

THIRD EDITION

1%	64.68%	103.5
2%	51.39	
3%	50.82	
4%	48.70	
5%	48.25	
6%	47.97	
7%	44.30	190.0
8%	43.18	
9%	41.94	146.2
10%	40.46	153.4
11%	40.05	140.3
12%	39.82	131.8
13%	39.61	*
14%	39.33	254.5
15%	39.04	171.3
16%	25.77%	118.0
17%	246	16

Treasury Prices in 3

BILLS	Chg.	Yield
27.37	1.99	2.02
99.97	6.89	+0.10
115.09	6.99	-0.05
131.00	6.74	
147.00	6.99	+0.14
163.00	8.16	-0.03
179.00	8.03	+0.04
195.00	7.90	+0.13
211.00	7.94	+0.04
227.00	7.95	+0.04
243.00	7.98	+0.04
259.00	8.01	+0.10
275.00	8.02	+0.12
291.00	8.00	+0.17
307.00	7.94	+0.14
323.00	7.88	+0.12
339.00	7.79	+0.16
355.00	7.77	+0.08
371.00	7.77	+0.11

BONDS & NOTES	Rate	Bid	Ask	Chg.	Yield
7 1/2% 99-29 100	7.49				
7 1/2% 99-29 100	6.42				
7 1/2% 100-03	6.24				
7 1/2% 150-03	6.24				
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McGraw-Hill	Irwin	McGraw-Hill
13 1/2% 99-29 100	7.49	
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A G U I D E T O

EVERYDAY ECONOMIC STATISTICS

GARY E. CLAYTON

MARTIN GERHARD GIESBRECHT

Pittsburgh Nat'l	5.81	0.00	
National Bank of Detroit	7.18	-0.05	8.03 +0.22
Bank of N.E. (Boston)	8.30	-0.16	8.20 -0.10
Southeast (Miami)	5.90	-0.27	7.75 -0.10
Citibank S.D.	8.51	-0.20	8.61 -0.30
City Sav. (Rich)	5.65	0.00	6.15 -0.05
C. & C. Commerce (Houston)	5.37	0.00	7.39 -0.21

MARKET INDEX	Last	Aug	Sept	Oct
100	1.16			
100	1.16			
100	1.16			
100	1.16			
100	1.16			
100	1.16			
100	1.16			
100	1.16			
100	1.16			
100	1.16			

	Dec	351.50	3	r	1	s	r	r	r
	MR90	355.60	3 1/2	r					
	Est vol	47.89		r	1 1/2	r	r	r	r
	Index prelim			r					
	NYSE COM		3/16	r					
Oct	Dec	195.50	1	r	5	s	r	r	r
	Sept	192.95	2 1/2	s					
	MR90	198.15	1	r	5	s	r	r	3 3/4
	Est vol	6.71		r					
	The Index:	13/16	1	r					
	MAJOR MKT			r	3 1/16	r	r	r	
	Aug	520.45	27 3/4	r					
	Sept	523.90		r					3/4
	Est vol	5.50	15 1/4	r					1 1/2
	The Index:	8 1/2		r					
	Sept	523.90	4 1/2	r	9	s	r	2	r
	Est vol	300.70	2 3/4	r	6 1/2	3 1/4	r	8 3/4	6 3/4
	Sept	175		r					
	Est vol	175		r					
	The Index:	1 1/2		r	18 1/8	r	r	r	
	CRB Index		3/4	r					
	Sept	222.70		r					
	Dec	223.20	3/16	r					
	Est vol	531		r	1/2	r	r	r	
	The Index:			r					
56% 34% Scott				r					
10% 10% Scott				r					
				r					
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A GUIDE TO EVERYDAY ECONOMIC STATISTICS

Third Edition

Gary E. Clayton

Northern Kentucky University

Martin Gerhard Giesbrecht

Northern Kentucky University



**Irwin
McGraw-Hill**

Boston, Massachusetts Burr Ridge, Illinois Dubuque, Iowa
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A GUIDE TO EVERYDAY ECONOMIC STATISTICS

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Dedication

It is traditional for authors to dedicate their work to their mentors, colleagues, and especially the family members and loved ones who have endured daily sacrifices while the authors dally at the keyboard. Well, we've done all of the above--and we certainly appreciate the support of our families and loved ones--but this time there is a special group we would like to acknowledge.

Specifically, we would like to dedicate this book to the many public servants in the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Bureau of the Census who are dedicated to making the statistics on the United States economy as good as they can possibly be.

We owe a special debt of thanks to numerous individuals--including Richard Bahr, Susan Behrmann, Sharon Cohany, Jeff Crawford, Pauline Cypert, Patrick Duck, Kevin Ellis, John Glaser, Patrick Jackman, Everette P. Johnson, Clint McCully, Jeff Newman, Nick Orsini, Kenneth Petrick, James Rankin, Steve Rawlings, Mary Lee Seifert, Chris Singleton, John Stinson, David Sullivan, Leeto Tlou, Brenda Yates, and Mary Young--who have answered questions, supplied data, recommended sources, and cheerfully tolerated a never-ending series of arcane (and sometimes inane) questions.

Finally, we are also indebted to Phil Yannarella, our government documents librarian, who can find *anything*. Of course, whatever errors and oversights remain in this manuscript are entirely our own, but we freely acknowledge that we could not have come this far without their help.

Indeed, in a world where government bureaucracy is becoming increasingly unpopular, we can report that there are some agencies that are a pleasure to work with. We'd like our readers to know that they are doing a great job. We'd like our colleagues in government to know that their efforts are sincerely appreciated.

About the Authors

Gary E. Clayton teaches economics and finance at Northern Kentucky University. He received his Ph.D. in Economics from the University of Utah, has taught economics and finance at several universities, and has authored a number of books and articles in educational, professional and technical journals. Dr. Clayton has appeared on a number of radio and television programs and, along with his colleague, Dr. Martin Giesbrecht, has appeared as a guest commentator for “Marketplace,” which is broadcast on American Public Radio and originates at the University of Southern California.

Dr. Clayton also has a long-standing interest in economic education. He has participated in and directed numerous economic education workshops, received an Outstanding Citizen Certificate of Recognition from the state of Arkansas for his work in economic education, and was a national award winner in the college division of the International Paper Company competition which is sponsored by the National Council on Economic Education.

Martin Gerhard Giesbrecht teaches economics at Northern Kentucky University. He has taught and/or done research at Stanford University, the University of Chicago, Harvard University, Indiana University, National Chengchi University (Taiwan), Rutgers University, and Wilmington College. His doctoral degree (cum laude) was earned at the University of Munich, Germany, which he attended on a Fulbright Grant. Making economics accessible, intellectually enlightening, and even entertaining is the mission of Martin Giesbrecht’s professional life. All of his ten books, including this one, and his many shorter articles, some of which have also appeared in German and Chinese, are dedicated to that end, as is his weekly commentary on WNKU.

Because he writes and speaks in a way that people can understand, the Society of Professional Journalism has bestowed its Award for Excellence on him in 1993. He has also won awards from the German-American Chamber of Commerce, the National Aeronautics and Space Administration (NASA), the American Society for Engineering Education, the National Science Foundation, The General Electric Foundation, the Ford Foundation, the U.S. Small Business Administration, and the National Endowment for the Humanities, among others.

Preface

Economic statistics, like so many other statistics, might seem as dry as an old bus schedule. A closer look, however, reveals them to be fascinating.

There are two reasons for this. One, economic statistics hit us where we can feel it: in the breadbasket, in our wallets, in our standards of living, and in our careers. And, two, they are themselves the product of one of the more extraordinary human endeavors of our modern age.

Statistics tell us a great deal about ourselves and our economy. Studying economics without paying attention to the statistics would be like a tourist ignoring a road map. But this book is neither a statistics lecture nor an economics textbook. Nor does it need to be read consecutively from beginning to end, although that is OK too. It is a handy little guide that can be consulted for clarification whenever any of the statistical series dealt with herein are encountered.

This book takes a closer look at the economic statistics that describe the world in which we live. It examines how the statistics are constructed and how we may use them effectively. Of course, we've had a lot of help along the way. This third edition has benefited not only from the suggestions of colleagues, students, and business decision makers, but also from the many members of the business news media, including the able staff of American Public Radio's *MARKETPLACE* program.

Use it well, and use it often.

Gary E. Clayton
Martin Gerhard Giesbrecht

Table of Contents

CHAPTER 1: INTRODUCTION

How the Statistics in This Book Were Chosen	1
A Frame of Reference	2
The Many Faces of Economic Statistics	6
Abusing Economic Statistics	8
Using Economic Statistics	10
And Beware of Forecasts!	12
A Final Word	13

CHAPTER 2: TOTAL OUTPUT, PRODUCTION, AND GROWTH

Gross Domestic Product	15
The Index of Industrial Production	24
Index of 11 Leading Indicators	28
Purchasing Managers' Index	34
Labor Productivity	38
Capacity Utilization	41

CHAPTER 3: INVESTMENT AND CAPITAL EXPENDITURES

Gross Private Nonresidential Fixed Investment	43
Building Permits and Housing Starts	48
Business Inventories	52
Durable Goods Orders	56

CHAPTER 4: EMPLOYMENT, EARNINGS, AND PROFITS

The Unemployment Rate	59
New Jobless Claims	66
Help-Wanted Advertising	68
Personal and Disposable Personal Income	70
Corporate Profits	75

CHAPTER 5: SPENDING, SALES, AND EXPECTATIONS

Consumer Spending	77
Retail Sales	80
Auto Sales	82
Consumer Confidence and Expectations	86

CHAPTER 6: PRICES, MONEY, AND INTEREST RATES

The Consumer Price Index	89
The Producer Price Index	94
The Money Supply	96
The Prime Rate	99
The Discount Rate	102
The Fed Funds Rate	104
The Treasury Bill Rate	107

CHAPTER 7: FINANCIAL MARKETS, INTERNATIONAL TRADE, AND FOREIGN EXCHANGE

The Dow Jones Industrial Average	109
Standard & Poor's 500	114
The Trade Deficit	117
Foreign Exchange	121
The Value of the Dollar	123

APPENDIX: THE ECONOMIC BULLETIN BOARD

Logging On	126
The Data Files	127
Fees and Billing	128

INDEX	129
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Chapter 1

INTRODUCTION

How the Statistics in This Book Were Chosen

We need economic statistics to know how we are doing, and we need to know how we are doing in order to figure out how to get where we want to go. Decision making requires knowledge, and knowledge is the only logical basis of action. That is why we need economic statistics.

There are literally millions of statistical series! At the personal level, each of us could probably generate a dozen series from our grocery receipts, odometer readings, telephone bills, and electricity bills. Every business, town, city, county, and industry could do and often does the same in its own field of operation.

Even the broad-based measures of economic statistics, those that deal with whole states, regions, and nations, number into the thousands. A glance at any statistical yearbook or almanac or at the annual *Statistical Abstract of the United States*¹ will make this point.

Yet, only 35 series of economic statistics are dealt with in this book. Why?

First and most obvious, there is such a thing as too much information. It can prevent us from seeing the forest for all the trees.

¹ Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or any U.S. Department of Commerce district office.

Second, many statistical series, like one detailing our own personal electric consumption, are not interesting to everyone.

Third, many statistical series are compiled and published too late to be of much more than historical interest.

Finally, many statistical series are not reported regularly in the press and broadcast media. The 35 series dealt with in this book are those with extremely high profiles. Some, like the Dow Jones Industrial Average, are reported daily--on television, radio, and in national and local newspapers. Others, like the prime rate, are mentioned less frequently but receive prominent attention when they change.

If we want to know how we are doing or where we are headed, even just these 35 are usually more than enough. They include most of the major economic indicators that are important all of the time. Gross domestic product (GDP), the consumer price index, and the unemployment rate would certainly be in the top half-dozen of anyone's list of key economic statistics. Many others are important most of the time, and the rest are important at least some of the time.

We may not have selected everyone's favorite statistical series--and for that we apologize--but we are driven by a positive philosophy of wanting to describe "what is" rather than a normative one of "what should be." Many statistics are neglected when they should not be, while others are widely reported when there is less reason to do so. However, the objective here is to provide a guide to those series that *do* receive attention rather than to the ones that *should*.

A Frame of Reference

The main measure of overall economic and business activity is gross domestic product, whose fluctuations are the most important gauge of good

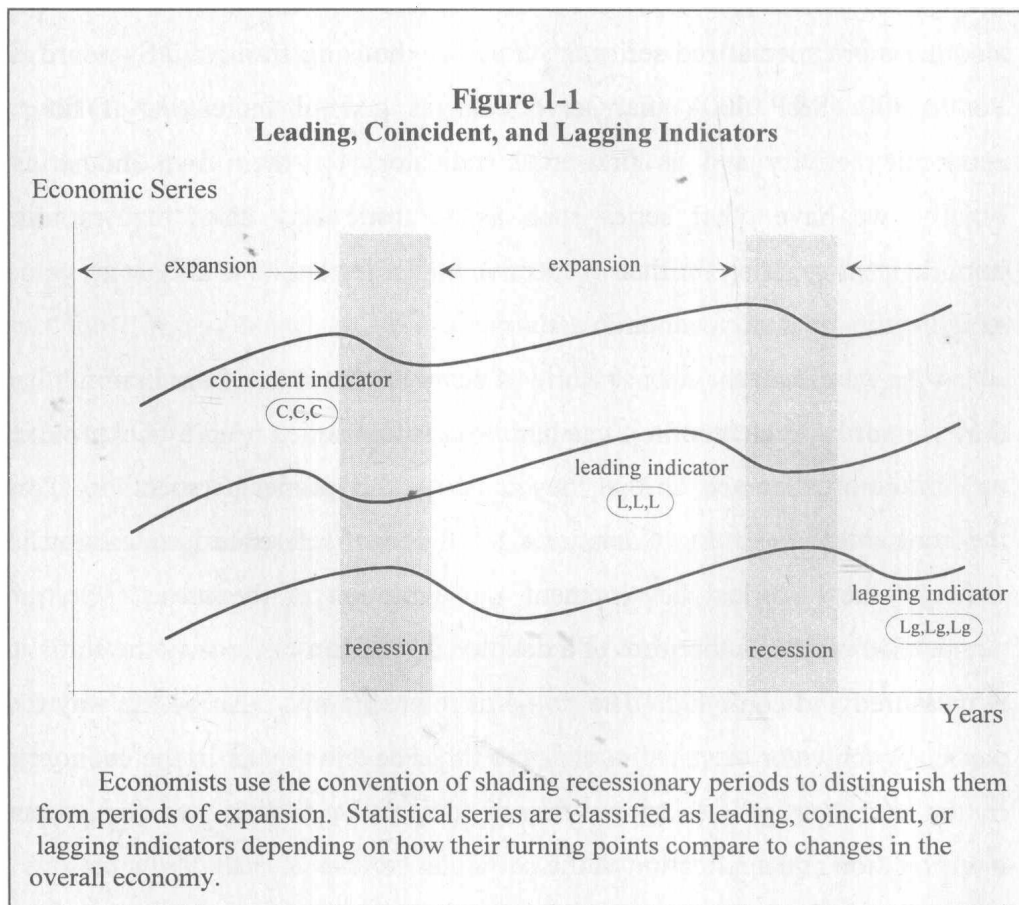
times or bad times that we have. In this context, as in virtually all others, GDP is to be understood as a final, bottom-line accounting measure, an economic result, rather than as an indicator of things to come.

Many of the statistics reviewed in this book measure either the whole or parts of GDP. Other statistics, the index of 11 leading indicators preeminent among them, serve better as signals of things to come. There are also the more specialized series, such as new housing starts and Standard & Poor's 500 (S&P 500), that serve both as general indicators of future economic activity and as first-order indicators for their own industries. Finally, we have other series such as domestic auto sales that provide important information for their respective industries but have almost no value as indicators of future economic activity.

As we peruse the formal world of economic statistics, bear in mind that they cannot be evaluated in a vacuum. Statistical series need a background, or a frame of reference, so that they can be put in proper perspective. This the book attempts to do. Sometimes the frame of reference is discussed in terms of the historical development and evolution of the series. Or, the perspective may take the form of a detailed discussion of the way the statistic is measured and compiled. The frame of reference may also be the way the particular indicator or statistic relates to other developments in the economy. In the end, our goal is to provide a perspective that allows for proper interpretation and application of the particular series.

Of particular interest in Figure 1-1 are the three types of indicators: leading, lagging, and coincident. The name given to each refers to the way the series moves in relation to changes in overall economic activity. For example, the series marked "leading indicator" turns down before the economy enters a recession (the shaded area in the figure) and turns up before the expansion begins.

The "lagging indicator" series behaves just the opposite: it turns down after the economy enters a recession, and up sometime after the recovery is underway. A coincident indicator neither leads nor lags. Instead, its timing is such that it turns down when the economy turns down, and up when the economy turns up.



The three codes in the oval key for each indicator show how the changes in the individual series compare to changes in the overall economy. The coding, also shown in Figure 1-2, is the same as that used by the Bureau of Economic Analysis (BEA) in the Department of Commerce to classify the economic indicators reported in the monthly *Survey of Current Business*.

Sometimes a series leads both peaks and troughs in the economy to make it an overall leading indicator. At other times, it may lead peaks and lag troughs to earn an overall rating of "unclassified." Other series play no role as indicators of overall economic activity, and so no codes are shown.

Figure 1-2
Leading, Lagging, and Coincident Indicators

- | | |
|---|--|
| <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px; display: inline-block;">L,Lg,U</div> | <p>The series leads the peaks in the economy; it turns down <i>before</i> the economy turns down (L = leads).</p> <p>The series lags the economic recovery; it turns up <i>after</i> the economy turns up (Lg = lags).</p> <p>Overall, the series is unclassified; it is neither a leading nor a lagging indicator on a consistent basis (U = unclassified).</p> |
| <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px; display: inline-block;">Lg,C,Lg</div> | <p>The series turns down <i>after</i> the economy peaks (Lg = lags).</p> <p>The series recovers <i>just as</i> the economy recovers (C = coincident).</p> <p>Overall, the series lags (Lg = lags) as an economic indicator.</p> |
| <div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px; display: inline-block;">C,L,L</div> | <p>The series turns down <i>just as</i> the economy turns down (C = coincident).</p> <p>The series turns up <i>before</i> the economy turns up (L = leads).</p> <p>Overall, the series is classified as a leading indicator (L = leads) even though the timing of the series is coincident for peaks.</p> |

The first code in the oval stands for the timing of the series with respect to peaks in the economy, or when the expansion ends and the recession begins. The second stands for the timing of the series with respect to troughs in the economy, or when the recession ends and the recovery begins. The last code indicates the overall classification of the indicator.

Whenever possible, the economic series examined in this book are plotted against the historical background of recessions and expansions. As will be seen, many series behave like those in Figure 1-1, although the timing of the turning points will vary considerably. Others will appear to have little, if any, relationship to changes in the overall economy. Even so, we feel that

the presentation is important if you are to make your own judgments about the behavior of the series.

We have also listed convenient sources of data. Sometimes the source is in the form of easily accessible publications, and sometimes it is in the form of a telephone hotline. There is also an appendix at the end of this book describing an electronic bulletin board available at the U.S. Department of Commerce to anyone with a personal computer and modem. Each of these sources will help you keep abreast of your own favorite series.

The Many Faces of Economic Statistics

The task of interpretation might seem to be a simple one: just take the numbers and describe how they have changed. Unfortunately, it's not always that easy. The task of interpretation is also made difficult because most statistical series can be reported in a number of ways. To illustrate, consider a hypothetical report stating that total sales increased from \$900 billion to \$940 billion over a recent 12-month period. If the report is in terms of current prices, and many initial reports are released this way, then it stands to reason that some of the \$40 billion increase is due to inflation.

To compensate for inflation, sales can be measured in terms of constant dollars--also known as real dollars--using prices that prevailed in an earlier year. If 1987 is used as the base year, then the same report could be worded like this: "In terms of constant 1987 dollars, total sales increased from \$630 billion to \$643 billion for the most recent year." Since prices were about 30 percent lower in 1987 than they are today, the \$900 billion is converted to \$630 billion for purposes of the report.

Most series that are susceptible to the distortions of inflation are reported in both current (nominal) and constant (real) dollar amounts, with

1987 being the most popular base year. Both kinds of information are valuable--if used correctly--although the availability of both means that final sales statistics can be reported in a number of different ways:

- the *current* or *nominal* dollar value of total sales (\$940 billion)
- the change in the *current* or *nominal* dollar value of total sales (\$40 billion)
- the *constant*, or *real* dollar value, of total sales (\$643 billion)
- the change in the *constant*, or *real* dollar value, of total sales (\$13 billion)
- the percentage change in the *current* or *nominal* dollar sales (4.44 percent, or \$40 billion/\$900 billion)
- the percentage change in the *constant* or *real* dollar sales (2.06 percent, or \$13 billion/\$630 billion)²

We have the same type of problem when numbers are converted to an index, such as the consumer price index, the producer price index, or any other index. For example, suppose that the index under consideration has a base year of 1977 = 100 and currently stands at 145. If the index goes to 146 in the next month, there is an increase of 1 over the base period activity, or a 0.69 percent increase in the index over the previous month ($1/145 = 0.0069$). If the index were to grow at the same rate for each of the next 11 months, the annualized rate would be 8.6 percent.³

Using the numbers in the paragraph above, we can see that the change in any index can be reported in several different ways:

- the *absolute level* of the index (145)
- the *absolute change* in the level of the index from period to period (1)
- the *relative percentage change* from the previous period (0.69 percent)
- an *annualized projection* of the current period percentage change (8.6 percent)

² If the nominal change was 4.44 percent, and if the real, or price-adjusted change was 2.06 percent, then the 2.38 percent difference was due to inflation.

³ The series is compounding monthly, and so the correct computation is to use the following formula:

$$\begin{aligned}\text{Annualized growth} &= (1 + \text{monthly percentage change})^{12} - 1 \\ &= (1 + 0.0069)^{12} - 1 = 0.086\end{aligned}$$

Because of compounding, you *cannot* multiply the monthly percentage change of 0.0069 by 12 to get an annualized rate, although some people often make this mistake!

In general, the relative percentage change is the most useful, with the annualized version coming in next. However, the reader should be advised that even these lists are not exclusive. For example, sometimes the change in the level of the index is compared to a period 12 months earlier. If the new level of 146 is 10 points higher than it was 12 months ago, then we could also say that the annual increase was closer to 7.35 percent.

Abusing Economic Statistics

The governments of the modern, industrialized nations of the free world--the United States among the best of them--enjoy a remarkable reputation for producing honest statistics. Surprisingly (since they bear less responsibility to the citizenry), so do many nongovernmental agencies in these countries that produce statistical series, some of which are included in this book. In some nations however, statistics are exaggerated, underreported, or simply faked for political or ideological reasons. When this happens, the usefulness of the statistics is radically reduced. Whether they know it or not, it is also a tragic loss to those nations that support this type of activity.

In the United States, it has been hinted that the release of new statistical figures is sometimes delayed for a few hours in order to prevent some political or commercial embarrassment. But even such temporary mischief has not been widely confirmed. Quite to the contrary, what no politician or business leader in America will deny is that statistics tend to be brutally honest.

Perhaps the most common abuse of economic statistics is to apply them to situations for which they were never intended. For example, some series with little, if any, relationship to movements of the overall economy

are often treated as if they are significant predictors of future changes in GDP. Personal income in current dollars, discussed in detail in Chapter 4, is one such example. The historical record shows that personal income almost always goes up, even when the economy is in recession.⁴ Even so, increases in personal income are dutifully reported and widely heralded by the press each time they are released.

Other series are treated as indicators of future overall economic activity when in fact they consistently lag developments in the economy. Interest rates can be cited in this context. For the most part, interest rates tend to follow, rather than lead, changes in the overall economy. Declining interest rates may benefit some sectors of the economy, especially housing, automobiles, and to some extent stock prices, but lower interest rates are of little use in predicting future changes in the overall economy.

Yet a third abuse is to focus on nominal dollar values when the real, or inflation-adjusted, figures give a better picture of the underlying changes. Unfortunately, the various government agencies contribute to this problem because the nominal dollar data and the price deflators needed to adjust the data are not available at the same time. When the U.S. Department of Commerce releases its *Advance Monthly Retail Sales* report⁵ during the second week of every month, the data are adjusted for seasonal, holiday, and trading day differences but not for inflation. By the time inflation-adjusted figures are available, the initial change in retail sales has already been reported and the new figures are of little interest to the media.

Finally, we should note that the media sometimes report on new government figures without giving us enough information to evaluate the

⁴ The most recent recession in the U.S. economy began in July 1990. During the 9 recessionary months that followed, personal income in current dollars increased 7 times and declined only twice! In terms of constant dollars, there were 5 monthly decreases and 4 increases.

⁵ A brief monthly report available on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.