribution, so the NAPM-Chicago got close attention because many economists and traders based their expectations of the ISM on the direction of movement for the NAPM-Chicago. In fact, the

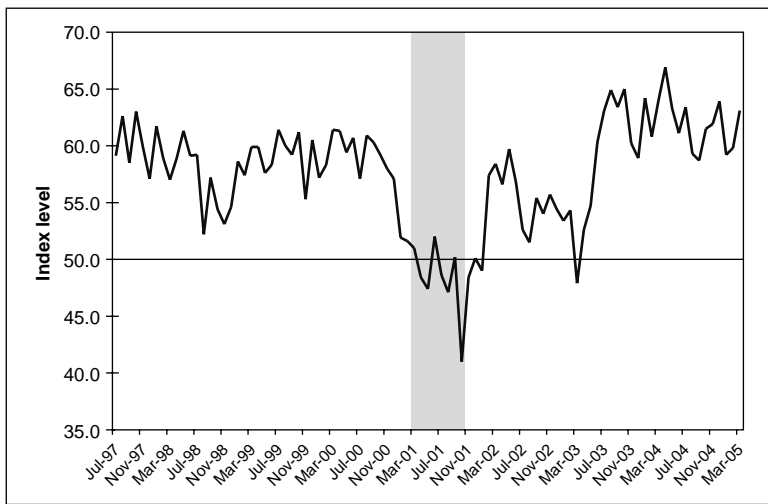


FIGURE 9.2 ISM Non-Manufacturing Survey: The ISM non-manufacturing survey does not have a composite index, so market players monitor the business activity index. This survey is newer than its manufacturing cousin.
Source: Institute for Supply Management and Haver Analytics.

Chicago index does not only measure manufacturing activity, but overall business activity. That is, its respondents are not limited to the manufacturing sector. Consequently, one should not expect the NAPM-Chicago to be a good predictor of the ISM manufacturing index, even though many market participants continue to use this index to predict the ISM. Statistical analysis shows only a loose correlation between it and the ISM manufacturing index. Most of the time, the Chicago index falls more sharply and rises more strongly than the ISM manufacturing index. Instead, one should consider using the NAPM-Chicago to predict changes in the business activity index of the ISM non-manufacturing survey.

Market Reaction

A rise in the NAPM-Chicago is considered friendly news for the equity market, but is viewed unfavorably in the bond market. Conversely, a drop in the NAPM-Chicago can lead the bond market to rally and the equity market to falter. The NAPM-Chicago has a long history as an economic indicator, and as such, it can indeed cause financial market players to react significantly to its news. (See Figure 9.3.) But again, this index does not have a perfect correlation to the ISM manufacturing index nor the industrial production index and should not be given such prominence. Sometimes, old habits die hard.

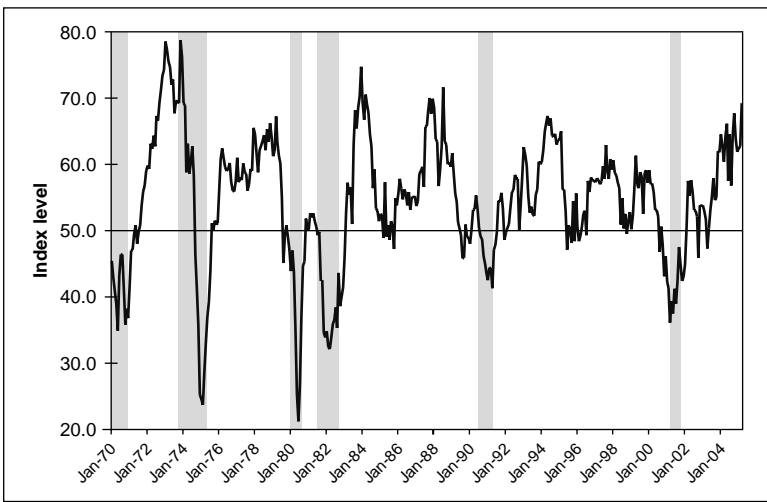


FIGURE 9.3 NAPM-Chicago: The NAPM-Chicago is widely followed by market players because it is considered a leading indicator of manufacturing conditions even though it covers both manufacturing and non-manufacturing activity.
Source: Chicago Association of Purchasing Managers and Haver Analytics.

ARE YOU INTERESTED IN PURCHASING MANAGERS INDEXES?

The New York NAPM is reported on the last day of the month just one hour before the Chicago NAPM. For some reason this indicator did not catch on as a market-moving indicator in the same way as the NAPM-Chicago.

Business Outlook Survey of the Philadelphia Fed

The Business Outlook Survey (BOS) is compiled and published monthly by the Economic Research Division of the Federal Reserve Bank of Philadelphia. Financial market participants and economists know it as the *Philadelphia Fed Survey*. It is reported on the third Thursday of the month for the current month. Figures are seasonally adjusted.

The Federal Reserve Bank of Philadelphia began to conduct monthly surveys of manufacturers in May 1968 to monitor business conditions in its district. The BOS was based on the premise that surveying businesses about recent activity is one of the least costly methods of gathering economic data. The report offers an advanced look at the region's manufacturing activity before other indicators reported by the government or private agencies. The tradeoff is that most other economic data is quantitative whereas this survey is qualitative. But it is helpful in indicating "where we are and whither we are tending," not only in the Philadelphia Fed region but the country as well.

This survey is limited to manufacturing firms with plants in the area that employ at least 100 workers. Executives at about 250 establishments, covering durable and nondurable industries, are mailed questionnaires each month; responses are voluntary. The monthly response rate ranges from 40 to 50 percent. The sample is periodically revised to include new participants who were not previously eligible and remove firms that no longer meet participation requirements.⁴

The questionnaire includes two sets of questions on 10 measures of business activity: employment, working hours, general activity, new orders, order backlogs, shipments, inventories, delivery times, prices paid, and prices received. The first set of questions regards current conditions; they are either "up," "down," or "unchanged" from the previous month (for each measure). The survey participants are also asked about their expectations for six months in the future. Again, they must respond with "higher,"

“lower,” or “about the same.” The expectations section also asks about capital spending plans.

To track economic conditions easily, a diffusion index, which is calculated for each measure, determines the diversity of the responses of some aggregate indicator. The premise behind the BOS diffusion index is similar to the ISM diffusion index, but the calculation is a bit different. The BOS measures the diversity of responses to each question by subtracting the percentage of respondents reporting a decrease from the percentage of respondents reporting an increase. When all the respondents report an increase from the previous month, the index can post a maximum value of +100. Conversely, when all the respondents report a decrease in an indicator, the index would post a minimum value of -100. Usually, the index value will be somewhere between these two extremes. The degree of agreement in responses (on either end of the spectrum) reflects the degree to which manufacturing firms are participating in the expansion or recession. Table 9.4 lists the components.

The expectations portion of the questionnaire is calculated in the same fashion. The BOS subtracts the percentage of respondents expecting a higher pace of activity. The diffusion index for each measure has a maximum value of +100 and a minimum of -100.

In the beginning of a business downturn, not all firms show declining activity at the same time. Nor do all firms post growth at the same time when the economy begins to recover. As the economy enters a new phase

TABLE 9.4 Business Outlook Survey (April 2005, seasonally adjusted)

	April vs. March				Six months from now vs. March			
	Inc.	No chg	Dec	Diffusion Index	Inc.	No chg	Dec	Diffusion Index
General Business Conditions	35.8	53.7	10.5	25.3	40.8	43.7	13.3	27.5
Company Business Indicators								
New orders	37.3	45.8	16.9	20.3	49.1	33.1	15.2	33.9
Shipments	44.0	40.7	14.6	29.4	48.2	32.2	16.4	31.8
Unfilled orders	14.8	66.4	18.6	-3.8	22.7	56.4	18.8	3.9
Delivery time	12.9	74.1	7.9	5.1	19.0	67.1	12.2	6.8
Inventories	22.0	58.5	18.6	3.4	20.4	48.5	28.9	-8.5
Prices paid	55.9	38.8	5.4	50.5	58.0	28.9	7.4	50.6
Prices received	33.2	61.6	5.2	28.0	43.0	50.2	6.0	37.0
Number of employees	29.3	57.7	12.5	16.8	30.5	54.6	11.3	19.2
Average workweek	23.1	71.0	2.7	20.4	20.7	66.6	8.0	12.7
Capital expenditures	NA	NA	NA	NA	37.8	37.8	42.7	32.1

Source: Federal Reserve Bank of Philadelphia.

of economic activity, responses are likely to be diverse, show no clear trend, and the diffusion index will probably fall somewhere between +100 and -100. As the economy grows robustly or declines sharply, the diffusion index tends toward one of the extremes showing less diversity among manufacturing industries.

Financial market participants like to use the BOS as a predictor of the ISM diffusion index. Is that appropriate? According to the Philly Fed economists, this regional index does correlate well to national indexes because manufacturers who participate in the survey are from relatively large establishments and their markets are national. Also many have plants in other parts of the country.⁵ Studies done by the Economic Research Department of the Philadelphia Fed show that the general activity index works well as a predictor of regional and national economic activity—particularly with respect to industrial production. Many of the other components have healthy correlations, although some, such as the average workweek and new orders, are not good predictors of their official government counterparts (from the Labor Department and the Census Bureau).

The Philadelphia Fed's Economic Research Department cautions users in their correlation of the BOS with other regional or national indicators. First, the timing of the BOS is different from most statistics. Official statistics are usually collected in the middle of each month. In contrast, the BOS takes place from about the twentieth of one month to the fifth of the following month, so it reflects data for both the current month and the previous month. Therefore, you need to look at either same months or off-months to check correlations between series if you are using this index to predict monthly changes in other related economic indicators. Instead, if you are monitoring longer-term trends, then looking at a three-month moving average could be more useful—and show a more stable picture of the manufacturing sector.

Another essential distinction when comparing the BOS with official statistics is that it is better to look at the change in the indicator rather than at the level. The BOS index represents qualitative data, not quantitative data, so if the BOS diffusion index posts a decline for a couple of months, you might expect either an outright decline in industrial production, or a decline in the rate of change in industrial production (see Figure 9.4).

Market Reaction

Any indicator that is timely is well received by financial participants. Although a diffusion index, the BOS is not read in the same way as

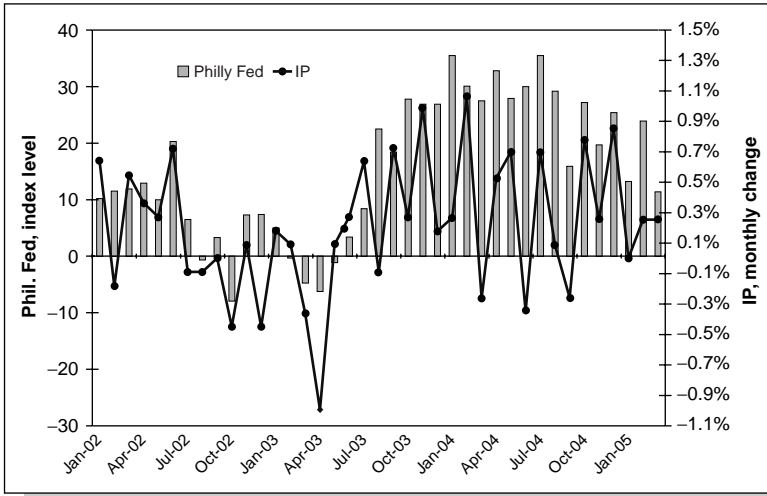


FIGURE 9.4 Business Outlook Survey versus Industrial Production: This chart depicts the strong correlation between the Philadelphia Fed index of general activity and monthly changes in the index of industrial production. *Source:* Federal Reserve Bank of Philadelphia, Federal Reserve Board, and Haver Analytics.

the ISM, so they are not directly comparable. Financial market participants may react to the BOS's movements but they may react more cautiously relative to other economic indicators. (Although there is no question that the Philadelphia Fed survey has caused bond and stock prices to both rally and sell off because the report was surprisingly strong. On April 21, 2005, equity prices surged on a strong report, just as bond prices sold off and interest rate yields rose because of fears of economic strength.)

This series is more difficult to read as an index, and market participants take into account the analysis offered by the Philadelphia Fed. If the analysis shows that activity has deteriorated, the bond market will rally and interest rates will decline. A strong report could boost stock prices. Historically, foreign exchange market professionals have not paid too much attention to this series, but in 2005, they have looked for every excuse to boost the deteriorating dollar. Consequently, a surprisingly robust report could help lift the dollar.

Watch Out!

First look at the index level of the various components of the Philadelphia Fed Survey. An index toward either extreme, +100 to -100, shows the magnitude of disparity. Since this series began in May 1968, the widest disparity occurred during the 1973–1975 recession when the index stood at 58.9 in March 1973 and fell to -57.9 in December 1974. In more recent times, the index fell to -36.9 in January 2001 and rose to 35.5 in July 2004. The closer the index is to the positive high end, the more robust the activity; and the closer the index is to the negative low end, the more lackluster the activity. Next, look at the direction of change. Is the diffusion index becoming more positive, less positive, more negative, less negative? As the index becomes less negative and more positive, it points toward improving economic conditions. In contrast, as the index becomes less positive and more negative, it reflects deteriorating economic conditions.

Most market players look at the general activity index, which is akin to a production measure. It is not a composite index of the other components in the survey. You may also want to look at the separate measure such as employment, workweek, new and unfilled orders, shipments, inventories, vendor performance, and prices paid and received. The BOS has a long and reliable history, but it is not the final word on manufacturing activity. If you are looking for confirming evidence for a particular viewpoint, the Business Outlook Survey is useful. But take care when relying on this survey to support new trends.

The Empire State Manufacturing Survey

The Empire State Manufacturing Survey is released on the fifteenth of the month; when the fifteenth falls on a weekend, it is reported on the subsequent Monday. The New York Federal Reserve conducts this monthly survey of manufacturers in New York State. Participants from across the state represent a variety of industries. On the first of each month, the same pool of roughly 250 manufacturing executives is sent a questionnaire to report the change in an assortment of indicators from the previous month. Respondents also give their views about the likely direction of these same indicators six months ahead. The early release of the survey is justified because most responses are received by the tenth of the month, although surveys are accepted up until the fifteenth. According to New York Fed economists, about 100 responses are received each month, a response rate of 40 percent, nearly the same as the Philadelphia Fed's business outlook survey.⁶

This index is adjusted for seasonal variation using standard statistical procedures—which typically require five years of data. Because the Empire State Manufacturing Survey is constructed in the same manner as the Philadelphia Fed’s business outlook survey and asks the same questions, the New York Fed is utilizing the history from the Philadelphia Fed’s manufacturing survey to establish historical seasonal patterns. The monthly levels of the Philadelphia Fed’s business outlook survey and the Empire State Manufacturing survey are nearly identical over this short time horizon. While it is very likely that trends are similar because manufacturing activity in the Philadelphia Fed’s district behaves in the same manner as that in the New York Fed district, it is also possible that the seasonal adjustment factors are creating a slight correlation. It will be interesting to see if the trends continue to hold when the New York Fed has sufficient data to establish its own seasonal patterns for this series.

The previous month’s data is revised slightly with the introduction of each new month’s figures. Once a year, all data undergo benchmark revisions. Government agencies tend to reestimate seasonal adjustment factors yearly for most economic indicators.

New York Fed economists Richard Deitz and Charles Steindel have studied the predictive ability of this survey and have found that it compares at least as favorably as two older and more established surveys: the ISM manufacturing survey and the Philadelphia Fed’s business outlook survey. They admit that the Empire State Manufacturing Survey has not been tested over an entire business cycle (including an expansion and a recession), but has established a solid track record thus far.⁷ Nonetheless, the business cycle test is crucial in providing greater credibility for the predictive ability of this survey, in my view.

Market Reaction

Many market players are excited about the Empire State survey because it does a good job of predicting the Philly Fed’s business outlook survey. That is all well and good, but is the Philly Fed index a good predictor of manufacturing conditions? Indeed, we have long found that the Philadelphia index was a good predictor of the direction of the monthly index of industrial production. However, many market players prefer to lump all the manufacturing surveys together and are happy if they are predictors of each other. For instance, the Empire State survey predicts the Philadelphia Fed’s survey which predicts the ISM manufacturing index.

It is important to note that these surveys are similar but not identical. And the response rate for the ISM surveys is far superior to the Philadel-

phia Fed’s business outlook survey and the Empire State manufacturing survey. According to Mark Pender, who regularly reports on the ISM surveys, the higher response rate is due to the fact that the president of the Institute for Supply Management (ISM) woos his or her members. The ISM president develops professional relationships and camaraderie within the organization is strong. As a result, more purchasing agents who are members of the ISM are inclined to respond regularly to the member survey.⁸ This increases the likelihood that the responses are consistent, because they are answered by the same person (the purchasing agent). The Fed surveys send questionnaires to the same executives, but it is entirely possible that different people within the management office respond to the questionnaire.

When the general business conditions index of the Empire State Manufacturing Survey increases, this bodes well for equity investors, although not bond investors. Conversely, when the general business conditions are falling, the bond market rallies, but equity prices can decline. The value of the dollar in the foreign exchange market favors strong economic news (a rising index), which can lead to dollar appreciation. (See Figure 9.5.)

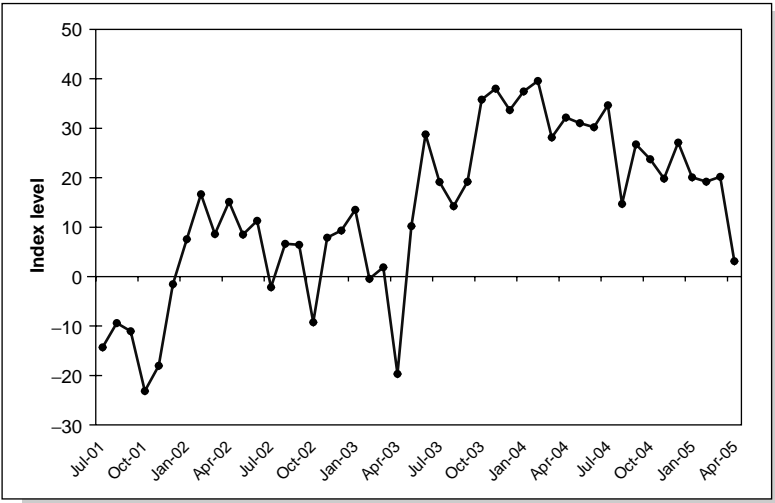


FIGURE 9.5 Empire State Manufacturing Survey: The Empire State Manufacturing Survey is similar to the Philadelphia Fed’s business outlook survey but is much newer and has a shorter history. *Source:* Federal Reserve Bank of New York and Haver Analytics.

ARE YOU INTERESTED IN MORE FED SURVEYS?

Several of the Federal Reserve district banks compile monthly surveys of activity within their Fed region. Most of these have not become market-moving indicators, although they can be useful for regional analysis. These include the Kansas City Fed Survey, the Richmond Fed Survey, and the Chicago Fed's Midwest Manufacturing Index.

Index of Leading Indicators

The index of leading indicators is a measure of the *direction* of economic activity. This index is a composite of 10 series chosen for their timeliness, consistency, and forecasting ability. The index is seasonally adjusted, with an index set to 1996 = 100. The Conference Board releases the index about three weeks after the end of the month. In conjunction with leading indicators, The Conference Board also releases an index of coincident indicators and an index of lagging indicators. They did not receive as much attention as the leading index in the 1980s; but financial market participants and economists started to look a bit more closely at these series in the early 1990s in the aftermath of the 1990–1991 recession.

The Commerce Department, with the help of the Columbia Business Cycle Research Center, did a major overhaul of this index in 1989, dropping some series, adding others. The premise behind the revision was that the structure of the U.S. economy had shifted in the postwar period to increased production of services and away from goods. Many have argued that the index of leading indicators was designed to signal the direction of the manufacturing sector more than anything else. Despite the consideration given to leading indicators for the service sector and the consumer, most series in the index remain wedded to the manufacturing sector.

The Conference Board updated this index in 1996, a few months after they took over its administration and compilation from the Commerce Department. The ten indicators that now make up the index are the average workweek in manufacturing, initial unemployment insurance claims, vendor performance, stock prices (measured by the S&P 500), real money supply (measured by the M2 component and adjusted for inflation), housing permits, new orders for consumer durables, manufacturers' new orders for nondefense capital goods, consumer expectations, and the spread between the Treasury's 10-year note and the federal funds rate. The old rule of thumb that three consecutive declines in this index portends a recession

and three straight increases portend a recovery no longer hold. According to The Conference Board: "A downward movement in the composite index of leading indicators of 2 percent (annual rate) or more over six months, coupled with declines in the majority of the series, is needed before a recession warning can be considered reliable."⁹

Many analysts claim that the magnitude of change in this index will reveal the depth of the upcoming recession or the magnitude of increase during a recovery. This is not true. The index of leading indicators was designed simply to signal direction of economic activity, nothing more. More precisely, the index of leading indicators was designed to predict changes in the index of coincident indicators.

The local press always covers this indicator, perhaps because it is easily understood, but the financial press gives it less attention since not all financial market participants are equally interested in it. Bond investors are less interested in this index than equity investors for instance. Most financial market participants have learned that it reveals no new information since it is reported late in the month. The ten indicators are all readily available by the time this index is calculated. The index has been revised numerous times in the postwar period after it failed to identify turning points correctly; in retrospect it does not look bad because one is looking at revised data, not the original leading indicators! In general, less attention should be given to the magnitude of changes in the index of leading indicators as predictors of economic growth rates.

"I can think of half a dozen reasons why I don't spend a lot of time thinking about the leading indicators," said Lehman Brothers economist Joe Abate to the *Wall Street Journal* on the eve of a leading indicators release.¹⁰

The index of coincident indicators includes four series: the index of industrial production; personal income less transfer payments in 2000 dollars; nonfarm payroll employment; and manufacturing and trade sales in 2000 dollars. The premise behind this index is that these will move exactly in line with the economy. When the economy is growing, this index will rise; when the economy is declining, this index will decrease. Given that these series are all reported well in advance of the index, it seems irrelevant.

The index of lagging indicators incorporates seven indicators: the average duration of employment (in weeks); the ratio of inventories to sales (manufacturing and trade); the change in the index of labor cost per unit of output in manufacturing; the average prime rate charged by banks; commercial and industrial loans outstanding (in 2000 dollars); the ratio of consumer installment credit to personal income; and the change in the consumer price index for services (at an annualized rate). The idea is that

certain sectors of the economy lag the business cycle. Thus, the lagging index would continue to post declines as the economy was beginning to expand and would continue to increase after the economy had already fallen into recession.

Market Reaction

Although financial market participants do not usually react strongly to the index of leading indicators, market players grab any piece of information that will prove their point when market sentiment is either particularly negative or positive. For example, in the early stages of recovery, bond traders may still have doubts about the economy. If the leading index posts a solid gain, traders feel that the recovery is more likely assured and interest rate increases are around the corner. As the economy heads toward recession, bond traders use a decline in the leading indicators index to confirm that interest rates are headed downward.

Watch Out!

Determine whether increases or decreases in the index are broadly based. Otherwise, it will be difficult to get a good reading. In addition, just look at the direction of change. Do not worry about the magnitude of increases or decreases. This index is most useful at economic turning points.

ARE YOU INTERESTED IN LEADING INDICATORS?

Many analysts try to provide leading indicators that will predict the direction of the economy and inflation, but the most successful among this group is ECRI (Economic Cycle Research Institute). It publishes over 100 proprietary indexes to predict economic activity and inflation around the globe. Except for the monthly FIG (Future Inflation Gauge), which is released to the media, its service is by subscription only.

QUARTERLY INDICATOR

Quarterly Services Survey

The Quarterly Services Survey is conducted by the Census Bureau and provides revenue estimates for U.S. firms that are classified as service industries by NAICS. These include the Information sector; Professional, scientific, and technical services; Administrative and support; and waste management and remediation services. About 5,000 employer firms are in this sample, which is selected from the Service Annual Survey. Firms of all sizes participate in this survey; it is updated quarterly to account for new service businesses, deaths, and other changes to the survey universe.

This is a new survey that was just released for the first time in 2004. Quarterly reports tend to garner less attention than more frequent reports. Furthermore, this is only a small portion of the service sector in the U.S. economy. However, not many indicators are reported for the service sector (aside from GDP) and the Census Bureau promises to increase the scope of the selected industries.

The inventory cycle exaggerates economic business cycles and industrial production growth. That is why indicators describing the manufacturing sector have been highly desired. However, the bulk of the U.S. economy is comprised of services. Yet the quantity of economic indicators covering the service sector is minuscule in number. The federal statistical agencies would surely like to provide this information, but funding has consistently been a problem.

ARE YOU INTERESTED IN THE SMALL BUSINESS SECTOR?

The National Federation of Independent Business (NFIB), the nation's largest small-business advocacy group, produces a monthly report on economic trends in the small business sector based on a survey of small and independent business owners. A quarterly survey was begun in 1973, and the NFIB converted it to a monthly survey in 1986.

KEY POINTS

- Production indicators show that signs of strength for the economy cause bond prices to fall (yields to rise) and stock prices and the value of the dollar to increase.
- Production indicators that portend weakness for the economy cause bond prices to rise (yields to fall) and stock prices and the value of the dollar to decline.
- Most indicators are useful but observers and financial market participants should not overreact at their release.
- Never take one month's data at face value. Look at the trend of the series, especially when blips occur.
- Industrial production now covers a smaller share of the U.S. economy than it did 20 or 40 years ago; nonetheless, production of goods that generate inventories continue to matter because it leads to business cycle fluctuations.
- Regional surveys (such as the Philadelphia Fed Survey, the Empire State Manufacturing Survey, and the NAPM-Chicago) are important because they correlate to national indexes—and they cover big population centers.

The Federal Reserve System

INTRODUCTION TO THE FINANCIAL SECTOR

This book generally describes the “real” side of the economy. That is, we look at economic indicators—such as gross domestic product or retail sales or the employment situation—that reveal the strength of economic activity. Nevertheless we should remember that the economy is affected by financial factors. In many cases, economic indicators describing business conditions are determined by movements in financial flows or interest rates. Interest rate movements are then influenced by business conditions. International considerations and Federal Reserve policy affect interest rates as well. This means that one cannot look solely at indicators describing production, nor only interest rates, nor only the stock market. The ebbs and flows of the economy are interrelated and all factors must be taken into account in assessing current conditions and making financial decisions.

The next two chapters describe the Federal Reserve System and Treasury financing. Understanding the process of monetary policy is the lifeblood of the financial markets. This chapter covers a brief description of the Federal Reserve System, the implementation of monetary policy, the monetary aggregates, and other key indicators that market players closely monitor. The Treasury financing chapter focuses on Treasury auctions, the monthly Treasury statement that shows why the federal government needs to borrow from the public, and the Treasury International Capital report that shows cross-border international flows of financial instruments, including Treasury securities. The Treasury securities market reflects federal government borrowing and is referred to as “supply” by financial market participants. Together with the demand for these securities—coming from individual or institutional investors—security prices and interest rate levels are determined in the market. Treasury securities are one conduit through which the Federal Reserve conducts monetary policy.

The chairman of the Federal Reserve Board is often considered the

second most powerful person in the country as he or she essentially controls the direction of the domestic economy and has considerable influence over global economic conditions. It is no wonder that when the Fed chairman talks, people listen (and financial markets fluctuate)!

The first part of this chapter gives a brief description of the Fed's main objectives and its internal structure. The second part examines the Fed's role as purveyor of monetary policy. The final third of the chapter describes the monetary aggregates and other key indicators.

DESCRIPTION OF THE FEDERAL RESERVE SYSTEM

Main Functions

Monetary policy, which refers to controlling money supply growth or the level of interest rates, is the most visible function of the Fed. Congress initially mandated the Fed to undertake monetary policy in order to maintain a more elastic currency that would avoid the many financial panics that occurred in the 1800s and early 1900s. In more recent times, the Full Employment and Balanced Growth Act of 1978, also known as the Humphrey-Hawkins Act, directed the Fed "to promote effectively the goals of maximum employment, stable prices, and moderate long term interest rates."¹ While the Humphrey-Hawkins Act expired in mid-2000, Fed officials still follow many of its principal tenets.

Liquidity and stability of the financial markets are closely related to monetary policy. The Federal Reserve System was created in 1913 when commercial banks were the primary players in the financial markets. Banks that chose to become members of the Fed were required to maintain reserves at their district banks, but were also allowed to borrow funds from the Fed's discount window. The Monetary Control Act of 1980 forced all depository institutions to maintain reserve requirements (and also opened the discount window to all), giving the Fed greater control over bank reserves. Two primary factors reduced the Fed's direct control over reserves and financial flows: banking deregulation in the 1980s and low interest rates in the 1990s. Investors took their funds out of banks that are required to hold reserves, and put them into mutual funds and investment houses that do not require reserves.

To reduce the incidence of bank failures, the role of supervision and regulation of banks and other financial institutions was also given to the Fed. As a regulator (although not the only one), the Fed establishes rules in conformance with federal law. In its supervisory role, the Fed conducts on-site examinations of individual banks, bank holding companies, and cer-

tain other institutions to make sure that they are operating safely and soundly. The Fed supervises not only domestic banks, but also foreign-owned banks operating in the United States.

Congress increased its attention to consumer welfare and local communities in the 1970s and 1980s. Consequently, the Fed's role was expanded to include the governance of consumer protection laws and community reinvestment and development such as the Truth in Lending Act (1960), the Equal Credit Opportunity Act (1975), the Home Mortgage Disclosure Act (1975), and the Community Reinvestment Act (1977).

The Fed also maintains close ties to the U.S. Treasury. From a policy perspective, both have a hand in formulating and implementing national economic policy. The Fed is independent of the Treasury, as well as other areas of the Executive Branch. Operationally, the Fed performs as the Treasury's banker since the Treasury maintains an account at the Fed and makes most of its payments from this account. The federal government purchases goods and services or makes Social Security disbursements with Treasury checks that are cleared and paid by the Fed. It routinely issues, services, and redeems Treasury securities on behalf of the Treasury.

Finally, the Federal Reserve System, through the 12 district Reserve banks, provides services to depository institutions. Among these include the efficient transfer of funds between banks, electronically, and through automated clearinghouses.

Structure and Organization

The Federal Reserve System is comprised of private and public elements, with centralized and decentralized authority. The *Board of Governors* is the central governing body of the system, and is an independent agency of the federal government. The seven governors are appointed by the President of the United States and approved by the Senate. A full term runs 14 years, with a member's term expiring every even numbered year. The long term of the office was devised to insulate governors from political pressures and to promote stability and experience on the Board. Yet few governors appointed since the 1970s have served full terms. A member who has served a full term may not be reappointed; however a member who fills an unexpired term can then be reappointed to a full term. Federal Reserve Chairman Alan Greenspan fits that bill—he was originally appointed in 1987 to fill an unexpired term and then reappointed to a full term that ends January 31, 2006. He cannot be reappointed again; but he can legally stay in his position until the President appoints a new chair. The President appoints a chairman and a vice chairman from among these members for four-year terms with the approval of the Senate.

Did You Know?

A former governor once claimed that the half-life of an ex-governor was six months. Yet, economists who served as governors in the late 1980s and during the 1990s found it financially lucrative to be an “ex” on Wall Street.

The governors are responsible for conducting monetary policy (through the FOMC), approving discount rate changes requested by the district banks, and altering reserve requirements within limits determined by law. They have final responsibility over regulatory and supervisory activities, margin requirement responsibilities, and consumer protection and community affairs activities. The Board supervises the 12 district Reserve banks: It appoints three of the nine members for the board of directors of each district bank, and approves the appointment of each bank’s president and first vice president.

The Board is directly responsible to Congress and frequently reports to Congressional committees. Financial market participants anticipate testimony on monetary policy and the economic outlook by the Fed’s chairman each February and July. This was initially instituted through the Humphrey-Hawkins Act, but continued even after its expiration. The Federal Reserve System is financially independent from the rest of the federal government and does not rely on Congressional appropriations to operate.

The *Federal Open Market Committee* (FOMC) is a special committee that determines the overall strategy of monetary policy and oversees the System’s activities in foreign exchange markets. The FOMC has 12 voting members: the seven governors with the chairman of the Board of Governors as the chairman of the FOMC, and five of the 12 district bank presidents. The president of the New York Fed serves as vice chairman of the FOMC, is a permanent voting member, like the seven governors, because the New York Fed is responsible for implementing the open market operations. The other four positions rotate among the remaining 11 district bank presidents. For example, the presidents of the Chicago and Cleveland Feds alternate years in which they vote. Whether a bank president is voting or not in a given year, he or she actively participates in the discussions at the meeting. (See Table 10.1)

The 12 *Federal Reserve Banks* are located in Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco. (The banks could have one or more branches in other key cities in the region. For instance, the San

TABLE 10.1 Rotating Presidents

Always Votes		New York	
Group One	Boston	Group Three	Atlanta
	Philadelphia		St. Louis
	Richmond		Dallas
Group Two	Cleveland	Group Four	Minneapolis
	Chicago		Kansas City
			San Francisco

Francisco Fed has a Seattle branch and the Chicago Fed has a Detroit branch.) The corporate structure of the district banks is similar to that of commercial private banks. The banks have a board of directors, issue capital stock, and the bank officers have jobs comparable to the private sector. The nine-member board of directors of each district Federal Reserve Bank comes from the community's large and small banks, major corporations in the district and community leaders. The regional boards also rely on academics from local universities.

The district banks' primary responsibility is to promote the public interest rather than the narrower interests of stockholders so that profit considerations do not play a role in determining the bank's transactions. Nonetheless, the banks can earn profits as a by-product of their routine operations. In the 1990s, though, the Federal Reserve System undertook a study of their costs and profits, determining whether they would have to make personnel adjustments or close any branches. Many Federal Reserve employees at the district banks were laid off—a lesson that working for the Fed can be just like working for a regular profit-motivated corporation. Any earnings of the district banks above operating expenses and fixed dividends are passed on to the U.S. Treasury, although law does not require this. The Federal Reserve district banks have several functions—these are to:

1. Carry out the policy decisions determined by the FOMC
2. Examine and supervise state-chartered banks in their district
3. Provide banking services to the Treasury and other government agencies

4. Provide services such as check cashing, handling commercial banks reserve deposit accounts, and making loans
5. Issue Federal Reserve Notes (paper currency)

Did You Know?

According to *The Economist*, the Federal Reserve reported profits of more than \$23 billion in 2003, but other central banks are not as lucky. The European Central Bank suffered losses in both 2002 and 2003. The Bank of Japan could potentially see a sharp balance sheet adjustment if its Japanese government bonds, currently yielding next to nothing, see a drop in value.²

The one function of the Federal Reserve that financial market participants concentrate most on is its monetary policymaking role. The aims of the Federal Reserve are to sustain price stability and encourage economic growth. While the federal government can promote economic growth through fiscal policy, only the Fed has the power to keep inflation in check through monetary policy. (*Note:* An overly stimulative fiscal policy by the federal government can encourage inflationary pressures. The inflation will not survive in the long run unless the Fed ratifies this policy with an accommodative monetary policy.)

Did You Know?

A former Vice Chairman of the Federal Reserve (1979–1982), Frederick H. Schultz, stated in a 2005 St. Louis Federal Reserve publication that to “Milton Friedman’s consternation, Alan Greenspan is the greatest fine-tuner in history.”³

Economists have long argued that the Fed cannot fine-tune the economy in the short run, but can foster sustainable economic growth in the long run only through a policy of stable prices. In the 1990s, several Congressional leaders sought to modify the Humphrey-Hawkins Act by giving the Fed the single mandate of price stability. Nonetheless, many economists and policymakers still believe that the Fed should continue to worry about employment as well as inflation as a safeguard against economic recessions when the nation’s unemployment rate rises sharply. That is one reason why the Fed has not yet adopted inflation targeting as a policy tool in the

United States, although it is quite popular with other central banks such as the Bank of England, the European Central Bank and the Bank of Canada. The concept of inflation targeting has a variety of opponents and proponents even on the Fed's Board of Governors. Inflation targeting is not particularly appealing to Fed Chairman Alan Greenspan and Governor Donald Kohn, a former long-time Fed staffer and Greenspan ally. The biggest proponent is Ben Bernanke—a Fed governor from 2002 to 2005 who was nominated by President George W. Bush to the position of Chairman of the Council of Economic Advisors in April 2005.

Perhaps Fed Governor Bernanke made his mark on the FOMC with respect to inflation-targeting: According to the minutes of the February 1–2, 2005 meeting, Fed policymakers discussed inflation targets. Some analysts believe that inflation-targeting might be adopted after Greenspan's term ends.⁴

On October 24, 2005, President Bush nominated Ben Bernanke to replace Greenspan as chairman of the Federal Reserve. While Bernanke favors inflation-targeting, don't consider it a done deal when his term begins on February 1, 2006. He will need to convince his colleagues on the FOMC.

The Business of Policymaking

Each February, the chairman of the Federal Reserve reports to Congress its intentions for monetary policy for the coming year. Consequently, the first FOMC meeting of the year runs for two days in late January or early February to give members enough time to establish the coming year's monetary and economic objectives. The seven governors and 12 district bank presidents sit down to discuss current economic conditions, to determine the direction of the economy and to set targets for monetary aggregates which are consistent with these economic views.

Roughly three weeks in advance of each FOMC meeting, the 12 district Reserve banks collect anecdotal information about their respective district. They talk to economists and CEOs of the various large businesses in their area in order to assess the conditions of the district. What has retail spending done? Is construction activity increasing or decreasing? Are employers forced to raise wages because of tight labor markets? One of the district banks is chosen each time to compile the information and summarize the conditions for all the districts. This forms the *Beige Book*. It is released for public dissemination at 2:00 P.M. Eastern time on Wednesday, two weeks before the FOMC meeting.

Financial market participants are anxious to see what the *Beige Book* says about economic conditions since it is advance information about the

economy reflecting on conditions of the most recent four or five weeks. While market participants are aware that the data are anecdotal and qualitative, the information is timely compared to many economic indicators. This report has gained prominence in the past 10 years and is more closely followed than it was in the past.

The Thursday before the meeting, the Fed Board staff distributes to the FOMC members the *Greenbook*, which represents their assessment of current economic conditions and an economic forecast of the current year and one year beyond. The Fed staff builds into the forecast their projected path for the federal funds rate, which is a critical assumption for the outlook. The Fed staff also prepares the *Bluebook*, which is delivered to the policymaker's home the weekend before the FOMC meeting. This presents a set of short-term policy alternatives for how the Fed can best pursue its objectives in the four to six week interval between meetings. These two documents form the basis for the debate at the FOMC meeting. The economic research staff from each regional bank has advised their district president; some of the presidents also have in hand economic forecasts prepared by their own staff at the regional bank, although not all regional banks prepare detailed forecasts.⁵

At the meeting, governors and bank presidents have an opportunity to express their views on the outlook for employment, output, and prices. Within the context of these economic forecasts, they discuss how to best pursue the goals of sustainable economic growth with price stability. That is, what level of interest rates, or what rate of money growth will actually allow the economy to grow respectably without creating (worsening) inflation?

The members of the FOMC do not always agree on the economic outlook for a variety of reasons. Bank presidents sensitive to their own district might base their economic forecasts on the particular conditions in their regions; views of international events may differ; or they may each interpret differently the transmission of past policy changes, or how general economic events will shape future conditions.

Unlike Supreme Court justices who can have dissenting opinions with a majority and minority view, the FOMC looks to build a reasonable consensus. Yes, dissensions by governors and bank presidents are evident in minutes of past meetings. But according to former governor Janet Yellen, formally dissenting at a meeting reveals a strong message. Speaking to Steven K. Beckner—*Market News Service* reporter and author of *Back from the Brink: the Greenspan Years*—Dr. Yellen said she “would only dissent if I thought I had a significant disagreement. I see an awful lot of people voting yes when they’re not getting their first choice.”⁶

Former governor Laurence Meyer, author of *A Term at the Fed*, noted that it was not common to see more than one or two dissenting votes

around the FOMC table. He called the voting process a game of musical chairs. If two FOMC members dissented, it was unlikely that a third member would dissent. And because voting at the FOMC is alphabetical, a member with a low letter alphabet is more likely to dissent than one with a high letter alphabet. According to Meyer, Alfred Broaddus was thus more likely to dissent than Anthony Santomero. Incidentally, dissenters were more likely to be Fed district bank presidents because during Laurence Meyer's term (June 1996 to January 2002), the governors were encouraged to show their support to the Fed chairman. Not one governor dissented during this period.⁷

The February 17, 2000 Humphrey-Hawkins report was the last one to establish growth ranges for monetary aggregates and debt. The legal requirement to establish these ranges expired by midyear and the July 20 report no longer included these ranges. Moreover, the Fed noted: "The legal requirement to establish and to announce such ranges had expired, and owing to uncertainties about the behavior of the velocities of debt and money, these ranges for many years have not provided useful benchmarks for the conduct of monetary policy. Nevertheless, the FOMC believes that the behavior of money and credit will continue to have value for gauging economic and financial conditions, and this report discusses recent developments in money and credit in some detail."⁸

The agenda for the eight FOMC meetings are similar, although six meetings last one day rather than two. The other two-day meetings take place in late June (or early July), just in advance of the semiannual testimony before Congress in mid-July. The process of distributing the *Beige Book*, the *Greenbook*, and the *Bluebook* is identical prior to each meeting. The Fed may set their policy objectives early in the year in order to present them to Congress, and review them at midyear. Rest assured that the Fed could respond to changes in economic conditions throughout the year. In times of emergency, such as when the stock market crashed in October 1987 or in the aftermath of September 11, 2001, phone conferences will lead to policy changes. When economic and monetary conditions warrant the Fed to change their current policy stance, directives are issued to the Open Market Desk at the New York Fed, which conducts the daily operations.

THE IMPLEMENTATION OF MONETARY POLICY

In the first part of this chapter, we looked at the Fed's functions, their structure, and how they plan for an FOMC meeting. Bond investors, financial futures traders at the various exchanges, equity investors, currency traders, bankers, corporate borrowers, and consumers are all

interested in the process of monetary policy. Not only the United States, but other countries are affected either directly or indirectly by the Fed's decisions on interest rates.

The Evolution of Fed Watching

Business economists serve corporations in a variety of functions. In the late 1970s, economists who were forecasting economic activity and interest rates turned to the more specialized glamour field of "Fed watching." Investment banks and commercial banks each had their own Fed watcher on staff who would ultimately forecast the Fed's behavior and the direction of rates.

The job of Fed watching has evolved since the 1970s in part because of changes in the structure of the economic environment and how information is processed. The different personalities of the Fed chairmen and how they chose to institute policy have also played a role in the evolution of the business. Economists' daily duties are different today, although not any easier, than they were 30 years ago. The next few pages briefly describe the major regimes since 1979 and how Fed watchers adapted to them.

The 1970s were a period of high inflation and the Fed had little credibility as an inflation-fighting institution. Newly appointed chairman Paul Volcker stunned financial market participants in October 1979 by changing the status quo. Volcker announced a regime whereby the Fed would target nonborrowed reserves—essentially the money supply. More importantly, Volcker reduced the tolerance toward missing the money target. Between October 1979 and 1982, Fed watchers predicted the monetary aggregates weekly for their institutions and all eyes were on money supply figures reported every Thursday afternoon. Fed watchers were also concerned with the factors that affected nonborrowed reserves. (Reserves are explained more fully later.) In addition to the money supply measures, estimates were made to assess reserve needs for daily open market operations. The process of Fed watching was very tedious as economists built elaborate models to predict money supply and reserve factors. Short-term interest rates were highly volatile during this period because monetary aggregates rather than the federal funds rate were targeted.

From 1983 to 1987, the Fed switched to a borrowed reserves target. This time the federal funds rate was used as an indicator of reserve constraint. Weekly money supply figures remained important, but lost a good bit of the luster gained in the 1979–1982 period. During both regimes, it was quite important to follow daily open market operations since the draining or adding of liquidity could be signaling changes in policy. Also,

Fed watchers spent an inordinate amount of time calculating and estimating reserve factors that would distinguish between “normal” daily operations and operations that reflected a policy shift.

The Fed temporarily abandoned the borrowing approach and relied more heavily on the level of the federal funds rate to assure liquidity needs in light of the October 1987 stock market crash. When it returned to the borrowings approach in 1988, the relationship between borrowed reserves and the federal funds rate became less reliable because the banking crisis caused more banks to borrow from the Fed’s discount window.

Between 1989 and 1993, the federal funds rate was used to gauge the degree of reserve pressure within the context of an initial borrowing allowance. Nonetheless, it was important to monitor daily operations because they could signal a change in the direction of policy. The weekly money supply figures were becoming less and less relevant while real economic indicators dominated the scene. The Fed, instigated by Chairman Alan Greenspan, who was appointed just months before the October 1987 stock market crash, monitored economic indicators more closely. At this time the Fed was also concerned with the soundness of the banking system because of the ongoing savings and loan debacle.⁹

Before 1994, the Fed did not have preset times or dates on which to change policy, although changes in the federal funds rate were more likely to occur on days when major economic news such as the employment situation was released. As the 1990s unfolded, the Fed tried to get away from tying their policy changes to particular economic indicators such as the employment situation or GDP. In any case, changes in the federal funds rate were noted in the morning when the New York Fed’s Open Market Desk undertook open market operations.

A new era began in spring 1994 that continues to the present. The Fed began to announce policy changes immediately following FOMC meetings. At the end of each FOMC meeting, the Fed releases a statement. The statement can announce a policy change, or it could be identical to the statement issued after the previous meeting, meaning no change in policy. The Fed thus decoupled the timing of policy changes from specific indicators. Moreover, the disclosure was new for the Fed and was well received by financial market participants as well as by Congress. It marked a sea change in the history of the Fed, which had previously been secretive about its decisions and deliberations. Many Congressional leaders had long argued that the Fed should be more open. The Fed in fact is now striving for greater transparency. In December 2004, the Fed announced that they would report the minutes of FOMC meetings with only a three-week delay. This reduced the lag significantly—which had previously run closer to six weeks.

Did You Know?

Sometimes Fed officials do stop talking about economic and monetary policy. In the week just before and after an FOMC meeting, a “blackout” period exists in which Fed governors and district bank presidents either will not give any speeches, or they will comment only on matters *not* relating to monetary policy and the economic outlook.

Despite the more transparent behavior of the Federal Reserve, its chairman is more often than not obscure. “I know you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant,” Alan Greenspan once remarked on Capitol Hill.¹⁰

Laurence Meyer ends his book, *A Term at the Fed*, with a chapter devoted to the topic of Alan Greenspan entitled, “Alan, I Hardly Knew You.” That says it all, doesn’t it? Greenspan always appears enigmatic, but we tend to think it is the chairman’s plan to be ambiguous before the public. It seems that Mr. Greenspan plays this role with the other governors and Fed district bank presidents as well. Meyer tells the story of how in December 1996, Greenspan delivered his famous “irrational exuberance” remark. Seated at the dinner table was Greenspan’s wife Andrea Mitchell, Chief Foreign Affairs Correspondent for NBC News, who asked others at the table whether or not her husband said anything newsworthy. The chairman’s ambiguous delivery was even unclear to his wife!¹¹

After 1994 it was no longer necessary to watch daily open market operations to indicate interest rate changes, because these would only occur after FOMC meetings. Since Fed governors monitored economic conditions, the good Fed watcher did, too. In fact, ever since Alan Greenspan was named Fed chairman, focus shifted away from monetary aggregates to economic indicators. According to *Business Week*, the Fed’s staff tripled the number of series in its database to 14,000 in the first 10 years of Greenspan’s tenure as Fed chairman.¹² The Fed watcher’s formerly important job of predicting weekly reserve factors and monetary aggregates became virtually meaningless. Economic indicators were king. The FOMC began to feel that economic indicators such as employment conditions, retail sales, and a variety of inflation measures would give them a better handle than monetary aggregates on assessing their goals of economic growth without inflation. Fed watchers who had a better understanding of the economy now were better equipped at predicting interest rates than those who simply followed weekly money supply.

But assessing economic conditions is not enough for Fed watchers. It is imperative to know what the Fed is thinking. Consequently, clues about potential policy changes can also come from remarks made by Fed officials. In fact, economists and financial market participants dissect all the words of every governor and district bank president. Instead of poring over the details of reserve factors and monetary aggregates, Fed watchers scrutinize the words uttered by members of the FOMC, with greater weight given to the Fed chairman's utterances. Possibly the information age made it easier to publicize the speeches of the FOMC. But since information became more accessible, it increased the demand for the words of governors and bank presidents. Financial reporters in print and on TV compete daily to get the latest scoop by interviewing Fed officials.

Alan Greenspan's term as governor expires January 31, 2006. He cannot be reappointed to another term, though he can legally keep his position for a few extra months as the process for a new chair is underway. His popularity over the years through both Republican and Democratic administrations has made him an icon. There is no question that a new Fed chair will put his or her unique stamp on the position in 2006. Greenspan's appointment was not well received in the beginning because then-Chairman Paul Volcker was considered a hard act to follow. It is likely that the new person, however capable, may not be entirely welcomed by financial market players at first, either. Fed watching may just see another evolution.

Did You Know?

Once a Federal Reserve governor announces his or her resignation, they do not attend the final FOMC meeting just before their term ends. For instance Edward Gramlich's last day from the Fed was August 31, 2005; consequently, he did not attend the August 9 meeting. This tradition does not hold for the Chairman of the Federal Reserve, however. Alan Greenspan's term ends January 31, 2006; he is still expected to attend and chair this meeting.

The Fed in Action

Apart from actively changing the federal funds rate target, the Fed also *talks* about potential policy changes. This is called *moral suasion*, but is better known as jawboning. It historically provoked fear in the hearts of market participants, and interest rates moved in the "right" direction as if directed by an invisible hand.

Does it still work? Sometimes. And sometimes market interest rates do not move in the direction the Fed wants even after a definite stated change in policy. For instance, the Fed removed policy accommodation in 2004 by raising the federal funds rate target five times during the year in increments of 25 basis points—but the hikes did not cause long bond yields to rise. In fact, average yields on 10-year Treasury notes fell 50 basis points between June and December 2004.

Moral Suasion

In Chapter 1 we learned that financial markets depend on expectations because all relevant information is processed continuously. In a world of adjusting expectations, the threat of action can be just as important as the action itself. By expressing their own expectations, Fed officials can push and pull the markets in a desired direction. Fed Chairman Alan Greenspan was long concerned that equity prices were overvalued based on fundamental analysis of profit expectations. The Fed can control credit used for purchasing securities, so Greenspan could have increased margin requirements to make it more difficult to borrow funds to buy stocks. He did not change margin requirements, but suggested on December 5, 1996 that financial market participants were “irrationally exuberant” about the stock market given the likelihood that corporate profits would soon grow at a less robust pace. Stock prices did initially fall on his comments, although the drop was more significant after the Fed raised interest rates in March 1997.

Greenspan often uses the opportunity of addressing his concerns about the state of the economy, inflation, and interest rates when he testifies before Congressional committees or gives speeches. This serves as a “heads up” for market players.

“Frankly, when Greenspan made his conundrum comment, he was trying to apply moral suasion,” said Ward McCarthy of the forecasting firm Stone & McCarthy to the *Wall Street Journal*. “Because, frankly, if the Fed’s intention is to slow down the economy, it can’t be that only short-term rates rise.”¹³

Most of the time, comments by governors and district bank presidents discuss the Fed’s inclination toward maintaining price stability. In 2003 Fed officials were very concerned about the prospects of deflation. It is one reason why the Fed kept the federal funds rate so low (at 1 percent) for so long (12 months). In June of that year, a few weeks before an FOMC meeting, several Fed officials commented on the extremely negative consequences of deflation. As a result, bond and equity investors were convinced that the Fed would reduce the federal funds rate

target by 50 basis points, rather than by the initially expected 25 basis points, in order to wipe out deflation. Bond yields plummeted in anticipation. After the FOMC meeting on June 25, the Fed announced a 25 basis point drop. This suggests that moral suasion is not as easy to control—or to interpret—as one would expect. Market players were convinced that the extra Fed speak on deflation signaled a major policy change—but in fact, the Fed only changed the federal funds rate target by an incremental amount.

These sorts of comments play a significant role in affecting the behavior of financial market participants who fear that rate increases or rate declines are imminent, perhaps coming at the next scheduled FOMC meeting. The comments can lead to sharp declines or increases in bond yields. When financial market participants expect the Fed to raise (lower) rates, this will be factored in market prices and higher (lower) rates will come from expectations rather than outright actions. When the Fed actually does raise (reduce) rates, the market impact might be muted. Nevertheless, be warned that paying too much attention to every utterance by a Fed governor or president can be misleading.

Did You Know?

Comments by Fed officials are not always identical and could give different assessments of current conditions. On January 20, 2005, Minneapolis Fed president Gary Stern and St. Louis Fed president William Poole both commented on inflation and economic conditions. According to articles in *Market News International* authored by Fed pundit Steven Beckner, Stern was less worried about inflation than Poole: “Gary Stern said he would need to see a ‘deterioration’ in inflation ‘prospects’ before he would conclude that the Fed needs to speed up the pace of its interest rate hikes, and he said he does not anticipate that happening.”¹⁴

In contrast, Poole was less sanguine about inflation even though he admitted that inflation now seems “well controlled”; but he then said that the Fed’s policymaking FOMC is prepared to raise interest rates “more aggressively” if it threatens to go higher.¹⁵

Discount Rate

The discount rate is the lending rate that the Federal Reserve charges to depository institutions and commercial banks at the local Federal Reserve Bank. Until Regulation A, a regulation governing discount-window

borrowing, became effective on January 9, 2003, discount window loans were for adjustment credit, extended credit, and seasonal credit. But this regulation changed the structure of discount-window borrowing. Now depository institutions have access to three programs: primary credit, secondary credit, and seasonal credit. The seasonal credit needs have not changed in essence since they impact relatively small depository institutions that have recurring seasonal fluctuations such as banks in agricultural or seasonal resort communities.

The discount rate charged for primary credit is essentially the one now known as the discount rate (in the old sense). At this writing, it is set at 100 basis points over the federal funds rate target and is used for very short-term loans (mainly overnight) for banks and other financial institutions in sound financial conditions. Those banks and institutions that are not eligible for primary credit may apply for secondary credit in order to help meet short-term liquidity needs or to resolve several financial difficulties. This rate is set at a higher rate than the primary credit rate. The seasonal credit rate is an average of selected market rates.

The discount rate is uniform across Federal Reserve Districts, even though each district's board of directors must vote on discount rate changes. These are then approved (or not) by the Board of Governors, who can change this rate without benefit of an FOMC decision. To find out the current discount rate, you can call your district bank, find it in the daily newspaper, or on the Fed's web site.

The FOMC usually announces changes in the discount rate at the same time as changes in the federal funds rate since the two are now tied. Unless the Fed changes its policymaking process, we are unlikely to see announcements that will change the value of the discount rate without a change in the federal funds rate target.

Reserve Requirements

Reserve requirements are another tool that the Fed can use to control the money supply. The amount of reserves that banks and thrifts are required to hold depend on the type and size of the deposit, the type and size of the bank, and the location of the institution. For example, reserve requirements are lower for small banks relative to large banks; lower for time deposits relative to demand deposits; and lower in rural areas than in urban areas. The structure of reserve requirements under the Monetary Control Act of 1980 made it more possible to control M1, the most liquid of the monetary aggregates. While reserve requirements are one of the Fed's tools to stimulate the economy, they are rarely used. Reserve requirements were revised slightly in early 1991 to allow banks to shore up their capital re-

quirements, not to spur lending. According to a Federal Reserve publication, the role of reserve requirements in the implementation of monetary policy is mainly for its “announcement” effect. The *Federal Reserve Bulletin* lists the reserve requirements for the various types of banks and types of deposits.

Did You Know?

The Fed has other tools at its disposal to change monetary conditions. For instance, the Fed instituted credit controls in early 1980 to curtail the rapidly expanding pace of consumer debt. Many economists believe that the credit controls played a major role in deepening the 1980 recession because consumer spending plunged during the period.

Open Market Operations

In short, open market operations are the daily purchase and sales of government securities undertaken by the Open Market Desk at the Federal Reserve Bank of New York under the direction of the Federal Open Market Committee. As stated previously, open market operations are the principal tool used by the Fed to change monetary policy. Open market operations are also undertaken to provide adequate liquidity for the daily needs of the banking system, which are affected by a variety of factors described in greater detail in the following sections.

We need to distinguish between open market operations that change policy and those that merely make the banking system run smoothly. Therefore, let us turn first to the policy issues. The Federal Reserve’s current policy monitors reserve restraint through the federal funds rate. The funds rate is the price of reserves determined by supply and demand conditions in the banking system.

When the Federal Reserve wants to ease monetary policy, it *buys* Treasury securities. Purchasing securities for a short period of time is known as *doing RPs* (repurchase agreements), because the Fed agrees to buy a security with the intent to resell it in a few days’ time. For a more permanent change, the Fed will do a bill or coupon pass, which buys the securities outright without intent to resell them. The Fed can also purchase securities from their customers, such as foreign central banks who hold Treasury securities and maintain dollar accounts at the New York Fed.

The Fed sells securities—doing matched sales or reverse RPs—to tighten monetary policy. In this case, the Fed would sell Treasury securities

with the promise to repurchase them at a later date. Buying Treasury securities causes the Federal Reserve to increase the supply of money in the banking system and is a stimulative measure. Selling Treasury securities causes the Fed to decrease the supply of money in the banking system and is considered restrictive to economic growth. Following its twin goals of promoting economic growth with price stability, the Fed would want to stimulate the economy if the United States were in a recession by doing a coupon pass. Conversely, the Fed would want to tighten conditions if inflationary pressures surged during an economic expansion and would sell securities in the open market. Because the Federal Reserve can only control the currency components of the monetary aggregates, it is not essentially increasing or decreasing the money supply. More appropriately, it is increasing or decreasing the growth in bank reserves. Banks expand or contract the money supply by increasing or decreasing loan growth. At one time, the FOMC set annual target ranges for growth in each of the monetary aggregates such as M1, M2, and M3, but stopped this practice in 2000.

Judging by the market fascination with the Federal Reserve and its chairman, one would think that the Fed is constantly changing monetary policy. In fact, the Fed does not change policy very often. In some years, changes are frequent—for instance the federal funds rate target was increased five times in the second half of 2004, but in some years there are no changes in the federal funds rate target. Figure 10.1 compares the federal funds rate target to yields on the 10-year Treasury note. Note that 10-year Treasury yields have fluctuated more dramatically than the funds rate target over the past 20 years.

Open market operations are conducted mostly for technical or offsetting reasons. The daily addition or subtraction of money in the banking system does not signify a change in policy. At any given moment, some banks have excess reserves while some banks require reserves. Banks sell and buy reserves to one another overnight at the federal funds rate. When the federal funds rate is well above the federal funds rate target, it can imply that there are not sufficient reserves in the banking system. When the federal funds rate is well below the target, it suggests that the banking system has an overabundance of reserves. The Fed may not add reserves or sop up reserves due to a variety of seasonal factors.

Since the 1990s, the easiest way to note a change in monetary policy (other than through the Fed's announcements) via daily open market operations is to monitor the federal funds rate.

The drop in the federal funds rate between 1989 and 1993 shows the general easing of monetary policy over that period. The rise in the funds rate in 1994 shows the general tightening of monetary policy during that year. Another easing period occurred between 2001 and 2003 during the economic

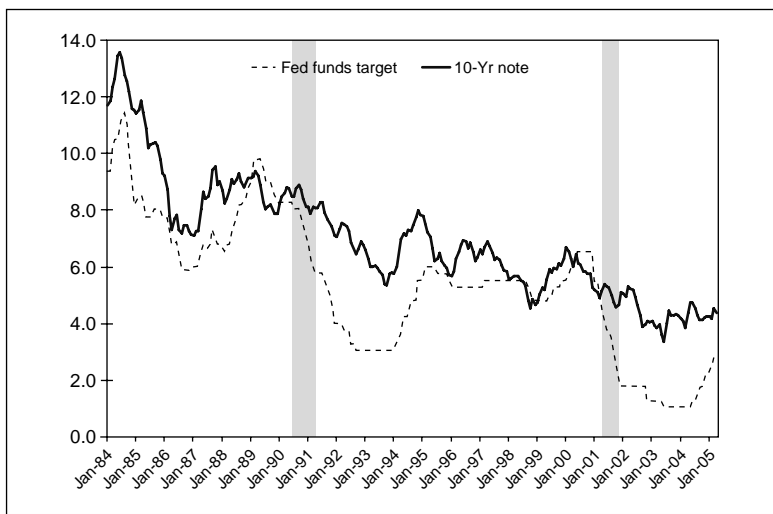


FIGURE 10.1 Federal Funds Rate Target versus 10-Year Treasury Yield: The federal funds rate target, measuring Federal Reserve Policy, fluctuates less than market rates.

Source: Federal Reserve Board and Haver Analytics.

recession and the subsequent recovery that also featured deflation fears. (See Figure 10.1.)

The Federal Reserve generally conducts its open market operations in the morning. Short-term RPs (typically under 14 days) are done around 9:30 A.M. Eastern time. The weekly long-term RPs (14 day) are conducted every Thursday at roughly 8:20 A.M. Open market operations can be undertaken at any time of the day and financial market players are quite flexible. For those more interested in the process of open market operations, this information is readily available in the New York Fed's Annual Report found on their web site under the "Markets/Open Market Operation/Annual Reports" link.

Understanding Bank Reserves

To get a better handle on the process of open market operations, we need to step back a bit to talk about the supply and demand for reserves. The Federal Reserve System publishes several pamphlets devoted solely to this topic. Two are relatively easy to read: *Modern Money Mechanics* by the Chicago Fed, and *Open Market Operations* by the New York Fed. This

section briefly summarizes the key points without getting bogged down in the details—nevertheless you are encouraged to read these publications for their particulars.

The U.S. banking system operates under a fractional reserve system in which banks are required to hold reserves against transaction accounts in banks. Banks must calculate their required reserve needs over a two-week maintenance period. Given the difficulty in making precise calculations of their requirements, most banks have excess reserves. This forms the demand side of the equation:

$$\text{Required} + \text{Excess reserves} = \text{Total reserves}$$

The supply of reserves can be equally stated. Banks either have enough reserves to meet these requirements, or they borrow them from the Federal Reserve's discount window. Incidentally, nonborrowed reserves refer to reserves that are not borrowed from the Fed. They do include those reserves that Bank A "borrows" from Bank B overnight in the federal funds market (hence the term federal funds *rate*.) From the supply perspective,

$$\text{Borrowed} + \text{Nonborrowed reserves} = \text{Total reserves}$$

Reserve factors are volatile, making the nonborrowed reserves portion a major source of imbalance in the system. Reserve factors are listed in the Fed's weekly H4.1 release available every Thursday afternoon. Some of the factors do not move much from week to week. The greatest volatility comes from float, Treasury balances at the Federal Reserve, and currency in circulation. To some extent, these factors are predictable from week to week. Incidentally, even though the check-clearing process has changed since October 2004—whereby checks supposedly clear more quickly, float has thus far remained highly volatile. Table 10.2 is an abbreviated version of the H4.1 release.

The top half of the table shows the total factors *supplying* reserves; the bottom half lists the factors *absorbing* reserves. Currency in circulation is listed as a factor that absorbs reserves. It is the amount of coins and paper currency held by the public; it becomes vault cash when held by banks and can be issued to meet a bank's reserve requirements. Changes in currency held by the public follow a regular intramonthly pattern. Holiday periods induce greater cash needs. The more currency people want to hold, the less cash banks hold in their vaults—which reduces bank reserves. The Fed would want to *add* reserves in this case through open market operations by doing RPs. When the holiday season is over and cash flows back to banks, the Open Market Desk at the New York Federal Reserve would do matched sales to drain the excess reserves.

TABLE 10.2 Selected Information from the H4.1: Factors Affecting Reserve Balances of Depository Institutions (Millions of dollars)

Reserve Bank credit, related items, and reserve balances of depository institutions at Federal Reserve Banks	Averages of daily figures			Wednesday May-04-05
	Week ended May-04-05	Change from week ended		
		Apr-27-05	May-05-04	
Reserve Bank Credit	786,449	-263	+44,322	782,861
Securities held outright	719,356	+1,415	+41,618	719,372
U.S. Treasury ^(a)	719,356	+1,415	+41,618	719,372
Bills ^(b)	263,005	0	+12,904	263,005
Notes and bonds, nominal ^(b)	434,785	+1,385	+23,397	434,785
Notes and bonds, inflation-indexed ^(b)	19,108	0	+4,644	19,108
Inflation compensation ^(c)	2,457	+29	+672	2,473
Federal agency ^(b)	0	0	+0	0
Repurchase agreements ^(d)	26,143	-1,178	+1,679	21,500
Loans to depository institutions	111	+9	+23	124
Primary credit	5	-2	-1	3
Secondary credit	0	0	0	0
Seasonal credit	107	+11	+25	121
Float	-1,117	-801	-371	-112
Other Federal Reserve assets	41,957	+295	+1,375	41,978
Gold stock	11,041	0	-4	11,041
Special drawing rights certificate account	2,200	0	0	2,200
Treasury currency outstanding ^(e)	36,672	+14	+830	36,672
Total factors supplying reserve funds	836,362	-249	+45,148	832,774
Currency in circulation ^(f)	753,795	+1,062	+35,290	755,472
Reverse repurchase agreements ^(f)	26,355	+861	+4,878	26,060
Foreign official and international accounts	26,355	+861	+4,878	26,060
Dealers	0	0	0	0
Treasury cash holdings	257	-3	-62	254
Deposits with F.R. Banks, other than reserve balances	14,326	-80	-2,723	14,082
U.S. Treasury, general account	4,863	-723	-1,162	4,618
Foreign official	101	+6	-29	79
Service-related	9,028	+603	-1,534	9,028
Required clearing balances	9,028	+603	-1,533	9,028
Adjustments to compensate for float	0	0	0	0
Other	335	+35	+3	357
Other liabilities and capital	28,799	-69	+7,877	28,643
Total factors, other than reserve balances, absorbing reserve funds	823,533	+1,772	+45,261	824,510
Reserve balances with Federal Reserve Banks	12,829	-2,020	-113	8,264
Memo (off-balance-sheet items):				
Marketable securities held in custody for foreign official and international accounts ^(b, g)	1,398,940	+8,123	+204,582	1,400,271
U.S. Treasury	1,077,108	+849	+112,373	1,075,587
Federal agency	321,833	+7,275	+92,210	324,684
Securities lent to dealers	3,492	+1,897	-221	2,096

Note: Components may not sum to totals because of rounding.

^aIncludes securities lent to dealers, which are fully collateralized by other U.S. Treasury securities.

^bFace value of the securities.

^cCompensation that adjusts for the effect of inflation on the original face value of inflation-indexed securities.

^dCash value of agreements, which are collateralized by U.S. Treasury and federal agency securities.

^eEstimated.

^fCash value of agreements, which are collateralized by U.S. Treasury securities.

^gIncludes U.S. Treasury STRIPS and other zero coupon bonds at face value.

Source: Federal Reserve Banks and the U.S. Department of the Treasury (May 5, 2005).

Besides depository institutions, foreign central banks, international financial institutions, and the U.S. Treasury hold reserve accounts at the Fed. Note that these are listed in the H4.1 release as factors that absorb reserves. The U.S. Treasury is the most important nonbank depositor and holds some of its operating balances with the Fed. The remaining funds are held at banks across the U.S. in Treasury tax and loan (TT&L) accounts. Whenever the Treasury disburses funds through the Fed, the Fed makes sure the funds are available in the TT&L balances at banks. This drains reserves from the banking system. Again, the Open Market Desk would add reserves by doing RPs.

Finally, the last reserve factor we will discuss here is float. *Float* is the reserve credit given for checks not yet collected. Put differently, it is the timing gap between when a check is credited at the receiving bank and debited from the paying bank. Note that float is listed as a factor that supplies reserves. Processing delays, potentially caused by poor weather conditions that ground planes transporting checks, allow both banks to count the funds as reserves. Because both banks are counting the reserves, an increase in float temporarily increases the supply of reserves within the banking system. The Fed, aware of this technicality, would want to drain reserves by doing reverse RPs, and selling Treasury securities.

On October 28, 2004, a federal law known as the Check Clearing for the 21st Century Act (“Check 21”) made it easier for banks to electronically transfer check images instead of physically transferring paper checks. Since payments are processed more quickly than in the past, the funds are deducted more quickly from a consumer’s checking account. One would expect float to be reduced in the new environment. Perhaps over time, we will see fewer changes in weekly float. However, since the law became effective, through April 2005, the fluctuations in float have not been reduced by any discernable measure.

This brief description of Federal Reserve factors is intended to give you a flavor of the process. The Open Market Desk at the New York Fed would clearly analyze each factor in depth in order to be able to predict in advance the intramonthly or seasonal variations. This is one of the duties performed by the old Fed watchers before the Fed disclosed policy decisions. By monitoring the reserve factors one can assess whether changes in the federal funds rate is coming from normal technical (seasonal) factors or changes in demand for bank reserves associated with changes in economic activity. Increased demand for goods and services would put upward pressure on the federal funds rate; decreased demand by consumers and business would put downward pressure on the funds rate.

FED INDICATORS

Monetary Aggregates

The Federal Reserve changed the definitions of the monetary aggregates a couple of times in the early 1980s. The measures were constructed in order to allow the Fed to better monitor and conduct monetary policy in its relation to economic activity. The definitions range in terms of liquidity. Consumers generally hold money for daily transactions, emergencies, and to speculate and invest. The money measures defined by the Federal Reserve correspond to these demands for money.

M1 is the most liquid form of money. It includes: currency outside the Treasury, currency at Federal Reserve Banks and the vaults of depository institutions; travelers checks of nonbank issuers; demand deposits at all commercial banks other than those due to depository institutions, the U.S. government, and foreign banks and official institutions less cash items in the process of collection and Federal Reserve float; other checkable deposits consisting of negotiable orders of withdrawal and automatic transfer service accounts at depository institutions, credit union share draft accounts, and demand deposits at thrift institutions. The demand for M1 may change with the level of interest rates. When interest rates are low, more funds might remain in transactions accounts because the opportunity cost of lost interest earnings is low. Conversely, when interest rates are high, the opportunity cost increases and consumers shift their money to interest bearing accounts. Sweep accounts, offered by investment banks to their clients, have greatly distorted the usefulness of M1. Figure 10.2 shows the relationship of M1 growth to nominal GDP growth.

M2 includes M1 plus overnight repurchase agreements issued by all depository institutions and overnight Eurodollars issued to U.S. residents by foreign branches of U.S. banks worldwide, money market deposit accounts, savings and small denomination time deposits, and balances in both taxable and tax-exempt general-purpose and broker-dealer money market mutual funds. It excludes individual retirement accounts and Keogh balances at depository institutions and money market funds. It also excludes all balances held by U.S. commercial banks, money market funds, foreign governments and commercial banks, and the U.S. government. The ability of consumers to use money market funds more like transactions accounts has made M2 more liquid. This monetary aggregate is considered a leading indicator of economic activity and (after adjusting for inflation) is included in The Conference Board's index of leading indicators. Figure 10.3 shows the growth in M2 relative to the growth in nominal GDP.

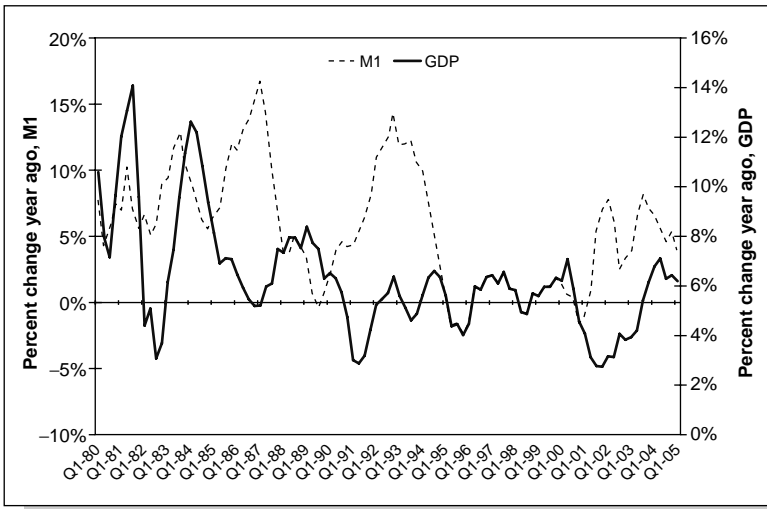


FIGURE 10.2 M1 versus GDP: The yearly growth in M1 and nominal GDP tended to move in the same direction if not by the same magnitude until the mid-1980s when the relationship fell apart completely.
 Source: Federal Reserve Board, Bureau of Economic Analysis, and Haver Analytics.

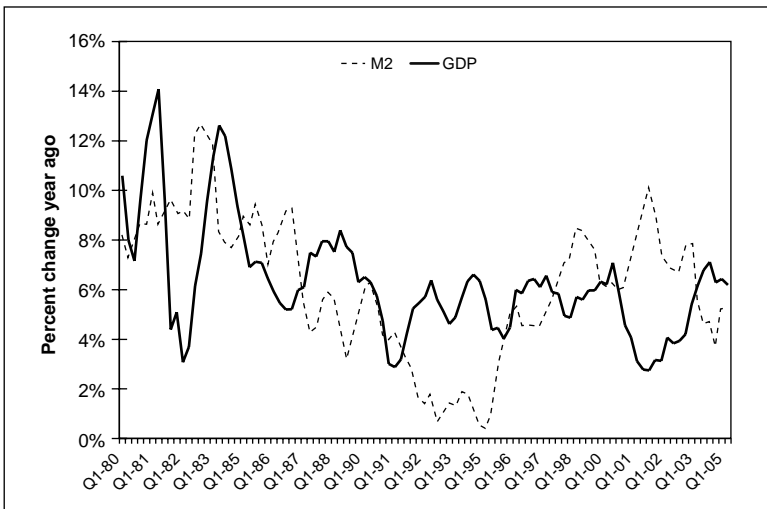


FIGURE 10.3 M2 versus GDP: M2 and nominal GDP appear to grow in opposite directions since the mid-1980s.
 Source: Federal Reserve Board, Bureau of Economic Analysis, and Haver Analytics.

M3 is substantially less liquid than M1 and M2. It includes M2 plus large denomination time deposits and term RP liabilities issued by depository institutions, term Eurodollars held by U.S. residents at foreign branches of U.S. banks worldwide and at all banking offices in the United Kingdom, Canada, and balances in both taxable and tax-exempt institution-only money market mutual funds. It excludes amounts held by depository institutions, the U.S. government, money market funds, and foreign banks and official institutions. Also subtracted are the estimated amounts of overnight RPs and Eurodollars held by institution-only money market mutual funds. This monetary aggregate has less relevance as an indicator of consumer and business demand. Figure 10.4 shows the relationship between M3 and GDP. As we were going to press, the Fed announced that it will cease publication of M3 on March 23, 2006.

The *monetary base* is equal to total bank reserves plus currency held by the nonbank public. The Federal Reserve Bank of St. Louis has published the monetary base since 1968, while the Board of Governors began to publish their version of the monetary base in 1979. The two versions differ slightly. Economists who closely follow the monetary aggregates seem to prefer the St. Louis version of the base.

These monetary aggregates (M1, M2, and M3) are reported weekly with a lag of one and a half weeks. The weekly measures are released

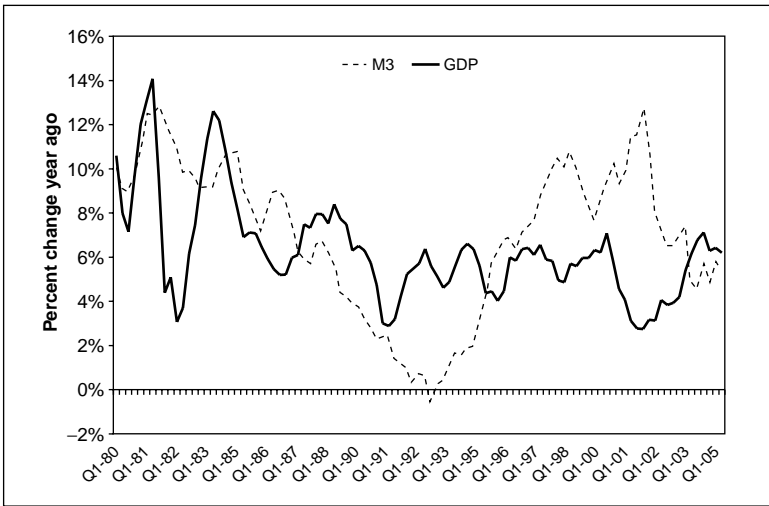


FIGURE 10.4 M3 versus GDP: M3 and nominal GDP don't appear to have much of a relationship.

Source: Federal Reserve Board, Bureau of Economic Analysis, and Haver Analytics.

every Thursday afternoon at 4:30 P.M. Eastern time. One can view the seasonally adjusted and the unadjusted figures. Components of the various monetary aggregates are also available weekly. For example, the actual levels of such items as currency in circulation, demand deposits, and savings deposits are found in Federal Reserve release H.6. Factors affecting reserve balances such as government securities bought by the Fed are reported in Federal Reserve release H.4.1 for the current week ending Wednesday.

Why are monetary aggregates considered important? To paraphrase a time honored cliché, “Money makes the world go ’round!” If consumers have more money in their demand deposits (i.e., checking accounts) they can spend more and spur economic activity. If banks get additional deposits from their customers, they can lend more money to businesses that plan to purchase equipment or expand facilities. This also increases gross domestic product. In sum, increases in the monetary aggregates portend increases in U.S. industrial production, income, employment, and nominal GDP. However, increases in the monetary aggregates only spur economic activity if the economy is not operating at full capacity. Once the economy is at full employment, increases in the money supply would increase prices, leading to accelerating inflation.

Some economists use mostly financial indicators, particularly the monetary aggregates, to predict economic activity. Frankly, I am not part of that group and believe that the economic indicators discussed in this book will go a long way in helping to decipher economic conditions and trends. In my view, the monetary aggregates have only limited appeal as a guide to economic conditions. Regulatory changes along with financial market innovations have rendered old relationships unstable and less reliable. It is telling that the FOMC does not find it useful to set annual growth targets.

Beige Book

Two weeks before an FOMC meeting, the Fed releases the *Beige Book* at 2:00 P.M. Eastern time. The *Beige Book* compiles information gathered from the 12 district banks and each time, a different bank is charged with compiling the information. Some banks have reputations as being hawkish or dovish—and so market players are keyed up about which of the district banks compiles the data. Frankly, while a bank district president may be considered hawkish or dovish, he or she is not the one putting together the summary. A staff economist does that, and they do not, at least as a rule, have an “agenda.” The report begins with a general summary as well as a summary by Fed district. Also, the *Beige Book* in detail discusses activity

by sector (retail, real estate, commercial and industrial loans, labor market conditions).

Market Reaction

In the early 1990s, market players did not pay much attention to the *Beige Book*. This changed in the late 1990s and early 2000s. The *Beige Book* information is anecdotal; but it is available before other economic indicators are released and, therefore, has a leading quality to it.

FOMC Statement

According to former Fed governor Laurence Meyer, the Fed chairman (with input from the director of monetary affairs and the head of public affairs) writes the FOMC statement in advance of the FOMC meeting.¹⁶ After the meeting, FOMC members have a chance to consider changes. For the most part, however, the statement remains in Greenspan's words. (This may change when a new Federal Reserve chairman assumes office.) The statement does not vary from meeting to meeting. Consequently, Fed watchers and market players dissect every word and syllable. Since the 2000s, catchphrases have included "for a considerable period" and "at a measured pace." Any variation in terminology is considered as a potential shift in Federal Reserve thinking.

Market Reaction

Because the Fed has signaled their intentions to change the federal funds rate target in a more transparent fashion in the past few years, market players have begun to focus on the post-FOMC meeting statement as much as their action (or inaction) on the federal funds rate target. The statement can now cause sharp fluctuations even if the Fed has not changed its federal funds rate target since market players are quite attuned to changes in phrases or words that might potentially change the meaning of the Fed's intent.

The Fed's tendency to hold on to the same limited phrasing has caused some Fed watchers to conclude that Fed language is not as helpful as it once was. Paul McCulley, a Fed watcher at PIMCO said: "The statement has been tortured to the point where it is not particularly illuminating now."¹⁷

FED ERROR CHANGES TONE OF POSTMEETING STATEMENT

On May 3, 2005 when the Fed released its post-FOMC statement at about 2:15 P.M. Eastern time, it inadvertently left out a sentence. No one would have known that the Fed made a mistake, but the Fed owned up to the error and released a correction at about 4:00 P.M. Eastern time. The FOMC reinserted a sentence that had been in the previous four post-FOMC statements: “Longer-term inflation expectations remain well-contained.”¹⁸

Market players may have been annoyed at the error, but viewed the correction in a favorable light. The market interpretation was such that the statement without that sentence was more hawkish than one with the sentence. The corrected statement that the Fed released in late afternoon was worded this way:

The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 3 percent.

The Committee believes that, even after this action, the stance of monetary policy remains accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity. Recent data suggest that the solid pace of spending growth has slowed somewhat, partly in response to the earlier increases in energy prices. Labor market conditions, however, apparently continue to improve gradually. Pressures on inflation have picked up in recent months and pricing power is more evident. Longer-term inflation expectations remain well contained.

The Committee perceives that, with appropriate monetary policy action, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal. With underlying inflation expected to be contained, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.

Voting for the FOMC monetary policy action were:

Alan Greenspan, Chairman; Timothy F. Geithner, Vice Chairman; Susan S. Bies; Roger W. Ferguson, Jr.; Richard W. Fisher; Edward M. Gramlich; Donald L. Kohn; Michael H. Moskow; Mark W. Olson; Anthony M. Santomero; and Gary H. Stern.

In a related action, the Board of Governors unanimously approved a 25-basis-point increase in the discount rate to 4 percent. In taking this action, the Board approved the requests submitted by the Boards of Directors of the Federal Reserve Banks of Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco.¹⁹

FOMC Minutes

Historically, the Fed released minutes of its meeting with a six-week delay. Two days after each FOMC meeting, the Fed would release the minutes of its previous meeting. Since 1994, when the Fed began to announce their policy changes after each meeting, it did not make much sense to monitor the minutes of the meeting that had taken place six weeks before. In December 2004, the Fed announced that they would now issue the minutes with only a three-week lag—that's right, only three weeks! There is more information in the minutes than the statement, often information that market players have not seen. The first release of the FOMC minutes with a three-week lag was reported on January 5, 2005 and covered the December 2004 meeting. They were considered more confusing than helpful. Bloomberg columnist Caroline Baum begins: "Not everyone can write on deadline. The Federal Reserve's latest and laudable effort at increased transparency—releasing the minutes from policy meetings with a three-week instead of a six-week lag—seems to have sacrificed clarity for speed."²⁰

By the time the March minutes were reported in April, however, market players and economists did not seem to have problems with the terminology and the minutes were subject to less interpretation. That is, more economists and market players were in agreement rather than in disagreement over the meaning of the minutes. In 2005, market players closely monitored the FOMC minutes.

Understanding Fed Terminology in an Era of "Transparency"

When the economy is expanding too rapidly and inflationary pressures are percolating, the Federal Reserve tightens monetary policy by increasing the federal funds rate. The Fed tightened monetary policy in 1999 and 2000. Conversely, when the economy is in recession and the unemployment rate is rising, the Federal Reserve will ease monetary policy by reducing the federal funds rate target. The Fed eased from 2001 through 2004. Can the Federal Reserve do anything other than ease or tighten monetary policy? In fact, they can. Between June 30, 2004 and through this writing in mid-2005, the Fed pursued a policy of "removing policy accommodation." This is not new to policymakers, nor is it new to economists and financial market participants. It is a relatively new term, though, that the Fed is using since it has become more transparent—or at least is attempting to become more transparent—in describing current monetary policy to the American public. The next couple of pages describe what determines the difference between easing, tightening, and removing policy accommodation.

It is not unusual to see the Federal Reserve continue to ease credit conditions in the early stages of economic recovery. But eventually, Fed officials worry that solid economic growth will cause inflationary pressures and start putting their foot on the break. Economic growth did recover after the relatively mild 2001 recession, but GDP growth was relatively mild in 2002 and did not take off more sharply until 2003. At the same time, employment was still declining in 2002 in the early recovery and growth was soggy through most of 2003. Moreover, Federal Reserve officials saw the inflation rate, measured by the core CPI, moderating from 2 percent to 1 percent over the course of 2003 and feared that deflationary pressures would derail the economy. To avoid the kind of problems faced by Japan, they fought deflationary pressures in the United States by lowering the federal funds rate to 1 percent—and left it there for a period of 12 months (June 2003 to June 2004). By June 2004, members of the Federal Open Market Committee had come to the realization that deflation fears were overblown—or at least they were no longer a problem because the core inflation rate was once again rising toward 2 percent. Indeed, the U.S. economy was growing then at a healthy clip—even employment growth was improving.

There is no question that a federal funds rate hovering around 1 percent was highly accommodative in the United States during this time. Market interest rates were low—and this translated into the lowest mortgage rates in 40 years. Consumers and businesses were happy to borrow money

at these rates and borrowing activity surged. In 2003 and 2004, the core inflation rate ran between 1 and 2 percent. Thus, after adjusting for inflation, a nominal federal funds rate of one percent meant that the *real* federal funds rate (the nominal rate minus the inflation rate) was actually negative.

A former Federal Reserve chairman once quipped, “It is the Fed’s job to take away the punch bowl just as the party is starting.” In 2004 Fed officials knew that the time had come for less accommodation since U.S. economic growth was healthy and it was time to head off any inflationary pressures. Consequently, they raised the federal funds rate target by 25 basis points for the first time in 12 months on June 30, 2004.

While the Fed finally raised the federal funds rate, no one could claim that they were tightening because monetary policy remained highly accommodative even when the federal funds rate was 1.25 percent. The funds rate was increased five times in 2004 in 25-basis-point increments. By the end of the year, the federal funds rate stood at 2.25 percent. Nevertheless no one could claim that the Fed had tightened monetary policy because the inflation rate was running at about 2.2 percent, the same as the funds rate. As long as the *real* (inflation-adjusted) federal funds rate was negative or zero, monetary policy would be still considered accommodative.

In 2004 and then again in 2005, each time the Federal Open Market Committee announced a rate hike, they stated that they were “removing policy accommodation.” As long as the *real* federal funds rate target was not positive, it would not be considered tightening. Moreover, it is important to understand that the Federal Reserve did not want to be in a position of *tightening* credit conditions. Instead they wanted to achieve a *neutral* policy, whereby policy was neither overly accommodative nor overly restrictive.

Writing in the early 1900s, Swedish economist Knut Wicksell developed the concept of a neutral rate. Today, we define this rate as a real short-term interest rate that is consistent with stable inflation and an economy growing roughly in line with its potential. When the real interest rate (here the federal funds rate) is below its neutral level, monetary policy is loose; when the real interest rate is above its neutral level, monetary policy is considered tight.

Just like the concept of full employment is difficult to measure and can generate explosive controversy in economic circles, so is the neutral rate. Federal Reserve Vice Chairman Roger Ferguson has argued that the neutral rate is difficult to pinpoint, and that it could easily deviate temporarily from its long-term equilibrium. In his typical fashion, Fed Chairman Alan Greenspan said in Congressional testimony in 2004 and 2005, “We don’t know what neutrality is until we get there.”

Ferguson is correct. Studies show that the neutral rate is not constant

across time. Economists at the Federal Reserve Bank of San Francisco found that the real neutral rate has fluctuated from a low of one percent in the early 1990s to a high of 5 percent in the late 1960s. The OECD (Organization for Economic Cooperation and Development) estimated that the neutral rate in the United States was 3 percent in 2002. Then, after taking into account current economic conditions, they brought down the estimate to 2 percent in late 2004.²¹

Even if we can come to agreement that the real neutral rate is 2 percent (keeping in mind that it could rise to 3 percent or fall to 1 percent), one still needs to arrive at a nominal neutral rate. This is accomplished by using a rough rule of thumb that the nominal neutral rate is equal to the real neutral rate *plus* the current inflation rate. There lies the rub. Economists and policymakers must agree on an appropriate inflation measure. Go back to Chapter 7 and you will be reminded of all the possible permutations of inflation measures! Let us try to simplify the inflation debate by stating that the CPI excluding food and energy prices (otherwise known as the core CPI) is the appropriate rate.

In May 2005, the inflation rate for the core CPI was 2.2 percent. At the same time, the federal funds rate target was 3 percent. Subtracting the inflation rate from the nominal federal funds rate yields a real federal funds rate target of 0.8 percent. It does not take a mathematical genius to see that 0.8 percent is well below 2 percent. If we are looking for a real neutral rate of 2 percent, we are not there yet. We can conclude that monetary policy remained accommodative in mid-2005. Thus, the Fed was continuing to “remove policy accommodation” in 2005 just as they were in 2004. Once the Federal Reserve has reached a nominal federal funds rate target that equals the economy’s current inflation rate plus two percent (for the real neutral rate), then they will have *roughly* arrived at the nominal neutral rate they were striving to attain. An inflation rate of 2 percent would roughly yield a neutral federal funds rate of four percent; a 3 percent inflation rate would call for a 5 percent federal funds rate target and so on.

OTHER FED INDICATORS

Flow of Funds

Chapter 3 covers consumer installment credit and Chapter 9 covers the index of industrial production, two key economic indicators that are compiled and reported by the Federal Reserve Board. Indeed, the amount of data compiled by the Fed is amazing. The Fed’s web site (www.federalreserve.gov) covers everything you ever wanted to know about the Fed,

banking, regulatory issues, community development, payment systems, consumer information, and economic research and data. This latter category is particularly useful for those interested in monetary policy and the markets. The focus of this book is on economic indicators that help us determine the state of the economy and potentially the direction of monetary policy. Market players follow some more closely than others, and these become “market-moving indicators.” Some indicators are new and have not yet developed a strong following, but may become more important over time.

The Fed publishes a quarterly report, called the Flow of Funds, which is rich with information. Some economists have spent their entire careers interpreting and analyzing just this one document. Admittedly, this document is complex, and not one that I have closely monitored over the years since it is not a market-moving indicator. Nonetheless, among its 100-plus pages in each quarterly report, there are some useful pieces of information that are often cited by analysts.

For instance, one can look at summary tables to assess debt growth by sector (D.1); borrowing by sector (D.2); debt outstanding by sector (D.3); and total net borrowing and lending in credit markets (F.1). This is just the beginning.

Often, economists will indicate that the personal saving rate coming from the National Income and Product Accounts (NIPA) is inaccurate and that the Flow of Funds data are more precise. Indeed, the personal saving rate that comes from the Flow of Funds report starts with the NIPA figures but defines saving a little differently since they include expenditures on consumer durables as a form of saving. Table F.10 shows the Derivation of Measures of Personal Saving. For those interested in more detailed or precise definitions, I would recommend this source.

Economists commonly cite household assets and liabilities and net worth information. These figures are also from the Flow of Funds. Table B.100 offers the Balance Sheet of Households and Nonprofit Organizations. One can see how households’ assets and liabilities are categorized. Are funds primarily in equities or bonds? How much real estate do households own?

This quarterly report offers flows and outstandings and is available roughly 10 weeks after the end of each quarter. For instance, figures for the fourth quarter of 2004 were released on March 10, 2005. Data are revised frequently and can go back several years. Market players do not tend to monitor this data, but many analysts cite data from this report. How many times have you heard comments about the loss in consumer wealth from the stock market crash or the surge in wealth from housing appreciation? Real estate and financial assets are described in this report. What can you

take away from this chapter that will serve you in your role as an economic observer? The Federal Reserve System is an institution that follows time-honored traditions. The personalities of the governors—particularly the chairperson—will determine which economic and financial indicators are more relevant than others. The process of Fed policymaking can hardly be called transparent. It is, however, headed toward more disclosure rather than less. In the current period, listening to the governors and bank presidents reveals more about their plans and thought processes than monitoring daily open market operations, and ultimately tells you more about Federal Reserve policy.

KEY POINTS

- The Federal Reserve System has several functions, but its roles in monetary policy and maintaining bank liquidity are of primary importance to financial market participants.
- The process of monetary policy is ongoing as Federal Reserve governors and Federal Reserve District presidents constantly monitor economic and financial conditions.
- Fed watching has evolved over the years; overseers now monitor economic conditions and the words of every Fed official.
- The Fed announces policy changes at the end of every FOMC meeting. This makes the post-meeting statement very important.
- The minutes of the FOMC meeting are now announced with a short lag, rather than a long lag, and are available prior to the subsequent meeting. As such, they are more useful to market players.
- The monetary aggregates have a following among a small group of economists, but do not serve as a reliable guide of economic conditions in the short run.
- The Federal Reserve Board has an enormous amount of useful information on its web site.
- The Flow of Funds report is not normally monitored by financial market players but offers a wealth of key data.

The Treasury

The outstanding public debt of the United States was \$7.6 trillion on December 31, 2004.¹ Marketable debt, consisting primarily of Treasury securities, equaled \$3.9 trillion. Nonmarketable debt, half in savings bonds, amounted to nearly half a billion dollars. The public debt represents what the U.S. government owes for all the money that it has borrowed in the past. New debt is required to finance annual deficits when government outlays exceed revenues and to refinance outstanding debt that is maturing. The federal government regularly issues bills, notes, and bonds that individuals and institutions, both here and abroad, regularly purchase. When the government pays back the interest owed to United States citizens and residents, then we can say that we owe ourselves and the money is simply transferred from the right pocket to the left pocket. When interest is paid to foreigners, funds flow out of the United States and into someone else's coffers. This reduces our standard of living because high government debt with high interest rates encourages foreigners to hold our securities.

How this works—and the basics of the Treasury market and its relevance to the financial system—is described next.

TREASURY SECURITIES

Treasury bills have maturities of four, thirteen, and twenty-six weeks. The Treasury holds weekly auctions for these bills. Offerings for 4-week bills are announced on Monday, auctioned on Tuesday, and settled on Thursday. The 13-week and 26-week (also known as 3-month and 6-month) bills are announced on Thursday, auctioned the following Monday, and issued the subsequent Thursday. All Treasury securities, including bills, are sold in denominations of \$1,000. (Historically, buyers had to pony up \$10,000 for bills, whereas notes were sold in denominations of \$5,000 and bonds sold in \$1,000 denominations.) Depending on borrowing needs, cash management

bills are offered sporadically with a short lag between announcement and issuance. Cash management bills were more frequent before the Treasury decided to issue 4-week bills in August 2001. These 4-week bills were intended to smooth out the Treasury financing schedule. The schedule for weekly Treasury bill auctions is regular and predictable.

The auction schedule for Treasury notes (with maturities ranging from two years to ten years) is slightly less predictable—although still pretty regular. The Treasury tends to only release a final schedule for its announcements and auctions once a quarter. Keep in mind that the Treasury auction schedule is primarily determined by the Treasury's borrowing requirements. If the Treasury has smaller borrowing needs on a weekly basis, they tend to reduce the size of the weekly auctions. However, the auctions go on as scheduled.

Did You Know?

Congress is regularly required to raise the debt ceiling when it is reached because the Treasury cannot legally borrow more money. On many occasions, the ceiling is raised without a problem. Sometimes, however, Congress feels the need to play politics. Early 2005 was one of those times that politics came to the forefront and Congressional leaders tried to attach other items to the debt ceiling bill that was not passed in time. Several scheduled auctions were delayed by a few days. Similarly, a delay on the 4-week bill was announced in November 2004 due to a debt ceiling limitation.

Looking at the history of the debt ceiling, it usually needs to be addressed once a year—although it clearly was not an issue when the U.S. Treasury reported budget surpluses from fiscal year 1998 through fiscal year 2001.²

When the Treasury borrowing requirements change by significant amounts—for instance the average annual budget deficit doubles—then the Treasury needs to rethink their borrowing schedule. Over the past 30 years, the Treasury has made many changes to its schedule, adding and removing various securities. For instance, the 20-year bond was last auctioned on January 8, 1986, while the 30-year bond was last auctioned on August 9, 2001. From fiscal years (October to September) 1998 through 2001, the U.S. Treasury ran annual surpluses instead of deficits. Treasury borrowing requirements were reduced to the extent that the Treasury even

decided to buy back old 30-year bonds. Buyback announcements were listed twenty times in 2000, twenty-two times in 2001, but only three times in 2002. Since then, we have returned to ballooning budget deficits so that Treasury's borrowing needs have once again changed. Despite the fact that Treasury borrowing has increased, 30-year bonds were not offered through 2005. From time to time, key market players have advised the Treasury to reissue 30-year bonds since these long bonds are generally popular. At the time of the May 4, 2005 quarterly refunding announcement, the Treasury suggested it was reconsidering offering 30-year bonds again semiannually in 2006. On August 3, 2005, the U.S. Treasury did indeed announce that it will reintroduce the 30-year bond with the first auction in more than four years to be held in February 2006. They are initially planning to hold two auctions a year for 30-year bonds.

Did You Know?

Government financing agencies such as the U.S. Treasury are inclined to offer long bonds when interest rates are low. The Netherlands, Spain, Poland and Greece issued 30-year bonds in 2005. France and Italy are offering 50-year bonds. Incentives are strong to lock in low interest rates. However, investor, may not benefit from these long bonds if inflation returns with vengeance. In the 1970s and 1980s, U.S. investors found that inflation eroded values.³

The shifting borrowing needs by the Treasury causes changes in the quantity, frequency, and size of various maturities. For instance, 5-year note auctions might take place monthly when the federal budget deficit is large, but take place only quarterly when the deficit is small. These changes among various maturities are not the exception but the norm. The Treasury stopped issuing 52-week bills in early 2001, but began issuing 3-year notes in May 2003. The Treasury's decisions on security issuance are not frivolous since the Bond Market Association's Treasury Borrowing Advisory Committee, individuals who work at key financial institutions in the United States, regularly advises the Treasury on its auction schedule.

As of 2005 the U.S. Treasury auctions 2-year notes and 5-year notes monthly. The 2-year notes are announced on the fourth Monday of each month and auctioned on the subsequent Wednesday. They settle on the last day of the month, unless it is a weekend, and then they settle on the subsequent Monday. The 5-year notes are settled on the fifteenth of the month

and are usually auctioned about the second Wednesday of the month after being announced on the Monday of that week. Each quarter the Treasury announces a “refunding” which includes announcements on 3-year notes and 10-year notes as well. On such occasions, 5-year notes are announced on that same day.

The refunding schedule typically is announced in the first week of February, May, August, and November. Auctions for 3-year notes, 5-year notes, and 10-year notes are announced at this time and they are generally auctioned the following week. Each of these financial instruments settles on the fifteenth of the month. The 10-year note is re-opened in March, June, September and December and these are typically announced the first Monday of the month, auctioned the subsequent Thursday, and settled on the fifteenth. The rough rule of thumb in determining auction dates is that the 3-year notes are auctioned on Tuesday, the 5-year notes are auctioned on Wednesday, and the 10-year notes are auctioned on Thursday.

Did You Know?

Economists have special jargon as do market players—and the Treasury. A *reopening* is defined as an auction of a previously issued security. According to the Treasury, reopened securities have the same maturity date and interest rate as the original securities, but a different issue date and usually a different price. The Treasury states: “When you buy a reopened security, you have to pay a premium if the price of the security at reopening is greater than the face value of the security. Also, when you buy any reopened security, regardless of its price, you may have to pay accrued interest. However, we pay the accrued interest back to you in your first semiannual interest payment.” Typically, 10-year notes are reopened in March, June, September, and December.⁴

Changes in Treasury financing can occur frequently. It is a good idea to monitor a reliable calendar of Treasury announcements and auctions. The Treasury web site updates this information regularly and anyone can subscribe to receive updated information by e-mail.

In 1997, the Treasury issued inflation-indexed notes for the first time in its history. When first issued, they were not very popular. Given that these long-awaited securities finally were brought to market during a period of low inflation was ironic. Over time, the issues became more popular among consumers and institutional investors. TIPS, Treasury Inflation-Protected

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)

A bond investor could avoid the loss of purchasing power by buying an inflation-indexed bond. Until January 1997, these did not exist in the United States, although Canada issued inflation-linked bonds in 1991 and the United Kingdom has issued inflation-linked bonds since 1981. The first U.S. Treasury inflation-indexed security was a 10-year note issued on January 29, 1997: The auction sold \$7 billion notes with a real yield of 3.45 percent, at the same time that conventional 10-year notes were yielding 6.63 percent.

TIPS have a couple of advantages. They offer investors a guaranteed real rate of return and a principal repayment with no loss of purchasing power. Investors also find greater diversification for their portfolios since TIPS should move inversely to conventional bonds or stocks in a period of high inflation. The federal government benefits with inflation-indexed securities because they eliminate the inflation risk premium.

Inflation-indexed securities became popular on Wall Street in 2005 as consumer prices increased due to accelerating energy costs. Various states and cities issued their own inflation-indexed municipal bonds, as did Sallie Mae, the government agency that offers education loans to college students. Despite the proliferation of inflation-indexed securities, there is no question that they offer disadvantages to investors as well as advantages.

For instance, small investors tend to pay larger markups on these bonds than do institutional investors. Between 2004 and 2005, TIPS became more expensive as inflation fears became more prevalent and this has reduced the yields on the bonds. If inflation pressures should ease, and that is likely with a vigilant Fed, investors could get burned with these securities because they offer a lower yield than comparable fixed rate investments.

The biggest concern among many investors is that TIPS are adjusted by the consumer price index. When TIPS were first issued in 1997, investors were warned that the CPI has historically overstated the rate of inflation by as much as one percentage point. But in 2005, several prominent analysts indicated that the CPI understates inflation by a similar magnitude.

(Continued)

TREASURY INFLATION-PROTECTED SECURITIES (TIPS)***(Continued)***

Tax features of inflation-indexed securities are not favorable: Investors pay taxes each year on the coupon payment and the increased principal value even though the inflation adjustment is not paid until maturity. These “phantom taxes” make those TIPS held in a tax-deferred account more valuable than those held in a taxable portfolio. For those investors interested in TIPS, buying these securities directly from www.TreasuryDirect.gov can save higher costs and commissions, but individual investors can only purchase these at regularly scheduled auctions, not in the secondary market.⁵

Securities, are issued in three denominations: 5-year notes, 10-year notes, and 20-year bonds. The 30-year TIPS bond was last auctioned on October 10, 2001. When the Treasury announced that they will bring back 30-year bonds, they did not announce any plans to bring back 30-year TIPS.

As of 2005, 5-year TIPS are initially offered in April and reopened in October. They are announced about the third week of the month and auctioned about five days later. They settle at the end of the month. Initially offered in January and July, 10-year TIPS are also reopened in April and October. These are announced about the second week of the month and are auctioned three days later. They settle on the fifteenth of the month. Finally, 20-year TIPS are offered in January and reopened in July. They are announced the third week of the month and auctioned roughly five days later. They settle at the end of the month. (See box for more details on TIPS.)

On December 31, 2004, 54.7 percent of the marketable debt was concentrated in notes (with maturities of two to ten years). At the same time, bills accounted for 25.4 percent of the debt, and bonds accounted for less than 13.7 percent. The share of debt attributable to notes and bonds has declined over the past seven years, while the share attributable to bills has increased. Inflation-indexed notes accounted for 6.2 percent of the marketable debt—seemingly small, but reflecting a significant increase since their inception.

The distribution of the maturities of the marketable debt is significant to what the government pays on the interest of the debt. In a normal environment, short-term interest rates are lower than long-term rates. The gov-

ernment would benefit by shortening its maturity when interest rates are low and falling. Conversely, when interest rates are rising, the government would be better off by lengthening its maturities for greater stability.

Treasury financing is serious business and the Treasury does not change the maturity structure of its marketable debt very often. It last decided to shorten its maturities in the 1990s. Treasury officials decided to make a marked investment in inflation-indexed notes despite the fact that inflation was not a problem during most of the 1990s and early 2000s. Before the Treasury makes any changes in its financing schedule, it solicits input both from selected individual dealers at regular meetings it holds each quarter as well as through the Bond Market Association Treasury Borrowing Advisory Committee. This gives market participants input into debt management decisions.

When the Treasury announces an auction, investors are invited to submit bids. Individual investors generally place noncompetitive bids which guarantee them a security at a rate determined by the auction. Institutional investors must tender a bid specifying a discount rate up to six decimal points in any Treasury auction. The investor will only be awarded the security if it falls within the range accepted at auction.

All Treasury securities are now auctioned via a uniform-price auction where successful competitive and noncompetitive bidders are awarded securities at the price equivalent to the lowest accepted rate or yield. Prior to the 1990s, the Treasury had used multiple-price auctions. However, the winner's curse was that dealers who bid the highest paid the most for these securities. In a uniform-price auction, all bidders pay the same price. The Treasury began to test the uniform-price auctions on 2-year and 5-year note securities in September 1992 and found that these experiments were indeed successful.⁶

Treasury securities are first purchased at auction, but can be traded in the secondary market. The large size of the market makes it very liquid. Since the U.S. government issues the securities, they are considered free from default risk. As a result, they are used as a benchmark for the pricing of all other instruments. Moreover, they are used in hedging, which improves the liquidity of other financial markets.

Did You Know?

Do you know the difference between “when-issued” and “on the run” securities? “When-issued” securities are those announced, but not yet issued. “On-the-run” securities are the most recent issue of a particular maturity.

Treasury Yield Curve

Economists and financial market participants often refer to the *yield curve*. The yield curve represents the interest rate associated with a given maturity at a specified point in time, describing a spectrum of interest rates. A flat yield curve means that the difference between short-term rates and long-term rates is small. The yield curve tends to flatten when economic growth is moderating, or market participants anticipate little change in the rate of inflation. A *Wall Street Journal* article noted that the spread between 2-year and 10-year Treasury yields has fallen from 2.228 percentage points to 0.54 percentage points from 2004 to 2005, compared with an historical average of about 0.75 percentage points. Depending on whom you talked to, the yield curve signaled good news, bad news, or no news! Merrill Lynch economist David Rosenberg believed the Fed had gone too far and that the declining gap in the yield curve pointed to slower growth. In contrast, Frederic Mishkin, now a finance professor at Columbia Business School in New York and a former director of research at the New York Fed viewed the shrinking gap in the yield curve as good news. “We’re in a situation where inflation expectations seem to be tied down, and that’s really good for the economy.”

Jan Hatzius, senior U.S. economist at Goldman Sachs in New York, does not believe that a flat yield curve has any effect. “All the flat yield curve does these days is say that Mr. Market thinks economic activity is going to be weak.”

Joseph LaVorgna, chief U.S. fixed income economist at Deutsche Bank in New York concurred suggesting that Mr. Market hasn’t been a very good forecaster lately. In the mid-1970s, the yield curve and economy moved up and down together, with the curve leading the economy by about a year. The correlation appears to have broken down by 2001.⁷

In a June 6, 2005 speech, Federal Reserve Chairman Alan Greenspan proposed a variety of reasons why U.S. long bond yields were 80 basis points lower than in the previous year despite a 200-basis-point hike in the federal funds rate. While he considered the possibility that the flattening yield curve was signaling economic weakness, he did not believe that to be the case this time. He offered other hypotheses as well, but discounted each of them in turn. His bottom line? “The economic and financial world is changing in ways that we still do not fully understand.”⁸

A steep yield curve represents a large gap between short-term and long-term rates and is usually evident in the early stages of recovery.

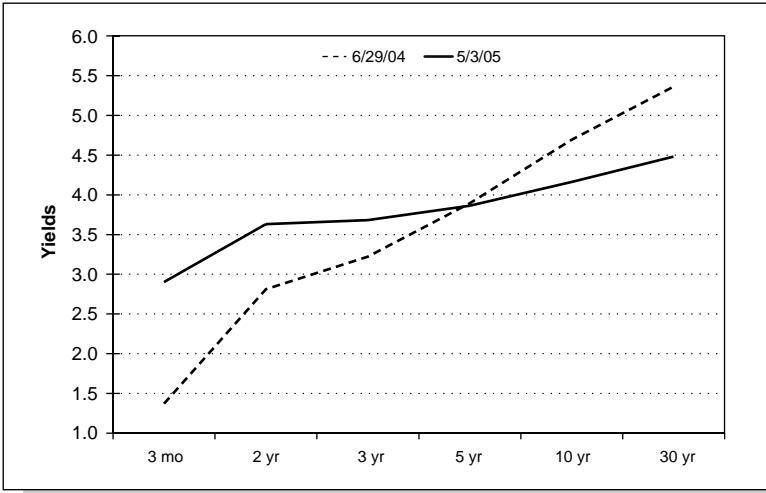


FIGURE 11.1 Yield Curve: The yield curve shows the range of maturities from 3-month Treasury bills to 30-year Treasury bonds. Notice that the curve is substantially flatter in May 2005 than it was in June 2004. The dates chosen to depict the yield curve are meaningful: June 29, 2004 is the day before the Fed embarked on its path to remove policy accommodation after three years of easing. May 3, 2005 is the day the Fed raised the federal funds rate target for the eighth time in 11 months.

Source: Federal Reserve Board and Haver Analytics.

Typically, the yield curve will be positively sloped with long-term rates higher than short-term rates. Even assuming no changes in the pattern of economic activity or inflation, individuals need an inducement to lock in their funds for a longer time horizon and this is known as the liquidity premium. An inverted yield curve is not unusual (although not the norm) and reveals information about the state of the economy. Short-term rates could be higher than long-term rates at or near the peak of the business cycle as heavy loan demand bids up short-term rates. One of the components of The Conference Board’s index of leading indicators is the spread between the ten-year Treasury note and the federal funds rate. (See Figure 11.1.)

ARE YOU INTERESTED IN THE TREASURY MARKET?

Then you might be interested in Treasury STRIPS, a monthly release detailing the amount of net stripping of Treasury securities that has taken place during the month. The report details gross stripping and reconstitution of Treasury notes and bonds by individual issue.

STRIPS is an acronym for Separate Trading of Registered Interest and Principal of Securities. A normal Treasury note or bond consists of a principal payment and semiannual interest payments. For example, a 30-year Treasury bond purchased at par for \$1,000 consists of 60 interest payments—one every six months for 30 years—and a principal payment of \$1,000 when the bond matures. If this bond gets stripped of its interest (coupon) payments, it becomes a “zero-coupon” bond. The owner does not get paid any interest but buys the right to repayment of principal, \$1,000, at a deep discount to the face value. Investors buy these to guarantee a certain payment amount at a specific point in the future (for example, when a child will be ready for college), but do not want income from the bonds over that period.

MONTHLY INDICATORS

The first part of this chapter describes how the Treasury finances the federal government. The upcoming section will cover two key indicators released by the Treasury: the monthly report on income and outlays by the federal government and the Treasury International Capital Report covering the purchasers of U.S. securities.

Federal Budget

The Treasury Department’s Financial Management Service releases the Monthly Treasury Statement of Receipts and Outlays. This detailed report is issued on the eighth business day after the end of each month. It is reported in the afternoon, unlike most economic indicators that are released in the morning. Neither expenditures nor receipts are adjusted for seasonal variation. Furthermore, the data are not annualized like most economic statistics. In looking at the Treasury data, one needs to remember that it is based on a fiscal year that begins in October and ends in September. Thus, fiscal year 2007 would begin October 2006 and end September 2007.

While each month's statement is reported on schedule, there is no scheduled release date in October for the Treasury statement's final month (September) of the fiscal year. Sometimes, the Treasury takes an extra few days—and sometimes they release the information in the morning instead of the afternoon. The Monthly Treasury Report contains more than 30 pages of detailed information. "Table 9: Summary of Receipts by Source and Outlays by Function of the U.S. Government" is found near the end and it happens to be one of the key tables that economists and market players monitor.

Budget receipts are some form of taxes, coming from individuals, corporations, estate taxes, and customs duties. Social insurance receipts are also included in these figures, even though some are considered "on-budget" and a larger portion "off-budget." For purposes of this monthly report that market players monitor, the entire social insurance receipts portion is included in "receipts." Individual income taxes are the largest source of revenue. The second largest revenue source is social insurance taxes and contributions. Corporation income taxes might be a large component of receipts from time to time for one month, but not as a general rule. Table 11.1 shows all the other classifications of taxes and duties released regularly.

Outlays include total government expenditures: those that can be counted as GDP expenditures and those that cannot (by virtue of being a transfer payment of some sort). In fiscal year 2005, Social Security outlays were the largest government expenditure, closely followed by national defense. Income security, Medicare, and health expenditures were the next three largest categories. In the second edition of this book, I had noted that interest on the national debt was the third largest outlay in fiscal year 1997. By fiscal year 2005, net interest was the sixth largest category. There is no question that lower interest rates and the years of surplus have helped to reduce this portion of government outlays until now. Rising interest rates along with burgeoning budget deficits will once again cause this component to increase in size in coming years. Table 11.1 shows expenditures for all categories.

Although budget receipts and outlays are not seasonally adjusted, they sometimes follow a seasonal pattern, the magnitude of which varies from year to year. Receipts tend to rise in January, April, June, September, and December, months that correspond to quarterly tax payment dates. Outlays do not follow any discernible pattern over the year. The only exception is that agencies may spend more in August and September, the end of the fiscal year if they still have unspent appropriated funds because they fear that the funds will be taken away in the subsequent fiscal year.

TABLE 11.1 U.S. Budget Receipts by Source, Outlays by Function
(Billions of dollars)

	FY 1994	Share of Receipts	FY 1999	Share of Receipts	FY 2004	Share of Receipts
Receipts:						
Individual income taxes	543.1	43.1	879.5	48.1	809.0	43.0
Corporation income taxes	140.4	11.2	184.7	10.1	189.4	10.1
Social insurance and retirement receipts:						
Employment & general retirement	428.8	34.1	580.9	31.8	689.4	36.7
Unemployment insurance	28.0	2.2	26.5	1.4	39.5	2.1
Other retirement	4.7	0.4	4.5	0.2	4.6	0.2
Excise taxes	55.2	4.4	70.4	3.9	69.9	3.7
Estate and gift taxes	15.2	1.2	27.8	1.5	24.8	1.3
Customs	20.1	1.6	18.3	1.0	21.1	1.1
Miscellaneous	23.2	1.8	34.9	1.9	32.6	1.7
Total Receipts	1258.6		1827.5		1880.1	
Outlays:		Share of Outlays		Share of Outlays		Share of Outlays
National defense	281.6	19.3	274.9	16.2	455.9	26.8
International affairs	17.1	1.2	15.2	0.9	26.9	1.6
General science, space & technology	16.2	1.1	18.1	1.1	23.1	1.4
Energy	5.2	0.4	0.9	0.1	-0.2	0.0
Natural resources & environment	21.0	1.4	24.0	1.4	30.7	1.8
Agriculture	14.9	1.0	22.9	0.9	15.4	0.9
Commerce and housing credit	-4.2	-0.3	2.6	0.2	5.3	0.3
Transportation	38.1	2.6	42.5	2.5	64.6	3.8
Community & regional development	10.6	0.7	11.9	0.7	15.8	0.9
Education, training, employment, & social services	43.3	3.0	50.6	3.0	87.9	5.2
Health	107.1	7.3	141.1	8.3	240.1	14.1
Medicare	144.7	9.9	190.4	11.2	269.4	15.8
Income security	217.1	14.9	242.4	14.2	332.8	19.6
Social Security	319.6	21.9	390.0	22.9	495.5	29.1
Veterans benefits & services	37.6	2.6	43.2	2.5	59.8	3.5
Administration of justice	15.5	1.1	26.5	1.6	45.5	2.7
General government	11.2	0.8	15.3	0.9	21.8	1.3
Net interest	202.9	13.9	229.8	13.5	160.2	9.4
Undistributed offsetting receipts	-37.8	-2.6	-40.4	-2.4	-58.5	-3.4
Total Outlays	1461.9		1701.9		2292.2	
Surplus/Deficit	-203.2		125.5		-412.1	

Source: Financial Management Service, U.S. Department of the Treasury.

Because the budget is not seasonally adjusted, always look at the current budget deficit (surplus) relative to the previous year. For instance, if the budget is in surplus every April, check to see if this year's surplus is larger than last year's. In April 2005, the budget surplus was \$57.7 billion, just about half the size of the surpluses posted over the previous 10 years for this month and not large enough to offset March's \$71.2 billion shortfall. Figure 11.2 shows three years of monthly budget data.

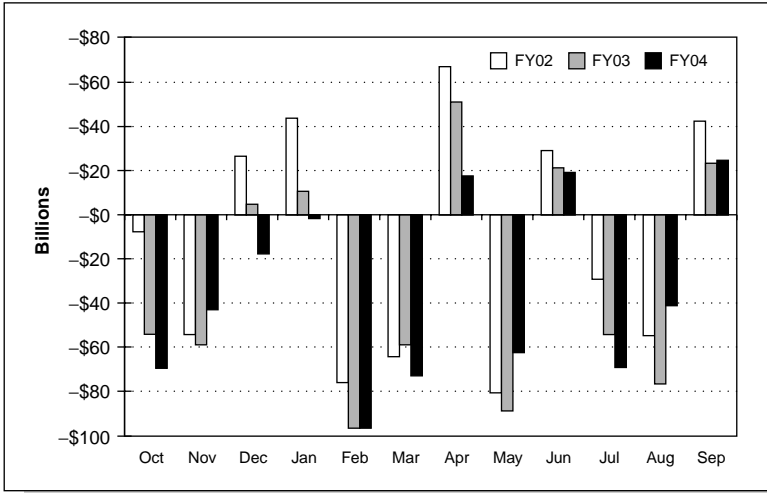


FIGURE 11.2 Federal Budget Comparisons: Although the federal budget is not seasonally adjusted, some patterns persist from month to month. *Source:* U.S. Treasury and Haver Analytics.

Market Reaction

Financial market professionals are not always interested in the specifics of what was spent and what was collected. They are more interested in the total monthly budget balance, more commonly referred to as the budget deficit, since we have seen very few surpluses in the past thirty years. A large budget deficit is bearish for the fixed-income market because it implies that government borrowing will likely increase. To finance the deficit, the United States Treasury sells bonds, notes, and bills as indicated in the first part of this chapter. The greater the supply of Treasury securities (which support the annual budget deficit as well as the total debt outstanding) the lower the price of these securities. Low bond prices mean high yields. Thus, a large supply of Treasury securities suggests higher interest rates are needed to entice buyers. Corporate bonds compete with the Treasury securities. A high interest rate for Treasury securities, considered free of default risk, means a higher interest rate on corporate bonds that have a greater likelihood of default.

In economic jargon, this is known as “crowding out”—that is, government borrowing crowds out private investment due to rapidly rising interest rates. Private firms make investment decisions on the rate of return they

expect to earn from investments. When borrowing costs exceed expected returns, investments are not pursued. The government, however, bases its borrowing decisions on fiscal policy, not on expected returns.

Players in the stock market are not favorably disposed to high budget deficits, either. Since the stock market represents equity of corporations, these companies will have to borrow funds at higher interest rates to expand their businesses, or to meet short-term cash needs.

At face value, foreign exchange market professionals might be more favorably disposed to large budget deficits supported by an ample supply of Treasury securities. Higher interest rates in the United States can bring in capital from abroad. As foreigners buy our supply of Treasury securities, they bid up the demand for dollars, and the exchange value of the dollar will increase. Remember that we are assuming other factors are constant here. For example, higher U.S. interest rates entice foreign investors if inflation is not expected to accelerate, or is worse than their domestic inflation environment. (Refer to Chapter 1 for factors that determine exchange rates.) Also, the United States has been selling Treasury securities to finance our deficit spending for many years. Financial market players, policymakers, and economists generally worry that one day foreign buyers will peter out.

Watch Out!

Check the various categories of receipts and outlays to see if anything in particular could have caused the current month's budget surplus to be smaller or larger than expected. For example, a particularly good report (high surplus) might be reflecting the postponement of payments by government agencies. A rather poor report (large deficit) might be due to the stage of the business cycle where the government is paying out more in transfer payments, and receiving fewer tax receipts.

As the federal budget deficit increases, the U.S. Treasury has to finance it with more and more Treasury securities. That is, the greater the supply of securities, the lower the price of these securities—which translates into higher interest rates. Another aspect to consider is that financial market participants fear a surge in the federal budget deficit will accelerate inflationary pressures. Many feel that larger budget deficits may one day induce the Federal Reserve to print money and inflate the economy to reduce the burden of the debt on the government and transfer it to taxpayers. Because of this fear, an inflation premium was built in the long (30-year) bond in the 1980s. In 1997, Congress and the Administration agreed to achieve a balanced budget by the year 2002. (Fiscal years 1998, 1999, 2000, and 2001

were budget surplus years; but deficits resumed from 2002 onward.) Market participants celebrated by allowing rates on the long bond to drift lower. The yield on long bonds would not permanently decline until financial market participants were convinced inflation had been wiped out, and/or the supply of 30-year bonds declined as shown in Figure 11.3. Indeed, long bond yields have been on a long downward trend since the end of 1999. Long bond yields remained low even as the Fed began to raise the federal funds rate target and inflation accelerated in 2004 and 2005.

According to strategist Eric Lonergan, bond investors who think that low long bond yields in the United States post Fed rate hikes are failing to consider the global integration of the long bond market. He believes that foreign bond markets in the Eurozone and Japan where yields are much lower are dragging down U.S. long bond yields.⁹

Treasury International Capital

The U.S. Treasury releases data on flows of financial instruments to and from the United States including figures on Treasury securities, on the eleventh

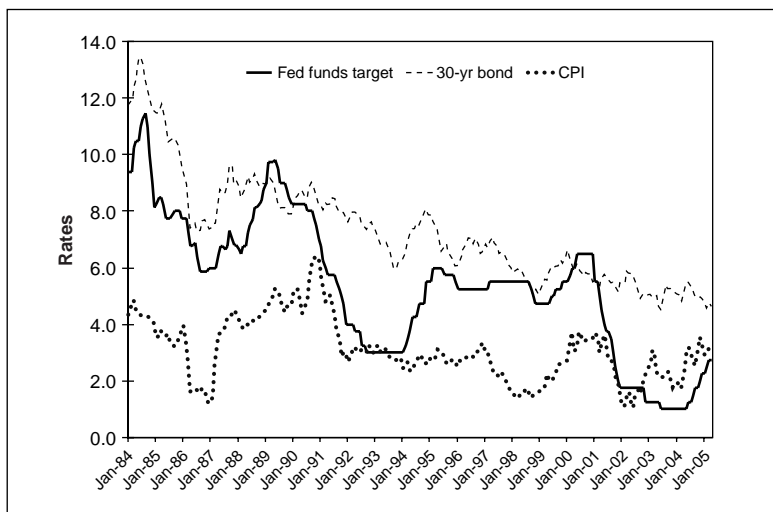


FIGURE 11.3 Fed Funds Rate, 30-Year Treasury Yield, and the CPI: This chart depicts Fed policy measured by the federal funds rate target, long-bond yields, and the inflation rate.

Source: Federal Reserve Board, Bureau of Labor Statistics, and Haver Analytics.

business day of the month with a two-month lag. (February figures are available in April.) This data is commonly known as *TIC* in the financial market arena and it has garnered a lot of attention in 2004 and 2005 even though it has been available for the past 30 years. Domestic and foreign financial institutions are asked by the Treasury to track and report the location of buyers and sellers of a variety of financial instruments including corporate debt and equities, federal agency and municipal debt, and Treasury securities. This report is intended to measure sales of domestic securities to foreigners. It can be misleading however. A foreign buyer might reside in Japan but purchase through a broker in the Cayman Islands. Financial centers such as the Cayman Islands, the United Kingdom, Switzerland, Luxembourg, and Bermuda are disproportionately measured in the TIC data because they are major custodial centers. Countries that do not have large banking centers are undercounted. Also, those U.S. debt securities issued abroad in the form of bearer (unregistered) securities are unregistered. “Country unknown” was the third largest holder of total U.S. long-term securities in 2000 after the United Kingdom and Japan.

Did You Know?

Policymakers have long been concerned about foreign holdings of U.S. securities. A Federal Reserve study reveals that the first measurement effort was an 1853 Department of the Treasury survey of foreign holdings of U.S. public and private securities. It had been conducted in response to congressional concern about the increasing level of U.S. debt held by foreigners.¹⁰

Other distortions follow. Following the balance of payments accounting, the residence of the buyer determines how the security is counted. An American living in Paris who buys U.S. Treasury securities counts as a foreign purchase, whereas a Parisian living in New York City counts as a domestic purchase. Furthermore, a Fed study notes, a security issued in Germany by a U.S.-resident firm that is denominated in euros is a U.S. security, while a security issued by a Canadian firm that trades in the United States and is denominated in U.S. dollars is a foreign security. Again, due to the balance of payments accounting mechanism, American Depositary Receipts (ADRs) are considered foreign securities because their purpose is to serve as proxies for foreign securities, even though they may be issued by American institutions. (See Table 11.2.)

TABLE 11.2 Foreigners' Transactions in Long-Term Securities with U.S. Residents (Billions of dollars, not seasonally adjusted)

	2003	2004	12 Months Through		Nov-04	Dec-04	Jan-05	Feb-05
			Feb-04	Feb-05				
1 Gross Purchases of Domestic Securities	14,383.6	15,269.8	14,805.7	15,642.3	1,409.9	1,318.1	1,305.3	1,376.3
2 Gross Sales of Domestic Securities	13,644.9	14,365.8	13,970.7	14,708.8	1,308.9	1,234.7	1,213.5	1,278.0
3 Domestic Securities Purchased, net (line 1 less line 2)^a	738.8	904.0	835.0	933.5	101.0	83.5	91.8	98.3
4 Private, net^b	595.7	669.9	657.5	718.9	73.1	73.2	77.5	79.7
5 Treasury Bonds & Notes, net	163.2	150.9	197.7	177.7	12.7	1.4	23.1	31.2
6 Gov't Agency Bonds, net	135.1	206.1	151.1	198.4	24.3	25.6	19.9	11.0
7 Corporate Bonds, net	261.5	286.5	254.5	305.1	23.6	39.2	17.3	30.0
8 Equities, net	35.9	26.4	54.1	37.7	12.5	7.0	17.1	7.4
9 Official, net	143.1	234.1	177.6	214.5	27.9	10.2	14.4	18.6
10 Treasury Bonds & Notes, net	113.5	201.1	151.1	175.4	21.0	7.0	7.6	11.3
11 Gov't Agency Bonds, net	24.3	20.3	21.8	23.8	3.5	1.0	6.1	5.2
12 Corporate Bonds, net	5.6	11.4	5.5	14.1	1.9	1.6	1.3	2.1
13 Equities, net	-0.3	1.4	-0.8	1.2	1.5	0.6	-0.7	0.0
14 Gross Purchases of Foreign Securities	2,893.8	3,119.1	3,039.1	3,108.5	272.2	261.5	250.6	281.1
15 Gross Sales of Foreign Securities	2,959.7	3,228.6	3,114.8	3,211.4	277.9	282.6	249.9	294.9
16 Foreign Securities Purchased, net (line 14 less line 15)^c	-65.9	-109.5	-75.8	-102.9	-5.7	-21.1	0.7	-13.8
17 Foreign Bonds Purchased, net	18.9	-26.1	14.0	-15.1	2.0	-7.0	5.8	1.5
18 Foreign Equities Purchased, net	-84.8	-83.4	-89.8	-87.8	-7.7	-14.0	-5.1	-15.3
19 Net Long-Term Flows (line 3 plus line 16)	672.9	794.6	759.3	830.6	95.3	62.4	92.5	84.5

^aNet foreign purchases of U.S. securities (+)

^bIncludes International and Regional Organizations

^cNet U.S. acquisitions of foreign securities (-)

Source: Department of the Treasury.

Market Reaction

As of mid-2005, TIC was still a relatively “new” indicator to market players. While this report offers information on Treasury securities, government agency bonds, corporate bonds, and equities, it seems market players mostly focus on Treasury securities. This does make sense in light of the large supply of Treasury securities that is continuously coming to market.

KEY POINTS

- The U.S. Treasury finances government spending.
- The Treasury sells securities ranging from 4-weeks to 30-years.
- Treasury securities are considered free from default-risk and serve as the benchmark for all other interest rates in the United States.
- The Treasury yield curve is monitored as a leading indicator of economic strength and weakness, but sometimes it can give misleading signals.
- The Department of the Treasury releases monthly receipts and outlays of the federal government.
- The Treasury releases flows into and out of the United States each month.

Making Strategic Investment Decisions

This chapter is different from the rest of the book. Chapter 1 gave an overview of the economic marketplace, Chapters 2 through 9 covered key economic indicators by economic sector, Chapter 10 provided an overview of the Fed, and Chapter 11 discussed key aspects of the U.S. Treasury in relation to financial markets. In other words, the first 11 chapters are a real-world explanation of the economic arena, one that explains how professional traders and investors, whether in the bond market or the equity market, assess this economic information.

Chapter 12 is written for nonprofessional investors who are sophisticated enough to know that economic conditions and Federal Reserve policy are relevant to investment decisions—but are not quite sure how to use the barrage of information that is regularly reported.

In the early 1980s, it was uncommon to monitor economic indicators unless you were a financial market player who traded on the economic news or a geeky economist who monitored current events. Primarily bond investors cared about the daily economic news. Equity investors were less concerned about “trading the data.” The 1990s saw a sea change and 24-hour financial networks such as CNN and CNBC made it fashionable to monitor daily economic events, whether you traded bonds or bought and sold stocks.

Even in the early aftermath of the 2000 stock market crash, closely following the financial news was still popular. Five years later, however, financial newsletters are different than they used to be. Many financial advisors discourage their clients from watching CNBC and counsel them against trading on current events. This is, for the most part, sage advice.

The old days are gone. Most investors want to be well-informed about how current economic events impact their portfolios; and they know that information is readily available online. Furthermore, it is never wise to let

financial advisors dictate your investments without monitoring your monthly or quarterly statements. The Internet has allowed ordinary people to become more aware—and involved—with their investment opportunities. Some have become quite sophisticated in the process. Furthermore, the proliferation of 401(k) plans, which oblige people to make their own decisions on retirement accounts, has forced them to be more vigilant.

Despite the availability of “24/7” financial news and information, individual investors do not have at their disposal the same sophisticated information, ranging from real-time news services to services of research professionals such as economists, that is available to professional money managers. Trading economic reports that are released at 8:30 A.M. Eastern time will not yield the same lucrative results for even a well-versed individual as it does for the professional investor. While it is possible for individual investors to work with good brokers who execute trades quickly, most professional traders have established relationships and are able to get speedy executions in situations where timeliness is crucial and every second counts.

And of course, just about all financial pundits recommend against market timing. After all, you can only pick market troughs and market peaks if you are omniscient, they say, so just buy regularly and do not try to be a guru. While I wholeheartedly agree that general market timing is impossible, I think that individual investors who enjoy managing their portfolios can use their knowledge of the economic business cycle to their advantage when managing their investments. We can all make strategic investment decisions.

But rather than trying to outdo financial professionals by trading for small profits (and still relatively high costs), individual investors would do better by monitoring economic *trends* and using the economic news to make strategic long-term investment decisions.

For instance, in the late 1990s, I saw that federal budget deficits were becoming smaller—and predictions were rampant that we would soon see budget surpluses. Indeed, the January 1999 issue of *The Economic Budget Outlook: Fiscal Years 2000–2009*, published by the Congressional Budget Office (CBO) revealed that the \$70 billion surplus for fiscal year 1998 was no fluke as shown in Table 12.1. Surpluses were projected for the entire forecast horizon—and they were increasing in magnitude.

If budget deficits were disappearing, replaced instead by budget surpluses, it would mean that the U.S. Treasury would have smaller borrowing needs over time. Lower borrowing needs eventually would translate into a smaller supply of Treasury securities. The U.S. Treasury would offer fewer securities to individual and institutional investors in the bond market. Prices of Treasury securities, like any other U.S. commodity, are deter-

TABLE 12.1 The CBO Budget Outlook Under Current Policies (By fiscal year, billions of dollars)

	Actual											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Budget Surplus	70	107	131	151	209	209	234	256	306	333	355	381
Off-Budget Surplus	99	127	138	145	153	161	171	183	193	204	212	217
On-Budget Deficit (-) or Surplus	-29	-19	-7	6	55	48	63	72	113	130	143	164

Source: Congressional Budget Office, January 1999.

mined by supply and demand. If demand were stable, a smaller supply of Treasury securities would result in higher prices—and lower yields.

If I wanted to buy high-yield Treasury securities, it was a good time to buy immediately—before surpluses became common and increased exponentially (judging by the CBO budget projections). I was able to purchase long-term Treasury securities with yields well in excess of 6 percent. (As it turned out, budget surpluses did not become common, but other factors helped to keep down yields even as budget deficits returned with a vengeance.) Given that long bond yields were running between 4 and 5.5 percent between 2001 and 2005, my decision was not a bad bet. Also I was able to shield part of my portfolio from the 2000 stock market crash by purchasing Treasuries instead of stocks in 1999 (see Figure 12.1). It did not take an advanced economics degree to make this investment decision. Any investor who regularly monitored long-term economic trends could have made the same observation.

INVESTMENT ALTERNATIVES SENSITIVE TO INTEREST RATES

Interest rates move up and down over the economic business cycle exhibiting periods of rising and falling rates. Rates generally are in a rising mode when the economy is expanding or inflationary pressures accelerate. Interest rates typically are declining when the economy experiences a downturn or recession. As Figure 12.1 reveals, interest rates can move up and down even within an expansion or within a recession. Bond traders will tell you that interest rates can easily move up and down by 25 basis points in any given day. Figure 12.2 shows daily changes in yields of 2-year and 10-year notes for the month of June 2004. Those investors interested in catching potential opportunities in the short term note that interest rates can fluctuate more sharply on days when inflation news is reported or the FOMC

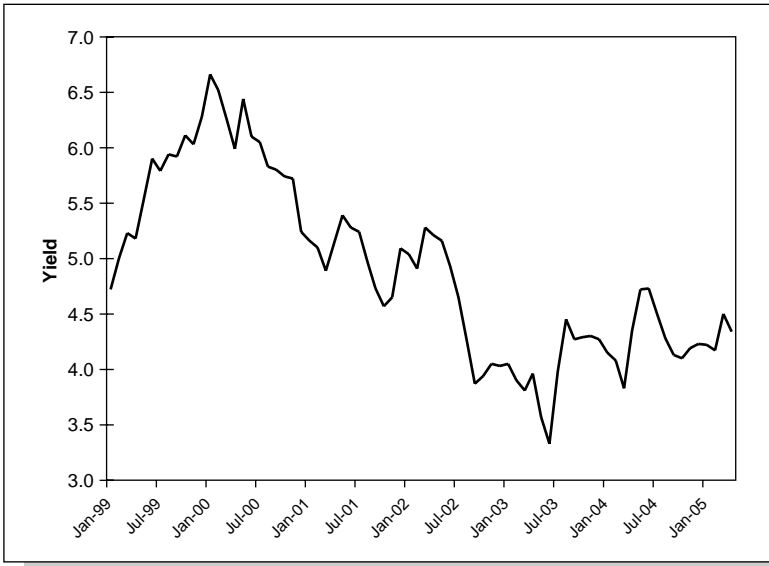


FIGURE 12.1 Ten-Year Treasury Yield: Yields on 10-year Treasury securities peaked in late 1999, early 2000, and have steadily declined ever since.
Source: Federal Reserve Board and Haver Analytics.

meets. Employment statistics are big market-movers; however the news was relatively benign in June 2004, so bond yield changes were not especially large in this particular month on June 4, the day the employment situation was released.

In taking the long view, that is, trying to monitor long-term trends within business cycles, investors have time to make their decisions and are not forced into a BUY IT NOW! SELL IT NOW! mentality. Of course, it is easy to see that money can be made on any given day, but individual investors would probably do better by letting professional investors take the stage in the short term when movements are due to economic news.

Keep in mind, too, that trying to time the market to get the lowest possible loan rate or the highest possible yield on a fixed income security is . . . difficult. Yet over the long run, there is no question that understanding how interest rates move over the economic business cycle allows investors to make more strategic decisions that generate more profitable investments.

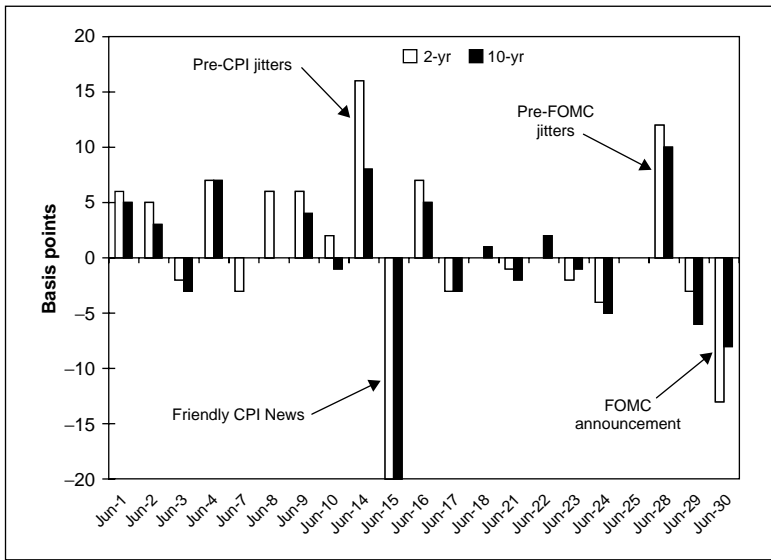


FIGURE 12.2 Daily Yield Changes for June 2004: Daily changes in 2-year and 10-year Treasury note yields reflect market reactions to various events such as the CPI release and the FOMC announcement in June 2004. *Source:* Federal Reserve Board and www.Econoday.com.

Buying Fixed Income Securities

There are two ways of looking at the fixed income market. You can buy a bond at a low price, sell it at a high price—and make a profit on the difference. That is essentially what traders do—earn capital gains. However, many individual investors are more interested in adding bonds to their portfolio so that they can generate regular interest income. The higher the interest rate, the more interest income the investor earns. Typically, interest rates are higher when inflation is accelerating (or there is a potential for inflation to accelerate); and when economic demand is strong during economic expansions. Consequently, these are good times to buy bonds with good income potential. Keep in mind that all sorts of bonds are available—from low-risk Treasury securities to high-risk junk bonds. Yields rise with risk, so that for the same 10-year maturity, Treasury notes have lower interest rate coupons than junk bonds (rated below BBB from Standard and Poor’s or below Baa from Moody’s Investors Service). You will earn more interest income from junk bonds—but the chance of default for such bonds is significantly higher. Default risk increases (even for high-rated Aaa

bonds) when the economy is headed toward a recession, but is reduced during economic expansions. Default risk in the case of corporate bonds can be measured as the spread, for a given maturity, between Treasury security yields and corporate bond yields. (See Figure 12.3.)

During economic recessions, interest rates are generally declining. In these periods, interest income potential is usually pretty low. If you are holding old bonds with high yields, your potential capital gain would be good; that is, you can sell your bonds at a profit, but you cannot find new bonds with similarly high yields. The question is this: Do you want capital gains or regular income flows? This is a valid question—and one you will need to ask yourself when you are considering your investment opportunities from time to time (monthly, quarterly, semiannually). Yes, there are also tax implications to your decision since long-term capital gains are taxed at a preferential rate over ordinary (interest) income.

If you are trying to maximize your income flows or maximize capital gains, it is generally more profitable to purchase bonds during economic expansions when interest rates are rising. This sounds simple enough, but often, interest rates rise because of inflationary pressures. The yield might not always sound like it is high enough to offset inflation. Usually, how-

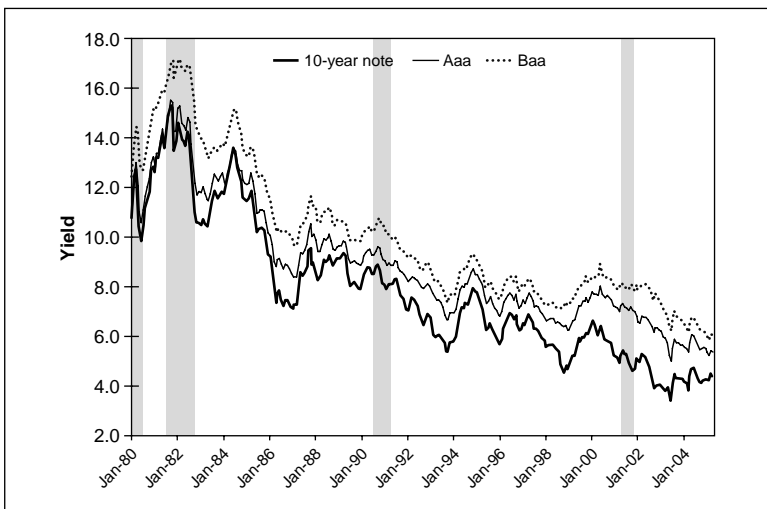


FIGURE 12.3 Alternative Yields by Risk: Alternative securities with higher default risk are depicted over the business cycle.

Source: Federal Reserve Board and Haver Analytics.

ever, inflation declines after the economic expansion subsides and a potential downturn ensues.

Economic Calendar Impacts

It makes most sense for individual investors to monitor long-term economic trends in order to make solid investment decisions. Some more sophisticated investors enjoy following the daily barrage of economic indicators that are reported by government and private agencies and that cause bond and stock prices to fluctuate by the minute. As a more sophisticated investor, you might be inclined to time your bond portfolio with—or away from—key economic events.

For example, one is nearly always guaranteed volatility in the bond market (and financial market generally) on employment Friday. As noted in Chapter 8, economists use key components of this report to easily predict industrial production and personal income that is reported in subsequent weeks and the employment report sets the tone for the upcoming month. A stronger-than-expected report causes bond yields to rise, while a weaker-than-expected report typically causes bond yields to fall.

Suppose you were intending to buy a 2-year or a 10-year Treasury note for your portfolio. Do you want to bet that the market will go your way? Or do you just want to step out of the way of the moving train? For instance, the 10-year Treasury note yield rose 11 basis points and the 2-year Treasury note yield increased 18 basis points on Friday, May 6, 2005 (measuring the change at the market close) when the Labor Department reported that April nonfarm payrolls increased 274,000—somewhat more than the 160,000 gain expected by bond investors. The month before, on April 1, the Labor Department had reported that March nonfarm payrolls increased by an anemic 110,000, half as much as expected and the 2-year note yield fell 5 basis points while the 10-year note yield decreased 4 basis points on the day. One never knows in advance just how much bond prices and yields will move to any given report. No doubt, bond yields fluctuated dramatically in the moments the headline figures were announced, but trading activity tends to mellow out by the end of the day. Sometimes the change in closing prices from one day to the next is not reflective of the wild market swings that can occur during the day.

What should an individual investor do? That is a tough question. You could decide to ignore what happens in the market on employment day and buy your securities a day or two before the economic report is released. (Although you may bump up against other key releases.) You could decide to bite the bullet and buy your bonds on employment Friday and not worry about the outcome. After all, everyone agrees that

market timing is impossible. By following long-term trends, you are already benefiting generally by buying near market lows and selling near market highs.

If you are more adventurous, you might want to closely monitor the events reported in the weeks coming up to the employment report. For instance, weekly jobless claims might be signaling whether or not employment trends are on an upswing or a downswing.

What would I do given my 25 years of experience forecasting economic indicators? I would probably not buy bonds on employment Friday. Instead, I would buy them either before or after. I am fairly risk averse and know that, even though I have a pretty good record with my nonfarm payroll forecasts, it is not worth worrying too much about the employment report only to gain an extra basis point or two in yield on a long term investment. (That is, “pretty good” relatively speaking. I stopped forecasting while I was ahead!) Individual investors often get caught up in buying low—trying to buy the security at the lowest possible price and for a bond that would give the highest possible yield. However, they forget that in purchasing small quantities, they are at the mercy of brokers who can earn fat commissions. So, it is a better idea to find a good discount broker who charges low commissions rather than sweat out employment Friday to get the highest possible yield.

In the 1990s and the 2000s, economic indicators were not the only events that caused market gyrations. Bond yields fluctuated sharply on days when Fed chairman Alan Greenspan uttered a few words. Sometimes he made meaningful remarks, sometimes he was extremely ambiguous, and at other times, he just repeated himself. It is best to not make important investment decisions on days when the Fed chairman is scheduled to speak about the economy or monetary policy. The Fed chairman’s speech calendar is readily available in advance. Incidentally, if you see a sharp rise or fall in stock prices or bond yields on any given day and do not see any rational (economic news) explanation, check the calendar. It just might be possible that the Fed chairman spoke (or sneezed incorrectly) that day and markets swung wildly in response.

Did You Know?

Economists regularly comment on the importance of looking at more than one month’s data. In one instance, Harvey S. Rosen, chairman of President Bush’s Council of Economic Advisors, wrote in the *Wall Street Journal* that the “bounce back in recent data exemplifies that we shouldn’t overreact to individual reports of economic data—or even to a full month of data. The

economy has a way of making anyone who puts too much emphasis on a single month look foolish.”¹ Jim Glassman, senior U.S. economist at J.P. Morgan Chase & Co., makes a similar observation: “You have to ask yourself why people are so sensitive to every twitch and turn in the data, knowing how flaky they can be.”²

INDICATORS MOST LIKELY TO CAUSE SHARP MARKET FLUCTUATIONS

- FOMC decision
- Employment situation
- Inflation: CPI or PPI
- Retail sales
- ISM manufacturing survey

Real Estate Investments

Once upon a time, everyone who bought a home would get a 30-year fixed rate loan. In such an environment, the housing market experienced boom and bust cycles that aligned with falling and rising interest rates. In the 1980s, when mortgage rates were high double digits, adjustable rate loans became more common—and more popular. It prevented the housing market from drying up completely (although housing activity did plunge) when 30-year fixed mortgage rates averaged 18.45 percent in October 1981—and averaged 16.63 percent for the year as a whole. At the same time, adjustable loan rates were averaging roughly 13 percent, a significant improvement even if rates were still high. In the late 1980s and early 1990s, average homeowners were also becoming more aware of refinancing options. After all, those homeowners who had purchased homes in the early 1980s had faced such high mortgage rates that refinancing was a no-brainer even when closing costs were higher than they are today.

Between 1995 and 2005, the types of fixed and adjustable rate loans have proliferated. Most of the time, locking in a fixed rate loan is best when interest rates are low; adjustable rate loans are better options when interest rates are high. But, rough rules of thumb have caveats. If you know for a fact that you will not remain in your home for a long time, an adjustable rate loan might be the better bet even in a low interest rate environment. For instance, if you know you will move in three years, you can

get a 3-year or 5-year adjustable loan rate that offers a lower rate than the 30-year fixed loan rate. This could save a significant amount of money in the near term.

One problem with adjustable rate loans is that the bank or loan company evaluates consumers at the lower interest rate. In a rising rate environment, the semiannual or annual changes in the monthly mortgage payment could easily rise to a level that becomes unaffordable to the homeowner. Thus, adjustable rate loans are clearly worthwhile, but take a certain amount of fortitude and vigilance. One should not buy more house than one can afford with the lower adjustable rate.

As housing prices have rapidly appreciated, and more homeowners have wanted to get into the market, loan companies have become highly creative in their financing options. For instance, interest-only loans (which allow a new homeowner to only pay the interest and not the principal of their mortgage for a certain time period) have caught on fast in the past few years. *Business Week* found that 31 percent of new mortgages were interest-only in mid-2005—a sign that people were stretched to their financial limit.³ It appears that creative mortgage financing has surpassed the ability of average homeowners to make wise housing choices.

INVESTING IN STOCKS

Stock prices often move in reaction to economic events. However, unless you have the ability to move large quantities of funds the instant that you see an indicator headline—and you know exactly how the equity market will react en masse—it is not a good idea for individual investors to speculate or day-trade. Nevertheless nonprofessional investors can easily use economic reports to make more informed strategic investment decisions over the long run.

Most of the economic reports described in this book represent the summation of many industries and sectors in the U.S. economy. While total retail sales tell you whether consumers are shopping or not, the *components* of retail sales tell you what consumers are buying. Are furniture store sales rising? Are consumers spending more money at department stores or at electronics stores? By monitoring trends in the components of retail sales, one will be able to better determine what types of consumer stocks to buy or sell.

Suppose you see that sales at building materials stores have been on an upward trend for the past year. That would suggest that stores such as Home Depot and Lowe's were good bets. Of course, you would research both Home Depot and Lowe's and look at their corporate fundamentals

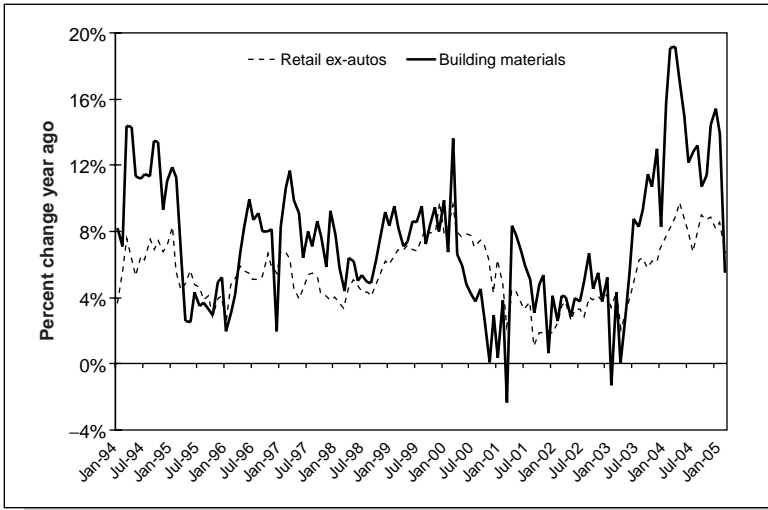


FIGURE 12.4 Retail Sales versus Building Materials: Growth in total retail sales has been more moderate than growth at building materials stores in the past few years. Both have started to decline. This suggests that companies that sell building materials, garden equipment, and supplies may not perform as well as overall retail sales in 2005.

Source: Census Bureau and Haver Analytics.

to determine which would be a better buy. The economic trends at least would suggest that you were looking in the right direction as shown in Figure 12.4.

Consider that you are a big fan of Nordstrom; but retail sales have been generally sluggish and department store sales have fallen for the past several months. Should you automatically nix the idea of purchasing Nordstrom stock? Of course not! But be smart. First, ask yourself why department store sales are falling. Is the economy in recession? Look at the corporate fundamentals for Nordstrom—and for other department stores. Nordstrom may still be a good buy, but you might want to monitor stock prices and retail sales for more than just one or two months. And undoubtedly, it would be more profitable to buy a retail stock in the middle of a recession when prices are relatively low, rather than at the peak of an expansion when prices might be overly exuberant. (See Figure 12.5.)

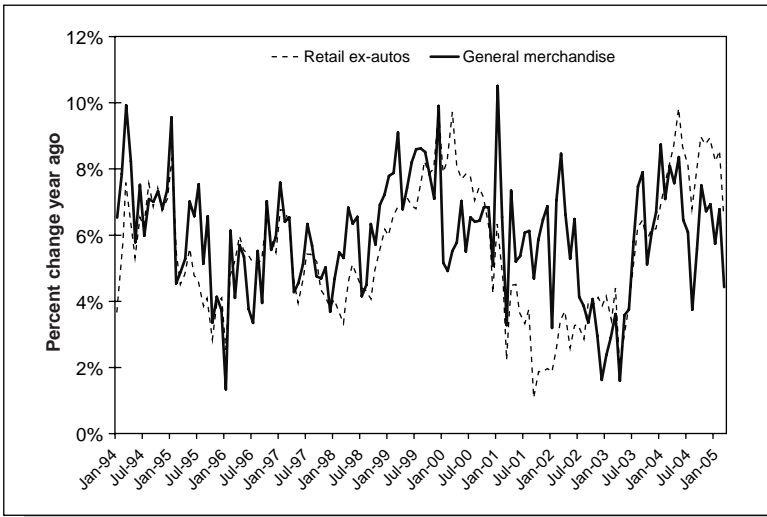


FIGURE 12.5 Retail Sales versus General Merchandise Store Sales: General merchandise stores mostly performed as well as overall retail sales, although not from 2000 through 2002 when total sales grew less rapidly than department stores. In 2004, general merchandise stores grew less rapidly and this may have implications for department stores revenues.

Source: Census Bureau and Haver Analytics.

Retail sales are not the only economic indicator with a variety of industry sectors available for monitoring. The index of industrial production tells us about the industrial sector of the economy as shown in Figures 12.6 and 12.7. Are you interested in high tech stocks? Look at the behavior of computers, video, and audio equipment in the consumer durable goods sector, or information processing and related equipment in the business equipment sector. The types of goods that consumers purchase may not be the same as the type that businesses purchase. Consider the company in question. Do they primarily build for consumers or businesses?

Are you interested in service-oriented companies? The establishment survey from the employment situation is rich with information (see Figure 12.8). Are you interested in the hotel industry? Check leisure and hospitality payrolls. Are you interested in the motion picture industry? Check out motion picture and sound recording industries within the information sector of payrolls.

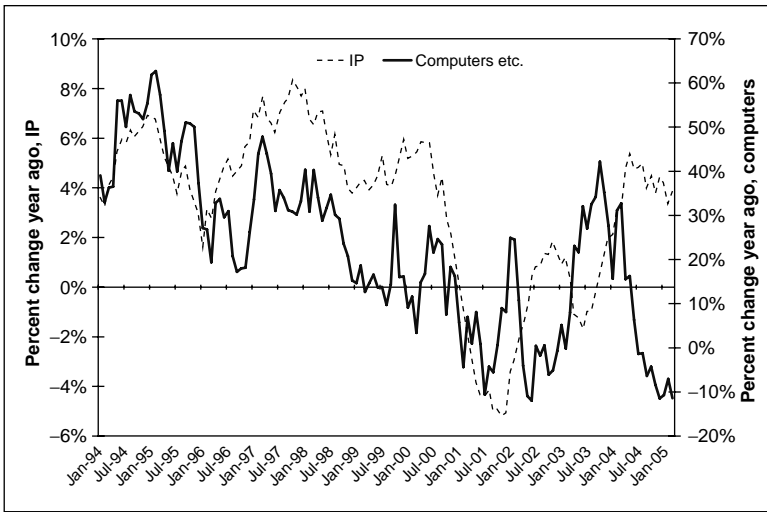


FIGURE 12.6 Industrial Production versus Computers, Video, and Audio Equipment: Notice that the computers, video, and audio equipment component of industrial production fluctuated sharply over the past 10 years, while overall production growth was more stable. In 2004, this sector fell sharply (about 10 percent from a year earlier) while production was still up 4 percent from the previous year’s pace. This implies that companies that are consumer oriented may not have posted healthy profits in 2004.
 Source: Federal Reserve Board and Haver Analytics.

HIGHLY DETAILED INDICATORS THAT ALLOW INDUSTRY ANALYSIS

- Retail sales (see Table 3.1 in Chapter 3)
- Manufacturing shipments and orders (see Table 4.1 in Chapter 4)
- Nonfarm payroll employment (see Table 8.2 in Chapter 8)
- Industrial production (see Table 9.2 in Chapter 9)

Monthly data fluctuates quite a bit and must be taken with a grain of salt. The best way to compare the direction of a stock price and the direction of an economic indicator is by looking at year-over-year percent changes in both. This allows one to look at variables that are scaled similarly. Otherwise, investors will be looking at stock prices that range from \$0 to \$100 and economic indicators whose values are in the

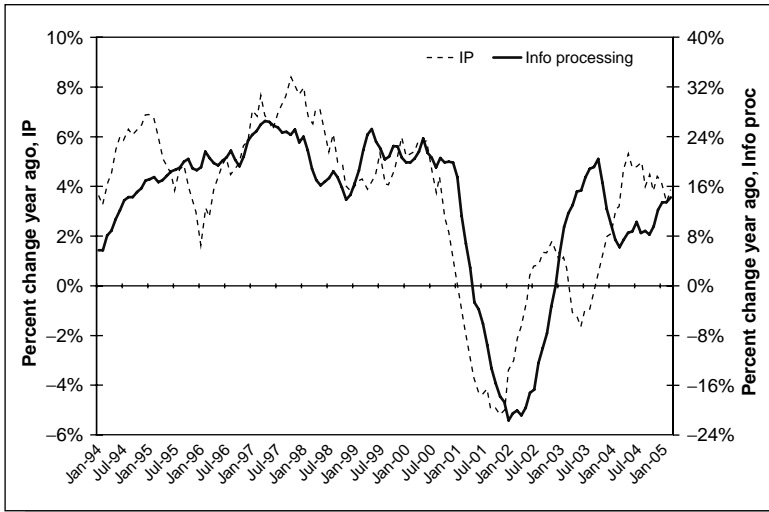


FIGURE 12.7 Industrial Production versus Information Processing; Industrial production for information-processing and related equipment has outperformed overall production by a wide margin. This is the business equipment aspect of the computer business. Notice that this sector was still posting healthy growth in 2004 and early 2005 while the consumer goods sector was in decline. This could imply that high-tech companies focusing on the business sector may be garnering a better revenue stream than those servicing only consumers.
Source: Federal Reserve Board and Haver Analytics.

millions or billions of dollars. By monitoring long-term trends of at least five years, but preferably longer to include both an expansion and a recession within the period, investors would gather sufficient data for the industry that they wish to investigate. The process of monitoring economic trends should help minimize trading costs and maximize profits when determining whether or not particular stocks are worthwhile investments.

How would you go about doing this kind of research? It is a little time-consuming, but it can be done. First, pick your stock. Let us say you are interested in Home Depot because you spend a lot of time and money there every Saturday and see that it is always crowded. Collect closing market prices for Home Depot. You could then compile the data any way you chose—whether it was to calculate monthly average levels, or use only the month end prices, or even the midmonth prices. I was able to get

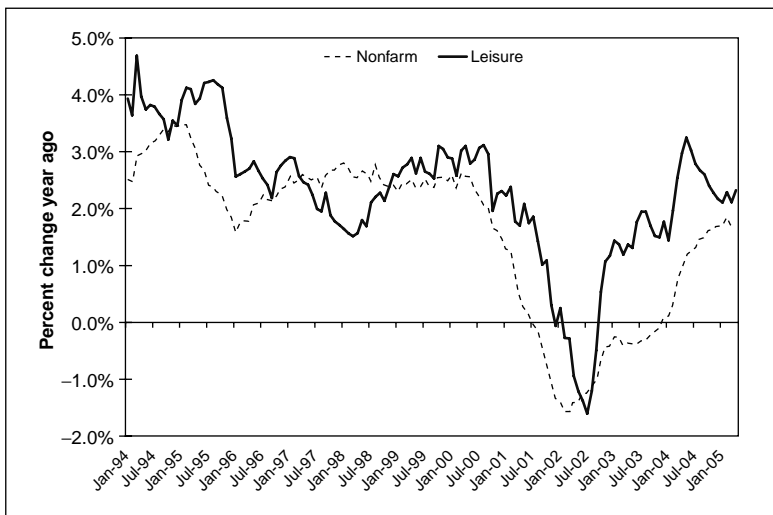


FIGURE 12.8 Nonfarm Payrolls versus Leisure and Hospitality: It appears that the leisure and hospitality industry was recovering faster than overall employment in 2003 and 2004. Perhaps this was a good time to purchase hotel stocks?
 Source: Bureau of Labor Statistics and Haver Analytics.

prices (high, low, close, and volume) online at Microsoft Network’s web site <http://www.msn.com>. There might be better sites for gathering this data, but this was simple and took just a couple of minutes. (One of my colleagues recommends Yahoo! Finance at <http://finance.yahoo.com>, which is also free.)

The next step would be to think about economic indicators that would give you a clue about the direction of building store sales. The obvious answer, of course, is interest rates. Rising interest rates should choke off housing-related spending, while falling interest rates should spur the building trades. It does not really matter which interest rate you use, however, since housing is usually tied to long rates, try the 10-year Treasury yield or a mortgage rate. You can easily get these on the Fed’s web site at www.federalreserve.gov. (See Figure 12.9(a)–(c).)

Other indicators also impact spending on the types of goods sold at Home Depot. For instance, consumers spend more money when they earn more money. Disposable income would be another good variable to

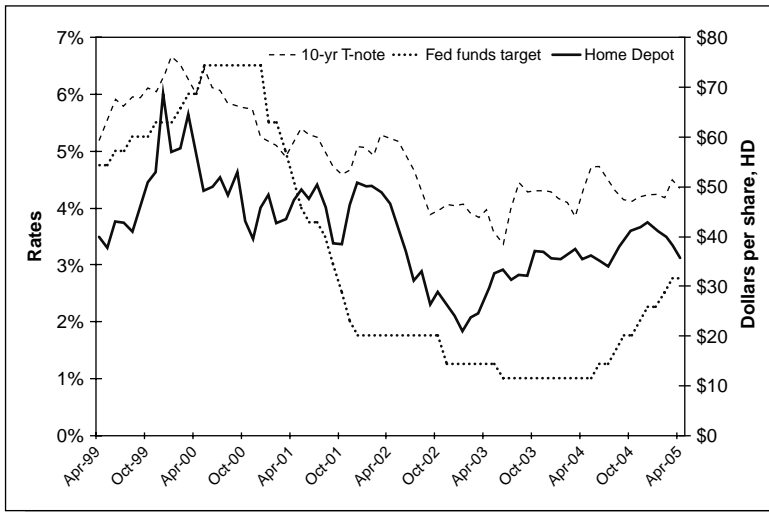


FIGURE 12.9(a) Home Depot Stock Price versus Interest Rates: There is no question that Home Depot is strongly affected by changes in interest rates. Here we see the 10-year Treasury yield (which is a benchmark for fixed rate mortgage rates) and the federal funds rate target, controlled by the Federal Reserve. While a relationship between interest rates and Home Depot exists, it is not obvious by looking at the level of the stock price.

Source: Federal Reserve Board, Haver Analytics, and www.msn.com.

consider. Disposable income is reported monthly and historical data is available online on the BEA's web site at www.bea.gov. (See Figure 12.10(a) and (b))

How are sales doing at building materials stores anyway? Are sales rising or falling? Retail sales are reported monthly; building materials store sales are a component of this report. This data is available online at the Census Bureau's web site at <http://www.census.gov/cgi-bin/briefroom/BriefRm>.

You should find that Home Depot's stock price declines when interest rates are rising and rises when interest rates are falling. Home Depot's stock price should also be positively correlated with disposable income—more people shop when income rises than when it falls. If overall building materials store sales are rising, then Home Depot should be sharing in that rise, and the stock price should be higher. *If you are not seeing these types of results, then perhaps Home Depot is not performing very well.*

Is Home Depot's stock price falling or rising? Ask yourself whether it is

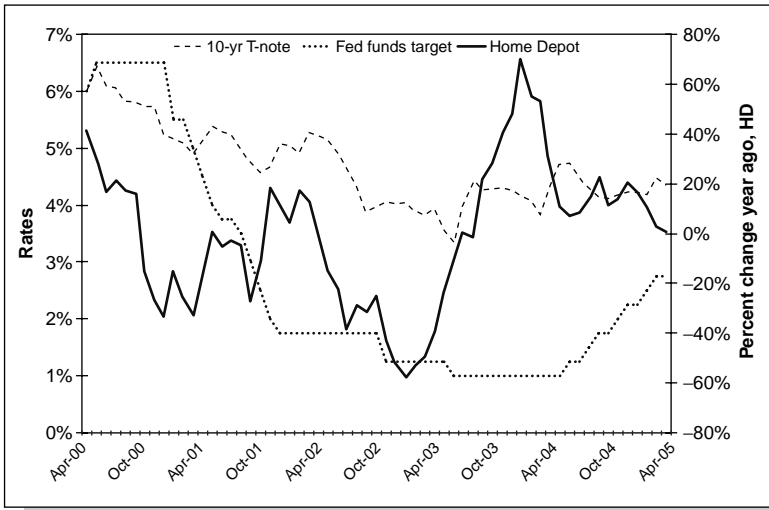


FIGURE 12.9(b) Home Depot Stock Price versus Interest Rates (cont.): Here interest rates are compared to the year-over-year change in the Home Depot share price. Month-end levels are compared to a year earlier. Notice that year-over-year changes in the stock price show a more pronounced relationship to interest rates.

Source: Federal Reserve Board, Haver Analytics, and www.msn.com.

falling because the U.S. is in recession. If so, now may be a good time to consider buying this stock. If you wait until the recovery, then you will pay a higher share price. Is Home Depot’s stock price rising? Is the United States in an expansion? Does Home Depot’s stock price have room to grow? Or are we nearing the peak of an expansion—and nearing a peak in the price?

How is Home Depot’s primary competitor, Lowe’s, performing? Is this company’s stock stronger or weaker than the Home Depot price? Are the growth prospects for Lowe’s better or worse than for Home Depot?

Looking at the factors that help determine sales at building materials stores (interest rates, disposable income) can guide you in your purchase decision—or in its timing. You might find that Home Depot is indeed a good company and you would like to buy the stock—but in a few months when economic conditions will potentially generate a better price. It is a good idea to have a price target along with a time frame in mind when you are considering buying shares. Otherwise, the stock price may begin to appreciate rapidly before you have had a chance to buy. Always remember that your primary aim is not to get the absolute lowest stock price—even

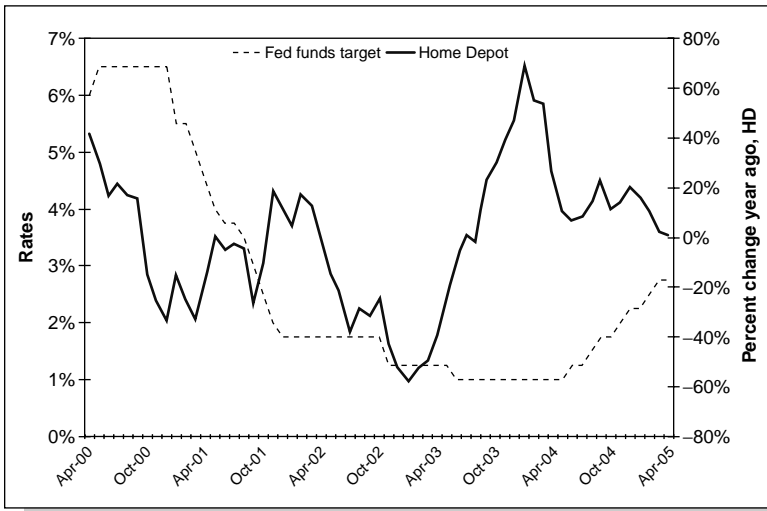


FIGURE 12.9(c) Home Depot Stock Price versus Interest Rates (cont.): The federal funds rate target is more closely related to changes in Home Depot's stock price than the 10-year Treasury. (Remember, long-term Treasury yields did not react to Fed policy changes during much of 2004 and early 2005.) There is absolutely no question that a rising rate environment is negative for Home Depot. This is a no-brainer—one did not need a chart for this example, but this shows the process of discerning relationships between economic indicators and stock prices.

Source: Federal Reserve Board, Haver Analytics, and www.msn.com.

when properly analyzing the economic environment we are not, after all, all-seeing.

Suppose you already own shares in Home Depot that you purchased a year ago when economic conditions were booming. Lately, your monthly brokerage statements have shown the value of the price has declined for a couple of months. Should you sell? It depends if you had a sell price target in mind. Did you reach your target price? Are you worried that you will lose some of your profit? Go ahead and sell. *However*, perhaps you purchased Home Depot a year ago with the intention of holding it for a long period because the company has a lot of potential in your view. In that case, you would want to consider what has changed. Have corporate fundamentals changed? Is there a new CEO at the helm? Has the product mix changed at Home Depot and, therefore, fewer customers are shopping there these days?

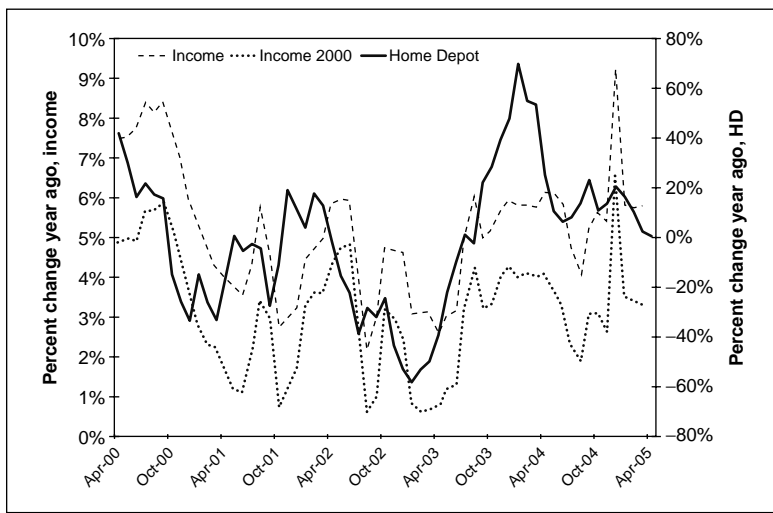


FIGURE 12.10(a) Home Depot Stock Price versus Income: Comparing billions of dollars of disposable income to the level of the stock price is unlikely to reveal anything. Looking at year-over-year changes in disposable income, year-over-year changes in inflation-adjusted disposable income (\$2,000), and year-over-year changes in Home Depot’s stock price are more useful. It appears that a relationship exists. Nevertheless it is not convincing that real income provides more information than current dollar income.
 Source: Bureau of Economic Analysis, Haver Analytics, and www.msn.com.

Perhaps—and more likely, economic conditions have changed and these have caused consumer demand to decline for not only Home Depot goods, but all goods and services in the economy. Are corporate fundamentals sound? Are the same fundamentals still in place since your original purchase? If so, you might want to consider buying Home Depot at a bargain price. You will be adding to your profit later on. Is this an easy decision? Of course not! It is very difficult to buy stocks when prices are falling. During a recession, it seems as though all is bleak and we will never recover. However, that is the best time to make a purchase. It is the best way to buy low and sell high.

The decision to sell a stock is not often discussed. In the old days, before the 2000 crash, pundits suggested that investors buy for the long term and hold onto their stocks (almost forever). These days, many financial pundits are more likely to recommend that investors be nimble, and sell stocks almost as often as they buy, with much shorter time horizons.



FIGURE 12.10(b) Home Depot Stock Price versus Income (cont.): Here the year-over-year change in disposable income in current dollars is compared to the year-over-year change in Home Depot's stock price. It appears that the two move in the same general direction over time. Of course, we know that the spike in 2003–2004 in Home Depot's price stems from the exceptionally low federal funds rate target. This tells us that both interest rates and income matters for home building. Therefore, while the rising interest rate environment is bad for business, the drop in revenues at Home Depot stores may be mitigated if disposable income continues to increase at a healthy clip.

Source: Bureau of Economic Analysis, Haver Analytics, and www.msn.com.

Many individual investors tend to purchase some stocks for short-term speculation and some for long-term gains. My husband purchased Marvel several years ago in anticipation that the first *Spiderman* movie would do well at the box office and that Marvel stock would benefit. The film did—and so did Marvel stock. Given that he considered this a short-term speculative play, however, he held Marvel until the price doubled and sold it. If he had held it for an extra year, he would have benefited from a quadrupling in his purchase price. (Oh, well, easy come, easy go.) Our family portfolio holds several stocks that were intended as long-term investments when we purchased them. We have owned them for several years, and we occasionally analyze these companies to see whether we want to keep the positions, sell the positions, or add to the

positions when opportunities arise (when stock prices tumble from time to time).

Taking Advantage of Opportunities

The Peter Lynch principle of stock picking is to buy something that you know. We all have hobbies and we all see trends develop. Several years ago, I saw more and more individuals on motorcycles. Baby boomers were using their disposable income to buy their dream machines. Several makers have motorcycles on the road: Honda, Kawasaki, Ducati, Triumph, BMW, and that old American favorite, Harley-Davidson. Many of these were foreign-makes; and even if I could purchase a Honda ADR (American depository receipts allow purchases of shares of foreign corporations in the United States) on the U.S. exchange, I would be buying all of Honda (cars, trucks, SUVs, lawnmowers). I wanted a straight motorcycle play and decided to investigate Harley-Davidson.

I am not a frequent trader and do not make investment decisions lightly. As such, I monitored Harley-Davidson for a long time. In 2001, the United States fell into recession and Harley-Davidson stock prices fell, too. I was nervous, but should have bought, anyway. (See, buying low is not as easy as it sounds.) I missed the opportunity because stock prices started to rise while we were still in recession, as is the case for this type of consumer durable. The Harley-Davidson share price rose rapidly, and I felt that the P/E (price-earnings) ratio became too high for my taste. (Some financial analysts discount the importance of P/E ratios. However, I tend to compare the P/E average of the stock I am analyzing to its industry average. The price-earnings ratio is also known as the earnings multiplier and equals a stock's market price per share divided by its earnings per share.)

After 9/11, many durable goods manufacturers saw steep price declines in their share prices. I felt very strongly that the United States would recover from the trauma of 9/11—and considered the opportunity in the final months of 2001 to purchase this stock but the stock price once again increased rapidly before I had a chance to buy some shares.

Finally in 2002, there was a lull in economic activity and it became my opening to finally purchase some Harley-Davidson shares. I had, over the long run, based my decision on such fundamentals as baby boomer population growth, low interest rates, and an economic recovery. Harley-Davidson has a strong mystique factor as well—remember the film *Easy Rider*?—which is not always evident on other brands. For a couple of years, the Harley-Davidson shares were my best portfolio performer. The share price surpassed \$62 on several occasions in 2004; I liked the regular dividends the company paid and the economy was still going strong.

Economic conditions were starting to change in early 2005, and when the stock price hovered around \$62 again in February, I considered selling my position. Market analysts were anticipating a higher price for 2005 and 2006. Through my greediness, I paid attention to analysts' forecasts (which should always be viewed with a grain of salt) instead of paying more attention to the news of softer economic growth. The price, of course, plunged in April 2005 on news that upcoming production targets would be reduced and earnings expectations would not be met in the near term. Luckily, I was able to get out of my position at a profit, but not the profit I could have had earlier in the year.

By taking the time to analyze stocks and monitor economic conditions, one can indeed be ready to take advantage of opportunities. But if you have not done the advance research, you will not always know if a risk is worth taking. Keeping track of economic trends makes the purchase and sell decision a little easier to make—although it is never easy to buy stocks when shares are in a free-fall. And don't get greedy.

HOW TO CHOOSE ECONOMIC INDICATORS TO ANALYZE STOCKS

At first glance, one might think that it is hard to choose economic indicators to analyze stocks. In fact, an economics degree is not necessary if you follow a few simple steps. Those investors who prefer to make their own investment decisions and like to purchase individual stocks (as opposed to mutual funds) probably have good reasons for picking their stocks. For instance, I saw a lot of motorcycles on the road, which made me consider investing in Harley-Davidson. You might like the quality of Coach handbags, Nordstrom's excellent service, or Target's exceptional prices. (Disclosure: I do not own any of these stocks at this writing.)

- **Once you choose your company, go to the company's web site and look at its financial statement.** You want to learn about their primary businesses. For instance, if you were looking at GM or Ford, you would be interested in their earnings from auto sales, their earnings from truck sales, leasing profits, and auto financing

profits. Are they in any other businesses? As it turns out, both GM and Ford generate substantial profits from their financing arms. This means that auto sales and financing are at least two aspects of the company one would monitor and analyze. GMAC also earned a good chunk of profits in recent years from its mortgage business.

- **Consider what makes the business run.** In this case what causes consumers to buy motor vehicles? No doubt, disposable income plays a major role. Because consumers need to finance vehicle purchases, low interest rates would help this business. Also consumers worry about buying large ticket items during recessions when the unemployment rate shoots up.
- Auto financing at GM and Ford certainly depend on the level of motor vehicle sales. Nonetheless, this business is also affected by market interest rates. Contrary to popular opinion, financing activity benefits more by low interest rates than high interest rates since the opportunities for fatter margins are greater in a low interest rate environment.
- **Look at the indicators described in this book that could impact the business.** As a first attempt at determining the direction of GM and Ford, I would consider the following economic indicators: disposable income (monthly personal income release); unemployment rate (monthly employment situation); and interest rates (FOMC decisions).

There is no question that gasoline prices play a role in motor vehicle sales. But the impact between gasoline prices and auto sales are less direct. Rising gasoline prices might favor small cars or hybrid cars at the expense of gas-guzzlers. This would impact GM or Ford stock favorably if they offered a greater share of hybrid cars or trucks than their competitors.

There is no question that some companies are easier to analyze than others. Housing-related companies are impacted by interest rates; consumer spending is dependent on consumer income. Once one starts looking at companies that produce multiple types of goods and services (such as General Electric), it is more difficult, although not impossible, to analyze with these economic indicators. If you cannot figure out what makes a company tick, then you will not know what is driving its price. In that case, why are you buying the stock?

KEY POINTS

- Monitoring economic conditions can help one determine whether fixed rate loans or adjustable rate loans are better mortgage options at the time of home purchase or when refinancing a mortgage loan.
- Monitoring economic conditions can help one determine the best time to buy or sell fixed income securities.
- Economic indicators can be used for long term strategic decision making rather than just day trading!
- Study the business cycle; various sectors perform better at different times of the cycle than others.

Sources of Information

The Best of the Best

The Internet has caused dramatic changes in the availability of data and information since the first edition of this book was published in 1993. Then, just over 10 years ago, economic indicator reports were not readily available instantaneously without a price. One had to subscribe to costly news services or pay a pretty penny to get the statistical agency to fax you the news release. Even in 1998, when the second edition of this book was published, not all government agencies made available their economic indicators on the Web at the scheduled release time. One had to subscribe to newswire services or data vendors or government statistical agencies. While professional investors still must subscribe to wire services and data vendors for the most up-to-date information, individual investors now can access much of this information within a reasonable time frame.

What is reasonable?

Many statistical agencies will deliver the economic indicator report directly to your e-mail inbox in no more than five minutes after official release time. Some e-mails take a little longer, possibly 10 or 15 minutes. The data is readily available on the government's web site at release time.

The best sources to use will depend on your needs. If you are a professional investor or trader, timeliness is crucial and you cannot avoid purchasing newswire services. If you are not trading, but making longer-term investment decisions, then you can afford to wait a few minutes and get the information online. Sources on the Internet are plentiful and most are free, though Internet sources that charge a fee are more timely. Appendix B covers the key URL addresses for economic indicators that we have discussed in this book. URL addresses change over time, but usually the statistical agency's homepage URL is stable. Running a quick search online usually yields good results in any case.

Given that economic data and news are so much easier to gather these

days, it does not make sense to offer a list of sources that may or may not be available a few years down the road. For that reason, I have decided to list below only those publications and economic news sources that I consider the “Best of the Best.” No doubt, some of you may have other options that you might find adequate. But I highly recommend the resources described in this chapter.

PUBLICATIONS

The federal government’s statistical agencies distribute a truckload of publications. Historically, the agencies have charged for these publications. Now they are available free online. The cost? Your own paper and toner. In the past, it was useful to look at the monthly publications not only for the relevant articles, but also the abundant supply of economic indicators. Now, the economic data is readily available online in a significantly more timely fashion. Nonetheless, the topical articles provided by various statistical agencies remain useful.

- ***Economic Report of the President.*** I highly recommend the *Economic Report of the President* even if you have access to more timely sources. Sophisticated computers and broadband wireless technology notwithstanding, picking up a book off the shelf when you just need a few historical details is often more efficient. The Council of Economic Advisors writes this report, which offers current and foreseeable trends on such topics as employment, production, real income, and Federal budget outlays. The *Economic Report of the President* is transmitted to Congress no later than 10 days after the submission of the Budget of the United States Government. Supplementary reports can be issued to the Congress that contain additional and/or revised recommendations. In 2005, it was found at <http://www.gpoaccess.gov/eop/index.html>.
- ***Survey of Current Business.*** The best monthly publication is the *Survey of Current Business*, which is published by the Commerce Department. It regularly features stories on the national income accounts, regional trends, capital formation, and foreign investment. It is particularly useful because the Survey always warns users about upcoming changes to the National Income and Product Accounts. This publication is available online at <http://www.bea.gov>.
- ***Federal Reserve Bulletin.*** The Federal Reserve Board publishes topical articles in the *Federal Reserve Bulletin*. The monthly bulletin includes analytical articles on a variety of topics each month. It is available online at <http://www.federalreserve.gov>.

- **Monthly Labor Review.** The Labor Department publishes a fine monthly journal, *Monthly Labor Review* that is dedicated to inflation and labor issues.

By going to web sites sponsored by the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Census Bureau, the Federal Reserve Board, and the White House, you will find all the economic information you could possibly need.

DATA VENDORS

Economic data is also available from the private sector, but this data comes with a price. However, considering how much time is saved by simply going to one place for all of your data needs, there is no question that it is worth the money. Several providers of economic data are available and you can conduct an online search. I have used several providers over the years and have found Haver Analytics to be the best. The data are reliable and very timely (within a few minutes of the economic releases). You will find information at <http://www.haver.com>.

Haver Analytics offers two types of services. If you subscribe to their database service, you will get special software that allows you to quickly build charts. You can subscribe to databases that are already constructed, or customize one to suit your individual (or company's) needs. If you do not use economic and financial databases regularly, and would only need to download economic time series once in a while, then you can use Haver Select. This service allows you to download directly from the Web onto your computer economic or financial data in Excel format. There is nothing easier and a world of data is at your fingertips whether you are looking for daily, weekly, monthly, quarterly, or annual U.S.—or international—figures.

For the most part, I used Haver Analytics to gather data for the charts and tables in this book and found it to be much easier than gathering the information from each web site.

ECONOMIC CALENDARS

Those of you interested in regularly monitoring key economic releases could go to each of the government web sites and gather the release dates. But in fact, it would be much easier to go to <http://www.econoday.com>, which provides release dates for key economic indicators and Treasury auctions in a calendar format.

Econoday's basic calendar (which is licensed out to a variety of web sites is available gratis for users) shows release dates for key economic indicators, Treasury auctions, and whether the Fed chairman is speaking. A very brief definition for each indicator is listed on the calendar in plain English so that you will not need to carry this book with you always and everywhere.

You will find versions of the Econoday calendar that include a variety of information including current economic and market commentary and weekly articles about the U.S. and international economies. But just like you cannot find the entire Calvin Klein line of clothing at one department store, web sites will not have the entire line of Econoday products.

The most complete calendar is found at <http://www.Econoday.com> where you will find an abundance of materials. Commentary on economic indicators and financial market activity is written daily. A weekly wrap-up is offered for the U.S. economy (*Simply Economics*) and one focusing on G-7 countries (*International Perspective*). In addition, occasional articles (*Short Take*) cover everything from soup to nuts. A Fed Watching section keeps up-to-the-minute information on key indicators monitored by the Fed. Furthermore, Fed policy actions dating back to 1990 are listed in an easy-to-read table. A Bond Market module offers Treasury announcements and auction information in one spot. Country profiles allow you to get a quick assessment on the economic conditions of G-7 countries.

In addition to the online information, you can order Econoday products that sync the calendar to your MS Outlook, PDA, or through your Blackberry. The abbreviated calendar version can help you get all the information you need even while you are on the go.

As an added bonus, Econoday online offers a history of economic indicators and financial market behavior back to 2000. Do you want to know why stock prices surged and bond prices plunged on May 5, 2000? Econoday online will tell you. I used this feature of the calendar on more than one occasion while I wrote this book.

NEWS PROVIDERS

As an individual investor, it is important to find a web site (or even more than one) where you can easily get your dose of financial news. I use <http://www.bloomberg.com> to get financial data (market close information for stocks, bonds, commodities, etc.) as well as stories regarding current (financial) events. Bloomberg's free online version may not be as robust as the subscription service, but it provides an abundance of information.

Daily Financial Press

Key financial news providers are all online—although the majority is no longer free. The *Wall Street Journal*, the *Financial Times*, and the business section of the *New York Times* best cover U.S. economic and financial news. If you have limited reading time and are primarily interested in U.S. business, then the *Wall Street Journal* will suit you just fine. However, if you have a global perspective on life and finances, then the *Financial Times* is a powerful provider of the news. If you can read them all, you will be very well-rounded and register high scores on economic and financial literacy tests.

MY COWORKERS SPEAK OUT

When I showed this chapter to my colleagues, they pointed out several news sources that I neglected to mention. So I decided to let them recommend their favorites.

Anne Picker, Econoday's International Economist says: "To know what is going on in the U.S. economy it is necessary to get the outsider's view—that is, from overseas. And my favorite source not mentioned by Evelina is *The Economist*. Together with the *Financial Times* you can get a much more objective and broader picture of the U.S. economy and how it fits in with the rest of the world."

Mark Pender, Contributing Editor for Econoday and Contributing Writer for *Market News International* says: "I do most of my work at Yahoo! Finance (<http://finance.yahoo.com>), which is a bottomless pit of free and instantaneous business information, especially company news. The site is a single source for press release wires, which are an overlooked source of business information—the words directly from the horse's mouth."

Economic Indicator Releases by Statistical Agency

Key indicators within the report are listed as shown.

Bureau of Economic Analysis (www.bea.gov)

- Gross Domestic Product

 - GDP

 - GDP deflator

- National Income and Corporate Profits

 - Corporate profits

- International Trade Balance on Goods & Services

 - Merchandise trade balance

- International Transactions

 - Current account

- Personal Income and Outlays

 - Personal income

 - Personal consumption expenditures

 - Personal saving rate

Bureau of Labor Statistics (www.bls.gov)

- Consumer Price Index

 - CPI

 - CPI excluding food & energy

 - Chained CPI

Employment Cost Index

ECI

ECI—wages and salaries

ECI—benefits costs

Employment Situation

Unemployment rate

Nonfarm payrolls

Average workweek

Average hourly earnings

Import and Export Prices

Import price index

Export price index

JOLTS

Producer Price Index

PPI—finished goods

PPI—intermediate goods

PPI—crude materials

Productivity and Costs

Nonfarm productivity

Unit labor costs

Census Bureau (www.census.gov/cgi-in/briefroom/BriefRm)

Construction expenditures

Housing starts

New Single-family home sales

Retail sales and food services

Retail e-commerce sales

Advance durable goods

Manufacturers' shipments, orders, and inventories

Manufacturing and trade sales and inventories

Wholesale trade sales and inventories

Quarterly services survey

Energy Department (www.eia.doe.gov)

EIA Petroleum status report

Employment and Training Division (www.doleta.gov)

New jobless claims

Continuing claims

Federal Reserve System (www.federalreserve.gov)

Industrial production

Capacity utilization rate

Consumer installment credit

Flow of funds

Beige Book

FOMC statement

FOMC minutes

Monetary aggregates

Empire state manufacturing survey (New York)

Business outlook survey (Philadelphia)

U.S. Treasury (www.treas.gov)

Treasury international capital

Monthly budget report

Treasury auctions

U.S. Department of Agriculture (www.usda.gov)

Farm prices

University of Michigan Survey Center (www.isr.umich.edu/src)

Consumer sentiment

The Conference Board (www.conference-board.org)

Consumer confidence

Help wanted index

Leading indicators index

National Association of Realtors (www.realtor.org)

Existing home sales

Pending home sales index

Institute for Supply Management (www.napm.org)

ISM manufacturing survey

ISM non-manufacturing survey

Mortgage Bankers Associations (www.mbaa.org)

MBA purchase applications

National Association of Home Builders (www.nahb.org)

NAHB/Wells Fargo housing market index

NAPM-Chicago (www.napm-chicago.org)

NAPM-Chicago

Monster Worldwide (www.monsterworldwide.com)

Monster employment index

CHAPTER 1 Cycles, Markets, and Participants

1. Business Cycle Dating Committee, "The NBER'S Business-Cycle Dating Procedure," National Bureau of Economic Research, 21 October 2003. *Note:* This document can be downloaded at <<http://www.nber.org/cycles/recessions.pdf>>.
2. Ibid.
3. Geoffrey Moore, *Business Cycles, Inflation, and Forecasting: NBER Studies in Business Cycles*, no. 24, 2nd ed. (Cambridge, MA: Ballinger, 1983), 189–196.
4. Ibid., 196–201.
5. Ray Stone, "Looks like October Payrolls are up 116,000," *SMRA.com*: Stone & McCarthy Research Associates, 5 November 1998.
6. Staff, "US March IP 'Inadvertently' Posted Early on Web," *Market News International*, 15 April 2005.
7. Mark Pender of *Econoday* to author, April 5, 2005.

CHAPTER 2 National Income and Product Accounts

1. Alan Murray, "The Outlook: Investment Credits: A Temporary Answer," *Wall Street Journal*, 20 December 1991, A1.
2. Ray A. Smith and Ryan Chittum, "Real Estate's Foreign Affair," *Wall Street Journal*, 9 March 2005, B1.
3. Bureau of Economic Analysis, "Comprehensive Revision of the National Income and Product Accounts: 1929 through Second Quarter 2003," *BEA.gov*: News 10 December 2003.
4. Nicole Mayerhauser of the Bureau of Economic Analysis to author, 20 April 2005.
5. Kenneth Petrick, "Comparing NIPA Profits with S&P 500 Profits," *Survey of Current Business* 81, no. 4 (April 2001): 17.
6. Evelina Tainer, "Comparing Profits: NIPA vs. S&P 500," *Econoday.com*, 24 March 2004.

CHAPTER 3 The Consumer Sector

1. Michael Niemira, "ICSC-UBS Weekly Chain Store Sales Index: History Methodology and Use," *ICSC Research Quarterly* 11, no. 3 (Fall 2004): 8–13.

2. “Retail Averages Methodology,” *LJR Redbook Research*, 10 September 1997. *Note*: Catlin Levis of Redbook confirms that the same methodology is in place today.
3. Ray Stone, “US Snowstorm to Hit Retail Sales, Other Data,” *Market News International*, 19 February 2003.
4. Dan Roberts, “Data Point to Firm Seasonal Sales Growth,” *Financial Times*, 28 December 2004, 12.
5. Susan M. Sterne, “It’s All About Wealth,” *Business Economics*, July 2005, 37.
6. Cambridge Consumer Credit Index, “Cambridge Consumer Credit Index—About the Index,” *CambridgeConsumerIndex.com*: Cambridge Consumer Credit Index 2005. <<http://www.cambridgeconsumerindex.com>> (6 June 2005).
7. Richard T. Curtin, *Index Calculations* (Ann Arbor: Survey Research Center, University of Michigan, 1992).
8. Richard T. Curtin, *The Consumer as a Macroeconomic Forecaster: Accuracy of Consumer Attitudes and Expectations* (Ann Arbor: Survey Research Center, University of Michigan, 1992).
9. Fabian Linden, “The Measure of Consumer Confidence,” *Across the Board: The Conference Board Magazine* 16, no. 4 (April 1979).
10. Justin Lahart, “Ahead of the Tape—Today’s Market Forecast,” *Wall Street Journal*, 28 December 2004, C1.
11. TIPP Online, “The Economic Optimism Index,” *Tipponline.com* May 2005. <<http://www.tipponline.com/eoi-index.htm>>.

CHAPTER 4 Investment Spending

1. Brian Carey and Irene Chao, “The Mortgage Market’s Leading Indicators,” *Mortgage Finance Review* 4, no. 6 (November–December 1996).
2. *New York Times*, 27 September 1997.
3. Jon Hurdle, “U.S. to Include Rebuilding in New Housing Starts Definition,” *Market News International*, 25 September 1992.
4. Kim Clark, “Through the Roof,” *U.S. News and World Report*, 6 June 2005, 46–47.
5. Kenneth Gilpin, “The Numbers They Love to Hate,” *New York Times*, 17 April 1988.
6. U.S. Census Bureau and U.S. Department of Housing and Urban Development, “New Residential Construction in February 2005,” *U.S. Census Bureau News Joint Release* (Washington, D.C.: U.S. Department of Commerce, 16 March 2005), 1.

CHAPTER 5 The Foreign Sector

1. John M. Berry, “U.S. Fed Worries About Global Risks,” *Bloomberg*, 2 June 2005.
2. Floyd Norris, “Trade Surplus Turns to Rubbish,” *Seattle Post-Intelligencer*, 18 January 2005, C1–2.

CHAPTER 7 Inflation

1. “The Bears Appear,” *The Economist*, 16 April 2005, 64.
2. Katia Hetter, “Outguessing El Nino,” *U.S. News and World Report*, 8 December 1997.
3. Timothy Aepfel, “An Inflation Debate Brews Over Intangibles at the Mall,” *Wall Street Journal*, 9 May 2005, A1.
4. Ibid.
5. “A Productivity Primer,” *The Economist*, 4 November 2004.

CHAPTER 8 The Labor Market

1. Jay Meisenheimer in a telephone conversation with author, November 1997.
Note: Meisenheimer is an economist at the Bureau of Labor Statistics.
2. Laurence H. Meyer, *A Term at the Fed* (New York: HarperBusiness, 2004), 37.
3. Hudson, “Worker Confidence Falls to Lowest Level in a Year and a Half,” *Hudson Employment Index Press Release*, 1 June 2005.
4. Harry Hurt III, “Economic View: Help Wanted (for a Better Way to Count Jobs),” *New York Times*, 14 November 2004.

CHAPTER 9 Other Measures of Production

1. Federal Reserve, “Industrial Production and Capacity Utilization,” *Federal Reserve Statistical Release G.17*, 15 October 2004.
2. Terri Tracey of the Institute for Supply Management to author, April 7, 2005.
3. Mark Pender to author, May 2005.
4. Michael E. Trebing, “What’s Happening in Manufacturing: ‘Survey Says . . .,’” *Federal Reserve Bank of Philadelphia Business Review*, September/October 1998, 26.
5. Timothy Schiller and Michael Trebing, “Taking the Measure of Manufacturing,” *Federal Reserve Bank of Philadelphia Business Review*, issue Q4, 2003, 16.
6. Richard Deitz and Charles Steindel, “The Predictive Abilities of the New York Fed’s Empire State Manufacturing Survey,” *Federal Reserve Bank of New York Current Issues in Economics and Finance* 11, no. 1 (January 2005), 3.
7. Ibid., 6.
8. Mark Pender to author, May 2005.
9. Michael Boldin, “The Cyclical Indicator Approach,” *The Conference Board Business Cycle Indicators*, January 1997.
10. Justin Lahart, “Ahead of the Tape-Flashing Indicator,” *Wall Street Journal*, 19 May 2005, C1.

CHAPTER 10 The Federal Reserve System

1. Alfred Broadus, *A Primer on the Fed* (Richmond, VA: Federal Reserve Bank of Richmond, 1988).

2. "A License to Lose Money," *The Economist*, 30 April 2005, 74.
3. Frederick H. Schultz, "The Changing Role of the Federal Reserve," *The Federal Reserve Bank of St. Louis Review* 87, no. 2, part 2 (March/April 2005), 343–348.
4. Greg Ip, "Core Inflation is Heading Higher," *Wall Street Journal*, 24 February 2005, A2.
5. Steven K. Beckner, *Back from the Brink: The Greenspan Years* (New York: John Wiley & Sons, 1997).
6. Ibid.
7. Laurence H. Meyer, *A Term at the Fed* (New York: HarperBusiness, 2004), 51, 53.
8. Board of Governors of the Federal Reserve System, *Monetary Policy Report to the Congress, July 20, 2000* (Washington, DC: U.S. Government Printing Office, 2000).
9. M. A. Akhtar, *Understanding Open Market Operations* (New York: Federal Reserve Bank of New York, 1997).
10. Rachel Wildavsky, "Second Most Powerful Man in America," *Reader's Digest*, December 1997.
11. Meyer, 137–138.
12. Dean Foust, "Alan Greenspan's Brave New World," *Business Week*, 14 July 1997.
13. Agnes T. Crane, "At the Fed, Sometimes Words Speak Louder than Actions," *Wall Street Journal*, 1 April 2005, C4.
14. Steven K. Beckner, "Fed's Stern: Need Worse Inflation Prospects to Tighten Faster," *Market News International*, 20 January 2005.
15. Steven K. Beckner, "Fed's Poole: FOMC Ready 'to Move More Aggressively' vs. Inflation," *Market News International*, 20 January 2005.
16. Meyer, 74.
17. Andrew Balls, "Fed Policy Watchers Find Language Less Helpful," *Financial Times*, 4 May 2005.
18. Andrew Balls, "Fed's Error Highlights Policy Role of Inflation," *Financial Times*, 3 May 2005.
19. Federal Reserve Board, "FOMC Statement," *Federal Reserve Board Press Release*, (Version 2), 3 May 2005.
20. Caroline Baum, "Rushed Fed Minutes Could Use a Good Rewrite Man," *Bloomberg*, 6 January 2005.
21. "Aiming for a Happy Medium," *The Economist*, 18 December 2004.

CHAPTER 11 The Treasury

1. U.S. Department of the Treasury, *Treasury Bulletin*, December 2004, 24–25.
2. Terry Sheehan, "Chronology: US Treasury Debt Limit Maneuverings '93-'04," *Market News International*, 14 November 2004.
3. Joanne Chung, Jennifer Hughes, and Gillian Tett, "Long Bonds are Back," *Financial Times*, 15 May 2005.

4. Bureau of the Public Debt, "Treasury Reopenings," *publicdebt.treas.gov* 27 July 2005. <<http://www.publicdebt.treas.gov/sec/secreo.htm>>.
5. Jane J. Kim, "Wall Street Pushes Inflation Protection," *Wall Street Journal*, 5 May 2005.
6. Paul F. Malvey and Christine M. Archibald, "Uniform-Price Auctions: Update of the Treasury Experience," Office of Market Finance, U.S. Department of the Treasury, October 1998.
7. Mark Whitehouse, "Yield Curve May Be Sending a Signal," *Wall Street Journal*, 9 May 2005, C1.
8. Alan Greenspan, "Central Bank Panel Discussion to the International Monetary Conference, Beijing, People's Republic of China," (via satellite) 6 June 2005.
9. Philip Coggan, "The Short View: Are Bond Markets Rational?" *Financial Times*, 25 May 2005.
10. William L. Grier, Gary A. Lee, and Francis E. Warnock, "The U.S. System for Measuring Cross-Border Investment in Securities," *Federal Reserve Bulletin*, October 2001, 636.

CHAPTER 12 Making Strategic Investment Decisions

1. Harvey S. Rosen, "Data Bait," *Wall Street Journal*, 18 May 2005.
2. Caroline Baum, "Forecasters Swing From Tree to Tree, Miss Forest," *Bloomberg*, 17 May 2005.
3. Paul Krugman, "Running Out of Bubbles," *New York Times*, 27 May 2005.

Bibliography

- Aeppel, Timothy. "An Inflation Debate Brews Over Intangibles at the Mall." *Wall Street Journal*, 9 May 2005, A1.
- Akhtar, M. A. *Understanding Open Market Operations*. New York: Federal Reserve Bank of New York, 1997.
- Balls, Andrew. "Fed Policy Watchers Find Language Less Helpful." *Financial Times*, 4 May 2005.
- Balls, Andrew. "Fed's Error Highlights Policy Role of Inflation." *Financial Times*, 3 May 2005.
- Baum, Caroline. "Forecasters Swing From Tree to Tree, Miss Forest." *Bloomberg*, 17 May 2005.
- Baum, Caroline. "Rushed Fed Minutes Could Use a Good Rewrite Man." *Bloomberg*, 6 January 2005.
- Beckner, Steven K. "Fed's Poole: FOMC Ready 'to Move More Aggressively' vs. Inflation," *Market News International*, 20 January 2005.
- Beckner, Steven K. "Fed's Stern: Need Worse Inflation Prospects to Tighten Faster." *Market News International*, 20 January 2005.
- Beckner, Steven K. "FOMC Cautious; Leaves No Doubt Inflation Risk to Push FF Higher." *Market News International*, 3 May 2005.
- Beckner, Steven K. "FOMC Minutes: Amount of Tighten Need 'May Have Increased.'" *Market News International*, 12 April 2005.
- Beckner, Steven K. *Back from the Brink: The Greenspan Years*. New York: John Wiley & Sons, 1997.
- Berenson, Stephen A. and Steven W. Henderson. "Quality Adjustments for Structural Changes in the CPI Housing Sample." *Monthly Labor Review*, November 1990.
- Berry, John M. "U.S. Fed Worries about Global Risks." *Bloomberg*, 2 June 2005.
- Berry, John M. "Fed Minutes Hold More for the Markets to Ponder." *Bloomberg*, 5 January 2005.
- Boldin, Michael. "The Cyclical Indicator Approach." *The Conference Board Business Cycle Indicators*, January 1997.
- Broadbuss, Alfred. *A Primer on the Fed*. Richmond, VA: Federal Reserve Bank of Richmond, 1988.
- Cambridge Consumer Credit Index. "About the Index." *CambridgeConsumerIndex.com*. <<http://www.cambridgeconsumerindex.com/index.asp?content=about>> (6 June 2005).
- Carey, Brian and Irene Chao. "The Mortgage Market's Leading Indicators." *Mortgage Finance Review* 4, no. 6 (November/December 1996).

- Chiswick, Barry. "A Review of 'Counting the Labor Force,' the Report of the National Commission on Employment and Unemployment Statistics." In *Contemporary Economic Problems*, edited by William Fellner. Washington, DC: American Enterprise Institute, 1980.
- Chung, Joanne, Jennifer Hughes, and Gillian Tett. "Long bonds are back." *Financial Times*, 15 May 2005.
- Clark, Kim. "Through the Roof." *U.S. News and World Report*, 6 June 2005, 46–47.
- Coggan, Philip. "The Short View: Are Bond Markets Rational?" *Financial Times*, 25 May 2005.
- Commodity Research Bureau. "Reuters-CRB Futures Index: Current Construction and Calculation." *CRBTrader.com*. <http://www.crbtrader.com/crbindex/futures_current_print.asp> (15 August 2005).
- Corrado, Carol, Charles Gilbert, and Richard Raddock. "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments." *Federal Reserve Bulletin*, February 1997.
- Crane, Agnes T. "At the Fed, Sometimes Words Speak Louder than Actions." *Wall Street Journal*, 1 April 2005, C4.
- Curtin, Richard T. *Index Calculations*. Ann Arbor: Survey Research Center. University of Michigan, 1992.
- Curtin, Richard T. *The Consumer as a Macroeconomic Forecaster: Accuracy of Consumer Attitudes and Expectations*. Ann Arbor: Survey Research Center. University of Michigan, 1992.
- Deitz, Richard, and Charles Steindel. "The Predictive Abilities of the New York Fed's Empire State Manufacturing Survey." *Current Issues in Economics and Finance* 11, no. 1 (January 2005), 1–7.
- The Economist* Staff. "A Licence to Lose Money." *The Economist*, 30 April 2005.
- The Economist* Staff. "A Productivity Primer." *The Economist*, 4 November 2004.
- The Economist* Staff. "Aiming for a Happy Medium." *The Economist*, December 18, 2004.
- The Economist* Staff. "The Bears Appear." *The Economist*, 16 April 2005.
- Federal Reserve System, Board of Governors. "Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks." *Federal Reserve Statistical Release H.4.1*, 5 May 2005.
- Federal Reserve System, Board of Governors. "Flow of Funds Accounts of the United States—Flows and Outstandings Fourth Quarter 2004." *Federal Reserve Statistical Release Z.1*, 10 March 2005.
- Federal Reserve System, Board of Governors. "FOMC Statement." *Press Release*. (Version 2), 3 May 2005.
- Federal Reserve System, Board of Governors. "Industrial Production and Capacity Utilization." *Federal Reserve Statistical Release G.17*, 17 May 2005.
- Federal Reserve System, Board of Governors. "Industrial Production and Capacity Utilization." *Federal Reserve Statistical Release G.17*, 15 October 2004.
- Federal Reserve System, Board of Governors. "Industrial Production and Capacity Utilization—Documentation." *Federal Reserve Statistical Release G.17*, 21 March 2005.

- Federal Reserve System, Board of Governors. "The Discount Rate." *www.Federal Reserve.gov*. <<http://www.federalreserve.gov/monetarypolicy/discountrate.htm>>.
- Federal Reserve System, Board of Governors. *Monetary Policy Report to the Congress*, 20 July 2000.
- Fleming, Michael J. "The Round-the-Clock Market for U.S. Treasury Securities." *Economic Policy Review* 3, no. 2 (July 1997): 9-32.
- Foust, Dean. "Alan Greenspan's Brave New World." *Business Week*, 14 July 1997.
- Green, Richard K., and Kevin J. Thorpe. *Description of Methodology to Benchmark Existing Home Sales*. Washington, D.C.: National Association of Realtors, 1 April 2005.
- Greenspan, Alan. "Central Bank Panel Discussion to the International Monetary Conference, Beijing, People's Republic of China." Central Bank panel discussion, the International Monetary Conference, Beijing, Peoples' Republic of China (via satellite), 6 June 2005.
- Griever, William L., Gary A. Lee, and Francis E. Warnock. "The U.S. System for Measuring Cross-Border Investment in Securities." *Federal Reserve Bulletin*, October 2001, 636-650.
- Hamel, Harvey R., and John T. Tucker. "Implementing the Levitan Commission's Recommendations to Improve Labor Data." *Monthly Labor Review*, June 1982.
- Hartwig, Robert P. "Overview of Florida Hurricane Insurance Market Economists." In *Testimony delivered to Florida Joint Select Committee on Hurricane Insurance*. Tallahassee: State of Florida, 19 January 2005.
- Hetter, Katia. "Outguessing El Nino." *U.S. News and World Report*, 8 December 1997.
- Hudson. "Worker Confidence Falls to Lowest Level in a Year and a Half." *Hudson Employment Index Press Release*, 1 June 2005.
- Hurdle, Jon. "U.S. to Include Rebuilding in New Housing Starts Definition." *Market News International*, 25 September 1992.
- Hurt III, Harry. "Economic View: Help Wanted (for a Better Way to Count Jobs)." *New York Times*, 14 November 2004.
- Institute for Supply Management. "May Manufacturing ISM Report on Business," 1 June 2005.
- Institute for Supply Management. "May Non-Manufacturing ISM Report on Business," 3 June 2005.
- Ip, Greg. "Core Inflation is Heading Higher." *Wall Street Journal*, 24 February 2005, A2.
- Jablonski, Mary, Kurt Kunze, and Phyllis Flohr Otto. "Hours at Work: A New Base for BLS Productivity Statistics." *Monthly Labor Review*, February 1990.
- Kennedy, Isobel. "Talk from the Trenches: Bonds Roiled by 30-Yr Talk, Fed Error." *Market News International*, 4 May 2005.
- Kennedy, Isobel. "Talk from the Trenches: Pendas Scurry to Cover on Mild Minutes." *Market News International*, 12 April 2005.
- Kim, Jane J. "Wall Street Pushes Inflation Protection." *Wall Street Journal*, 5 May 2005.

- Krugman, Paul. "Running Out of Bubbles." *New York Times*, 27 May 2005.
- Lagomarsino, Deborah, and Campion Walsh. "Treasury is Considering Bringing Bank Long Bond." *Wall Street Journal*, 4 May 2005.
- Lahart, Justin. "Ahead of the Tape-Flashing Indicator." *Wall Street Journal*, 19 May 2005, C1.
- Lahart, Justin. "Ahead of the Tape—Today's Market Forecast." *Wall Street Journal*, 28 December 2004, C1.
- Linden, Fabian. "The Measure of Consumer Confidence." *Across the Board: The Conference Board Magazine* 16, no. 4 (April 1979).
- LJR Redbook Research. "Retail Averages Methodology." *LJR Redbook Research*, 10 September 1997.
- Malkiel, Burton. "Hot TIPS?" *Bloomberg Personal*, September 1997.
- Malvey, Paul F., and Christine M. Archibald. "Uniform-Price Auctions: Update of the Treasury Experience." Office of Market Finance, U.S. Department of the Treasury, October 1998.
- Market News International Staff. "US March IP 'Inadvertently' Posted Early on Web." Market News International, 15 April 2005.
- Meyer, Laurence H. *A Term at the Fed*. New York: HarperBusiness, 2004.
- Milstead, David. "Surprise: Tax Rebate Not a Rebate." Scripps Howard News Service, 25 July 2001.
- Monster Worldwide. "Monster Employment Index Continues Rise in 2005 in February, Showing Broad-based Growth in U.S. Online Job Demand." *Press Release*, 3 March 2005.
- Moore, Geoffrey. "Business Cycles, Inflation, and Forecasting" in *NBER Studies in Business Cycles*, no. 24, 2nd ed. Cambridge, MA: Ballinger, 1983.
- Mortgage Bankers Association, Economics Department. "Weekly Mortgage Application Survey—Description, Indexes and Interest Rates." 1 January 2004.
- Mortgage Bankers Association. "Rise in Purchase Application Volume Offsets Decline in Refinance Application Volume." *Press Release—Weekly Application Survey*, 9 March 2005.
- Murray, Alan. "The Outlook: Investment Credits—A Temporary Answer." *Wall Street Journal*, 30 December 1991.
- National Association of Home Builders. "What is the NAHB-Wells Fargo Housing Market Index (HMI)?" *NAHB.org* 2005. <<http://www.nahb.org>> (15 March 2005).
- National Association of Realtors. "Pending Home Sales Index (PHSI)." *www.Realtor.org* 2005. <[http://www.realtor.org/Research.nsf/files/PHS0501.pdf/\\$FILE/PHS0501.pdf](http://www.realtor.org/Research.nsf/files/PHS0501.pdf/$FILE/PHS0501.pdf)> (14 April 2005).
- National Bureau of Economic Research, Business Cycle Dating Committee. "The NBER'S Business-Cycle Dating Procedure." 21 October 2003.
- Niemira, Michael. "ICSC-UBS Weekly Chain Store Sales Index: History Methodology and Use." *ICSC Research Quarterly* 11, no. 3 (fall 2004): 8–13.
- Norris, Floyd. "Trade Surplus Turns to Rubbish." *Seattle Post-Intelligencer*, 18 January 2005, C1–2.

- Parker, Robert P. "Integration of U.S. Macroeconomic Accounts: A Progress Report." *Business Economics*, April 2005, 56–63.
- Pender, Mark. "Yen Policy Helps Bonds." *Econoday.com*, 25 February 2004. <<http://www.econoday.com>>.
- Petrick, Kenneth. "Comparing NIPA Profits with S&P 500 Profits." *Survey of Current Business* 81, no. 4 (April 2001): 16–20.
- Preston, Noreen L. *The Help Wanted Index: Technical Description and Behavioral Trends*. New York: The Conference Board, 1977.
- Roberts, Dan. "Data Point to Firm Seasonal Sales Growth." *Financial Times*, 28 December 2004, 12.
- Rosen, Harvey S. "Data Bait." *Wall Street Journal*, 18 May 2005, A14.
- Schiller, Timothy, and Michael Trebing. "Taking the Measure of Manufacturing." *Federal Reserve Bank of Philadelphia Business Review*, issue Q4, 2003, 24–37.
- Schultz, Frederick H. "The Changing Role of the Federal Reserve." *Federal Reserve Bank of St. Louis Quarterly Review*, March/April 2005, 343–348.
- Sheehan, Terry. "Chronology: US Treasury Debt Limit Maneuverings '93-'04." *Market News International*, 10 November 2004.
- Smith, Ray A., and Ryan Chittum. "Real Estate's Foreign Affair." *Wall Street Journal*, 9 March 2005, B1.
- Spinozza, Dawn M. "Two Indexes Track Consumer Confidence." *Cross Sections: A Review of Business & Economic Developments, Federal Reserve Bank of Richmond* 8, no. 2 (summer 1991): 8–9.
- Sterne, Susan M. "It's All About Wealth." *Business Economics* (July 2005): 36–40.
- Stone, Ray. "Looks like October Payrolls are up 116,000." *www.SMRA.com*: Stone & McCarthy Research Associates, 5 November 1998. <<http://www.smra.com>>.
- Stone, Ray. "US Snowstorm to Hit Retail Sales, Other Data." *Market News International*, 19 February 2003.
- Tainer, Evelina M. "Come With Me to the FOMC." *Econoday.com* 10 August 2004. <<http://www.econoday.com>>.
- Tainer, Evelina M. "Comparing Profits: NIPA vs. S&P 500." *Econoday.com* 24 March 2004. <<http://www.econoday.com>>.
- Tainer, Evelina M. "Empire State Manufacturing Survey." *Econoday.com* 19 February 2003. <<http://www.econoday.com>>.
- Tainer, Evelina M. "JOLTS." *Econoday.com* 14 April 2004. <<http://www.econoday.com>>.
- Tainer, Evelina M. "Monster Employment Index." *Econoday.com* 6 October 2004. <<http://www.econoday.com>>.
- Tainer, Evelina M.. "Trading with New and Improved GDP." *Futures*, December 1995.
- TIPP Online. "The Economic Optimism Index." *TIPPOnline.com* May 2005. <<http://www.tipponline.com/eoi-index.htm>>.
- Trebing, Michael E. "What's Happening in Manufacturing: 'Survey Says. . .'" *Federal Reserve Bank of Philadelphia Business Review*, September/October 1998, 15–29.

- U.S. Bureau of the Public Debt. "Reopenings." *www.PublicDebt.treas.gov* 27 July 2005. <<http://www.publicdebt.treas.gov/sec/secreo.htm>>.
- U.S. Bureau of the Public Debt. "Table of Treasury Securities." *www.PublicDebt.treas.gov* 30 March 2005. <<http://www.publicdebt.treas.gov/of/ofsectable.htm>>.
- U.S. Census Bureau. "Explanation of Benchmarking Revisions, Summary of Changes, Definitions." *Sector Service Statistics* 30 March 2004. <<http://www.census.gov/mrts/www/summary.html>>.
- U.S. Census Bureau. "Advance Monthly Retail Sales: December 2004." *News*, January 13, 2005.
- U.S. Census Bureau. "Advance Monthly Retail Sales: January 2005." *News*, 15 February 2005.
- U.S. Census Bureau. "Advance Report on Durable Goods Manufacturers' Shipments, Inventories, and Orders: December 2004." *News*, 27 January 2005.
- U.S. Census Bureau. "Advance Report on Durable Goods Manufacturers' Shipments, Inventories, and Orders: November 2004." *News*, 23 December 2004.
- U.S. Census Bureau. "Advance Report on Durable Goods Manufacturers' Shipments, Inventories, and Orders: October 2004." *News*, 24 November 2004.
- U.S. Census Bureau. "Annual Retail Trade Survey." In *Sector Service Statistics*, 3 January 2002. <<http://www.census.gov/svsd/www/overview.html>>.
- U.S. Census Bureau. "Description of Survey." In *Current Industrial Reports*. <<http://www.census.gov/indicator/www/m3/m3desc.pdf>>.
- U.S. Census Bureau. "Full Report on Durable Goods Manufacturers Shipments, Inventories, and Orders, January 2005." *News*, 4 March 2005.
- U.S. Census Bureau. "Manufacturing and Trade Inventories and Sales—General Program Overview." *www.Census.gov: Sector Service Statistics* 18 May 2000. <<http://www.census.gov/mtis/www/overview.html>>.
- U.S. Census Bureau. "Manufacturing and Trade Inventories and Sales, January 2005." *News*, 15 March 2005.
- U.S. Census Bureau. "Manufacturing and Trade Inventories and Sales—Reliability of Estimates." *www.Census.gov: Sector Service Statistics* 15 May 2002. <<http://www.census.gov/mtis/www/rely.html>>.
- U.S. Census Bureau. "Monthly Retail Trade and Food Services Definitions—Reliability of Estimates." *www.Census.gov: Sector Service Statistics* 30 March 2004. <<http://www.census.gov/mrts/www/nrelydef.html>>.
- U.S. Census Bureau. "Monthly Retail Trade and Food Services Definitions—Technical Documentation." *www.Census.gov: Sector Service Statistics* 30 March 2004. <<http://www.census.gov/mrts/www/ndesign.html>>.
- U.S. Census Bureau. "Monthly Wholesale Trade: Sales and Inventories, January 2005." *News*, 10 March 2005.
- U.S. Census Bureau. "New Residential Construction in February 2005." *News*, 16 March 2005.
- U.S. Census Bureau. "New Residential Construction." *www.Census.gov* 16 December 2004. <<http://www.census.gov/const/www/newresconstdoc.html>>.

- U.S. Census Bureau. "New Residential Construction." *www.Census.gov* 26 May 2004. <<http://www.census.gov/const/www/newressalesdoc.html>>.
- U.S. Census Bureau. "New Residential Sales in November 2004." *News*, 23 December 2004.
- U.S. Census Bureau. "November 2004 Construction at \$1,103.3 Billion Annual Rate." *News*, 3 January 2005.
- U.S. Census Bureau. "Quarterly Retail E-Commerce Sales: 4th Quarter 2004." *News*, 24 February 2005.
- U.S. Census Bureau. "U.S. Government Estimates of Quarterly Revenue for Selected Services." *News*, 14 December 2004.
- U.S. Department of Commerce, Bureau of Economic Analysis and U.S. Census Bureau. "U.S. International Trade in Goods and Services, January 2005." *News*, 11 March 2005.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Comprehensive Revision of the National Income and Product Accounts: 1929 through Second Quarter 2003." *News*. 10 December 2003.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Effects of the Third-Quarter Hurricanes on Income Measures." *www.BEA.gov*: National Economic Accounts October 2004. <<http://www.bea.gov/faq/national/disasters.htm>>.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Gross Domestic Product: Fourth Quarter 2004 (Advance)." *News*, 28 January 2005.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Gross Domestic Product: Fourth Quarter 2004 (Final)." *News*, 30 March 2005.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Gross Domestic Product: Fourth Quarter 2004 (Preliminary)." *News*, 25 February 2005.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Personal Income and Outlays: February 2005." *News*, 24 February 2005.
- U.S. Department of Commerce, Bureau of Economic Analysis. "Personal Income and Outlays: November 2004." *News*, 23 December 2004.
- U.S. Department of Commerce, Bureau of Economic Analysis. "U.S. International Transactions: Third Quarter 2004." *News*, 16 December 2004.
- U.S. Department of Commerce, Bureau of Economic Analysis. *An Introduction to National Economic Accounting—Methodology Paper Series MP-1*. Washington, D.C.: U.S. Government Printing Office, March 1985.
- U.S. Department of Commerce, Bureau of Economic Analysis. *Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends—Methodology Paper Series MP-2*. Washington, D.C.: U.S. Government Printing Office, May 1985.
- U.S. Department of Commerce, Bureau of Economic Analysis. *Foreign Transactions—Methodology Paper Series MP-3*. Washington, D.C.: U.S. Government Printing Office, May 1987.
- U.S. Department of Commerce, Bureau of Economic Analysis. *GNP: An Overview of Source Data and Estimating Methods—Methodology Paper Series MP-4*. Washington, D.C.: U.S. Government Printing Office, September 1987.

- U.S. Department of Commerce, Bureau of Economic Analysis. *Government Transactions—Methodology Paper Series MP-5*. Washington, D.C.: U.S. Government Printing Office, November 1988.
- U.S. Department of Commerce, Bureau of Economic Analysis. *Personal Consumption Expenditures—Methodology Paper Series MP-6*. Washington, D.C.: U.S. Government Printing Office, June 1990.
- U.S. Department of Commerce. “Census Bureau Reports on Residential Vacancies and Homeownership.” *News*, 25 April 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “Consumer Price Index: January 2005.” *News*, 23 February 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “Employment Cost Index—December 2004.” *News*, 28 January 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “Employment Hours and Earnings from the Establishment Survey.” *BLS Handbook of Methods*, Chapter 2, 9 February 2004.
- U.S. Department of Labor, Bureau of Labor Statistics. “Industry Productivity Measures.” In *BLS Handbook of Methods*, Chapter 11, April 1997.
- U.S. Department of Labor, Bureau of Labor Statistics. “International Price Indexes.” In *BLS Handbook of Methods*, Chapter 15, April 1997.
- U.S. Department of Labor, Bureau of Labor Statistics. “Labor force Data Derived from the Current Population Survey.” *BLS Handbook of Methods*, Chapter 1, 17 April 2003.
- U.S. Department of Labor, Bureau of Labor Statistics. “National Compensation Measures.” In *BLS Handbook of Methods*, Chapter 8, April 1997.
- U.S. Department of Labor, Bureau of Labor Statistics. “Producer Price Index: January 2005.” *News*, 18 February 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “Producer Prices.” In *BLS Handbook of Methods*, Chapter 14, 3 September 2003.
- U.S. Department of Labor, Bureau of Labor Statistics. “Productivity and Costs: Preliminary Fourth Quarter and Annual Averages for 2004.” *News*, 3 February 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “Productivity Measures: Business Sector and Major Subsectors.” In *BLS Handbook of Methods*, Chapter 10, April 1997.
- U.S. Department of Labor, Bureau of Labor Statistics. “The Consumer Price Index.” In *BLS Handbook of Methods*, Chapter 17, 10 March 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “The Employment Situation: January 2005.” *News*, 4 February 2005.
- U.S. Department of Labor, Bureau of Labor Statistics. “U.S. Import and Export Price Indexes: February 2005.” *News*, 18 March 2005.
- U.S. Department of the Treasury, Financial Management Service. “Monthly Treasury Statement of Receipts and Outlays of the United States Government.” 12 April 2005.
- U.S. Department of the Treasury, Fiscal Management Service. *Treasury Bulletin*, December 2004.

- U.S. Department of the Treasury, Office of Public Affairs. "Treasury International Capital Data for February." 15 April 2005.
- Whitehouse, Mark. "Yield Curve May Be Sending a Signal." *Wall Street Journal*, 9 May 2005, C1.
- Wildavsky, Rachel. "Second Most Powerful Man in America." *Reader's Digest*, December 1997.

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