“Ahead of the Curve” Review and Summary

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Book Review

Economic information comes from all angles in the media, constantly exposing us to endless analysis, commentary, opinion and debate. Yet this onslaught doesn’t seem to make us any wiser in knowing where the economy is heading. For the millions of people trying to read the economy, only a few are successful. (Economic forecasts are less accurate than weather forecasts.)

The reality is that most economic predictions are based on the wrong indicators, so there’s no chance that they will ever produce useful forecasts. Even when the right information is presented, it’s never presented in a way that’s easy for people to understand. The economy is complex, but don’t be discouraged. It is quite possible for the average person to learn what they need to know to understand it. *Ahead of the Curve* will arm you with the knowledge you need to deflect useless theories and reject hype. Economic analysis *can* be a do-it-yourself activity.

Throughout the book, Ellis draws extensively from his 35 years of experience as a Wall Street investment analyst. He also presents a new method of economic forecasting. Rigorously empirical, it’s based entirely on examining historical data for recurring patterns. Instead of tracking absolute increases and declines, this method looks at changes in growth to make economic forecasts. As chilling proof of the accuracy of the method, the book (published in 2005) precisely predicted the 2008 stock market crash and economic downturn. It isn’t often that a book on economics can cause goosebumps, but the last few chapters are likely to give shivers down the backs of many readers.

Chapter 1

Every day, we’re exposed to lots and lots of economic data. There are countless forecasters making economic predictions. Of all the people and organizations predicting the future, none

are so consistently accurate as to be reliable. Nevertheless, we do need some way to interpret the trends. We need to see around corners.

Context is everything. Information needs to be juxtaposed with the information that preceded it, so that we can understand the patterns in the data. Only by comparing last year's performance to this year's performance can we see whether we are progressing toward our goal.

All too often, though, the media doesn't present economic data with historical context. In fact, the media does a poor job in general with reporting data. Most people understand data better when it's explained with visual tools like charts, but media sources often report economic data without helpful tools. Even when they do use charts, reporters don't explain them very well.

So, it's up to individuals to take matters into their own hands and do their own analyses. Fortunately, analyzing economic data is as simple as gathering historic and current data from the internet and using Excel or similar software to assemble it all into an easy-to-read chart. Anyone can do this. It doesn't require special skills or tools. Econometric analyses, on the other hand, are complicated statistical analyses that economists use. But these forecasts are less useful than you'd expect. They tend to be rigid in their modeling and don't provide a complete, dynamic picture of things. Even with the improvements in technology and computer intelligence, economic Nobel Prize winner Paul Samuelson purports they're only of limited use. It's much better to just construct charts out of historical data and look for possible cause-and-effect relationships. (Turns out, these relationships drive economic cycles.)

The trick is to be smart about how you chart the relationships. Changing the organization and tracking of data can be useful preparation for analyzing relationships, and the book sets forth a simple method for doing so. This book is written for a diverse audience with various levels of economic sophistication (business owners, executives, investors, etc.), and it aims to provide a method for contextualizing economic data to make it easier to understand. Understanding this information is important: it is not the media's responsibility to ensure we develop this knowledge—it is our own responsibility.

Chapter 2

Personal Consumption Expenditure (PCE) is a way to measure consumer spending. Because consumer spending drives two-thirds of the Gross Domestic Product (GDP), it's a useful metric for understanding the economy. (Ellis has lots of experience working with PCE because he used to be a retail analyst.) Some readers might feel intimidated by all the big words thrown around, but it's quite simple. Economic growth is the rate of change in demand for and production of goods and services. See? That isn't so hard to understand.

The economic cycle is driven by cause and effect. Personal income drives consumer spending. Businesses respond to consumer spending by increasing production which, in turn, requires greater investments in infrastructure/capital spending. Consumer spending, production and capital spending all drive corporate profits. Stock market performance is dependent on corporate profits; corporate profits also drive employment. And so, you see that job growth is at the very end of the food chain. Employment is a trailing economic indicator, and for this reason, it isn't useful for making forecasts. Real consumer spending (i.e., PCE) is the economy's most important generator. It is real in the sense that spending is measured in units and not in dollars, meaning it's adjusted for inflation.

In 2004, the US GDP was over $11M. This includes consumer spending, capital spending and government spending. Considering each in turn:

- Consumer spending— GDP is reflective of final sales, but before the final sale there's a lengthy series of transactions that occur as materials are purchased and labor is paid. Consumer spending, then, is the final step in a long chain of transactions. (The largest economic sector hiding behind the final sale is industrial production.)
- Capital spending— The Department of Commerce calls this gross private domestic investment, but others simply call it capital spending. Like consumer spending, capital spending is cyclical and real capital spending is adjusted for inflation.
- Government spending— Usually about 15-20% of GDP, government spending is fairly stable and doesn't fluctuate much, so you can't really expect it to stimulate anything. Net exports and imports account for goods that aren't consumed domestically, balanced against those produced overseas and brought into the US.

Consumer spending dominates the economy. Because it is such a large share of GDP, it drives corporate profits— and corporate profits, as we saw, drive employment. The stock market is a predictive indicator, moving up and down with consumer spending. Consumer spending forecasts, then, can be used to predict the stock market, although there are lots of other factors that affect the stock market. Net-net: monitoring consumer spending is the best way to determine where the economy is going.

Chapter 3

As an investment analyst on Wall Street, Ellis learned about market cycles. There are long periods, sometimes lasting years, during economic slowdowns when stocks just aren't a good investment. In cycle after cycle, businesses always seem to get caught in periodic downturns, and by the time the leaders realize they're in a downturn, it's too late to do much about it. There's a traditional fear of recession (defined as two quarters or more of decline of real GDP), but ultimately, the downturn is already in the cards before a recession even hits.

Economic downturns have four stages:

- At the peak, consumer spending and GDP are growing, profits are rising, and employment is hunky-dory. The stock market continues to peak and investors are enthusiastic. Optimism is high.
- Then, things slow a little. The economy is still growing, but the rate of growth has been reduced. Interest rates rise just a little. The stock market cools down. Soon enough, worry sets in.
- Interest rates and inflation rise. Rate of growth in GDP slows to 2 or 3%. People start predicting a recession. The stock market slumps.
- Finally, the recession hits. GDP declines, profits fall, capital spending declines and so does the employment rate. This starts a negative feedback loop: fewer people working = less consumer spending = less fuel to keep the economy humming. Fear of decline become widespread; everything is very unpleasant. After the downturn reaches its nadir, the stock market stops falling and starts advancing once again.

Ellis observes these cycles and realizes that recession is cast as the villain, but the horror of recession is far worse than the actual effects of recession.

There are two big errors in traditional economic analysis. The first mistake is regarding recession as the main indication of economic slowdown. Recession is identified by GDP, but by the time the decline has hit GDP and it reflects the slowdown, significant portions of the economy are already damaged. Something more sensitive should replace recession as the canary in this coalmine. The second mistake is the practice of tracking economic data quarter to quarter and month to month. This causes a lot of noise; there are lots of adjustments that have to be made to the data. Year-to-year tracking is better.

Recession is the wrong indication of economic harm. Quarter-to-quarter rates are the wrong way to measure it. Correcting these errors allows us to use the same data that everyone else has, but to use it more effectively.

Chapter 4

Ellis recalls that the 1969-70 recession wasn't identified as such until the final quarter of 1970, by which time the bear market had already ended. In subsequent recessions, Ellis similarly observed that the harmful aspects of downturns actually occurred before the authorities declared a recession.

Recession, as a reminder, is defined as more than two-quarters decline in real GDP. This measurement tends to put observers into a simplistic, dualistic head-space. If GDP is positive, then it's good; if GDP is negative, then it's bad. A slowdown that doesn't land GDP in the negatives doesn't provoke much horror— it's seen as a soft slowdown, more of a minor worry, if anything. But Ellis has been watching the economy for a very long time, and he believes that such slowdowns can cause almost as much damage as proper recessions. Consider: 1953, 1956-57, 1962, 1966 and 1984 when markets declined over 15%, even without officially declared recessions. So really, the way recessions are measured and used as a benchmark is arbitrary, not necessarily as useful as we'd like.

Recessions are infrequent. Slowdowns are more important, and when you look at the numbers during these periods, GDP growth is actually inhibited more than you'd imagine if you were just looking at recessions. Recessions are bogeymen. Declining rates of growth are the real culprit.

Recessions might have some value in predicting the beginning of a new cycle, but that's about it. It's a very dramatic word and it gets people excited, but by the time the word is uttered, that horse has already left the barn. Since recessions have been dethroned a new milepost is

needed: how about rate of change economic tracking (ROCET), tracking turning points in growth, rather than absolute levels, to help make economic forecasts.

Chapter 5

Too much reliance on recession as an indicator is one problem; the second problem is the standard practice of measuring change in short-term increments– periods so short they can disguise larger trends. For example, data that is tracked quarterly has to be multiplied by four to get the annual rate. Every time you massage numbers like this, you're moving one step beyond the actual data. Sometimes it can't be helped and numbers have to be adjusted, but you should do everything in your power to minimize this. These noisy, quarterly charts with wild swings of data and little context are confusing. The better solution is year-over-year charting, which makes trends much easier to spot.

While charts like this often allow us to comprehend lots of data in a single glance, they can hide the truth just as well as reveal it. It's helpful if charts show more than one indicator; chart out both cause and effect. For example, if you chart consumer confidence, it's probably because you think this will affect consumer spending. Include both indicators on the chart.
Also be sure to include several years of data to show a number of cycles in completion. Publishers tend to limit charts to one-page or even half-page formats, which limits how much information can be shown. And often, it's chronological information that gets shorted. Sometimes you might need to look at 40 years' worth of data to really understand what's going on.

Ellis offers a number of other suggestions for chart makers, for example: if the two items you're charting have really different scales, you can show one series on the right side of the chart and the other on the left. Further, vertical and horizontal grid lines make charts much easier to read. It's best if these lines are grey instead of black, so that they don't compete visually with lines that indicate the actual data.

Chapter 6

Let's look at indicators. Say you have one series of economic data (we'll call this Series A) and another series of data (we'll call this Series B). If change in Series A consistently leads to change in Series B— both in upward and downward change— then you can conclude that A has a causal relationship with B. But keep in mind that A and B won't always be headed in the same direction. Say that A and B are both going up. A will start going down while B is still going up. This can be really confusing, and people won't want to see the writing on the wall for B because it is still going up. Instinct tells us that B is doing just fine, but it is not.

Leading indicators cycle through several phases. Starting with last phase of the previous cycle:

- Period Four— Positive divergence: The rate of growth in Series B, our target, is bottoming out; Series A has already turned upward. Even though B is doing poorly, the astute among us know that because A is heading up, B will turn around soon.
- Period One— Positive concurrence: B begins to increase and head upwards. Told you so.
- Period Two— Negative divergence: But wait, Series A flew too close to the sun, and now it's trending downward. B is still going strong, though, so the smart money is cautious about B, because soon it will follow A.
- Period Three— Negative concurrence: Everything is heading south; panic ensues. And it's too late to do anything about it now.
  Period Four— Positive divergence: This brings us back to where we walked in. Series A is up, but Series B is still tanking.

Naturally, this is a major simplification. In practice, there can be quite a bit of difference from one cycle to the next, and these differences can obfuscate the causal relationship between Series A and Series B. For one thing, cycles don't necessarily last the same amount of time: one might last a few years, another a few months.

The gap in time from when A peaks to when B peaks can also vary from one cycle to another. The highs might not be so high in some cycles; other cycles might see wild extremes. (This is one reason why charts are so helpful. We can usually see patterns with our eyes even better than computers can see them with analytical software.)

A big problem with analyzing causal relationships is that they're cyclical. A follows B follows A follows B. We have a chicken and egg problem with respect to determining whether A is causing B or B is causing A. In the case of economic indicators, however, we already kind of know how it

works. So, if we're looking for indicators to see how unemployment rates will change, we know that consumer spending is the indicator to watch. Sometimes causality is asymmetrical, which is to say that one factor may operate at a different scale than the counterpoint. A small increase in consumer spending, for example, may cause a disproportionate rise in employment.

It's important to use the right leading indicators. The cause-and-effect relationship should make sense. When they're charted out together, a causal relationship should be easy to see. But remember: there's sometimes difficulty knowing if two things have a causal relationship or if the correlation is just casual. You need to evaluate the evidence as best you can.

Chapter 7

Response to consumer spending is more volatile than the activity that spurred it. For example, if you start with a flat economy, and then there's a 5% increase in the purchase of shirts, factories will have to ramp up sales to 8% for a while in order to stay on top of the demand and growth. Consumer spending can spur seemingly exaggerated responses— it's important to understand that this means if you're in manufacturing and you see consumer spending slow by 2-4%, your own company sales will likely drop 8-10%. Supplier sales will drop even more.

People always say, "Oh, this time it's different." They're wrong. For example, look at the 2000-2002 downturn. People said the pattern was different because of unprecedented circumstances; the collapse of the tech bubble was unique. In fact, it was heralded by a drop in growth, so the pattern holds.

It's dangerous to imagine that you're looking at unique circumstances and that on this occasion the usual pattern won't hold. Chances are good that you're wrong. Look at charts of historical data— you will see these same patterns. Of course, there are unique variations with iterations of each cycle, but the cause and effect relationships stay the same.

Economists, analysts and managers never see these changes coming. They aren't looking at charts. But again, charts are really helpful in understanding what's going on. They provide perspective. Relationships between cycles of spending and specific sectors of manufacturing can always be charted.

Capital spending is driven by consumer spending—not the other way around. Capital outlay includes things like facilities and equipment costs. Usually it's after growth has been up for a few quarters that companies will update their capacity. Capital growth is thus strongly associated with demand, especially consumer demand.

Given the consistency of these patterns, it's amazing how many analysts are optimistic even when consumer spending falters. They are looking at capital spending. Wrong. Some economists think of capital expenditures as leading indicators, but they're wrong, and this misperception has important ramifications for tax policy. Of course, capital spending has a sort of ultimate effect in stimulating economic growth, but it does not drive the current cycle. There is a political debate about giving tax cuts to businesses in order to stimulate the economy, but it would be much more helpful to give tax cuts to consumers.

Chapter 8

Eighty percent of GDP is from the demand cycle, wherein consumer spending leads to industrial production which leads to capital spending. How does the demand cycle effect the stock market? Well, lots of things can move the market, but there are only a few consistent, significant market movers out there. The demand cycle shouldn't be the only factor referenced in forecasting the stock market, but it's definitely something useful to consider.

Surprisingly, Ellis points out that no one has really compared stock market returns against the cycle of corporate profits. A chart in the book shows what that looks like, tracking S&P 500 earnings against corporate spending. The S&P is much more volatile, but the relationship is easy to see: bear markets always begin when spending growth peaks. Another chart (less hypothetical and more historical than the last) shows that bear markets result when spending peaks and slows. Growth slows down and corporate profits slow, then investor enthusiasm declines, leading to a bear market. The bear market is usually over when growth bottoms out. (And, in case you missed this before, recessions are lagging indicators and totally unsuitable for economic forecasts. They do not predict bear markets.)

The best time to sell is when the economy is peaking, which is counterintuitive for many people. People want to believe the good times are going to keep rolling. Alternatively, the best time to buy is when the market is still tanking but close to reaching bottom. It's hard to have faith when everything looks so grim; it takes a lot of self-discipline to time the market like this. We've all

heard the old saw, “Buy low, sell high.” It’s so obvious, and it gets repeated so often that people take it about as seriously as they would a nursery rhyme.

And yet, when the market goes up, people are optimistic that it will continue to rise, so they keep buying, even though they’re buying high. And when the market crashes, people think they should sell before they lose even more. Really, though, all they’re doing is solidifying the loss and selling low. This self-destructive behavior happens because people extrapolate what’s happening in the present out to the future. They are using the wrong economic indicators as well. (As we’ve seen, consumer spending is really where it all begins.) It takes a lot of self-discipline to sell when everything is going well and to buy when it seems the apocalypse is near.

Admittedly, it’s hard to time the exact peak. Trends can continue for months. To identify the crucial turning points, you have to be on top of the real leading indicators of demand. These include things like hourly wages and interest rates. You should also track coincident indicators, like consumer confidence. Don’t let lagging indicators like unemployment or capital spending deceive you.

Finally, you absolutely have to learn how to master your emotions. Whether you’re dealing with the stock market as a whole or just one company, these principles hold. It’s very hard to let go of something at the height of success or to invest when the chips are down, but that’s the path to success.

Chapter 9

Clearly, understanding consumer demand is important for making forecasts. The real trick is catching the exact moments that demand reaches a peak or valley.

There are lots of different things that influence consumer spending. There are financial factors (for example, wage and consumer borrowing), fiscal and monetary factors (for example, taxes and interest rates) and there are psychological factors (for example, war, terrorism and instability). There are all different factors, and because there’s so many diverse factors, it’s important to focus on a few indicators. Try to find factors that are rooted in common sense and that are proven to have causality over several cycles.

There are two kinds of consumer spending power: personal income (including things like paychecks) and personal wealth (investments and similar things). Income has a large influence on consumer spending— the more money flowing in, the more people have to spend— so you'd think employment would be an important factor for income. And it is, however, labor is hired after the economy goes up and fired as it goes down. Employment is always a lagging indicator. A better indicator is the wage growth of the employed. Multiply these two figures together for total wages, which is the magic pixie dust that drives consumer spending.

Much attention is given to consumer psychology. Television hosts interview shoppers in stores and in parking lots, questioning them about their responses to the latest economic headlines. This produces lots of footage of people expressing opinions on economic events and describing plans for future spending in light of those events, but this is largely anecdotal. There's no good methodology for tracking psychological inputs.

There are consumer confidence indices, but they aren't that useful, because they don't show confidence in the appropriate context. The problem with consumer surveys is that consumers tend to think that current trends will continue. If the economy is good today, surely it will be as good tomorrow. Or, if it's bad today, then it will be bad tomorrow. Consumers don't have any special ability to tell the future. And while behavioral economic analyses are useful for understanding specific situations, they provide little hope for those looking for a system to guide them through decisions. Behavioral and psychological economic approaches don't provide the analytical results that businesspeople and investors require for making decisions. They don't provide empirical, disciplined methods for forecasting consumer spending.

Chapter 10

Real wages, that is to say the actual amount that workers make, is more relevant to growth than changes in the number of employed or unemployed workers. Although often overlooked as a leading economic indicator, wages and salaries are more important than wealth, which usually isn't as liquid (if it is in the form of an investment, it has to be sold before it can affect the economy). Increases in wages will have a greater impact than employment.

The Bureau of Labor Statistics publishes the real average hourly earnings series, which is reliable, and a great indicator predicting the direction of the economy. It is an excellent measure of individual purchasing power, tracking wages for 64% of the population. It doesn't include

income information for supervisors or executives, nonetheless, it's helpful for tracking wage growth for lots of people.

Changes in wages tend to come 6-12 months before those in consumer spending. The cycle is this: Rising hourly earnings leads to rising consumer spending growth. Spending, in turns, spurs consumer price inflation, which slows real hourly earnings gains. Slow real hourly earnings gains lead to slower consumer spending growth. Consumer price inflation cools, which raises real hourly earnings gains. It can sometimes be difficult to know which way earnings is going, but, for the most part, it's fairly easy to see. But bear in mind that the data is based on pre-tax earnings, meaning that changes in the tax code and how these changes affect consumer spending aren't accurately captured.

Chapter 11

People with jobs are more likely to spend money, and it should follow that employment drives the economy. But when the economy goes sour, companies fire workers. It should follow that the economy drives employment. Both contradictory statements are true.

For the most part, employment can be considered a lagging indicator. It is important to understand the role of employment in its proper perspective. Having a job is important in our culture; work is an important part of human well-being on a personal and social level. People tend to personalize employment, viewing its rise as a good thing and its fall as a bad thing. But, to understand employment as an indicator, this emotional framework must be discarded.

Sometimes, we need to talk about employment and unemployment dispassionately. Rather, for the purposes of accurate analysis, we simply have to set aside our emotions surrounding employment and see it purely as a lagging economic indicator. And careful observation of historical data shows that employment is indeed a lagging indicator. From 1960 to 2004 without exception, employment trailed spending.

In the news media, employment data is rarely presented as percentage change from year to year. Instead, the emphasis is on the employment rate. But this is an emotional approach and is not useful for our purposes. Nevertheless, employment as a lagging indicator does have its uses. As it turns out, it's a helpful tool for understanding the stock market. A year into a bear market when unemployment is low, people may assume it's not such a bad downturn. But it's high

because employment is lagging— eventually it comes down, in turn inducing investors to sell.

The market finally bottoms out. But as employment bottoms out, consumption should already be on its way up. So if you're scared to get in the market when employment figures are bad, look to see whether consumption is on its way up. If it is, it's time to act.

Chapter 12

One of the forces with the most influence on the economy is the Federal Reserve Board's influence on interest rates. Some types of interest rates can affect consumer borrowing which affects consumer spending. Because the Federal Reserve Board gets so much media attention, its actions have a psychological effect, influencing impressions of the country's economic health.

Is the relationship between interest rates and spending real or hype? Test it by first identifying sectors of consumer demand that are sensitive to interest rates and then by evaluating how much those sectors are affected by changes in interest rates. Housing, for example, is very much affected by interest rates. So are automobile sales, but perhaps to a lesser extent. There are all kinds of discretionary purchases that are sensitive to interest rates as well: jewelry, boats, vacations and other sorts of things for which consumers secure loans. (All such items combined count for, at most, about a third of PCE.)

Most other areas of consumer spending aren't sensitive to interest rates. People don't take out a loan to go out for dinner; people don't borrow to do most of their spending. (Credit cards are somewhat of a non-issue, because people usually pay off their purchases quickly— this isn't interest-sensitive activity. Furthermore, the high rates of interest on credit cards aren't connected to the Fed rate, so it doesn't count in this context.)

As it turns out, consumer spending is influenced by interest rates. Comparing year-over-year changes in the discount rate with year-over-year growth in spending across 1960-2004, we can see that interest rates do in fact lead spending. Increases in Fed rates presage economic turndowns and vice versa.

The Fed rate is also tied to inflation, which impacts earnings, which affects consumer spending. Inflation also moves hourly wages and direct interest rates. This can create the impression that

interest rates and consumer spending are more closely related than they are.

The Federal Reserve responds to economic growth rates and inflation rates. When either get too high, they cool things down by raising the Fed rate. When things get sluggish, they raise the rate. Even if consumer spending isn't interest-rate sensitive, the Federal rate appears to predict consumer spending.

Chapter 13

Interest rates have two important effects on the stock market: 1) they affect overall economic growth and 2) they affect price-to-earnings ratios. Charting out these relationships is useful for understanding market trends. Consumer spending drives corporate profits and, ultimately, affects the stock market. Because interest rates affect consumer spending, they can also affect the market.

Years when the discount rate rose sharply almost always saw a drop in consumer spending. The opposite effect was less marked; drops in the Fed rate didn't necessarily presage upswings of spending. The inverse relationship between interest rates and the stock market has been recognized for a long time. Stocks go up when interest rates go down; stocks go down when interest rates go up.

Interest rose steadily from the 1960s to the early 1980s. In that time, the 10-year Treasury yield rose from 4% to 14%, and all kinds of wacky things happened: price-to-earnings ratios on stocks were depressed; the S&P only returned an average of 2.9% over this period; and bear markets were frequent and lengthy. Then, from the early 1980s to the mid-2000s the Treasury yield retreated from 14% to 4%. During this time, price-to-earning valuation of stocks improved, the S&P averaged a 10.5% gain, and bear markets happened less often and were shorter when they did occur.

At the time of this writing (2005), interest rates are hitting historic lows. This is worrisome, because interest rates can only go up from here, and Ellis is deeply concern that the market could take a severe turn for the worse in this environment. The confident tone of this prediction stands out. He does not try to qualify anything or hedge his argument; he's quite sure that he sees something nasty coming down the pike. (With the advantage that hindsight brings, the reader is impressed. Ellis predicted the 2008 market crash as neatly as anyone did.)

Chapter 14

For the most part, Ellis avoids matters of policy or politics in *Ahead of the Curve*. He makes an exception to this rule to apply the ROCET method to the debate on the federal deficit (which is high and rising). Republicans want to cut taxes, but that could raise interest rates further, although they argue that federal debt doesn't really affect interest rates. On the other hand, Democrats don't want tax cuts. They think deficits will curtail the government's spending power and bring higher interest rates, damaging economic growth.

Does higher government demand for capital lead to higher interest rates? Does an increase in high-quality government debt (it's the highest quality debt there is) crowd out other issuers, ultimately aggravating interest rates? Are there simply too many factors at work to identify changes in borrowing levels for moving interest rates? According to Ellis, no one has satisfactorily addressed this. Media attention has been anecdotal. Available research doesn't answer the questions that business and investor audiences ask.

To figure out the relationship between the federal deficit and interest rates, you have to remember that federal debt is just one category of all the debt in the economy. There's also state and local government debt, not to mention consumer debt and corporate debt. In fact, of all the debt in the economy, only 18% is federal debt. By itself, federal debt doesn't seem to have much of an influence on interest rates, but all debt combined most definitely does. Using the ROCET method and charting out total national debt against the prime rate from 1960-2004, Ellis shows that the two are related. In most cases, changes in borrowing precede changes in the prime rate.

Both sides in the deficit debate have some valid points. Federal debt alone does not drive interest rates, but total debt does. Large, dramatic change in federal debt is enough to register change in interest rates. Ultimately, Ellis comes down against tax cuts. Tax cuts that would rapidly raise debt could be enough to raise interest rates. As long as debt remains high, so will interest rates. The possible effects on the economy and the stock market are "problematic."

Chapter 15

The ROCET forecasting method is not limited in applicability to the US government and the US economy. There are many industries and smaller entities that can benefit from this method, particularly those that are subject to cyclical economic forces. Applying the method, along with common sense, will result in reliable forecasts for industry sectors, market segments or individual companies. There are limits, however, to the method's applicability, and it cannot be used in a number of contexts: industries that are vulnerable to political events (for example, weapons manufacturers); industries that provide basic needs that tend to defy economic cycles (for example, health care); industries that are driven by novelties and fashion, like pop music; and some industries that are growing so fast that economic cycles pale as influences.

Most companies don't do much in the way of forecasting, because, in the past, forecasts weren't particularly accurate. But now, with the methods in this book, they have the tools for accurate forecasts. And it's easy to collect and manipulate data using free software. There's no excuse not to use this technique to make economic forecasts.

Manufacturers should determine the categories of expenditures or sales that are appropriate for and relevant to their products. Producers can use consumer spending to predict what the upcoming cycle will look like. All sorts of sectors are sensitive to consumer spending. For business managers trying to make decisions, looking at performance in the context of historical economic cycles is most instructive. (It's certainly better than relying on instinct.) Executives and investors can benefit considerably by studying the patterns that reveal themselves in these economic cycles.

Chapter 16

This book has taken us through some important ideas, numerous cause-and-effect relationships and charts galore. Some of this material is at the level of the economist or business professional and requires serious concentration to understand. The economy is complex, but it is knowable. Hopefully this book will change how you think about the stock market and the economy. At the very least, after reading this book, you should be better prepared to evaluate economic information in the news media.

Economics professors would also benefit from teaching the ideas in this book. Most economics classes cover a lot of theories and have plenty of graphs, but they don't use enough real-life data for modeling. They need to get down to the nitty-gritty of cause and effect. Economics is great for economists, but there is considerable room for improvement teaching how to use data for real-world questions. Economics should always be taught using historical data.