



Wiley Trading

Predict Market Swings with **Technical Analysis**

Michael McDonald

McDonald

Predict Market Swings with
Technical Analysis



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Predict Market Swings with Technical Analysis

The efficient market theory concludes that stock prices are essentially random and unpredictable. So how do thousands of professionals earn a living each year on Wall Street by predicting stock prices? The answer is quite simple—by using techniques that allow for a stock market that can at times become predictable.

Let Wall Street financial consultant and market analyst Michael McDonald show you how to navigate the turbulent ups and downs of the market in *Predict Market Swings with Technical Analysis*. This fresh approach to trading using technical analysis will teach you how to trade the swings of the market by catching the upswings and selling just before major downswings.

With the help of a few ideas from chaos theory, McDonald introduces you to a new model that is more accurate than the efficient market model, is closer to the ideas most traders have of the market, and allows for a market that is at times predictable. You'll learn how to use this model to align and integrate various pieces of stock market information that were previously confusing or at odds and then start to trade for maximum profits. You'll also learn about the specific parts of this model, including "fair value"—represented as D/I (dividends over interest rates)—which represents important economic factors.

McDonald continues his in-depth analysis by exploring the area of technical analysis and revealing how it can help locate markets that are unstable and ready to

(continued on back flap)

MICHAEL J. McDONALD

A Strategic Guide to

the Coming Roller-Coaster Market

A Strategic Guide to the Coming Roller-Coaster Market

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Contact Information

This book can also be heard as a Web-audio picture book or purchased as a CD-ROM, audio CD, or audiotape at the Web site *smau.com*. Michael McDonald can be contacted by email at *mjm@smau.com* or by mail at

#198-30100 Town Center Drive, Suite O
Laguna Niguel CA 92677-2064.

Publisher

Michael J. McDonald

Managing Editor

Christy Parrish

Development Editors

Christy Parrish

Barbara Clemens

Robin Romer

Katherine Pinard

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Copy Editor

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Cover Design

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Dedication

To my lovely wife Mary—who made it all possible.

To my wonderful mother—whose love and caring is unending.

To my father—who taught me how to think.

To my partners Glen and Tony—the best friends a man could have.

To Bob—the computer genius who figured it all out.

To Christy—who pulled it all together.

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Preface

There are many theories on how to make money in the stock market. Some sound simple—they would have you rely on a couple of simple ratios. Some are extremely complex compilations of theories called *models*, formulated by economists, which most of us have trouble understanding. How do you, the average investor, determine a profitable investment strategy, especially at this critical moment when the stock market is at record levels? You need something understandable and usable, something that doesn't require a master's degree in economics.

In this book, I present a new stock market model, one that holds that the stock market is usually random and unpredictable, except at certain moments, when it becomes very predictable and represents moments of opportunity. I think we are at one of those predictable periods right now, and *A Strategic Guide to the Coming Roller-Coaster Market* presents the evidence for this assertion.

Basically, I believe that the post-inflation bull market, which started around Dow 800 in 1982 and has now lasted 18 years, is starting to make a major top as America begins the millennium. What will happen next? I do not believe that the market will crash, as many fear, but that it will enter into a rolling sideways movement lasting about 4 years, encompassing a number of severe declines. During this period, investors will become disenchanted with the buy-and-hold strategy that has worked so well for the last 18 years and will again turn to market timing in their continuing efforts to produce income and growth, much as they did in the 1970s.

I have been compiling the information in this book since 1971 from the realms of mathematics, physics, technical analysis, finance, and chaos theories. In *A Strategic Guide to the Coming Roller-Coaster Market*, you will explore what I have learned about market

timing in those years, particularly during the 1970s when market timing was so important.

In addition, the first chapter describes what I call the Four Investing Paradoxes. Until they are resolved, these interesting mysteries keep even sophisticated investors confused about the market. Each paradox will be addressed and solved in the chapters that follow.

Introduction

Locating Important Information by Discarding Irrelevant Data

Stock market investing, or speculation, is one of the most exciting activities you can undertake. The word *speculation* comes from the Latin work *speculare* which means “to look.” The problem is that there are simply too many things “to look” at. Stacked top to bottom, one page at a time, there is probably over 20 feet of data produced by Wall Street on any given trading day. So, it’s not lack of data that’s the problem—it’s the sheer volume of data and not knowing exactly what is important and what isn’t. Without realizing that over 99% of the data on Wall Street is immaterial to the investment decision, most people simply get lost in the confusion of “too much information.”

Most investors will tell you that to make timely, correct investment decisions, you must pour over this mountain of data and know many facts. I have found the opposite is true. You achieve insight by simplifying your thinking, by focusing only on a few important points and never deviating from those points. You do this by continually discarding the mountain of unnecessary information to find the few important concepts. You locate the golden needles in a haystack not by looking for the needles but by carefully throwing away the hay, allowing the needles to slowly appear.

Early in my studies, I came across an investor who used over 100 indicators to analyze the stock market. At first, I envied his superior knowledge, but eventually I came to feel sorry for him. He was always confused. I finally figured out that he had simply too much information. At any given time, only one or two points were vital, and the rest just served to divert his attention into unimportant and contradictory data. He had never learned that the secret to a

clear and accurate picture of the market was finding the few truly important pieces of information and discarding everything else.

This point cannot be underestimated. There are countless books written on technical analysis. The majority of market technicians have read them all; yet, history usually finds them holding wrong opinions at critical market junctures. Why does this happen? The problem isn't with the information in these books—the basic data and theories are correct. The problem is that these books often omit the practical instruction on how to apply the information in real time. For example, two important indicators are pointing to opposite scenarios for the market. How do you determine which one to choose?

Stock market books seldom address this question. Yet it is key to the whole activity. I'll tell you the answer: To achieve understanding, you must first rank the data by relative importance and then learn how to fit the rankings together to see the correct stock market story. Yes, stock markets do tell stories through their price action. The art is learning how to use the available statistical information to figure out the story. The friend I mentioned previously failed because the books never instructed him on how to put all 100 indicators together to determine the complete picture.

This evaluation of the relative importance of data is extremely important. I cannot overemphasize its importance. Without correctly evaluated information, you can't think correctly about a subject. Sometimes, because of publicity, it is very difficult to evaluate a fact; the data has been made to appear more important—or less important—than it really is. This distortion can make it difficult to reach correct conclusions.

Here are two examples. The first concerns the current popular idea about the baby boomer investors; the second concerns the question of whether stock prices are controlled by an invisible set of insiders.

The Baby Boomer Example

Suppose because of interest rates and current price/earnings ratios you decide that stock prices are too high and are ready to decline. You sell many of your stocks. Then you read a compelling article

that says the stock market will continue to advance because the baby boomers are pouring billions of 401(k) dollars into stocks. This article leads you to believe that this is an enormous and powerful investment force. Not having the facts to evaluate this theory and not knowing whether this baby boomer data is more important than the negative facts that worried you, you lose confidence in your original conclusion and repurchase your stocks. You were unable to hold your market viewpoint against a contrary and compelling idea.

Because it's such a popular supposition, let's take a closer look at this baby boomer idea. There is wide agreement that the wave of baby boomers is a very powerful investment force. But is it really? To measure its importance, we need to find some way to quantify it.

The baby boomer idea is a simple one. It holds that money drives the stock market and that the expanding number of baby boomers reaching their prime investment years is a huge, irresistible force that will drive prices higher for a long time. This idea is often shown in a popular chart, which I've tried to replicate in Figure I.1, using my own data.

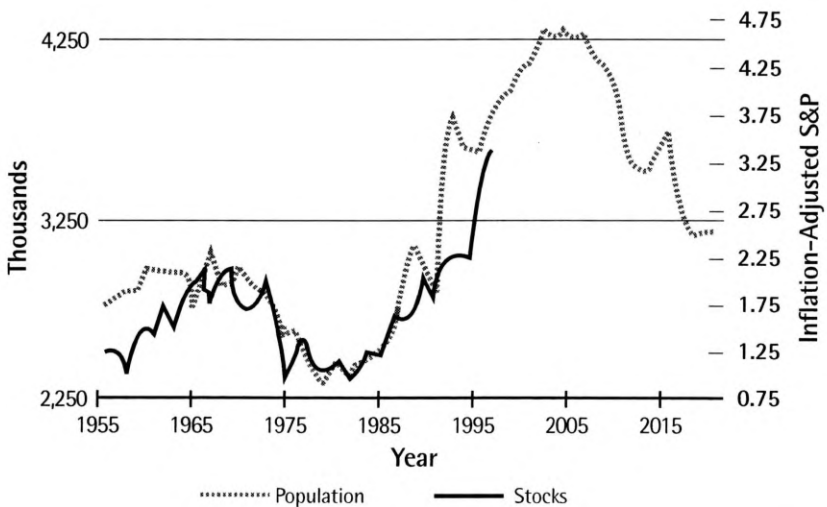


Figure I.1 Number of people turning 45 plotted against the inflation-adjusted S&P.

The chart shows the approximate number of people turning 45 plotted against an inflation-adjusted stock market. The way the stock market seems to follow the population curve is uncanny. It often leads people to these conclusions:

- The baby boomer wave is huge.
- There is a strong correlation between market movements and the number of people turning 45.
- The stock market will continue to rise until the year 2007.

Charts like this one have a strong visual impact and have created unswerving conviction about the power of the baby boomer wave.

Notice that with the baby boomer idea there is no consideration that maybe the stock market is already too high. The theory is simply that prices will continue to rise due to the influx of huge amounts of investment dollars. It is both the plausibility of the idea and the strong correlation between the two curves that gives the baby boomer idea its wide acceptance and apparent importance.

Let's think about what this chart plots, because I believe that it plots the wrong item. I think that to be more accurate it should plot the *percentage* of the population turning 45, not the actual number. Certainly, 1 million people turning 45 when the population is 300 million is less important than 1 million when the population is 100 million. As the population gets larger, it takes more people to produce the same economic impact. Figure I.2 shows the percent of the population turning 45 against this same inflation-adjusted S&P 500.

This chart shows an entirely different picture:

- The baby boomer wave is not really as large as is commonly thought.
- The wave might be peaking right now.
- The baby boomer wave exists—but it's much smaller and less important than many people think.

Therefore, I believe that the idea of the stock market constantly advancing because of the baby boomers is far overrated. If the market is too high and facing real economic problems, it can and will

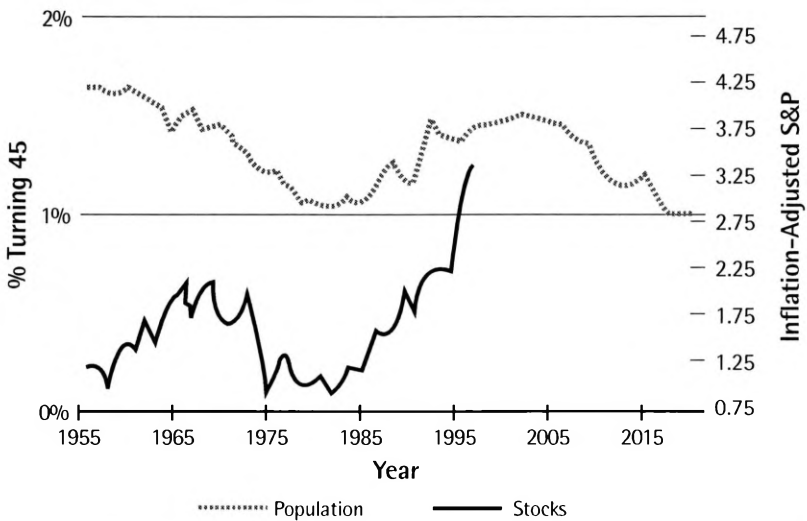


Figure I.2 Percentage of population turning 45 plotted against inflation-adjusted S&P.

decline—and decline severely. In fact, I think this baby boomer idea has all the classic signs of an old pattern: Near the top of a major bull market, a new idea emerges that convinces people that a new era has arrived and that bear markets are a thing of the past.

Stock market lore holds that every great bull market generates such ideas. (Because of this, well-schooled investors usually greet the emergence of a “new era” as one of the classic signs of a bull market end.) The new ideas always signify a new viewpoint and originate from the unique ideas and apparent “new economy” of each period. The new idea appears so powerful and so obviously right that a bear market seems almost impossible. Investors usually ignore any negative ideas because they seem so unimportant when viewed against the “new economic viewpoint,” and because they think any correction will be relatively mild. As soon as a correction continues and slips into a major bear market, people’s thoughts about stocks shift and the fallacy in the idea is soon uncovered. Maybe this time we’re ahead of the curve.

Do Insiders Control the Market?

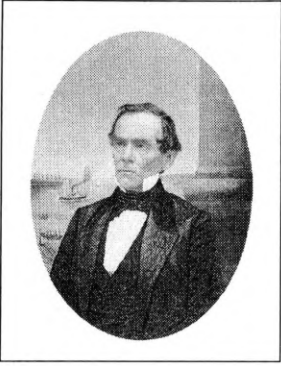
One of the most persuasive of the old ideas that still exist today is the theory that stock prices are controlled and manipulated by a large and powerful group of insiders. Over the years, I've investigated this idea in its many guises—from corporate insiders, to mutual fund money managers, to the stock exchange specialists—and I have always found it to be false.

My first contact with this idea was back in 1971 when the popular idea was that the specialists on the floor of the exchange control stock prices. All orders to buy and sell are processed through a specialist, who matches and executes all incoming buy and sell orders for a stock. The specialist also has the famous “black book.” This book contains all the orders that clients who are away from the market have entered with him—orders to buy or sell if the stock hits a certain price in the future. With this data, the specialist knows at what price heavy demand and heavy supply will occur.

The specialist is also charged with buying and selling for his own account to help keep supply and demand in balance. Because “specialists trading for their own accounts” can amount to approximately 20% of the daily trading volume, this is significant. These two facts led to the belief that specialists control stock prices to their advantage. At one time, a specialist short-selling indicator seemed to prove this contention. However, by 1974, after a careful analysis of specialist data, I was able to prove to myself that this is not the case. The specialist indicator didn't measuring what technicians thought it did. At that time, I became convinced that floor specialists do not control price movements over the intermediate or long term. The same conclusion was true of all other forms of possible insider data that I studied.

It was once true that markets were manipulated and conspiracies were possible, but this is no longer true. Furthermore, holding to the viewpoint that prices are controlled and manipulated by insiders is destructive to correct market thinking. Why? *It is destructive because it puts the cause of stock price movements, and therefore your ability to predict these movements, outside your perimeter of knowledge.* When you discover, by careful analysis, that prices are not manipulated, you are somewhat free; you are finally in a position to figure out what is really happening in the stock market.

Daniel Drew, Robber Baron



Source: Kean Collection/
Archive Photos™

Daniel Drew was the king of stock manipulation and short selling, and one of the infamous robber barons of the 1800s. His story illustrates how it used to be.

Daniel Drew was born in New England around 1800. A man of low business ethics, he prided himself on the swindle. One idea he invented was that of “watering the stock.” As a young cattle drover, he would deliver a large herd and then have his men lay out salt for the cows to lick. The next morning he allowed the thirsty cows to drink up until they almost burst. The butchers, faced with the fattest cows they had ever seen, paid top dollar.

Later, Drew gained control of the Erie Railroad and became rich by manipulating Erie stock. He would sell the stock short and then release bad news about the company. After the price fell, he would profit by buying back the shares at the low price. He would then release good news. He did this repeatedly until, after ten years, the Erie was almost bankrupt and Drew was a rich man.

He was a participant in one of the most colorful financial battles in American history. Commodore Vanderbilt got tired of the “Scandal of the Erie” and decided to buy it away from Drew by secretly purchasing a majority of shares on the New York Exchange. Drew, with the help of Jim Fisk and Jay Gould, fought back. Using the company printing press, the three printed illegal shares of Erie, flooding the Exchange with counterfeit stock as Vanderbilt’s brokers purchased every share in sight. Vanderbilt, upon learning that he held worthless stock, sent the law after the trio, which now had his money. The three went to New Jersey, bribed state officials, and fended off the Vanderbilt legal attack. Eventually, they

returned Vanderbilt's money, and he abandoned his efforts to buy the Erie. A while later, Drew, having again shorted Erie stock, was caught in one of his own traps. Jay Gould, Drew's former sidekick, wiped him out by manipulating the price higher, thereby forcing Drew to buy back at astronomically high prices.

This colorful era is long gone now, and the use of inside information and the release of misleading data to manipulate stock prices are now illegal. There is no longer a powerful "they" who can control stock prices. We don't know how investors survived in an environment like that, but somehow they did, long enough to bring about the reforms that created the fairer markets we enjoy today.

The Coming Roller-Coaster Market

In my opinion, this 18-year bull market is showing all the classic signs of a major market top. The signs of this market top are

- Extreme overspeculation, reflected in both the Internet craze and the high price/earnings ratios of the S&P 500
- High levels of bullish sentiment comparable to previous major tops in some indicators
- The internal market divergences that normally occur at market tops

A Strategic Guide to the Coming Roller-Coaster Market presents the theories behind each of these signs. Many technicians see these signs but are in a quandary about why the market hasn't already declined by now, and they see this failure to decline as evidence that these signs no longer work. However, this just shows a lack of understanding about how all these tools come together. The topping process, once started, can take years to play out, and it can be very confusing in the process. During these times, I'm reminded of the statement, "Market tops are as obscure while they're occurring as they are obvious after they have occurred."

But the evidence that the market is ready to crash isn't there. Instead, it is now poised to move sideways for an extended number of years. In this sideways market, stocks will move up and down within a given range, and will eventually end up very near where they started. It is within these short-term fluctuations that savvy investors will profit.

My model holds that by analyzing the correct information, you can, at specific times, predict certain market movements and use these predictions as a basis for a sound and profitable investment strategy.

Chapter 1

A New Stock Market Model

I believe the stock market, after over 18 years of unparalleled gains, is about to enter a long, sideways trading range. But holding to this belief presents a problem. The standard academic (theoretical) models for stocks say that stock prices are essentially random and unpredictable. So to come to this conclusion about the future course of stock prices, I must be thinking in terms of a different type of stock market model. And I am. In this chapter, with the help of a few ideas from chaos theory, I'll introduce the model I use for the market. I believe this model, based on over 29 years of personal study and experience, is much closer to the real stock market than other theoretical models and also parallels much closer to the ideas most traders and market technicians have of it.

My model for the market holds that stock prices are essentially random and unpredictable, except at certain specific moments when they become sometimes highly predictable. The art of investing is in knowing how to locate the predictable periods. As we begin the new millennium, I believe the market is at such a period. This book is the story of this new model and why I think it predicts this change.

What's a Model?

What is a model? Well, besides being a beautiful person on a runway, a model is either a mental construct or a physical system that

behaves in a similar way to the real system you are studying. An effective model of the stock market would act parallel to the actual stock market and help you understand how it behaves.

Definition

model is a mental construct or physical system that parallels, or behaves like, the real system you are interested in. Studying the model can give insight and understanding to how the real system works.

The Old Model

Academicians generally use models developed from ideas tested in the 1960s and 1970s. One of the ideas postulated in these early models was that the market was completely efficient. An efficient market model says that the current price reflects everything that is known about a company and that large investors know and react to any fresh economic news instantaneously, adjusting the price immediately. Any price deviation brought about by irrational investor reaction is quickly neutralized by the rationally informed. One conclusion from the standard model is that stock prices are essentially random and unpredictable, and therefore, you can't "beat" the market. Burton G. Malkiel popularized this standard investment model in a book written a number of years ago called *A Random Walk Down Wall Street*.

Understanding What's Wrong with the Old Model

People who made their living trading the market on a daily basis often disagreed with traditional academic models. Although their experiences differed from the ideas in these models, they found it difficult to describe those experiences to the academicians. The statistical mathematics used in academia often seemed to obscure the very realities that traders said they saw (statistical mathematics can often obscure subtle but important points).

Although academicians knew the efficient market model wasn't quite accurate, they assumed that it was accurate enough to be a practical model. But they made the same mistake in thought that

physical scientists had made in their realms. The finance professors had assumed that price disturbances that carried prices away from “fair value” would be small and prices would quickly return to “fair value.” Discoveries in the physical sciences that showed how small disturbances in physical systems can often magnify into large disturbances forced a different viewpoint to all this.

Understanding What’s Right with the Old Model

Although I never fully agreed with the efficient market theory, I did agree with some ideas that came out of it. One idea that I immediately agreed with was that it was hard to pick a few individual stocks that will do better than an index of stocks. This agreement came out of my training in physics. Let me explain.

When you study the physics of gases, you assume the gas consists of millions of free atoms, all moving around and banging against each other. To understand the gas, you don’t try to figure out what each gas molecule is doing. That is much too difficult. However, it *is* possible to figure out what they are doing en masse. The study of this is called the theory of statistical mechanics.

I assumed this same approach was probably true of the stock market and asked the following question: If stock prices were predictable, would I be more successful trying to predict an individual stock or a bunch of them en masse?

Drawing an analogy to the physics of gases, I figured the answer would probably be the same—a large mass of stocks. So you will see no stock-picking methods in this book. I believe you’ll be more successful if you try to figure the overall trend of the market and ride with it by buying an index of the market or a large diversified fund. If you can’t be successful at that, you will probably not be successful at picking individual stocks. This entire book is oriented around this basic assumption.

Components of the New Model

Before you explore the new model, it’s important to understand two basic concepts first. These are the time intention of the trade and feedback loops (chaos theory).

Determining the Time Intention of the Trade

I believe understanding the time intention of the trade is critical to understanding stock market price movements. It is interesting that Wall Street has no definition of this concept. The term “investor’s time horizon” (the period of time a person can invest through before they need the money) is close but not really the same. Time intention of the trade means that an investor has a clear understanding, even before the trade has begun, of the expected length of time between the purchase date and the sale date. Investors are not always conscious of the time intentions of their trades, and if they are, they don’t articulate them, which is a fundamental flaw in much investment thinking.

Definition

time intention of the trade is the time—measured in minutes, days, weeks, or months—between the start of a transaction and its conclusion. It is a clear statement of the intended time duration of the investment.

The stock market is not one investment activity but a sum of many, each classifiable by the time intention of the trade. For example, there are investors who try to predict and profit from short-term price movements that last from a day to a few weeks. In their world, a small two-day sell-off seems like an eternity. Intermediate-term investors focus on price movements lasting a few weeks to a few months. The long-term investor focuses on movements of many months to a few years. Each of these activities, defined by the time intention of the trade, is a legitimate investment activity in its own time realm. The price movements we see every day are the superimposition or sum of all these different time activities going on concurrently. Wall Street has always talked about short-, intermediate-, and long-term traders, but has never drawn a spotlight on the concept as a fundamental and illuminating idea.

You might think that short-term trading is less important than long-term investing. But if you look at the amount of money invested by short-term traders (specialists, floor traders, and day traders), you’ll find it represents about 30% of daily volume. You might say, “Yes, but these traders produce short-term price moves that last a day

or two and can be ignored.” This was the assumption that was the mistake. You’ll soon learn that short-term traders can often trigger a movement that can carry on for weeks.

Besides defining the investment game that is to be played, the time intention of the trade also determines the type of financial information an investor or speculator will use. Short-term traders usually use some form of technical analysis; longer-term investors use economic information (you’ll learn about these two different types of information in Chapters 3 and 4). Without knowing the time intention of a trade, an investor doesn’t know what to study.

Another reason the time intention of the trade is important relates to stock market predictability: If the market is predictable at times, as I contend it is, how long does it stay predictable before it slips into its usual random and unpredictable state? For example, if theory shows that the market is predictable over about four months, shouldn’t an investor’s trading be centered for around four-month trades?

Without a clearly defined time intention of the trade, investor activity often becomes illogical. For example, an investor decides to buy a stock because of long-term earnings growth. When the price drops 10% in two weeks he decides to sell. Yet the stock’s earnings prospects haven’t changed at all. The investor bought the stock based on data that predicts long-term movement, and then sold because of data used to trade shorter-term movements. This investor has not clearly defined the time intention of the trade.

Understanding the time intention of the trade will help you understand how an important idea from chaos theory enters into my model. This idea is called a *feedback loop*.

Recognizing Feedback Loops

The concept of feedback loops, ignored in earlier models, comes from the theory of chaos. New discoveries in the study of chaotic systems opened the door to a new way of looking at the universe and, coincidentally, the stock market.

By the way, the theory of chaos doesn’t hold that everything is chaotic, as its name might imply. The theory of chaos originated when scientists started finding hidden order in chaotic systems. They recognized that exact order and total chaos were absolute conditions

never really found in nature, and that real physical systems existed somewhere between. Chaos theory arose as a way to define something that is comprised of both order and chaos and a way to determine when a model can ignore one or the other.

Because feedback loops are so important in understanding my new model, let's look at two examples. The first is probably the clearest and simplest example (see Figure 1.1). The second example is a feedback loop of a physical system that very closely approximates the type of feedback loops found in the stock market.

You'll certainly recognize the first example. When listening to a lecture that uses an amplification system, have you ever heard that screeching sound from the speakers when the volume is too high? Everything is going along fine, and then a terrible screeching noise overwhelms the audience. This is a feedback loop. Sound enters the microphone, goes to the amplifier and comes out of the speakers at a higher volume. This amplified sound, besides assaulting listeners'

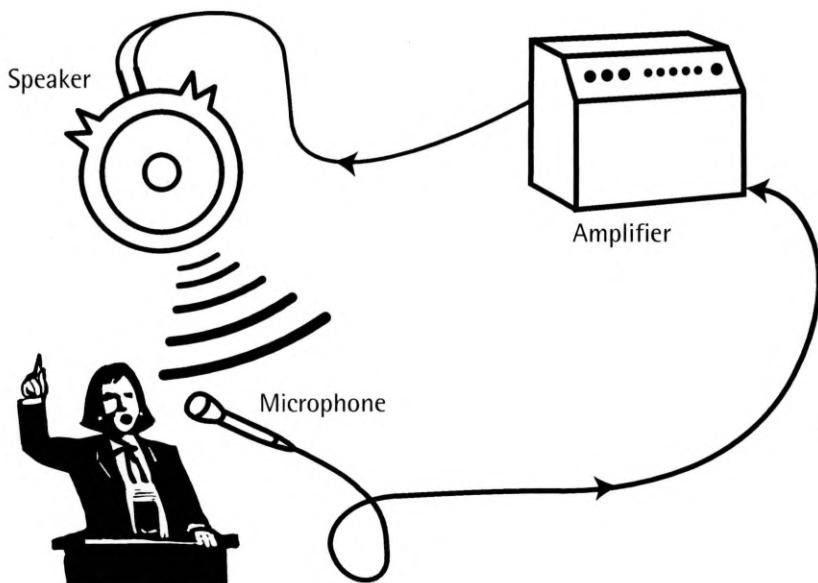


Figure 1.1 The “screeching” microphone—a common feedback loop. The screeching sound continues even after the speaker stops speaking.

ears, also comes over and reenters the microphone. If the volume is high enough, the cycle repeats, building the sound higher until you hear that terrible screech. Even if the lecturer stops talking, the screech continues. The lecturer initiates the sound, but when the feedback starts, it continues and builds on its own, feeding on itself. The second example is that of a feedback loop of a physical system that is very close in nature to those found in the stock market. It is that of a snow avalanche.

It starts with a large blanket of snow on the side of a mountain. The blanket grows as more snow falls. Although you can't see it from the surface, the accumulating snow is causing the crystalline structure of the snow to become unstable. One day, a small bird lands at the top and breaks a little snow free, which suddenly triggers the underlying instability. This small piece of snow falls and loosens a larger piece just below it. This larger piece falls on the snow below it, breaking even more snow free. Finally, the entire hillside of snow cascades and falls to the base of the mountain. A small cause has been amplified into a huge effect. After the avalanche, the hillside is stable. Although a bird could trigger the avalanche when the snow was unstable, twenty stomping elephants couldn't start one when it is stable. It will not collapse again until enough snow has fallen on the hillside to make it unstable again.

The important concept to understand here is that *the cause of the avalanche is the avalanche itself* (see Figure 1.2). In all feedback loops, the rapidly repeated movement that creates the ongoing effect is caused by the structure of the system, not by the triggering event. Although the bird triggered the initial snow drop, its continuance depends on the instability of the snow bank. This is also true with the screeching sound in the first example. The screech continues even after the speaker stops talking. A small beginning effect is magnified into a very large one by the structure of the system. This is the one of the main discoveries that has come out of the new science of chaos. This phenomenon is often colorfully described in chaos theory by the phrase "how the flapping of the wings of a butterfly in San Rafael can give rise to the hurricane over Texas."

The stock market, too, has feedback loops. Quite often a news item triggers the initial selling, but then selling begets more selling and the movement takes on a life of its own. Here, however, the source of

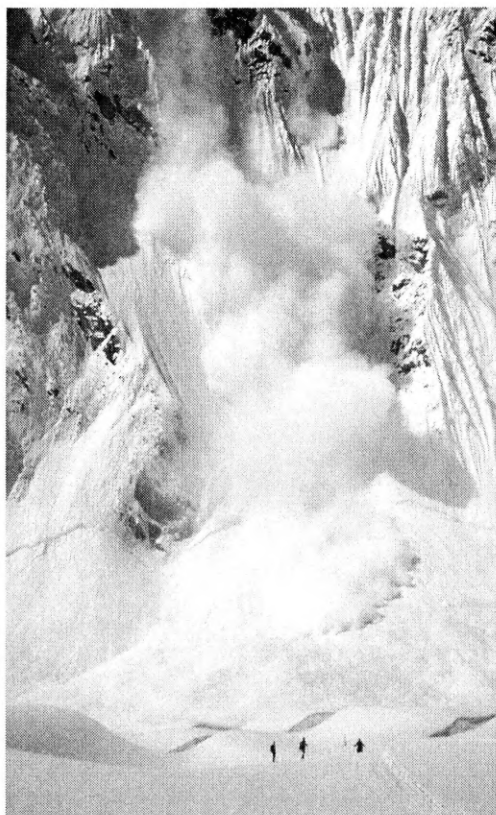


Figure 1.2 The avalanche is a feedback system very similar to the type found in the stock market. Once an instability has been triggered, it feeds and builds on itself. (Source: © CORBIS.)

the underlying instability can be complex. For now, I will say only that it resides in the group emotions and psyches of investors.

Older stock market models downplayed these feedback loops. They held that these types of price distortions are quickly erased by the rational investors who quickly neutralize them by bringing prices back to fair value. However, it was chaos theory that demonstrated that these types of distortions can be much more powerful than previously thought and therefore not so easily dismissed. My

work indicates that feedback loops alone seem to be able to cause price movements of up to 25%. This is a very important conclusion, and I want to state it very clearly: *The stock market can become unstable at times and undergo price declines of up to 25%, for no pressing economic reason.*

The best example of this is the 1962 crash. This crash, illustrated in the graph in Figure 1.3, lasted 13 weeks. The market declined more than 25% and there was no economic reason for it, which frightened investors and analysts even more, which made the feedback action (selling *only* because of fear) worse. After the 1962 crash, the market made bottom, stabilized, and started on a three-year advance to new highs.

It is the field of technical analysis that attempts to understand what causes these instabilities and how to tell a stable from an unstable market. The study of economic factors is incapable of locating them, because the cause of the extreme movement is not found in economics.

Each set of investors, grouped by the time intention of their trading, can generate feedback-loop movements in that time frame.



Figure 1.3 The 1962 stock market decline was a 25% movement that appears to have been nearly 100% caused by feedback.

For example, short-term traders can become nervous and produce extremely fast but short-term price changes. Certain instabilities can also exist in the minds of intermediate-term traders that, when triggered, can produce extremely fast intermediate price changes. Finally, instabilities can exist in the minds of long-term traders that can influence longer-term price changes. Long-term trader instability is much less important than the first two, however, because the mechanism behind the feedback loops lies in the emotional reactions of the participants, and it is difficult to hold an emotion and react to it over a long period of time. In fact, I have never seen a feedback-loop advance or decline last longer than 13 weeks.

So I believe the feedback loop of the stock market is not one loop but three. Each set of investors, grouped by the time intention of their trades, generates its own feedback loop. These three “time worlds” act somewhat independently of one another, like separate domains, but at times can bleed over and influence each other. The 1987 crash, where programmed trading magnified price movements out of all proportion, was an example where all three feedback loops were triggered simultaneously in the same day.

1987 Crash—A Feedback Loop Deluxe The 1987 crash, shown in Figure 1.4, caught everyone by surprise—including me. There was no fundamental economic problem to trigger it. Selling, magnified by programmed trading, triggered an underlying instability that in turn created more instability—and down the market went. The boards of governors of the major exchanges know these facts about investor emotional selling, and after the crash set up price and program trading limits to try to keep the bleed-over effect from happening again.

Feedback Loops and Market News Investors usually estimate the importance of an economic news item by what happens to the stock market after the news is released. However, a news item can act like the bird in the avalanche example; it can trigger a large price movement way out of proportion to the size of the news event. Because of this, during an extremely strong feedback-loop price movement, it is very hard to evaluate the real import of any news. Is the market doing what it’s doing for real economic reasons or has an instability

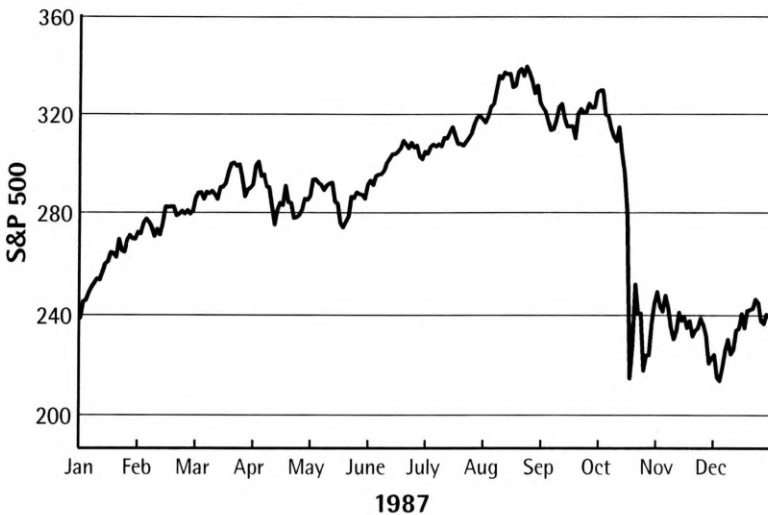


Figure 1.4 *The 1987 Stock Market Crash, a Feedback Loop Deluxe.* Program trading accentuated stock price movements, which then triggered all three time domains—short-, intermediate-, and long-term—in one day. Regulations on program trading have helped to keep them from acting as feedback loop triggers.

been triggered? This uncertainty also can work in another way—analysts and the media can start inventing economic reasons to explain an extreme feedback-loop price movement.

Although the 1987 crash was really just an extreme feedback loop, for months afterward many people were convinced we were heading into a severe recession. They needed a reason to explain what had just happened. Yet there was nothing to support the recession theory except the market crash itself. Eventually, the market did recover as investors regained confidence and there was no recession. Understanding that feedback loops exist *by themselves* is a major step to understanding large stock price movements. It doesn't make the loss of money any less painful, but it can help you understand what you are up against.

I have been talking about feedback loops only in the context of declining stock prices, but there can also be positive feedback loops.

Feedback loops can work in both price directions. You can have upward feedback loops, where a little positive news can cause the market to rise sharply, way out of proportion to what it should do in more normal markets.

The Advisor Frozen in the Stage Lights

I will forever be remembered in Los Angeles as the investment advisor who learned about the October crash that Monday morning—and had to respond to it—while on the air at the local financial station. I'm not a professional announcer and was on TV only for my investment opinions. My normal routine was to jot down some notes in the car on the way to the studio so I'd have something interesting to tell viewers on my first update. The notes would cover something I had read about the market over the weekend. I usually did the first market commentary 15 minutes after the market opening and counted on these notes to get me through. Later I would assess the market and the news background for more current observations.

At the studio, I put on my microphone and sat down in front of the large number board. I immediately saw the Dow Jones was down 140 points—that would be 600 points today—and it had been open only 15 minutes. I asked the cameraman what was going on. He said he didn't know. I took my microphone off, ran over to the production manager, and asked him what was going on. He said, "I don't know—you're supposed to know." I ran back to the board, on came the lights and cameras, and I gave my usual, smiling "Good morning."

I started to go over the market statistics, beginning with the number of advancing and declining issues. If I recall, it was something like 1,400 stocks declining and 7 advancing. The amount of advancing volume was so small it wasn't even registering on the board. I almost stopped and said that the numbers board was broken, but I wasn't sure, so I just kept going.

Near the end, when I would normally go over my notes, I realized they were completely useless. What was I going to do, just ignore all this and talk about some inane observation from the weekend? At the time I didn't know the cause of the crash—whether, for example, some terrible national event had occurred to trigger it.

Then the horrible thought came over me that I had nothing to say. I froze. So when the camera returned to me, I simply stared ahead completely speechless for 10 seconds. I was sweating bullets. Eventually I said something in a squeaky panicked voice—and it was over.

It took me about half an hour to calm down. I then came back, composed, for the next update and said that I thought the decline looked like a selling climax. I was ultimately right, but in truth, the bottom was four hours and 400 points (another 15%) away. I had never seen, nor had anyone else ever seen, a market decline so severe where all three feedback loops were triggered in one day.

An Economic Component A major feedback-loop movement, even though it can cause a 25% decline, should not be confused with a bear market. In my opinion, to be called a bear market the decline should have some long-term economic reason behind it and will last from at least 9 months to a couple of years. Because feedback loops can't last more than about 13 weeks maximum (with up to another 3 months adjusting to it), real bear markets are usually composed of a sequence of negative feedback-loop movements. The market goes from unstable to stable, and then sits there for a while until deteriorating economics brings about a new instability, which is again triggered. So economics must play a part.

Long-term stock movements do reflect financial and economic conditions, and markets do move up and down because of perceived changes in the economic picture—and my model does consider economic factors. The term in my model that represents the fair economic value for stocks is D/I . See Figure 1.5 for the complete model.

$$\text{PRICE} = \text{STFL} + \text{ITFL} + \text{LTFL} + D/I$$

STFL ITFL LTFL

KEY

STFL: Short-term feedback loop

ITFL: Intermediate-term feedback loop

LTFL: Long-term feedback loop

D: Dividends I: Interest

Figure 1.5 *A New Stock Market Model.* The price of a stock equals a fair value (represented symbolically by the term D/I) modified and stretched by the action of three somewhat independent feedback loops of different time domains.

The Complete Model

The complete model is expressed by the following: *Stock prices equal a fair value modified and stretched by the action of the three, somewhat independent, feedback loops.* In the model, D stands for dividends, I stands for interest rates, and the term D/I is symbolic. You'll learn more about this term in Chapter 4. This model, with the inclusion of the feedback loops, opens the door to having a market that is at times predictable.

Finding the Predictability in the Market

When I say that the market is predictable at certain times, I mean that your odds of being correct are at times better than 50-50. Now the efficient market theory says that the future course of stocks is always unpredictable, like the flipping of a coin—that the chances of your being right at any time are always exactly 50-50. I will tell you that, from my experience, this is true most of the time. But there are times when it is not true and the market is highly predictable. People ask how this could be since there is no way to know the unexpected economic news that drives the market. But remember, there is more behind price movements than economics. Those feedback loops are at times very predictable.

How do you describe or define an activity that is 100% unpredictable some of the time and at other times highly predictable? Is there any analogy to a system where the predictability ebbs and flows from random to somewhat predictable? Yes, there is. My analogy might make you uncomfortable at first, but keep in mind it's only an example of a system with changing odds; there is no other implied relationship with the stock market. The analogous situation is the game of blackjack.

In blackjack, there are certain odds—52-48, for example—that the house will win. However, the odds aren't fixed at those numbers; they *average* 52-48. There are times when the odds are even greater in the house's favor and times when the odds actually go the other way and favor the players.

Why? Because the initial odds of 52-48 depend on the ratio of the number of ten-cards to no tens in a standard 52-card deck. If, in the first deal, a disproportionate number of ten-cards comes out, the ratio shifts for the remaining deck. This is the essence of card counting; trying to determine when a deck is out of balance in favor of the bettor. With the stock market, it is a much more difficult proposition (see Figure 1.6).

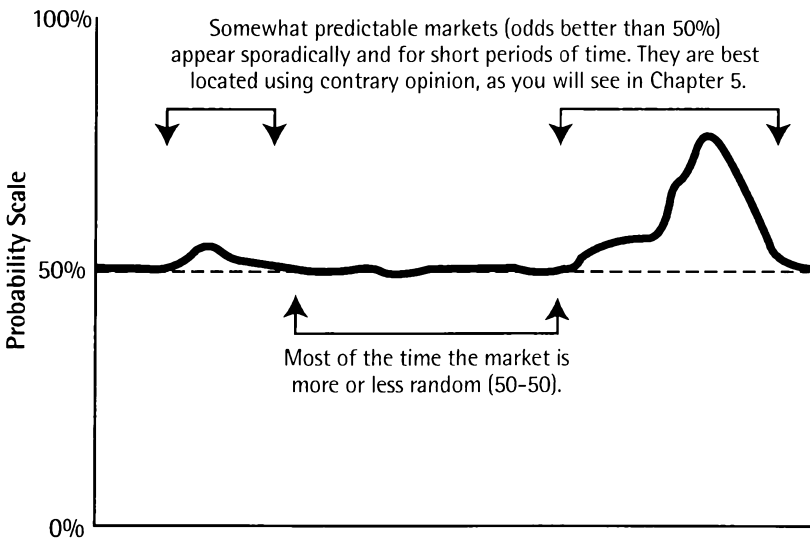


Figure 1.6 A schematic showing that, in my new model, the predictability of the stock market is not fixed like the flipping of a coin.

Suppose that a similar situation exists with the stock market. Assume that the stock market is usually a 50-50 proposition, but at certain times, these odds shift and the direction of prices becomes more predictable—60-40, for example. What does the speculator look for to see that the market is now in his favor, that it is more likely to go either up or down? The answer to that question is really the subject of this book and how these ideas apply to today's market.

The Four Investing Paradoxes

In the course of developing my stock market model, I've also found it useful to explain what I call "the four investing paradoxes." I will state them here but each is explained fully in ensuing chapters. Although these paradoxes seem simple, they are not. They contain some great truths about investing. You could read a whole book explaining the stock market, yet still be confused about investing simply because these four paradoxes are not given the focus they truly deserve. They are fundamental to any basic investment understanding.

Paradox 1: "I'm happy when I'm sad." In September 1997, the government announced good economic news: Payroll levels were increasing. The market fell 100 points. The press was in a quandary to explain it. The analysts said that good news often means that the Federal Reserve will raise rates and this is not good. But if this is true, then carried to its extreme, the better the economy gets, the more the market should sell off. Is good news really bad and bad news really good?

Paradox 2: "How can the tail wag the dog?" The stock market is one of 12 leading economic indicators, probably the best of the 12. To predict the stock market, people usually turn to interest rates. Here is the paradox: The U.S. government classifies interest rates as a lagging economic indicator. It is one of the last things to move in a business cycle. Why do people use a lagging economic indicator to figure what a leading indicator is about to do? How can the tail wag the dog?

Paradox 3: "The technician says up and the fundamentalist says down—yet both are right." Trying to determine the direction of stock prices, the fundamental analyst will look at the economic situation, proclaim all is well, and say that stocks will advance. The

technician, after studying new highs and lows, the advance decline line, and price patterns says that the stock market will decline. Both are right. How can this be?

Paradox 4: “One million investors are usually wrong.” In the stock market, when everyone says the market will advance, it generally starts to decline. When everyone thinks the market is in or starting into a bear market, it is usually after the fact and the market is now ready to rise. What is the true reason that the market behaves in such a contradictory fashion and what does it mean?

Jesse Livermore



Source: © Bettman/CORBIS

Jesse Livermore was one of the greatest traders in American stock market history. After 50 years of trading, he had come to a similar conclusion regarding the predictability of the stock market.

Jesse Livermore was one of the great stock speculators of Wall Street. Legend has it that he made 4 separate million-dollar fortunes over a trading career that lasted 50 years, from 1890 to 1940. His first job at age 12 was posting prices for customers placing bets in the local stock market “bucket” shop. Soon he was placing bets himself—and winning. In a few months, he had earned \$1,000. He was eventually so successful that all the bucket shops banned his activities. He then began speculating in stocks and became successful at that, too. Stock speculation was the only job Livermore ever had.

Over time, he matured from a short-term tape reader to a speculator who planned his operations based on longer-term economic trends. He made his first million in 1906, which was the start of a massive credit crunch that he foresaw. After enduring three false starts, his fourth short position eventually yielded immense profits. He bought the shares back at the bottom of the market and acquired the name “the boy wonder.”

Many books were written about him, the most famous being Reminiscences of a Stock Operator by Edwin Lefevre. This is probably the most famous book ever written on the subject of stock speculation and is still in print today. In a later book, How to Trade in Stocks, Livermore said, "One cannot be successful by speculating every day or every week. There are only a few times a year, possibly four or five, when you should allow yourself to make a commitment at all. In the interim you are letting the market shape itself for the next big move."

He lost most of his money in the 1929 crash and never really made it back in the heavily regulated environment that followed.

What's Next?

Now that you understand the basic components of my model and how they're arranged, you're ready to explore Chapters 2, 3, and 4, which present the different technical factors that indicate whether the market is in a stable or unstable situation and explore the meaning of the term *D/I*. You will also see in Chapter 2 how the new discoveries in chaos theory help explain the fractal nature of the price patterns, which gives a firmer theoretical foundation for the controversial Elliott Wave theory.

Chapter 5 goes into more detail about contrary opinion and how you can use it as an indicator to detect tops and bottoms. In Chapter 5, you'll also see a 30-year study showing that the market is predictable using contrary opinion and that therefore the conclusions of this new model are probably correct.

Chapter 6 explains the coming new market period—why it's going to happen. Chapter 7 gives you specific strategies, back-tested through the last long sideways market, on how you may be able to profit through this coming one.

Chapter 2

Price Patterns, Fractals, and Mr. Elliott

If I'm right in my conviction that the great bull market ended and a large, long-term trading range began as we crossed into the new millennium, it would be useful to have a price guide. This guide would act as a map to the possible sequence of bull and bear markets that might make up this no-go market. In practice, you would apply this map by constantly recalibrating it against the market and vice versa, adjusting and fine-tuning the map as the market etched out the real pattern over time. The best tool to map the market that I'm aware of is the Elliott Wave pattern.

Now the accepted models of the stock market (such as the efficient market model) give no good explanation for the patterns we see in stock charts. The usual interpretation is that these jerks and starts are the sudden adjustments to fair value as news continuously streams in about companies. The new model that I presented in Chapter 1 gives a different interpretation. It says that economic news does cause price adjustments but that it also triggers instabilities, setting into motion the interplay of the three feedback loops. The vibratory price pattern we see is the sum of all of these effects.

I first learned about the Elliott Wave Theory in 1979 when Robert Prechter published his book *Elliott Wave Principle—Key to Market Behavior*, and I began using it immediately. Now, after applying the Elliott Wave Theory for over 20 years, I believe I'm well qualified to discuss this very interesting and wonderful theory.

Original Price Pattern Observations

If you come across something that many people have observed over the course of many years, you should pay very close attention to it. Buried in those observations, you will often find an important truth, and when that truth finally surfaces, it can be quite illuminating. The Elliott Wave idea seems to have come into being in just this way; it is actually the culmination of the observations made by many men over many years. The observations of Charles Dow and W. D. Gann show the underlying basis for the Elliott Wave pattern.

Reviewing the Dow Theory of Price Movement

This story begins with Charles Dow, whose observations and thoughts at the turn of the century later became known as the “Dow Theory of Price Movement.” Although the theory is generally considered old-fashioned today, careful study shows that it is surprisingly modern and still contains most of the basics of today’s technical analysis. I’m not going to cover the entire Dow theory here—it would be beyond the scope of this book—instead, I will cover only the part concerning price patterns. The following paragraph is quoted from Robert Rhea’s book *The Dow Theory*, written in 1932:

There are three movements of the averages, all of which may be in progress at the same time. The first and most important is the primary trend; the broad upward or downward movements known as bull and bear markets, which may be several years in duration. The second and most deceptive movement is the secondary reaction: an important decline in a bull market or a rally in a primary bear market (the bear-market rally). These reactions usually last from three weeks to as many months. The third, and usually unimportant, movement is the daily or short-term movement.

The Primary Bull Market: A primary bull market is a broad upward movement, interrupted by secondary reactions, and averaging longer than two years. During this time, stock prices advance because of a demand created by both investment and speculative buying caused by improving business conditions and increased speculative activity. *There are three*

phases of a bull period: the first is represented by reviving confidence in the future of business, the second is the response of stock prices to the known improvement in corporation earnings, and the third is the period when speculation is rampant and inflation apparent—a period when stocks are advanced on hopes and expectations.

Reviewing W. D. Gann's Observations

Another well-known advisor and market technician, W. D. Gann observed stock market price patterns that were similar to those of Charles Dow. In his book *My 45 Years on Wall Street* (written 50 years after Charles Dow developed his theory), Gann says the following:

Stock market campaigns move in 3 to 4 sections or waves. Never consider that the market has reached final top when it makes the first section in a move up, because if it is a real Bull Market it will run at least 3 sections and possibly 4 before a final high is reached.

We will explore Gann's comment about the *possible* fourth wave later in this chapter.

Combining the Dow and Gann Patterns

So, now that we have the background, let's graph the observations of Charles Dow and W. D. Gann. In Figure 2.1, you can see the bull-market structure, or pattern, that both Dow and Gann describe: a pattern composed of three sections interrupted by two secondary corrections. Dow and Gann saw no structure or pattern to these secondary corrections—they considered them to be simply overall declining periods that separated the advancing sections. They also saw no pattern in daily and short-term movements.

The major drawback to both Dow's and Gann's observations is that there is no financial theory to explain them. They are simply empirical observations, which beg for explanation. That's not to say that the observations are not useful; it means only that we don't know why the pattern occurs. Even without a known cause, any effort to predict the stock market must somehow integrate this pattern observation.



Figure 2.1 The three movements of a bull market, as described by Charles Dow and W. D. Gann.

Elliott's Price Pattern Observations

Without a supporting theory that explains why a three-section bull market occurs, why should we expect a price pattern to be found only at the bull-market level? If we look a little harder, we might see repeating price patterns in other movements of the market. Enter a man named R. N. Elliott (see Figure 2.2).



Figure 2.2 R. N. Elliott developed the first fractal theory of stock prices in 1937, 40 years before the discovery of fractals. (Source: Reproduced by permission from *R. N. Elliott's Masterworks*, edited by Robert R. Prechter, Jr. © 1994, Robert R. Prechter, Jr.)

Elliott, an accountant, formulated his observations into what he called the *wave principle* during a long period of convalescence during the 1930s. He started with the basic ideas of Gann and Dow, but he went much further. Mathematicians today would recognize the theory that he formulated in the 1930s as a fractal theory—fractals being an advanced mathematical idea developed 40 years later (I will go into a deeper explanation of fractals later in this chapter).

Expanding the Bull-Market Pattern

To describe what Elliott saw, let's start with the Dow-Gann pattern for a bull market (see Figure 2.1). As you look at the pattern, consider just the first section of the bull market. As we know, Dow and Gann saw no distinct pattern in this movement; it was simply the first extended, advancing period of the bull market. In contrast, Elliott said that if you look closely, you'd see a pattern there too. The first movement of the bull market is actually composed of three smaller movements of its own. What about the second section of the bull market? You can see the same three movements. The same is also true of the third section. Figure 2.3 illustrates the finer detail that Elliott observed in the three advancing waves of a bull market.



Figure 2.3 The complete pattern for a bull market, as seen by R. N. Elliott, including the pattern for the corrections separating the primary waves. Once the bull market is through, it is followed by a large correction, called a bear market, which consists of two down movements.

Elliott's theory goes even further. Although Dow and Gann saw no pattern in the downward corrections, Elliott did find a structure in these reactions. They weren't simply down movements—they declined in two distinct downward sections. In other words, a correction is never one reaction—it's two. Figure 2.3 shows the complete Elliott Wave pattern, showing the structure of two corrections, or secondary reactions, along with three advancing waves.

As you can see, the bull-market movement is followed by a larger-scale correction, or bear market. Like all corrections, the bear market is composed of two down sections separated by a rally. Furthermore, the bear market, like all other price movements, breaks down into smaller movements.

Elliott noted that the three new waves that make up each section of the three primary waves of a bull market also have a structure. You guessed it—each of the three waves is composed of three movements of smaller or lesser degree. Sure enough, the corrective movements that separate these three also have the same pattern as the earlier correction: two down waves separated by a small rally. Figure 2.4 shows the breakdown of these patterns into their next smaller movements. In this figure, you can see the basic Elliott Wave pattern, showing



Figure 2.4 Upon closer examination, it becomes apparent that each section, or wave, in the price pattern also consists of three smaller waves. Likewise, the movements of each correction can be subdivided into finer movements, as shown.

three levels of movement. This is the very essence of the Elliott Wave principle. When can a movement not be broken down into three smaller movements? According to Elliott, it never happens. Any stock price movement can be broken down into three sections of smaller price changes and time lengths. This is true of movements over days, hours, or even minutes.

Going Beyond the Bull Market

Elliott put forth another idea, which seems quite startling at first; but, when you stop and think about it, you can see that it is really just an extension of the basic concept. He said that the three-wave movement doesn't end at a bull market. According to his theories, what we usually call a bull market is, in itself, just one section of a much larger, three-bull-market movement. Likewise, three of these much larger movements come together to form yet another even larger three-wave movement. He called these larger-than-a-bull-market movements *cycles*, *super cycles*, and *grand super cycles*.

It is the accepted belief among Elliott Wave practitioners that the longest known cycle started in 1790. Each movement in this grand super cycle was about 50 years long or longer and was composed of many bull markets (see Figure 2.5).

The Elliott Wave Applied to the Real Market

Let's see how this principle is applied to the actual stock market. We'll use an example out of Elliott's original works to see how he labeled a real market (see Figure 2.6). The great stock market crash of 1929 hit bottom in the summer of 1932, and then the market started into a 5-year bull market. Notice how Elliott labeled the five waves. You can see that the waves are nowhere near the same size or time duration as they appeared in the idealized wave pattern. Because of this, we can understand that the simple 12345ABC patterns building up into larger patterns might be much more difficult to see in practice. Unfortunately, this is true. In the real world, interpreting the waves requires applying a few more nuances that help bridge the gap from the ideal to the practical. These nuances include such factors as extensions, irregular corrections, fifth-wave diagonal triangles, and the like.

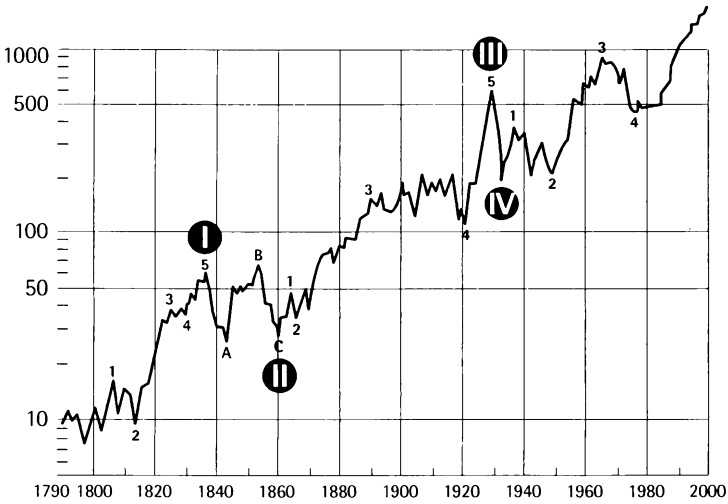


Figure 2.5 The longest known grand super cycle, as described by Elliott, started in 1790. Many Elliott Wave practitioners believe that the grand super cycle is nearing an end. (Source: Reproduced by permission, from *Elliott Wave Principle—Key to Market Behavior*, by Robert R. Prechter, Jr. and Alfred John Frost. © 1978–2000 Robert R. Prechter, Jr.)

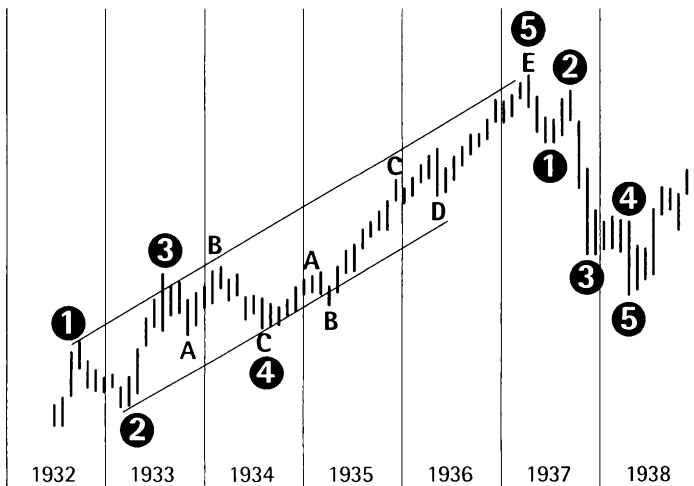


Figure 2.6 The 1932–1938 stock market, as labeled by R. N. Elliott in his original works. The chart plots the monthly range of the Dow Jones Industrials.

Labeling Elliott's 12345ABC Wave

Notice that describing Elliott's concept of sections within sections within sections can become a little confusing—it's easy to get lost in the various waves. Up to this point, I've intentionally avoided the normal Elliott Wave labeling to accentuate the similarities between his observations and those of Dow and Gann. However, now that this has been done, I will use the standard Elliott Wave labeling for designating this basic pattern.

The basic advancing wave in the Elliott pattern consists of three advancing sections separated by two corrections. These waves are labeled 1, 2, 3, 4, and 5. Waves 1, 3, and 5 are advancing, and waves 2 and 4 are corrective. A larger bear-market correction follows this major upward movement. Elliott called these bear-market waves A, B, and C. A and C are the downward moves, and B is the separating rally.

To distinguish the same movement, but to different degrees, you use numbers, numbers within circles, numbers within brackets, and so on. On the ABC correction, you use letters, letters within circles, letters within brackets, and so on. There is no established procedure for this. In Figure 2.7, have labeled the three degrees seen in the basic Elliott Wave pattern using this method.

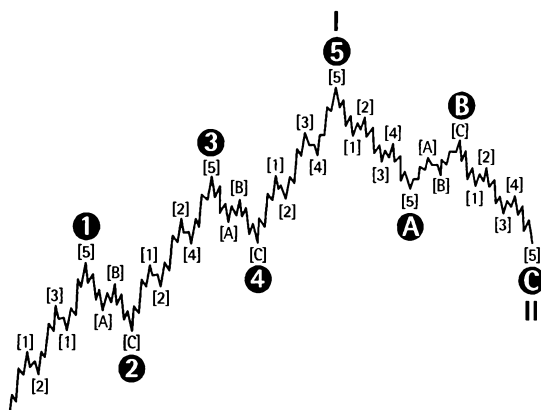


Figure 2.7 The varying levels of the Elliott Wave pattern are differentiated using different variations on the basic 12345ABC labels. This chart shows three levels of pattern with corresponding number and lettering.

Note The waves, or cycles, of the Elliott Wave pattern are not time cycles, like a sound or sine waves. They are action cycles. Eight events must occur before that cycle is complete. These eight events—the 12345ABC—do not have to be of the same size or duration.

Exploring Elliott Wave Variations

Before we can explore how the Elliott Wave Theory can be used in practice, I will complete the explanation of this theory by explaining the many variations that can occur when trying to interpret the wave count.

Extension We know that if the market does follow the Elliott Wave pattern, it must be a stretched and compressed version of the idealized pattern. One way that the Elliott Wave can be stretched is for one of the three forward waves—waves 1, 3, or 5—to become much larger than the other two. Because it is so much larger, the five waves that make it up also look much larger. In fact, they can get so large that they can be as big in price and time movement as the other two primary waves (see Figure 2.8). This variation is called an *extension*.

When an extension is involved, it looks like the whole movement is made up of five thrusting waves, instead of three. Extensions usually occur in waves 3 or 5—usually 3—and they seldom occur in wave 1. They occur during powerful market periods. As of this writing, 1999, the American stock market has been going through one of these extensions for the last four years. Unfortunately, there is no known way to anticipate an extension.

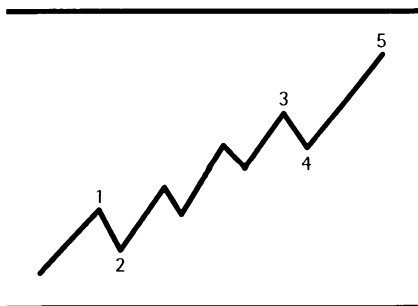


Figure 2.8 An Elliott Wave variation called an *extension*, in which one of the primary waves (wave 3 here) can be so large that the smaller movements that make it up become almost as large as the two other primary waves.

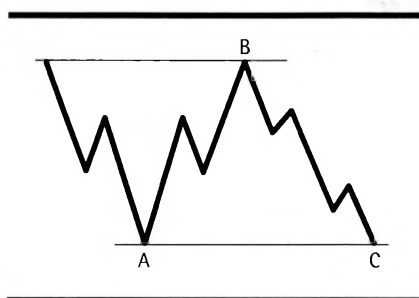


Figure 2.9 In an Elliott Wave variation called a *flat*, waves A and C end up at the same level.

Flat The corrective waves—waves 2 and 4—show the greatest amount of variation and, as I have found, cause the most amount of trouble. The simple ABC pattern, as drawn by Elliott in the idealized pattern, is seldom seen. What is seen is a slight variation on this pattern, called a *flat*. A *flat* occurs when waves A and C end up at the same level (see Figure 2.9). You can see that the basic ABC idea is there, but the size and endpoint vary, as well as the internal movements that comprise each section.

Irregular Correction One of the most interesting variations on a flat occurs when the B wave continues up and exceeds the top of the preceding wave 5 (see Figure 2.10). This variation is called an *irregular correction*, and it gives the impression that the overall movement containing four sections. (It also explains what W. D. Gann was observing when he said “three sometimes four movements”—he was referring to a period that had an irregular correction.)

The difference between an irregular correction and a fourth primary section is that the B wave in the irregular correction is made

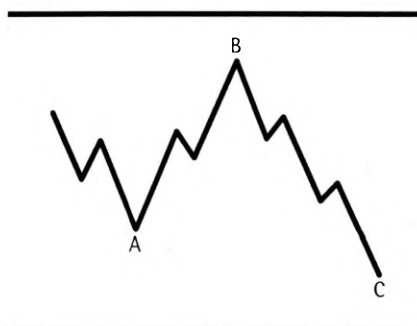


Figure 2.10 An Elliott Wave variation called an *irregular correction*, in which the B wave continues up and exceeds the top of the preceding wave 5.



Figure 2.11 An Elliott wave correction called a *horizontal triangle* usually occurs as a fourth wave correction after very large waves 1 and 3, with a small wave 2 separating them. It's as if all the correction for the whole move is being saved for one, long wave 4. A horizontal correction is composed of five movements (1, 2, 3, 4, and 5 as shown) and is not a simple ABC pattern.

up of only three distinct movements and not the usual five. This is very important and helps distinguish a B wave from a normal thrusting movement. This distinction can also help us determine whether the new movement is the beginning of an extension in the fifth wave.

Horizontal Triangle Quite often, the fourth wave can have a much more complex pattern than normal, forming what is called a *horizontal triangle* or a *wedge* (see Figure 2.11). This usually occurs when waves 1 and 3 are large and of long duration, and wave 2, the corrective wave between them, is very short.

Searching for an Underlying Cause

If the real market etched out a pattern exactly like the perfectly drawn wave pattern, the market would be completely predictable. We would know exactly what was coming next—and when. We know, however, that the real market doesn't work this way, and as

A Guiding Principle

The failure of trying to force ratios of either the duration or size of stock market price movements to match the “golden mean” confirmed an earlier conclusion of mine. A simple ratio is just that—it’s too simple—and therefore it couldn’t possibly work. My reasoning to this conclusion was very practical: If such a simple ratio worked, it would have been discovered years ago by one of the hundreds of thousands of intelligent people who have poured over investment numbers for the last two centuries. I think the fact that no one has ever discovered a ratio shows that none probably exists.

Based on this reasoning, I established a guiding principle for myself. A correct theory of the stock market must be complicated enough to make the market unpredictable most of the time and predictable only part of the time. Therefore, a correct theory cannot be too simple; it has to be somewhat complex. Hopefully, however, it’s not too complicated to be solvable. These requirements are met in a new form of mathematics—fractals.

we’ve seen, the Elliott Wave Theory acknowledges this. Elliott Wave theorists say that the real stock market *is* the idealized curve, just stretched and pulled out of shape. This concept is critical.

Elliott Wave theorists believe that the basic pattern is always there; they believe that if you add a few more ideas to the theory and study it hard enough, you can discover that pattern. If Elliott Wave practitioners are right, it means that the basic pattern is there and that the market is somewhat predictable; if they are wrong and deluding themselves, the patterns are just a random jumble of zig-zags and the market is unpredictable.

Elliott searched for an underlying theory that explained his wave principle. Because fractals were not known at the time, his ideas centered on the medieval mathematics of Fibonacci, whose number series matches the ever-expanding counts of the wave pattern. The

only idea that came from Fibonacci that can actually be tested was a ratio called the “golden mean,” which is 1.618.... Elliott Wave theorists have tried to make either the size of price movements or the time lengths behind these movements conform to the golden mean. Although this is an interesting theory, I never found that it worked.

Elliott had the right idea in looking for an underlying theory that would explain his observation of waves within waves within waves—a theory that would support his octave pattern repeating from the very small time scales up to the very large. He just didn’t have all the tools to do it. He was truly ahead of his time.

I was giving a seminar in 1982 about the Elliott Wave Theory when someone came up afterward and explained that I had been describing fractals. I looked into it, and I found out that the Elliott Wave Theory is exactly that—a fractal theory. Fractals are the correct underlying foundation for the whole wave principle.

Fractals Hold the Answer

What is a fractal? Benoit Mandelbrot, the mathematician who discovered fractals, defines a *fractal* as “a geometrical shape that can be separated into parts, where the shape of every part is a reduced-scale version of the whole.” Essentially, it is a certain kind of pattern, and if you take one of the parts of the whole pattern and magnify it until it is the same size as the whole, it looks like—and has all the characteristics of—the whole.

Definition

fractal according to Benoit Mandelbrot, is “a geometrical shape that can be separated into parts, where the shape of every part is a reduced-scale version of the whole.”

The subject of fractals is an important and new advancement in our understanding of the geometrical patterns that nature forms. It is considered a branch of chaos theory and has wide application in many fields. Besides helping explain stock price movements, fractals also help explain the distribution of galaxies in the universe, the structure of blood vessels in the body, the patterns of coastlines, and many previously confusing mathematical curves.

Stock Price Patterns Are Fractals

Stock prices follow the fractal definition. Let's take a time view of the S&P 500—for example, over 50 days. Then let's take a little section out of this—what the market did minute by minute over one day, for example. If you magnify the minute-by-minute chart up to the same size as the 50-day chart, it looks the same (see Figure 2.12). With stock prices, you can't tell whether you are looking at a 10-year sweep, with the back-and-forth fluctuation taking place over months, or a one-day movement, with the back-and-forth fluctuations taking place over minutes.

From the fractal definition in this example, you can understand why the Elliott Wave Theory is a perfect example of fractal theory. It postulates that the same pattern—the 12345ABC—is found in hourly movements as well as movements that last years. Because stock prices are fractal in nature and the Elliott Wave Theory is the only known fractal theory

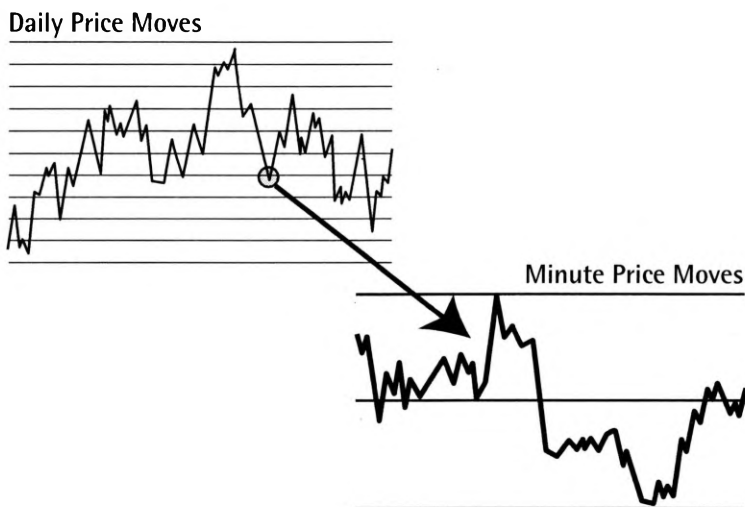


Figure 2.12 The stock market follows the standard fractal definition in that each small price movement is a part of and a reduced-scale version of the larger price movement.

of stock prices, it should be clear that this theory could be highly significant in helping us interpret market fluctuations. It might allow us to understand, using the modern discoveries of chaos theory, some of the price patterns that we have been examining.

Note Please do not be put off by the discussion of fractals. I have learned over the years that important ideas are usually simple and easy to understand; they are made complex only by people who present them as such. Great teachers, such as the physicist Richard Feynman, who really know their subjects and are confident with themselves and their knowledge, actually took pride in showing people how really simple it all was. Fractals are really quite simple and easy to comprehend if approached in the correct way.

There are many different types of fractals, and mathematicians have classified the tremendous variety of fractal patterns in a number of ways. Basically, the classification comes down to defining whether the underlying pattern that you “see” at the large-scale level or the small-scale level is regular and predictable, whether it is completely random and unpredictable, or whether it is something between the two. Fractals are classified by their basic underlying pattern, which is repeated as the fractal is created. To help you have a better understanding of this method of classification and its importance to the stock market, I am going to show you two examples of fractals where the underlying pattern has varying degrees of predictability: the Koch curve and the Mandelbrot curve.

Examining The Koch Curve

The first example of a fractal is the Koch curve. To understand this fractal, take a straight line and put a little V shape in the middle (see the first part of Figure 2.13). This V breaks the line into four smaller lines, each equal in length. Take each of these four lines and do the same thing—add a little V to the middle of them. Now there are 16 smaller lines. Add a V to each of these. Do this again and again and again—forever. This is the infinity-detailed Koch curve. It is a fractal because each part, no matter how small, when magnified, is a scaled-

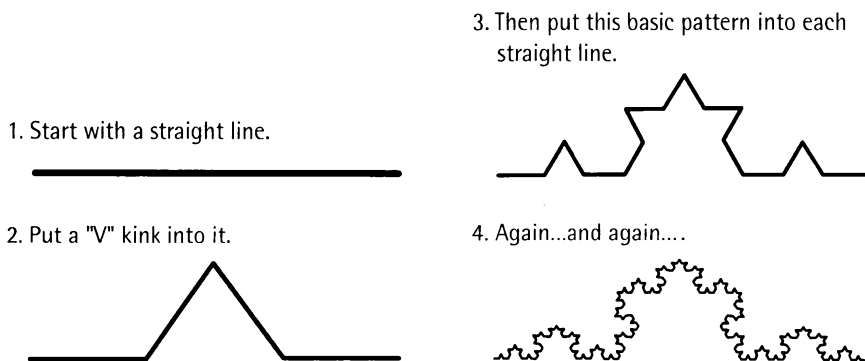


Figure 2.13 This figure shows how the perfectly predictable Koch curve develops over time. As you can see, it starts with a straight line that is broken by a V pattern. This V pattern further breaks each occurring straight line ad infinitum.

down version of the whole. The Koch curve is interesting because it is mathematically perfect; you know exactly what to expect. It isn't random—it is perfectly predictable.

As you can see, the Elliott Wave pattern, as we drew and explained it earlier, is similar to the Koch curve—except that the repeating pattern is a little more complicated.

Examining The Mandlebrot Curve

Another example of a fractal, one with patterns that are *not* predictable, is the Mandlebrot curve. Created by the man who first invented fractals, the Mandlebrot curve is the fractal that has come to symbolize not only the entire subject of fractals but also the theory of chaos (see Figure 2.14).

To explain what the Mandlebrot curve is, I'm going to give you a very simple example of the idea behind it. Let's start with the geometrical shape of the circle. Paint the points inside the circumference of the circle white and all the points outside the circumference black. What is the meaning behind this color scheme? The white points are all the points that satisfy one answer to the question, and the black points satisfy the other answer. What's the question? The white points are the points that are less than the radius away from the center. The points painted black are the points whose distance

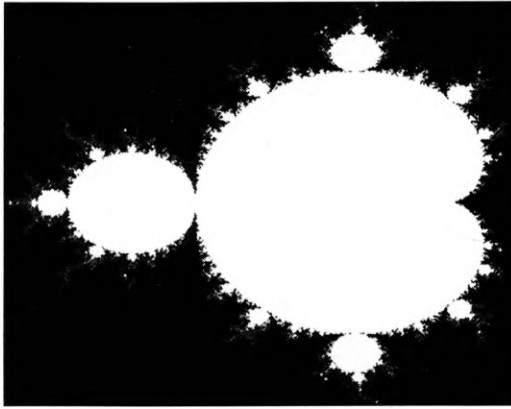


Figure 2.14 *The Famous Mandlebrot Curve.* This fractal pattern has appeared on innumerable book and magazine covers over the years yet few people know what it is. It comes from a very simple mathematical procedure. In this fractal, all the points in the light area represent one possible answer to that procedure while the black area are those points that represent the other.

from the center is greater than the radius. The circumferential line is the boundary between these two areas.

This might seem like a trivial concept, but it contains the simple idea that is behind the creation of the Mandlebrot curve. Simply put, the Mandlebrot curve is a boundary that satisfies a similar type of condition. The condition is a simple mathematical calculation that is done over and over, leading to either one or the other of two possible results. The white points lead to one answer, and the black points to the other. In this example, however, the curve or boundary separating the white and black points is not smooth like the circle. The curve is ragged, with acorn-like shapes sticking out and a bunch of hairy filaments all around it.

To get a better understanding of this, let's magnify the boundary and see what it looks like (see Figure 2.15). As we increase the magnification, notice that you can't clearly see this boundary. You just find more and more detail. In fact, you never get to a simple, smooth pattern; it never ends—ever. It is infinite in complexity and never resolves into something simple.

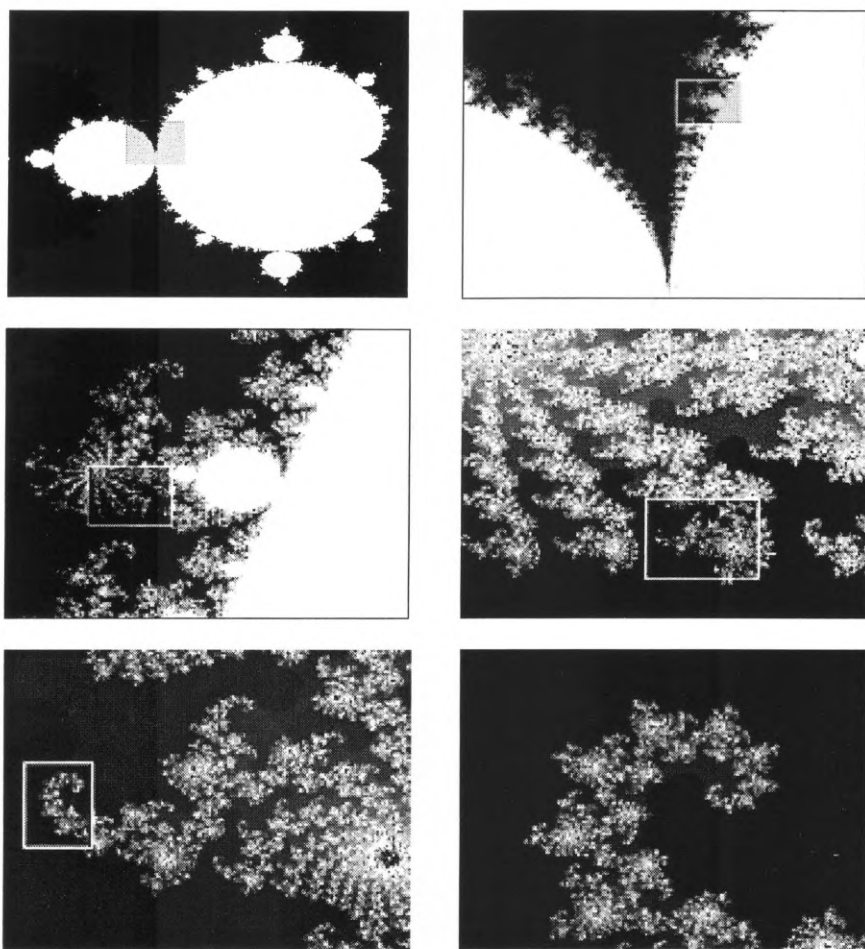


Figure 2.15 As we magnify deeper and deeper into the Mandelbrot curve, we find more and more detail. This fractal never breaks down into a simple pattern or curve. The picture at the top right is a magnification of the smaller box in the picture at the top left. The picture at the middle left is a magnification of the smaller box in the picture at the top right. And so on. This magnification process can go on—forever.

Can the complex patterns of the Mandelbrot curve be predicted the way the patterns of the Koch curve can? As far as I know, they can not. However, the patterns are often similar and you can predict some of the similarities. For example, you constantly see

similar patterns, such as the famous seashore shape in the Mandlebrot curve. The fractal definition is intact; you will find that every small section contains all the complexity and variation of pattern that is contained in the whole.

Applying Fractal Analysis to the Stock Market

We saw that the Koch curve is a fractal in which the pattern is identical all the way down. In other words, it is a completely predictable fractal pattern. In the Mandlebrot curve, we saw that the pattern is not identical but, it has similarities, or repeating similar patterns, that are predictable. You can also have fractals that have completely random patterns. *All this leads to the \$64,000 question: What type of fractal pattern does the stock market create—100% predictable, somewhat predictable, or random?*

This is a very important question; its answer is central to any effort to predict stock prices. Is the real market, as Elliott Wave theorists believe, simply a stretched-out, pushed, and pulled version of the idealized Elliott Wave pattern where, if you study it hard enough, you can see and predict what's coming next? Or is it just a random jumble of zigzags?

To really understand the concept behind this question, let's pull and yank on the Koch curve and see what happens. Suppose we stretch the Koch curve, and then pull on it, here and there, distorting it. You should still be able to recognize the curve as originally having been the Koch curve, just pulled and stretched a little. Is the pattern now as predicable as it was originally? No. The basic outline is still predictable, but some of the details are not. Now if you continue to distort it more, yanking it here, and stretching it there, it eventually loses any resemblance to the original, perfect pattern (see Figure 2.16). You have transformed the perfectly predictable Koch curve into a complex jumble of lines, all of different length and now completely unpredictable.

This is the idea behind the question that we are asking about the Elliott Wave pattern. Is the basic Elliott Wave pattern there, just stretched and pulled a little but with the basic pattern still recognizable? Or, is the stretching and pulling so great that it has lost any semblance of the basic pattern?

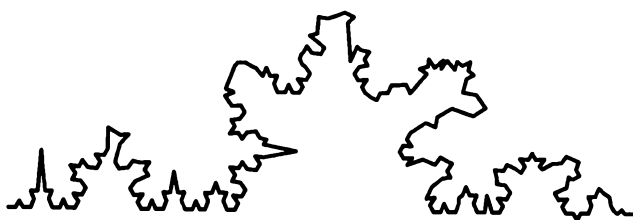


Figure 2.16 In a “stretched and pulled” Koch curve, the fractal pattern is no longer as predictable. If you stretch and pull it too much, it becomes completely random. Is the real stock market pattern a stretched and pulled Elliott Wave pattern but not stretched so much as to be unpredictable?

The Search for Predictability

I will try to answer this most important question. After 20 years of studying and applying the Elliott Wave Theory, my experience is that the Elliott Wave pattern is sometimes clear and that the market is then very predictable. At other times, the fractal patterns of the market are completely random, and no Elliott Wave pattern can be discerned. At these times, the market is completely unpredictable using the Elliott Wave Theory. Therefore, the answer to the question is: *Sometimes the pattern follows the basic Elliott Wave fractal pattern, making the market somewhat predictable, and at other times, it is random.*

Elliott Wave theorists often say that every market shows the actual Elliott Wave pattern. However, they always do this analysis after the fact. In general, they are right. The study of past markets almost always shows the market making a completed pattern. The problem with this becomes obvious when you have to make real-time, day-to-day decisions. There are just too many points along the way where you could have said a movement was complete when it really wasn't. The rules and exceptions are so broad and so many variations are allowed that we often don't know what to project.

The record of people using the Elliott Wave Theory over the years generally demonstrates partial predictability. Although there

have been many successes, there have also been many failures. In practice, there always seems to be an alternate wave count, indicating that the Elliott Wave Theory, by itself, is somewhat incomplete.

It is interesting that neither the Elliott Wave theorists nor those critical of the theory address this important question in any depth. Both believers in and critics of the theory see it as being either 100% right or 100% wrong. This is unfortunate because the Elliott Wave Theory does not, by its nature, lie at either of these two extremes. Efforts to make it a perfectly predictable theory actually destroy its value, and efforts to deny it ignore the new discoveries made in chaos theory.

The fact that the Elliott Wave Theory is not complete on its own does not invalidate the theory or make it wrong. It just reflects what we already know—the market is sometimes predictable and sometimes random. Nevertheless, even with this limitation, there is no better way to try to map the market. If you have to make a future projection of how prices will unfold, there is no better pattern to follow than the basic Elliott Wave fractal pattern.

This is especially true when you add to the Elliott Wave Theory the information that I will present in the next three chapters. With these other tools, it often becomes possible to overcome many of these obstacles and “read” the Elliott Wave pattern better.

Making the Elliott Wave Theory Work

So, taking all these factors into consideration, how do you actually make the Elliott Wave Theory work? As I have said, the Elliott Wave Theory presents the pattern, or a map, against which you can evaluate the current market. This is a constant, ongoing activity. I don’t evaluate the market against interest rates or earnings. I use the tools described in the following chapters to help me estimate where in the wave count the stock market is.

I start at a major market bottom, an orientation point, or a point of certainty. Then, I make every effort to determine where that point is in the Elliott Wave count. I study both daily and weekly charts of the major indexes to help me find the count. I use the S&P 500, the Dow Jones Industrials, the Russell 2000, the Nasdaq Com-

Be Wary of Doom Sayers

The Elliott Wave Theory should never be used to predict major crashes or calamities in the future, and prognosticators who do this only contribute to the invalidation of a very useful theory. When you are pretty certain the stock market has completed a major 12345 movement, all you know is that the market is headed for an ABC correction. It could be a crash, but it is just as likely to be an irregular correction where, after a very mild wave A retracement, prices will start into a B wave and continue to new highs for six more years. The Elliott Wave Theory alone cannot predict what form the ABC correction will take. You must include other factors to help you decide what type of top it is going to be.

posite, and a high-tech index, because sometimes the count is clearer on one index than it is on another. I have found that the Elliott Wave count is clearest during volatile markets—markets when feedback loops are functioning—and that dull markets usually produce confusing patterns.

Tip Don't force the count. If you don't know, you don't know. Remember that there will be times when the pattern is incomprehensible and prediction impossible. Learn to live with that. You have to become used to not knowing. Because of this, be suspect of anyone who always has an opinion. People who always have an opinion are either fooling themselves or selling something.

No matter how impatient you get waiting to identify exactly where the wave count is, you have to fight against the tendency to force an answer. This is very important. I have learned that the market will always show what it is doing if you have the patience. You have to be willing to say, "I don't know," and then wait until you see something that you can clearly identify. Remember that there are many times when the market is random and unpredictable—in fact, it's like that most of the time.

I use all the tools that I'll be presenting in the next three chapters, all evaluated as to their relative importance and integrated together, to help me find where in the pattern we are. Where we are in the wave count is always the central question. When you determine the wave count, you can time your buying and selling so that you achieve the greatest profit.

Chapter 3

Technical Analysis and Unstable Markets

Trying to predict and profit through an extended trading range market is very difficult. Not only do you have the nearly impossible task of locating the start of such a period (which means, in effect, predicting the end of the long, bull market); you also need to find the beginning and ending of the major swings that will form the trading range.

A long-term bull market, such as the one we've been in since 1982, spoils investors. When prices decline, investors become conditioned to the idea that if they wait, prices will come back and usually go higher. They become sloppy because investing becomes too easy—just throw your money into stocks and the prices go up. It's the best of all worlds. However, a warning against becoming too sloppy with investing is found in a wise, old phrase from market lore that says: "Never mistake brains for a bull market."

When a long bull market ends and a new period begins, the importance of accurate and disciplined trading again comes to the fore. Stocks no longer go up on their own. Many stocks decline and never come back. A significant number decline severely, wiping out all the gain of the previous long bull market. At these times, you must have greater trading disciplines, tight guidelines that will get you out quickly when your ideas are proved wrong.

Consider Figure 3.1. The dots at the end of the solid line are a projection that approximates what I'm expecting to happen to stock prices. To invest through a period like this successfully, it is necessary

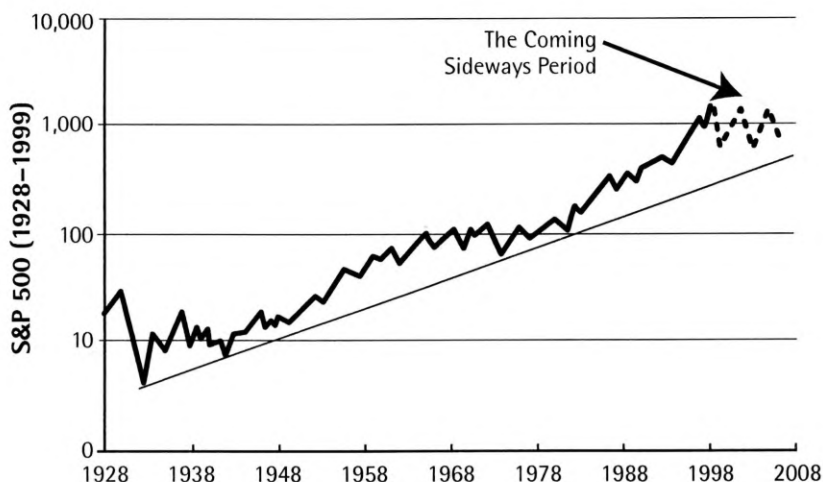


Figure 3.1 *The Coming Roller-Coaster Period.* The bottom straight line indicates the stock market's long-term trendline since 1928. Notice how the bull market of the last ten years has pushed prices far away from this trend-line. It would be normal for the market to digest these tremendous gains over time by working slowly back and forth until prices end up closer to the line.

to bring every reliable tool to bear in the effort. As I explained in Chapter 2, the Elliott Wave structure is the blueprint for the basic pattern the market should follow. However, the innumerable, complex variations of the Elliott Wave Theory make it, by itself, incomplete. You must incorporate other information to help limit the number of possible Elliott Wave patterns. One important tool in the effort to do this is called *technical analysis*.

Technical Analysis vs. Fundamental Analysis

There are two broad studies of the stock market. One is called technical analysis; the other is called fundamental analysis. In *fundamental analysis*, the investor compiles and considers economic data in an effort to predict stock prices. He looks at sales, earnings, dividends, interest rates, and so forth. In *technical analysis*, the investor considers only information generated on the floor of the exchanges: volume,

price history, short interest, put/call ratios, and so on. In fact, you can completely classify these two disciplines by specifying the exact physical location where the information is generated. If the information originates in the business world, it is fundamental data; if the information originates on the floor of the exchanges, it's technical data.

Definition

fundamental analysis is the process of compiling and considering economic data—such as sales, earnings, and dividends—in an effort to predict stock prices.

technical analysis is the process of compiling and considering information gathered on the stock exchange floor—such as volume, current stock prices, and short interest—in an effort to predict stock process.

For years, these two schools have been battling over which one is the correct discipline to predict and explain stock market movements. The silly part about the argument is that they are battling over what really amounts to separate turf. I mentioned in Chapter 1 that a clear definition of the time intention of the trade helps determine what type of data you should study. If you are investing for price movements of more than nine months, you should study fundamental data. If you are interested in predicting price movements of less than six months, you should study technical data.

Clarifying the Time Limitations of Technical Analysis

To explain this, let's go back to the model of the stock market introduced in Chapter 1. This model holds that stock prices are equal to a fair value stretched and modified by three, somewhat independent, feedback loops. Now I'm going to make a statement that may surprise, and even upset, some technical analysts. I believe that technical analysis is primarily useful in predicting *only* price movements caused by the action of the three feedback loops—what I call in the model the STFL, the ITFL, and the LTFL (short-term, intermediate-term, and long-term feedback loops, respectively). Because of this, I think it is incorrect for analysts who use only technical analysis to predict major bull and bear markets. In my opinion, any effort to

use technical analysis beyond its applicable time range is using it beyond what it is capable of accomplishing. (The only exception to this, I believe, is when extreme readings in investor sentiment exist simultaneously with extreme readings in the measurement of public involvement and speculation in stocks).

Many technicians would say that I am wrong. They will point to the deteriorating technical situation that existed before many bear markets as proof that technical signals can anticipate them. I do not deny this. Nevertheless, it is my contention that these technical indicators were incapable of distinguishing whether the market was just unstable and ready for a three- to six-month correction or whether a major bull or bear market was imminent. It is my contention that, in the cases they point to, the indicators were measuring an instability that eventually transformed itself, because of economic reasons, into a lengthy bull or bear market. If a decline is to last more than nine months and turn into a major bear market, there must be an economic reason—a fundamental foundation for a decline of this magnitude and time duration.

Separating Technical and Fundamental Analysis

So we get the picture that technical analysis is the discipline that measures and studies the three feedback loop terms in the model and that fundamental analysis studies the fair value term. Because feedback loops can't last more than three months maximum (with a dead-market carryover effect that can last another three months), and major bull and bear markets can last for years, I want to clarify the difference between these two disciplines using a time graph. The clarification takes place when we highlight our "time intention of the trade."

At the bottom of the graph in Figure 3.2, the x -axis is the time intention of the trade, which is the time period of the investment, or the time period over which you are trying to predict stock prices. It starts with trades lasting a few hours at the far left, going into days and then weeks as you move to the right. Eventually, you are at months, and then finally, at the far right, are investments that are intended to last a few years. Along the vertical axis, the y -axis, is a scale that measures of the usefulness of any information to predict, with 0% being useless and 100% being vital.

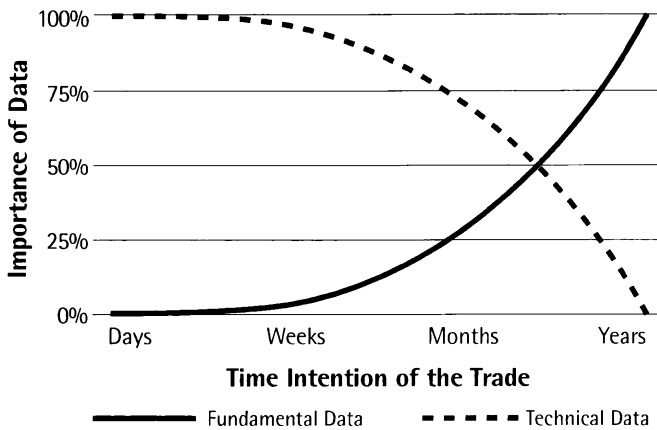


Figure 3.2 The relative importance of technical analysis and fundamental analysis in predicting market movement. The time intention of the trade determines which discipline should be used.

Now let's attempt to plot where technical and fundamental analysis fit on this chart. At the far left, when the time of the trade is only for a few days, the importance of technical analysis should be close to 100% and fundamental analysis close to 0%. Only technical analysis has any chance of predicting movements over a few days. Moving to the right, the situation gradually changes. At the far right, the importance of fundamental analysis is 100% and the importance of technical analysis is 0%. Where is the crossover? It's difficult to locate, but I place it somewhere between 6 and 9 months.

Basics of Technical Analysis

The Market Technicians Association (MTA) Website (www.MTA-USA.org) lists over 100 technical indicators of all types. There are 10 or 20 devoted to different types of volume measurement, 20 or 30 devoted to measuring different time periods of the advance decline line, and so on. This makes it look like they are measuring many different types of ideas, but this is not so. There are really only four or five basic ideas in technical analysis, and all these indicators

Market Timing vs. Buy and Hold

Before we go any further in discussing technical analysis, and how it can help predict the coming roller-coaster market, I first want to clarify the two competing ways people approach investing: buy and hold, and market timing.

Buy and hold is the philosophy that you should buy a large basket of good stocks and hold them over long periods, ignoring the intervening price swings. Investors who practice buy and hold believe that predicting market movements is either too difficult or too costly, and they recognize that stock prices, through all the bull and bear markets including the great crash, have averaged over 10% per year. Therefore, if you just hold on to your investments and ignore the wiggles, you will emerge just fine.

Market timing, on the other hand, is the philosophy that you will do better if you try to catch the upswings and sell just before the major downswings. Investors who practice market timing think that this can be done in an advantageous and profitable way. They believe that market timing parallels the natural tendencies of people to avoid risks and uncertainties.

Which philosophy is better? The answer depends on the current market type. During long protracted bull markets such as the one we have experienced since 1982, the buy-and-hold philosophy is best. During long, sideways trading range markets, such as the market from 1966 to 1982, market timing usually does the best. Since I believe we are entering a new trading range market, I think market timing will again become as popular as it was 25 years ago.

are just different ways to measure these four or five basic concepts. I do not intend to cover the entire subject of technical analysis in this book, only to highlight a few of the basic ideas that are the foundation of the subject. You should keep in mind that there is one additional, and quite important, part of technical analysis not covered in this chapter—the theory of contrary opinion. The theory of contrary

opinion is so important it has its own chapter (Chapter 5). So, as you're reading this chapter, remember that there is an important addition to the technical picture not being described.

Highlighting Divergence

Almost all technical analysis is associated with divergence in one form or another. What is divergence? It is very simple. *Divergence* occurs when two things that were acting together in a certain way start acting separately, or differently than they did earlier. Almost all the technical tools used, except for the theory of contrary opinion, look for some type of divergence. In fact, the original Dow theory is essentially a divergence theory. Charles Dow postulated 100 years ago that it is a negative indication when the Dow Industrials averages go to new highs while the transportation averages fail to follow. This divergence in activity is the basis of the Dow theory. If I were to check, I believe I'd find that over 80% of the indicators at the MTA Web site measures, or looks for, some type of divergence. I should also state that most technical indicators are better at finding market tops than they are at finding market bottoms. Before we go any further, let's ask an important question: Do technical indicators indicate short-, intermediate-, or long-term tops and bottoms? From this question comes an important clarification.

Definition

divergence is the observation in technical analysis that two indicators or market averages, which usually move up and down together, are now moving in opposite directions or doing opposite things. One is not confirming the other.

In 1973, I formulated a personal principle for myself that has served me well over the years. It is a principle very similar to the idea found in fractals, which we covered in Chapter 2. The principle is: *In technical analysis, what is true for the long term is true for the short term.* What this principle means is that if there is a certain sequence of events that usually occurs at a major market top you'll find that same sequence, albeit smaller in size, over a short-term market top. For example, suppose it is observed that volume usually hits a peak about four months before the final price top of a bull market. A careful study will show that volume also peaks before price in a movement

that lasts only four weeks. Here, however, it will peak about five or six days before the price peak. Everything is scaled back, in regards to time, but the sequence will be the same. Not knowing and understanding this principle is the cause of great confusion to technicians. They get confused over the time periods that are being referred to by the indicators they are measuring.

Understanding the Difference Between Market Tops and Bottoms

Market tops and bottoms, from a technical perspective, behave differently, and you use different technical tools for each. Tops are usually long, large, rounded affairs (think of an open fan), often to the point where it becomes very difficult finding the exact “top.” The top seems to be spread out, and it appears to be more like a process than an event. Bottoms, however, are different. Bottoms are usually short and over with quickly, and they are rather easy to locate. They are more of an event than a process (see Figure 3.3).

I say “usually” because there are exceptions in every case—it is important to know that. Otherwise, you won’t recognize something,

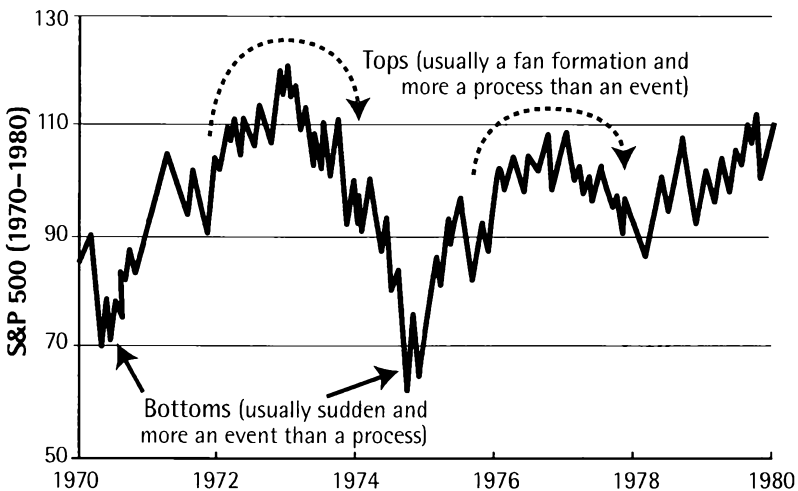


Figure 3.3 Market tops and bottoms are different. Bottoms are usually abrupt and end quickly. Tops usually form over an extended time period.

because your fixed idea prevents you from considering it. This happened to many analysts in 1982. The 1982 bear-market bottom was not a normal event bottom. The bottom didn't occur suddenly on a single day, but took place over six months as a rolling, compressed bottom. In Figure 3.4 you can see the compression process in the contracting number of stocks that made new lows as the market worked lower. I started to see the evidence for what was happening in the late spring of 1982, about three months before the final bottom. When I spotted what was happening, watching the market finish the process and make bottom was like watching a three-act play—the bottom occurred in the final act. Holding to the idea that declines end only in climaxes prevented many technicians from seeing that this was a process bottom and not an event bottom, even though the evidence was there.

The underlying idea in technical analysis is that in any bull market or major Elliott Wave movement, there is a normal sequence of events that occurs internally in the market as the topping process occurs. What do I mean by internally? Do you remember what I said

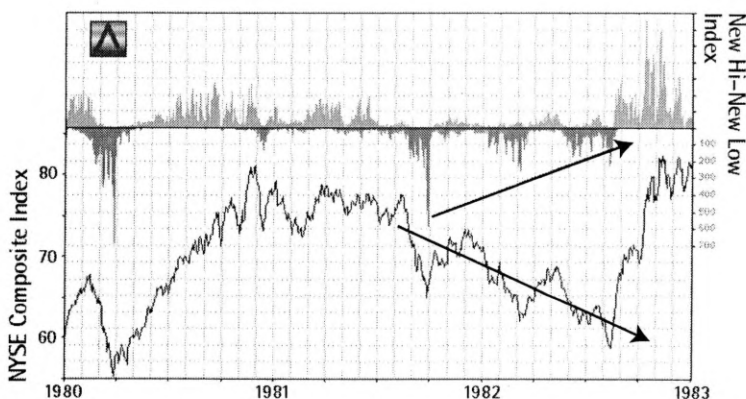


Figure 3.4 *The Unusual 1982 “Process Bottom.”* The top line plots the number of stocks making new lows. While the New York composite index went lower, the decreasing number of stocks hitting new lows pointed to the compression process underway. Careful study of individual stocks shows hundreds of them went through very powerful “saucer bottoms” while the process proceeded. (Source: © DecisionPoint.com.)

in Chapter 1 about the analogy of statistical mechanics in physics and the movement of many stocks in the stock market? I pointed out that it is easier to predict the whole stock market than to predict any individual stock, just as it is a lot easier to predict the overall movement of all the gas molecules than the movement of any individual molecule. By *internal market*, I mean looking at and measuring statistically the movement of the individual stocks that make up the whole market.

Definition

internal market is the statistical measurements, such as the number of stocks making new highs or lows and the number of advancing stocks versus decliners, that describe what is happening to the mass of individual stocks as the overall market moves up or down.

To understand this, remember that the market is the average of all stocks. The S&P 500, for example, is the average of what the 500 largest stocks are doing. When the S&P 500 is up, it doesn't mean that *all* the 500 stocks are up; it means only that a mathematical average of the 500 is up. Let's clarify this. Suppose that on two consecutive days, the S&P 500 is up 1%. From the market's point of view, the days look the same; however, if we statistically measured what the individual components were doing, we might see a different picture. Maybe on one day, only 20 stocks are up, but those 20 are up a lot, and the other 480 stocks are down just a little bit. On the second day, all 500 stocks are up, but they all are up just a little bit. Both days produce the same 1% mathematical average gain and look the same on the outside; internally, we see a different story.

Recognizing a Normal Market Cycle

What can we expect to occur internally in a normal market cycle? Usually, at the start of a major advance, most stocks move up together. This pattern continues for some time. This is good, and it's the way it should be.

How is this pattern measured? It is measured by what is called market breadth. *Market breadth* measures the number of stocks advancing each day versus the number declining. It doesn't matter how much a stock has advanced or declined; an $\frac{1}{8}$ -point advance is

The Perfect Indicator?

I do not intend to cover all the fine detail of technical analysis; there are already many books on the subject. Often, investors search through these books looking for that one indicator that predicts the market. I encourage the beginner to do this because it is educational; however, after searching for 28 years, I can tell you there isn't a perfect indicator. If you do this, my only admonition is this: In going over all the technical indicators and evaluating them, don't lose the basic concept on which each indicator is based. Those concepts are the important points. If you pay too much attention to the details in the hundreds of indicators described, you often lose sight of the big picture.

Remember that the market is, more often than not, unpredictable. During these periods, investors often become frantic trying to figure it out. They investigate all the indicators looking for the subtle clue. At those moments, there isn't one. So they start stretching things and magnifying subtle unimportant indications trying to "find the answer." Be careful—this is a major weakness. It is best, at those moments, simply to back away and say, "I don't know," and then wait until the picture becomes clear and conclusive.

just as important as a 10-point advance. Any stock that advances at all is an advancing stock. If the market averages are going up, technicians like to see good breadth, one in which the number of stocks advancing is a large number and not a small number.

History teaches us something. Usually, as a stock market advance matures, the averages continue to go up, but fewer stocks participate. This means that investors are starting to narrow their focus. A few stocks are going up a lot, while many other stocks are languishing or declining a little.

The volume of trading also stops expanding and actually starts to shrink as the averages move to their final highs. Normally in the beginning of a move, the volume of trading continually grows. Then, at a

certain point, the market makes new highs, but the volume doesn't continue to expand. In fact, it contracts. This sets up a divergence between volume and price. In fact, all these ideas (new highs and lows, market breadth, and volume) focus on the concept called divergence.

Divergence is really a sign that the topping process has begun. Recall that market tops are usually large, rounded, fan formations, and are more a process than an event. Different stocks and different stock groups usually top at different times. The different market divergences are a measure that this is occurring. The problem is that the process can take some time. There is no way of knowing how long the process will take—it could take two months or two years.

Making Top

As I stated before, in the process of the market topping, certain things usually happen before the general averages make top (see Figure 3.5). First, as the bull market matures, the number of stocks making new

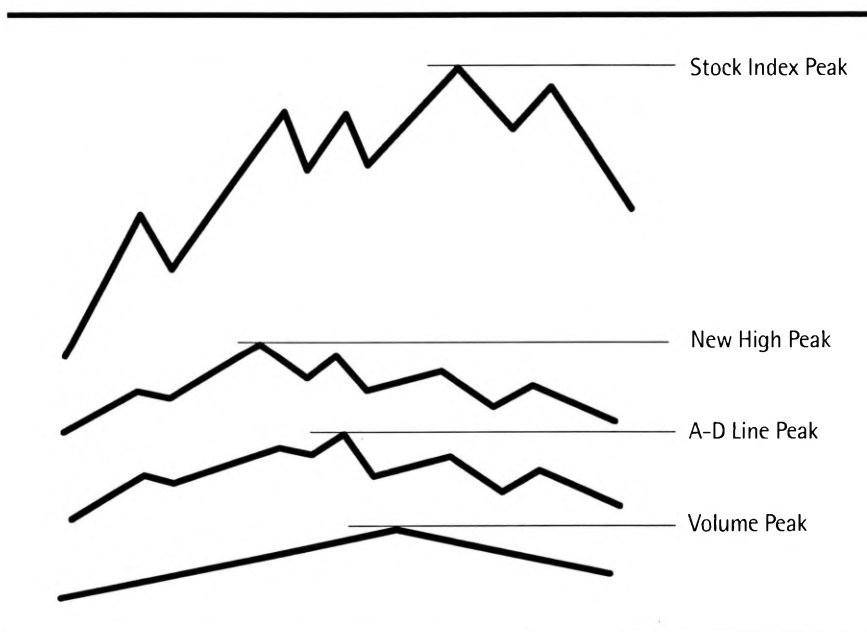


Figure 3.5 The normal sequence of indicator divergences as the market goes into the topping process.

highs hits a peak number. In other words, even though the market averages are going up and continuing to make new highs, the actual number of stocks making new highs does not increase.

Second, as the popular averages continue to new highs, the *advance decline line*, which is the difference between the number of stocks advancing and the number declining, fails to confirm—it fails to make a new high. This sets up the very popular technical indication of the divergence between the advance decline line and the popular averages.

Finally, the daily trading volume fails to expand. Usually as a bull market continues, the volume of trading grows. Then, at a certain point, prices continue to new highs but the volume of trading stops growing and actually contracts. This can happen for a little while without worry. But if it continues, it is usually the final, important indication that the topping process is just about complete. This reflects the observation that price follows volume.

Where is the top? The top has been occurring all along at different points for different stocks. Many stocks made their highs when the number of new highs peaked. Other stocks made their highs when the advance decline line made its high. Still others made their highs *after* the averages peaked. This action of various stock groups topping at different points in time is the topping process (the fan formation) that I referred to earlier. It is important to note that the process *usually* goes this way, but there are so many variations that the variations are really the rule.

Topping Often Starts in Fourth Wave From my experience through many markets, the process of topping often starts in the fourth wave of the Elliott Wave movement, especially if it is a complex horizontal movement (see Figure 3.6). In other words, the number of stocks making new highs occurs at the top of wave 3. Then, if wave 4 is protracted and complex, the divergence in the advance decline line starts in wave 4 and continues throughout.

This, by the way, is the cause of more prognostication errors by technicians than any other reason. I've seen it so often that I have come to look for it as a market indicator itself. Here is what happens: As the market moves into a complex wave 4, it gives the

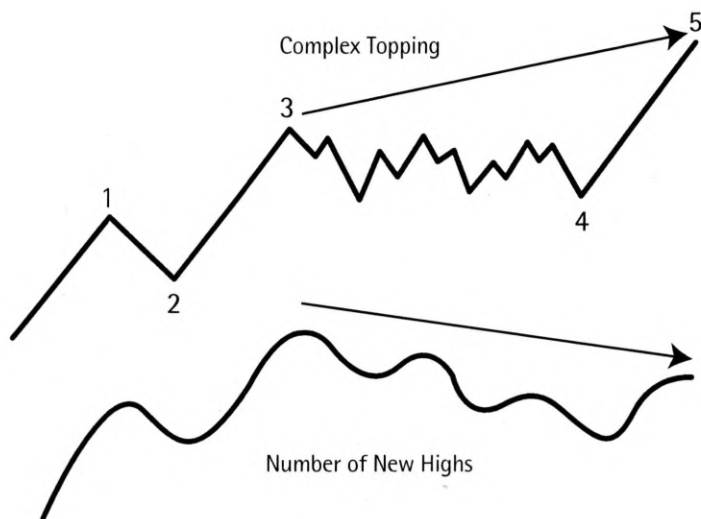


Figure 3.6 After a long advance, there is often an extended fourth wave correction before the final fifth wave to new highs. Market divergences often start during this wave 4, indicating that many stocks peaked at the top of wave three and will not make new highs when the final fifth wave occurs. It is common for some market technicians, seeing the divergences, to get bearish “too soon” and get confused when the market breaks to new highs.

appearance of starting to round over. Remember, a complex wave 4 usually occurs after strong waves 1 and 3, with a short wave 2 correction separating them. Some people start getting nervous after this big run-up and are ready for a reaction. They start seeing the technical divergences as wave 4 forms. At these times, many people comment that the market “looks weak.” It’s at this point that technicians often call the top. What they fail to notice is that all this caution is starting to make investor sentiment very negative. (You’ll see in Chapter 5 why this is a bullish sign.)

Now, as the market moves sideways, completing wave 4, people take a bearish stance expecting the market to decline, but it doesn’t. It moves sideways in a long back-and-forth pattern. Every little decline raises hopes that this is the beginning of the widely anticipated bear market, but each decline halts and the market

recovers. After a while, investors start feeling nervous about being bearish and not having the market validate their opinion. Then the market suddenly breaks to new highs and begins a strong rally—wave 5 has begun. For a short period, the advance decline line again comes back to life and looks strong. At this point, the majority of investors quickly swing back to the bullish view, often saying the divergences were a false signal. They weren't; it was just a little early. It is at this point, as everyone swings back to the bullish side, that you should get bearish.

Nevertheless, many people have locked themselves out psychologically. After having been bearish and wrong and having now changed back to being bullish, they are reluctant to flip-flop again and become bearish. As prices start to decline—in other words, prices do what people originally thought they would do—these people are somewhat frozen in a bullish posture. This shows how you can be basically right about the market, but you are right too early—and this can spoil everything. *Survival in the market is often simply the effort to maintain confidence in your own judgment.*

Making Bottom

Market bottoms are different from market tops from a technical view. There are very few technical tools, except sentiment indicators, that are useful in calling a bottom. Unless it's a very rare compressed bottom (as it was in 1982), most bottoms end in some form of a climax. A *climax* is a type of market bottom in which panic selling occurs in huge volumes with prices collapsing completely. The climax actually starts days earlier, and as the decline continues, the volume in stocks rise as prices plummet until it becomes a panic. The actual end, or bottom, usually occurs in one day, with prices collapsing on huge volume, and then, interday (mid-trading day), reversing direction and surging upward on huge volume. This reversal rally dies away after a few days, and then prices go into a long, quiet period during which nothing much happens and volume becomes very, very light. The market looks dead—and it is—but the decline is over.

During a selling climax, it's best not to look for the bottom. Take a step back, or, if you are invested, sell out and repurchase. Let the market make climactic bottom and go through its reversal rally.

An Important Observation

Unstable markets, where feedback loops are on the verge of being triggered, usually have the common characteristic of a lack of volatility right before the triggering. From my experience you'll see the following: The market will have advanced to a new high and seem to be holding that position very well. Sell-offs, when they occur, are moderate and don't seem to amount to anything. These weak sell-offs often induce people to comment on how strong the market looks after the recent advance. They comment that it doesn't seem like it wants to go down. Slowly, the market becomes very calm. Then it gradually moves to new highs on very light volume. Prices often seem to go right out on a ledge, slowly rolling over and picking up steam as trading volume rises. The decline often catches people off guard. The stock market has lulled investors into complacency. These declines start with low volatility, often becoming very severe, and end with high volatility.

When the rally is over, it almost always declines again at least 50% or more of the previous rally. On this pullback, the volume will dry up to almost nothing. It's the death after the climax. At this moment, the market will seem awfully weak, and there doesn't seem to be any reason for it to go up anytime soon. Investor sentiment will measure extremely negative; investors are generally expecting further price declines. The most optimistic talk that you'll hear is that the market will need a lot of confidence building before anything positive happens. You've got your opportunity! At this point, it is usually safe to purchase for the long term. And you won't have to wait for as long as you may think!

Obscuring the Obvious

Probably over 50% of the technical market indicators are oscillators of one kind or another. I find oscillators far overrated. Twenty-five years ago, I used and tested hundreds of them; now I never use them. Why? I stopped because I found that they are a form of esoteric mathematics

and prevent a person from seeing what is happening. If you can't see what is happening in the market, you won't be able to see anything deeper by studying an oscillator; it can't tell you anything more than the original underlying statistic on which the oscillator is based.

I know I'm being overly critical here, but I'm trying to make a point. As an example, there are many oscillators calculated from the advance decline line. If you recall, the advance decline line is simply the difference between two numbers: the number of stocks advancing and the number declining. There is no greater truth buried in this number. The creation of the advance decline line was originally intended simply to pinpoint market divergences, periods when the popular averages were going up while most stocks were going down. That's all. But then people started taking moving averages of this line. They started subtracting one moving average from another moving average and plotting this line. They started adding these differences and plotting this sum. They even started looking for trend lines of this measure.

You can see how this process can slowly remove a person further and further away from a simple and direct observation of the market. Doing this is a little like taking a simple equation, such as $1 + 1 = 2$, squaring it, then taking the fifth root, and then adding 3 to it. Doing more to this number won't give you any greater truth than the original simple equation of $1 + 1 = 2$. It's unnecessary mathematical complexity to find some deep meaning underneath all the data. There isn't any. That is not the direction to proceed to discover what the stock market is going to do.

Just by looking at the advance decline line, I can tell you what any oscillator will look like. The oscillators are calculated from the advance decline line, so they can't tell you anything that the line itself can't tell you. With many oscillators, technical analysts are simply bottling up tap water, adding bells, whistles, and a little mystery, and selling it as a magical potion. It's just plain tap water.

Paradox 3 Resolved

We have finally answered Paradox 3. Remember, Paradox 3 stated

The technician says up and the fundamentalist says down—
yet both are right. The fundamental analyst, after looking at

Computers as Traders

I'm expecting that a new investing rage will emerge after the market has been in a trading range for some time—computer programs that do all the trading for us. These programs will monitor the financial markets 24 hours a day, automatically call up an Internet account, and make the trades when and as they see fit. If a computer can now beat the world chess champion, a computer that can consistently do better than the best human trader is not far off. When a trading range market sets up and becomes accepted as the new investment reality and when trading programs start producing consistently better returns than their human counterparts, the movement toward this type of computer program will quicken. Humans will just stand back and watch, much like they now do at the computer chess tournaments. I think this could happen by the year 2005.

the economic situation, proclaims that all is well and says that stocks will advance. The technician, after studying new highs and lows, the advance decline line, and price patterns says that the stock market will decline. Both are right. How can this be?

Both analysts can be correct because they are referring to—or should be referring to—different time periods. It is unfortunate that this point is seldom clarified, and not doing so is the cause of half of the seemingly contradictory advice that you hear from analysts.

Conclusion

The market change indicated in my theory—that the long-term bull market of the 1980s and 1990s is ending and that we are entering a long sideways period—will occur because of economic reasons. We will explain some of the fundamental ideas that support my belief in later chapters. As we have said, anything that happens over the long term happens because of fundamental reasons. However, this extended, sideways up-and-down market will break down into a

number of advancing and declining periods, and many will last less than nine months. Because the time period of these sub-movements is shorter, the beginnings and ends of the movements will have to be identified using technical analysis. Fundamental analysis will not work, because it isn't useful for predicting shorter time frames. If you are going to make money during this sideways period, technical analysis will have to play a part.

Chapter 4

Fair Value: Stacking the Money Theory

The last chapter explained that divergence is the basic idea behind technical analysis and that market technicians look at market internals, measuring divergences to determine where the market is going and what it's going to do. In my opinion, these divergences cannot distinguish between a major bull/bear market and an intermediate-term movement; the divergences look the same before each. Because of this uncertainty, technical indicators should not be used to predict movements lasting more than nine months. A major bull and bear market—or any movement that lasts longer than nine months—always requires a fundamental or economic reason for its occurrence. The roller-coaster (trading range) market I'm predicting will probably last a number of years, so the reasons for it will be fundamental, economic reasons—not technical reasons. To understand what these economic factors might be, you need to understand more about the economic term D/I , from the new stock market model that I presented in Chapter 1.

The model, as seen in Figure 4.1, says that the price of a stock equals a fair value that is modified and stretched by three somewhat independent feedback loops. The fair value is represented symbolically by the term D/I , where D stands for dividends and I for interest rates.

If you're one of those people who think dividends no longer have meaning in today's stock market, you had better pay close attention. Throughout this chapter, you will see why dividends and

$$\text{PRICE} = \text{STFL} + \text{ITFL} + \text{LTFL} + D/I$$

STFL ITFL LTFL

KEY

STFL: Short-term feedback loop

ITFL: Intermediate-term feedback loop

LTFL: Long-term feedback loop

D: Dividends I: Interest

Figure 4.1 In my new market model, the price of a stock is a fair value (D/I) modified and stretched by the action of a short-, intermediate-, and long-term feedback loop. The term D/I is symbolic. It is really the sum of a long series of terms where future dividends are divided by powers of the current interest rate.

interest rates are so important to stock prices. At the end of this chapter I'll show you how this theory can be used to solve two of the four investing paradoxes.

The concept behind the fair value term in the model is simple. It is an old idea that says that the current price of a stock should exactly equal the present value of all that company's future dividends. This chapter describes what this means and how it applies to today's stocks. Your initial reaction may be that this statement can't be true because you know many companies that have never paid a dividend and yet still have a stock price. Nevertheless, as you will see, the model still holds. As we explore the idea behind D/I , you will learn how stocks with no current dividend can still have a theoretical stock price.

Stacking the Money: The Financial Theory for Fair Value

A few years ago, I was asked to develop a customized retirement seminar for a Fortune 500 company. This company allowed each employee the option of taking his or her pension as either a lump sum payment or a monthly check paid over the employee's life. In this seminar, I had to teach these retirees exactly what a lump sum

pension was and, because many of these employees were scientists, I explained the concept mathematically. In the process of trying to find the right level of mathematics that communicated the meaning of the term “lump sum,” I realized the importance of the underlying presentation in terms of understanding stock values.

Calculating the Lump Sum Pension: An Example of Fair Value

Theoretically, a lump sum pension payment is the amount that the pension actuaries think is exactly equal to the amount the pensioner would receive if she or he chose the monthly check-for-life option. How does a pension actuary make this calculation? It’s a two-step process. Figure 4.2 illustrates the first step.

The first step in the process of calculating a lump sum payment is to determine the present value of each year’s pension payments. Let’s assume that our retiree’s current age is 62 with a lifetime pension of

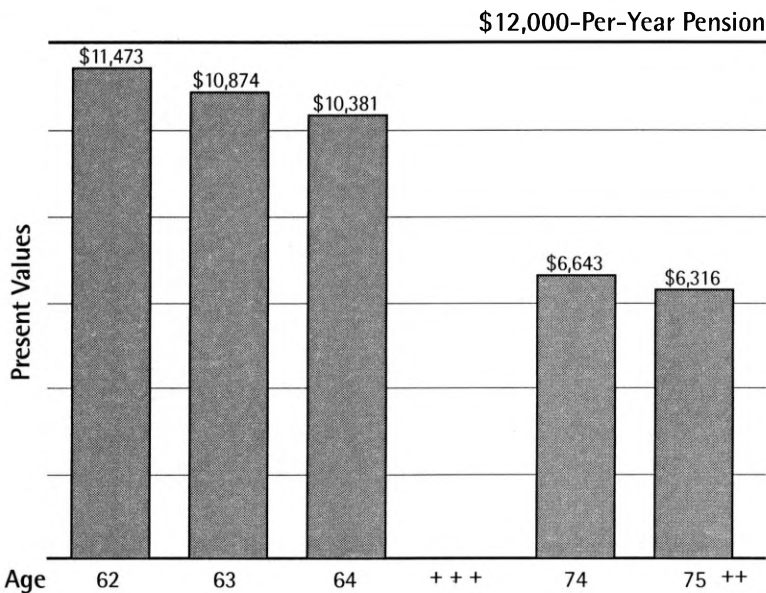


Figure 4.2 The first step to figuring a lump sum pension is to calculate the present value of all those future pension payments.

\$1,000 per month, or \$12,000 a year. First, we get a calculator, a piece of paper, and a stubby pencil. With these simple tools, we can calculate the present value of each of the \$12,000 yearly payments.

What is the present value? The present value is the dollar amount you would need *today* so that if it was compounded it would grow to each \$12,000 payment needed in any year. To make this calculation, of course, you need an interest rate at which to compound. Federal law requires that actuaries use the 30-year treasury bond interest rate as the compound rate. As of this writing, the current 30-year T-bond interest rate is 5.06%, so we will use that figure in our calculations.

Now that we have our interest rate, let's calculate some specific present values. For example, what amount of money would grow to \$12,000 in 13 years (for age 75)? Using my calculator and stubby pencil, I figure that at 5.06% we'd need \$6,316 today. In other words, \$6,316 will grow to \$12,000 in 13 years at 5.06%.

A pension actuary would make this same calculation for every year from age 62 to age 110. Yes, age 110! (These pension actuaries take their jobs very seriously.) Not much money is needed today to account for that payment at age 110. In fact, according to my calculations, the present value for \$12,000 when the retiree is 110 is \$1,122. After we have calculated all the present values, we make a list of them with our stubby pencil and then proceed to step two.

In step two, we take each present value and multiply it by the probability the company is going to have to make that payment. Where in the heck do we get this number? From actuarial studies, those rather amazing documents that predict the probability of a person at any age living to any future age. For example, there's about a 65% chance that a 62-year old will be alive at age 75. Therefore, we would multiply the present value for age 75, that being \$6,316, by .65. The result (\$4,105) is called the probability-weighted present value of a \$12,000 payment at age 75 (see Figure 4.3).

We then make this same calculation for each present value all the way to age 110. For example, the probability of being alive at age 110 is less than 1%, so the probability-weighted present value at age 110 is less than \$10. Now we mathematically stack these probability-weighted present values—in other words, we simply add them

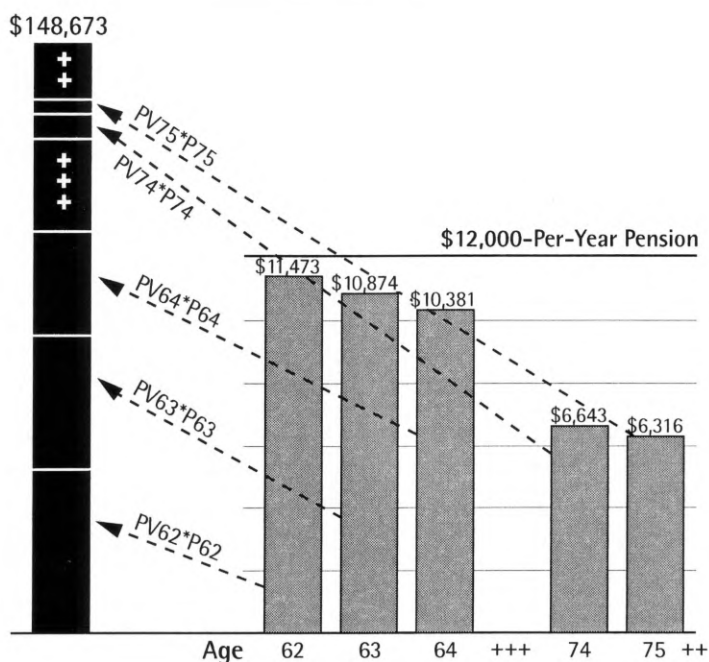


Figure 4.3 Second step: Stacking up the probability-weighted present values.

all up. This sum is the lump sum equivalent of the monthly pension checks for life. In our example, the lump sum would be \$148,673.

To an actuary, these two are equal—that is, the lump sum of \$148,673 exactly equals the \$1,000-a-month payment for life. You can also look at it from the other end; that is, if you wanted to buy a \$1,000-a-month payment for life for this retiree, you would have to pay \$148,673 right now. (Note that another company might come up with different figures, depending on the life expectancy tables used by the actuary.)

How Interest Rates Affect the Lump Sum Let's play around with this concept to be sure that we have a good feel for it. Suppose the retiree goes to his benefits department, learns about these two retirement payment options, and goes home to think about it. A few

months later, he goes back and asks whether his retirement package has changed. He learns that the monthly pension hasn't changed, (it's still \$1,000 per month) but the lump sum is larger; it is now \$151,356. The retiree is mystified, but suddenly remembers that over the two months interest rates declined. Then it dawns on him what is going on. The lump sum is always being evaluated and calculated in the interest rate environment of that moment. In other words, *given no change in the monthly pension, the retiree is entitled to a higher lump sum for no other reason than interest rates are now lower.*

This is a very important conclusion: When interest rates go down the lump sum goes up, and when rates go up the lump sum goes down. Because of this, employees wanting to take the lump sum often try to time their retirement when they think interest rates will be low.

Why would the lump sum go up if interest rates go down? Understanding why this happens opens the door to understanding many things about stocks and bonds. To learn why, let's look at an extreme case, one where interest rates go very low—all the way down to zero. What would happen to the present values? How much money would you have to have today growing at 0% to become \$12,000 at any future time? Obviously, you need \$12,000. With these much larger present values, the lump sum stacks up to a much larger amount. The opposite happens when rates go up. The present values reduce and the stack gets smaller. This relationship between the size of the lump sum and interest rates is shown in Figure 4.4.

This example of how a lump sum is calculated is very important, because this same procedure is the one used to determine the price of both stocks and bonds. You probably think that there is a lot more to stock prices than this but, except for the feedback loops discussed in Chapter 1, there isn't. All the thinking and effort that goes into Wall Street projections boils down to calculations like the ones we just performed to figure a lump sum pension. When performing such calculations, analysts and actuaries say they are calculating the *time value of money*. However, I think the term *stacking the money* more accurately describes the process, because the calculations involve stacking one number on top of another.

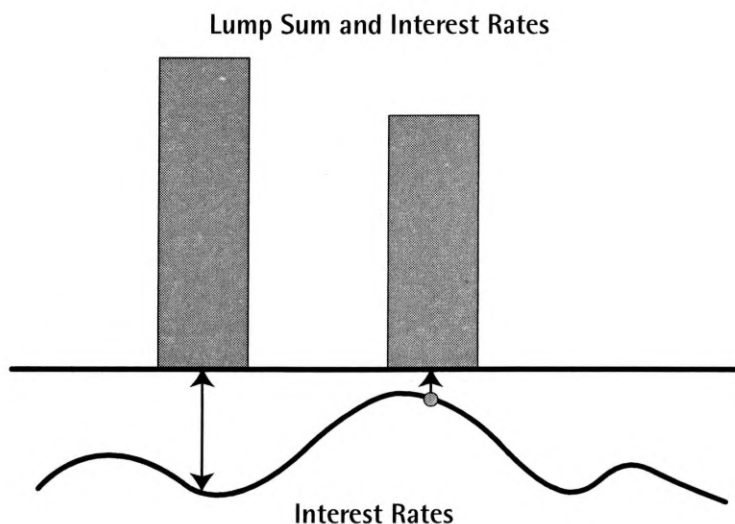


Figure 4.4 When interest rates are low, lump sum pensions are high. When interest rates are high, lump sum pensions are low.

Definition

stacking the money is the mathematical procedure used to find the current worth or value of any investment that will throw off a future stream of income or cash. This theory recognizes that money, like any commodity, has a value and that the current value of any investment—stocks, bonds, real estate, and so on—should be determined using this or some variation on this idea.

Remember: When interest rates rise the lump sum gets smaller, and when they go down the lump sum gets bigger. Does any of this sound familiar? Have you ever heard that high interest rates are bad for stock and bond prices and low interest rates make them go up? Do you think there is any relationship between why the lump sum pension goes up or down and why stocks and bonds also go up and down when interest rates change? The next section shows you how this theory applies to bond prices.

Stacking the Money to Determine Bond Prices

Stacking the money is the only theory used to calculate bond prices. Let's take a look at how this works. Suppose we have a U.S. Treasury bond with 10 years left to maturity. This bond will pay \$80 per year to the holder for the next 9 years and in the tenth year it will pay the final \$80, as well as the face value on the bond (\$1,000 in this case).

What's a fair price for this bond today? First, we need to look up the current Treasury interest rate. Then, with our calculator and stubby pencil, we use this rate to calculate the present value of each \$80 payment for the next 10 years, as well as the present value of the final \$1,000 payment (see Figure 4.5). Unlike with lump sum pension payments, the probability that payments might not be made isn't an issue, because the government guarantees the payments. This removes the probability factor from the equation. Finally, you stack (in other words, add up) all these values to determine the price of the bond.

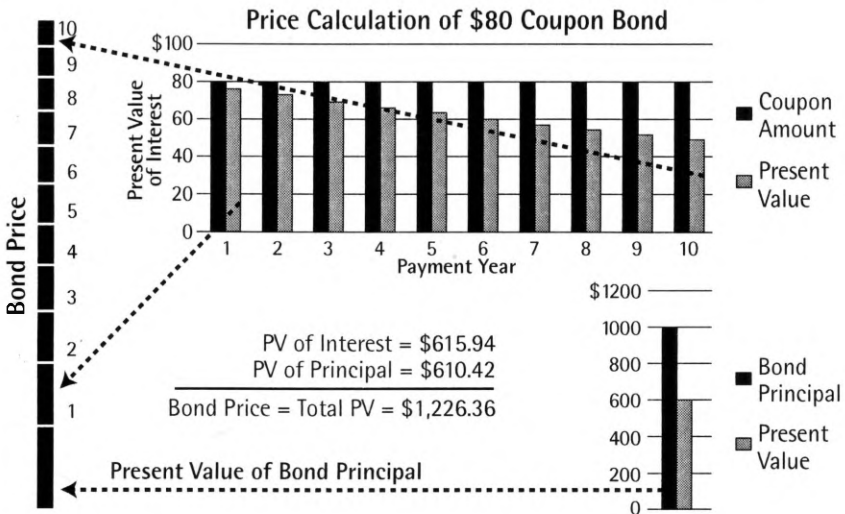


Figure 4.5 The price of a bond is calculated following the same “stacking the money” procedure that is used for calculating a lump sum pension payment.

Note By the way, when calculating corporate bonds (where there is possibility of default), the probability factor is not 1. Instead, you must multiply the present values for each coupon + the principal payments by a number that represents the chance of its default for that particular coupon. You then stack these default probability-weighted present values to find the price of the bond.

Bond prices rise and fall with interest rates for the same reason the lump sum pension rises and falls. In fact, after a bond is issued and its coupon is fixed, all a bond ever does pricewise is march to changing interest rates—that is, its price adjusts daily to reflect the ever-changing interest rate environment it lives in. With bonds, the link between interest rates and the price of a bond, just like the lump sum, is immediate and direct. Stocks follow the same theory, but here the connection is looser—because with stocks, the payments you’ll be stacking are fuzzy numbers.

Stacking the Money to Determine Stock Prices

Now let’s turn to stocks. What is the price of a stock? The same calculations apply, except this time we stack dividends. The rule of the game is that you always stack what is paid out. We take all the dividends that the stock will ever pay, calculate their present value using the current interest rate, and stack them up. The total should be the current price of the stock. Although this is feasible with bonds and pension payments, doing this calculation with stock prices involves the uncertainty of knowing exactly what those dividend payments will be. We may know what the dividend is today and have a good idea about what it will be over the next few years, but can you realistically project dividends over 10 or 15 years?

Estimated Value of Dividends Because of the uncertainty of these far away future dividends, the present values for the dividends become fuzzy numbers—especially for dividend estimates far in the future (see Figure 4.6). For some companies, such as stable utility companies, the dividend is very predictable over many years. With other companies, the dividend is harder to predict. Whether the predictions are fuzzy numbers or exact numbers, the basic theory still says that the current price of a stock is equal to the stacked present

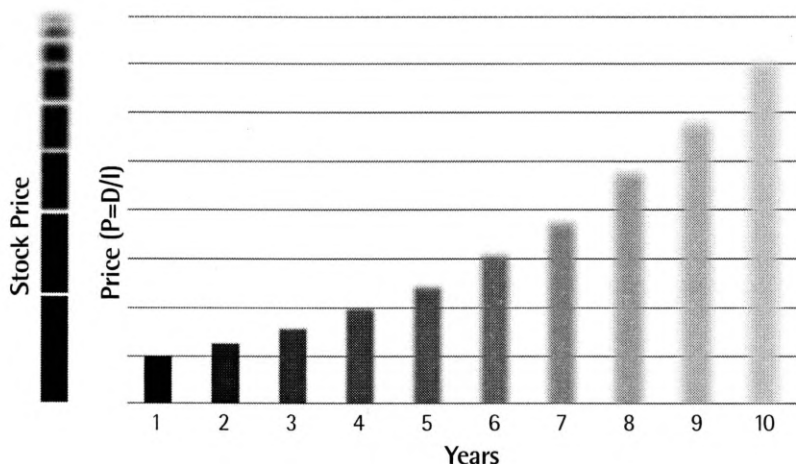


Figure 4.6 Stock prices follow the same “stacking the money” rules except that the numbers (dividends) being stacked are fuzzy numbers and they get fuzzier the farther out in time you go.

value of those future dividends. The D/I term in the model describes this. In reality, the number is the sum of a long series of terms (all of which are fractions) in which dividends are the numerator and a power series of interest rates are the denominator.

You must remember that when you are working with stocks, only one of the numbers in the stacking process—the interest rate—is an exact number. The other number—the dividend—is a fuzzy, or uncertain number. This fact leads to an important conclusion: If you divide a fuzzy number by an exact number, you get a fuzzy number. This means that the price of a stock, unlike the price of a bond, is always fuzzy; no one knows exactly what that price should be. That’s okay—it’s part and parcel of what investing is all about. But whether the dividends are fuzzy or not, when interest rates change these dividends still stack to either a higher or lower fuzzy number. The response is the same as it is for bonds and lump sums and for the same reason. You can understand why interest rates are so important to stock prices. Stock prices should respond to interest rate changes for the same reason bond and lump sum pensions do.

In practice, to help lessen this fuzzy number problem, stock analysts use a few tricks. Instead of trying to estimate all the dividends for the next 30 years, they estimate for shorter periods—5 years, for example. The analyst then reassesses these calculations every so often. I won't go into the details of this process, but it is the mathematical equivalent of what an explorer does as he or she sets off for a distant land, with only a compass and a map as guides. Instead of taking one compass reading and then setting off in a particular direction for good, the explorer would take the trip in stages, stopping every now and then to replot his position.

At this point, you should have a better understanding of how the components in the new model introduced in Chapter 1 work together. To summarize, that model says that stock prices equal a fair value modified and stretched by three feedback loops. It is easier now to understand how and why these feedback loops can actually exist. The fair value term is a fuzzy number (see Figure 4.7), and the

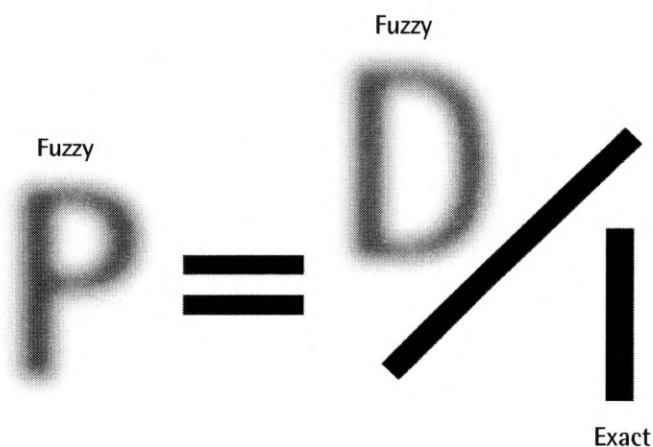


Figure 4.7 Of the two numbers used to calculate fair value, one (dividends) is a fuzzy number, the other (interest rates) is an exact number. This tells you that, at any time, fair value is always uncertain. How uncertain depends on the type of stock—the fair value of stable utility companies are much less fuzzy than start-up technology companies. The fuzziness of the fair value determines how much effect and play a feedback loop will have on the prices.

uncertainty of exactly what fair value is allows enough of a price range to give investor emotions free range. For example, these same feedback loops also apply to the bond market, but because bond prices are more exact, the price is more certain and the feedback loops much less pronounced.

The theory of stacking the money uses only two numbers to figure stock prices: dividends (both current and future) and the current interest rate. Other figures—such as sales, earnings, and market shares—are helpful but only because they ultimately help clarify the fuzzy dividends. The current price of a stock always reflects Wall Street's consensus estimate of what those fuzzy numbers will ultimately be.

Why Interest Rates Are So Important In 28 years, I have seldom seen the correct explanation of why interest rates are so important to the direction of stock prices. For example, two well-known books written by top market analysts give three reasons for the importance of interest rates. These reasons contain just enough shadow truth in them to get an investor into trouble. The three commonly given reasons are

- Lower interest rates are good for profits because they allow companies to borrow money for less.
- Movements in interest rates make bonds more (or less) attractive compared to stocks, thereby attracting money into (or out of) stocks.
- The cost of borrowing and buying more stock, called the *margin*, is less when interest rates are low.

None of these explanations really touches on the real and direct relationship that exists between stock prices and interest rates, as explained previously. This is so important that I'll say it again in another way. *The real reason interest rates are so important to stock prices is that the series of mathematical terms that are used to calculate fair value have interest rates in their denominators.* Recall what you learned about fractions: When the denominator gets lower (interest rates go down), the value of the fractions goes up and there-

fore prices go up. This is the real reason interest rates are so important. When you understand this, you can see that the three previously listed reasons are really of little consequence.

Interest Rates and Dividends: The Yin and Yang of Stock Prices The two factors that enter into the equation for fair value, dividends and interest rates, give us the yin and the yang of stock prices—yin and yang because dividends and interest rates usually work opposite each other. Normally, interest rates go down when business contracts—that is, when earnings and dividend estimates are also being reduced. This means that both the numerators and denominators get smaller; they somewhat counteract each other, but not completely. Which is more important in the fair value term: lower future dividends (D) or lower interest rates (I)? A mathematician would tell you that interest rates are more important because they change quicker and therefore affect the calculation faster. Interest rates can reduce by 20% in as little as a month—a quick change that not only affects the present value of the current dividends but also the present value of all future dividends. A recession really is expected to affect only a few years' worth of dividends. It is only when the dividends are perceived to be in trouble for a long time (such as during the Great Depression) does the long-term reduction in dividends matter more than the reduction in interest rates. This explains why stock prices often hit bottom in the middle of a recession, when interest rates start to decline as the economy recedes.

Many investors think that stocks start rising in the middle of a recession because farsighted investors anticipate the recovery and see expanding earnings and dividends. Yes, there is a little of that activity. But the important point is that stock prices rise because the lower interest rates result in the declining dividends that are stacking to a still higher price than they did a little earlier.

The direct relationship of interest rates to stock prices can be seen in Figure 4.8. About 50% of the long-term gains in stock prices since 1982 (when the Dow Jones started its rise at just under 800), is directly attributable to the drop in interest rates from 14% to 5%. The rest of the gain is attributable to the expansion and increase in earnings and dividends.

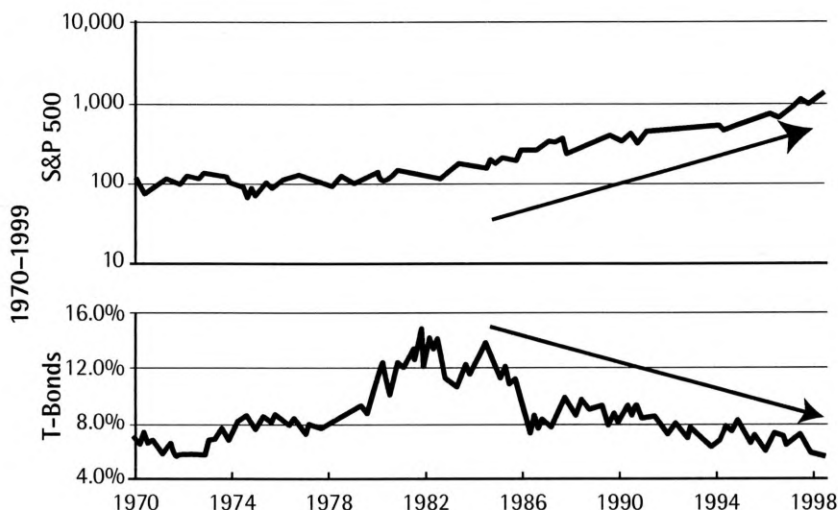


Figure 4.8 As the stacking the money theory indicates, about half the gains of the 18-year bull market are the result of the long drop in interest rates from 15% to 5%.

Note Now there are many ways to pay dividends. For example, recently some companies started to repurchase their own stock, which acts like a dividend payment. I don't intend to cover the alternative methods of paying dividends, because any effect would be measured much the same way we do using the theory of stacking the money.

Response Time Theoretically, stock prices should respond to interest rate changes as immediately and directly as bond prices do. In practice, however, the difficulties involved in predicting dividends loosen the connection, and the relationship is not as direct as with bonds. It is not uncommon to see both interest rates and stock prices decline simultaneously. Such a chain of events runs counter to theory. If this continues for a time, people often start saying that stock prices and interest rates have uncoupled. Although they are partially right—that is, stock prices and interest rates do occasionally break off their dance—a closer inspection reveals what is really happening. For whatever reason, during these periods, investors

turn their attention away from the denominator and focus entirely on the numerator. This usually happens when a severe economic event has occurred and investors are trying to evaluate its economic ramifications.

A shift like this happened during the decline of 1998, when a mini currency crisis rippled through the global economy. During this crisis, American stocks suffered a 20% decline. Interest rates also declined as the crisis worsened. However, investors were so concerned about the economic repercussions on the fuzzy numbers, they didn't notice—or didn't care—that interest rates were plunging. After the panic subsided, the theory of stacking the money took hold and prices rocketed upward.

Inflation and the Theory of Stacking the Money It's important to keep in mind that the D/I formula does not indicate whether future dividend growth occurs because of inflation or real growth. For example, suppose that the amount of goods a company sells remains the same, but that the company increases the price of its goods by 10%. This means that the company's earnings and dividends also rise by 10%. However, such an increase does not represent real growth, because the 10% rise is due to inflation.

By contrast, assume inflation is zero but that sales and earnings (and eventually dividends) increase by 10%. The theory of stacking the money treats this situation identically to the situation involving 10% inflation. You might think that these two should not be treated the same, because one represents real expansion in business and the other doesn't. But they are treated the same—and they should be. The difference between these two cases doesn't occur in the dividend number; it occurs in the bottom number, interest rates. During periods of inflation, interest rates are higher, thus stacking the dividends to a lower sum. When real growth occurs, you have the best of both worlds: high expected dividend growth and low interest rates. The theory allows for the highest possible fair value during these periods.

Applying the Model to Companies That Don't Pay Dividends

How about all those companies that don't pay dividends? How are their prices established? Their prices are predicated on the idea that the company will pay a dividend someday. The hope, of course, is

that fantastic corporate growth will result in really big dividends in the future (see Figure 4.9). After all, there is a present value for a payment, even if that payment is 10 or 15 years away. If those dividends are expected to be large enough, theory would justify a high stock price today. But if investors at any time begin to think that the company's dividends ultimately won't materialize, its stock price would go through a major evaluation.

To understand this principle, suppose that we have a time machine and go 50 years into the future. We then go to a library and search through the records and see that the small computer company named XYZ (which deals in computers, chips, software, and the Internet) grew for a time into a huge company that earned billions of dollars. Suppose we further learn that after a while, the company declined and eventually went bankrupt. Most importantly, suppose that over its entire life it never paid a dividend. If we then flew back to the present and we could convince everyone that what we had learned was real and accurate, at that point the price of that company should go to zero. I don't care if the company still had 15 years of

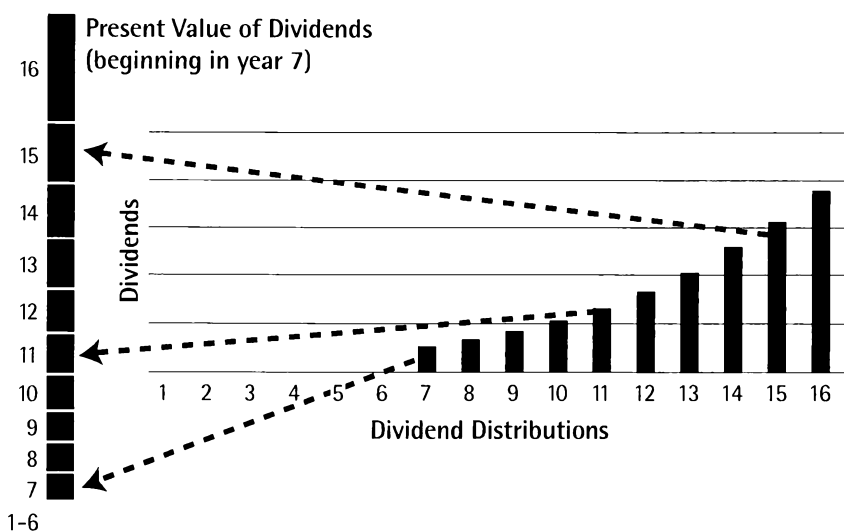


Figure 4.9 Even if a company isn't paying dividends now, large dividends expected in the future result in a big stock price today.

earnings growth in the billions of dollars ahead of it. Based on our equation for fair price, that company's stock price should be zero.

In practice, when dividends lie far in the future, analysts attempt to estimate them by looking at earnings. After all, dividends must eventually come out of earnings. Mature companies often pay out as much as 50% of their earnings as dividends. Therefore, by keeping track of how earnings are growing, analysts can form some idea of what dividends might be in the future. Today, there are many companies paying little, if any, dividends and also many companies doubling and tripling in price that have no earnings at all. If this continues for a long time, investors can start thinking that dividends don't matter. After all, fortunes are being made without any consideration for dividends.

This just shows how fuzzy the numbers can ultimately get. These same investors will soon learn the realities of finance if they don't remember that these price movements are 100% speculation. Sooner or later, the price of a stock must have a fundamental basis. Ultimately, the great growth cycle must complete and the piper must be paid.

An Important Conclusion

The economic equation D/I in our model describes the effect of dividends and interest rates on stock prices and leads to a number of very general conclusions. One of these conclusions will be important to us in Chapter 6, where I explain why I think the market is headed into a long-term up-and-down pattern. Let's take a look at that conclusion now.

The current dividend yield on stocks is very low—around 1.3% for the S&P 500. This number is calculated by dividing the current dividend by the current price. What does this low yield mean? To have a low ratio you need to have a high price. From our theory of stacking the money, how do we get a high price? High prices result from the expectation of very large dividends in the future (see Figure 4.10).

The low dividend yields result because the present dividend is very small compared to the high stack (price) of all those future huge dividends. In other words, the current price of stocks is built on a very high—in fact, a record high—expectation of earnings and dividends growth. If this growth doesn't materialize, in hindsight we will know

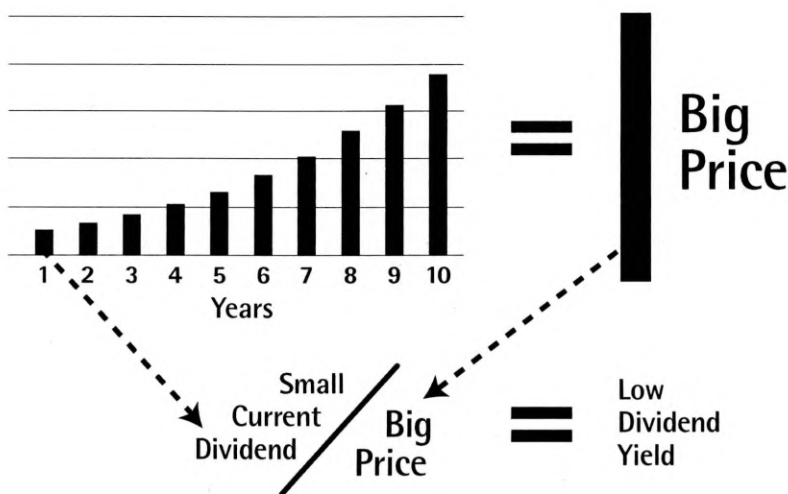


Figure 4.10 Theory says that a low dividend yield implies that Wall Street is expecting high dividend (and earnings) growth in the future. It is this high expectation for growth that allows investors to accept the low dividend yield today as OK. If confidence in the expected growth were ever shaken, a major price readjustment would occur.

that current prices were too high and the expectations too extreme, and a major readjustment will occur.

Stacking the Money Resolves Two of the Investing Paradoxes

We are now in a position to resolve two of the investing paradoxes introduced in Chapter 1.

Resolving Paradox 1: “I’m happy when I’m sad.”

Recall Paradox 1 from Chapter 1, which says: I’m happy when I’m sad. An example of this paradox in action occurred in September 1997, when the government announced good economic news—payroll levels were increasing. As a result, the stock market sold off 100 points. The press was in a quandary to explain it. The analysts said

that good news often means that the Fed will raise rates, and this is not good. But if this is true, carried to its extreme, the better the economy gets the more the market should sell off. Is good news really bad and bad news really good?

The analysts were correct, but they didn't go into the matter in enough detail. In fact, this paradox involves the yin and yang of stock prices explained earlier. After reading this chapter, you now know that interest rates are just as important when calculating stock prices as are earnings and dividends. Thus, the chain of events makes sense: When employment goes up, investors fear that the government will raise interest rates in order to stem inflation, and higher rates call for lower prices. The impact of news indicating that the economy is strengthening affects interest rates more than the growth of long-term dividends.

Resolving Paradox 2: "How can the tail wag the dog?"

Now recall Paradox 2, which asks: "How can the tail wag the dog?" To understand this paradox, you need to understand that the stock market is one of 12 leading economic indicators, probably the best of the 12. To predict the stock market, people usually turn to interest rates. Yet here is the paradox: The U.S. government classifies interest rates as a lagging economic indicator. Although stocks are one of the first things to move in a business cycle, interest rates are one of the last. So why can people use a lagging economic indicator to figure what a leading indicator is about to do? How can the tail wag the dog?

The paradox is resolved when you learn that the word *cycle* comes from the same root as the word *circle*. A rotating point on a circle traces out a normal cycle or sine wave. Can you find the leading point and lagging point on the circle in Figure 4.11? It's true that interest rates usually come down at the end of a normal business cycle, but remember that the end of one cycle is the beginning of a new cycle. The question we should ask is, "Why do stock prices move up early in the next business cycle?" Is it because investors are so good at seeing the higher D (dividends) from an expected new business recovery, or is it because I (interest rates) is lower, calling for higher stock prices? I believe it is because lower rates call for higher stock prices.

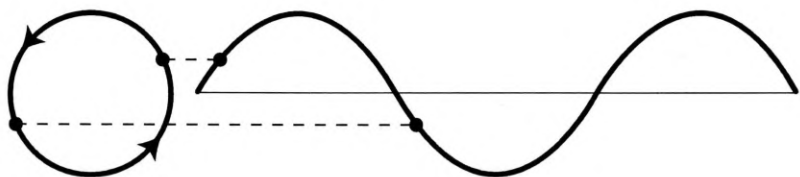


Figure 4.11 The word *cycle* comes from the same root as the word *circle*. What is the leading point on a circle and what is lagging?

I believe that the theory of stacking the money shows that the actual pattern is this: Interest rates come down, signaling the end of the previous business cycle. This in turn causes stock prices to rise, indicating the start of the new cycle. At one time, conventional wisdom held that the stock market was a good leading indicator because investors were farsighted enough to see the new recovery even in the midst of a recession. Early in my career, I could never see the end of the recession and couldn't understand why everyone else had such foresight and I was so blind. In truth, they weren't clairvoyant; they were just acting according to a theory that I had not yet learned—the theory of stacking the money.

Chapter 5

Of BABES, O'BUCS, and Contrary Opinion

In March 1972, the well-known market analyst, Marty Zweig, wrote an article for *Barron's* called "The Dearth of Short Selling." In this article, he predicted a major stock market decline, arguing that the lack of short selling indicated too much investor optimism. (Short selling is a way to make money if stocks decline. The lack of it meant people were optimistic about higher prices.) In fact, March was the month when the majority of stocks hit their peak; nine months later, the popular averages began their greatest decline of our generation, resulting in the 1973–74 bear market.

Two-and-a-half years later, the market hit bottom and, in an unheralded event, a brash 29-year-old market student (me) walked into his broker's office and declared that this was the "buy of the decade." Those were my exact words. But because my broker's business had declined so severely, my declaration seemed like nothing more than a grim joke. In fact, it almost got me thrown out of the room!

Even though I believed what I said, and was ultimately right, it felt very strange saying it at such a moment. It was like coming in after a devastating tornado and saying something like "Boy, aren't we going to have fun rebuilding everything from scratch!"

What gave me the courage to say something so outrageous? I was looking at the same short selling indicator that Marty Zweig had looked at two years earlier. However, by this time, it was indicating the opposite situation. It was showing one of the highest levels of short selling in history: pessimism so deep that it just had to be a major market bottom. Such is the power of the theory of *contrary opinion*.

The Theory of Contrary Opinion

The theory of contrary opinion is very simple. It says that when the vast majority of market participants think stock prices will advance, they usually decline. Likewise, when the vast majority thinks prices will decline, they will advance. In other words, prices usually move contrary to the expectations of the investing crowd when those expectations have reached an extreme. I want to emphasize that last point—the theory applies only when those expectations have reached an extreme. Notice that the theory doesn't consider the general economic situation. It simply states that the *necessary and sufficient condition for a major market peak or bottom is solely the existence of extreme bullish or bearish sentiment*. That's quite a statement.

Both history and experience have shown me that an investor's best chance of success at predicting stock prices is the theory of contrary opinion. This means that when you have an extreme reading in market sentiment, you must elevate that fact above all other indicators and economic data. This doesn't mean that these other indicators aren't important. It just means that when they conflict with an extreme reading in sentiment, you always defer to contrary opinion. When you make this mental adjustment, it forces you into an interesting inversion of thinking that I call BABES and O'BUCS, which I will explain at the end of the chapter.

Definition

theory of contrary opinion states that when the vast majority of market participants think stock prices will advance they usually decline. Likewise, when the vast majority think prices will decline they usually advance.

Understanding Why the Theory of Contrary Opinion Works

After 28 years, contrary opinion still mystifies me; I don't completely understand why it works. I don't think that I am admitting to a weakness here because no one has ever fully explained it. It's a little like the quantum theory—physicists use it and talk about it, but does anyone really understand it? Nothing I've read or heard completely explains the accuracy of the theory of contrary opinion. Nev-

ertheless, the fact that Marty Zweig and many analysts have made major prognostications based solely on this one theory shows how powerful many people consider it to be.

For one thing, contrary opinion seems to explain why it's so difficult to make money in the stock market. If markets simply went in the direction the majority thought, making money would be easy and we'd all be rich. I think it was the observable fact that this isn't the case combined with the high correlation between extremes in sentiment with market tops and bottoms that originally convinced me of the value of this theory.

Now the usual explanation as to why the theory of contrary opinion works is based on this simple idea: If everyone is bullish, the majority of investors have already made their purchases, which means there is no one left to buy and there is no means of driving prices higher. In the same vein, if everyone is bearish, most people have probably already sold their stocks, meaning that no one has any stocks left to sell.

This is a good explanation, but it doesn't fully explain everything. For example, I have seen markets that went through a sideways correction after a big advance and ended with extremely bearish readings—readings equal to those you see at major bear market bottoms. Yet the number of possible sellers after such a correction couldn't possibly have been exhausted—not like at the end of a bear market. Until we get a better explanation of the theory of contrary opinion, this one will suffice.

Reviewing a Brief History of the Theory of Contrary Opinion

Contrary opinion as a theory was first defined by Humphrey Neill in 1954 in his book *The Art of Contrary Thinking*, but I'm sure that it was known in some form even before that. For example, in Edwin Lefevre's book *Reminiscences of a Stock Operator*, written in 1917, you'll find the statement "Always buy when complete demoralization has set in."

Since its formative years, the theory has changed little. What has changed, however, are the methods analysts use to determine exactly what investors are feeling at any given moment. Over time,

analysts devised two major methods for measuring investor expectations. The next section explains these methods.

The Theory of Contrary Opinion as Applied to the Market

The methods for measuring investor expectations fall into two categories. The first attempts to measure what investors are thinking by calculating ratios based on what they are doing—exactly how and what they are buying and selling. The second category measures what investors are thinking by directly polling them to assess their opinions on the market.

Measuring Investor Activity

It's important to note that no matter which method you use (measuring investment activity or polling), the data is applied in the same way. In practice, you have to have a fair amount of data on hand—enough information to back-test the data through a number of severe bull and bear markets. You need this historical analysis to determine with any accuracy what levels of the data represent extremes in sentiment.

The Short Selling Ratios An investor usually sells stock short when they are expecting a decline. Thus, the amount of short selling in the market is a good measure of bearish sentiment. In the past, analysts have measured short selling in a variety of ways: odd-lot short selling, total public short selling, member short selling, specialist short selling, and short open interest. For example, Figure 5.1 shows the specialist short selling ratio between 1966 and 1976. It measured the percentage of total short selling the market specialists were doing. These short selling indicators were extremely useful at signaling market tops and bottoms in the 1960s and 1970s. But they haven't worked since 1984, which marked the advent of program trading.

Definition

short selling is selling borrowed shares of stock under the expectation of being able to buy them back at a lower price and returning the shares you borrowed. This strategy makes money if prices decline and loses money if prices rise.

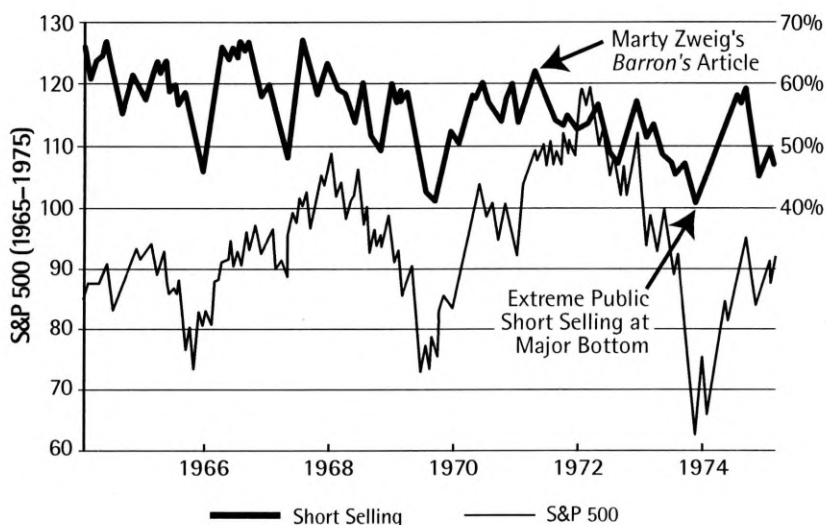


Figure 5.1 This chart plots the famous Specialist's Short Selling indicator, which is similar to the short selling indicator Marty Zweig used in his 1972 *Barron's* article.

Program trading is the instantaneous buying and selling short of a stock or index to lock in an abnormal difference in price between two similar or identical investments. This short selling is done solely to lock in an investment gain; it does not indicate any expectation that prices are headed lower. Ultimately, this arbitrage short selling introduced so much noise into the ratios that it made them useless. Although they are still followed, I do not recommend that anyone use the short selling indicators any longer as a means to measure market sentiment.

The Put/Call Ratio Another method of measuring investor activity is the put/call ratio. Officially, a put is an option to sell a stock at a specified price for a specified time. People buy puts if they expect the price of a stock to decline. A call is an option to buy a stock at a specified price for a specified time. People buy calls when they expect the price of a stock to advance. Because puts and calls can get very

complicated, let's just say that puts are bets that stocks will decline, and calls are bets that they will advance. By calculating the ratio between the number of puts and calls, it is possible to get a good idea what investors are thinking about the direction of stocks.

In 1970, before the creation of the Chicago Board Option Exchange (CBOE), the only available data on puts and calls was an informal option market put together by certain option dealers. It was again Marty Zweig, in a couple of pioneering articles in *Baron's*, who established the use of options to measure contrary opinion. But the data needed to follow these options was difficult to come by. Then, when the formal option markets were established in the mid-1970s, it became much easier to track these ratios on a daily basis. I have been following them since the first year CBOE opened.

You can calculate two types of ratios: the ratios for the totals of puts and calls for all individual stocks and the ratios for the index options. First, let's look at index options.

I remember dreaming in 1976, 8 years before their creation, that if index options were ever created, it would be the perfect way to apply the theory of contrary opinion. When my dream was finally realized, I was disappointed; they never turned into the great indicator of contrary opinion I dreamed they would be.

On average, index put buying exceeds index call buying by as much as 2:1, but this ratio has been gradually rising over the years. For this reason, it's hard to establish the band that represents *extremes* in bullish or bearish sentiment. More importantly, the ratio has a tendency to go in the opposite direction from what you would expect. Studies seem to indicate that more institutions are using index options as market hedges, thereby skewing the numbers the way program trading skewed the short selling ratios. Because of this, I do not use the index options as an indicator.

The only indicator I use for studying puts to calls is the ratio of puts and calls on individual stocks. This is the technique that Marty Zweig pioneered and I believe it is still the best puts and calls indicator of investor sentiment. You can see this indicator in Figure 5.2. It usually goes high at market bottoms and low at market tops, following the pattern that you would expect from contrary opinion.

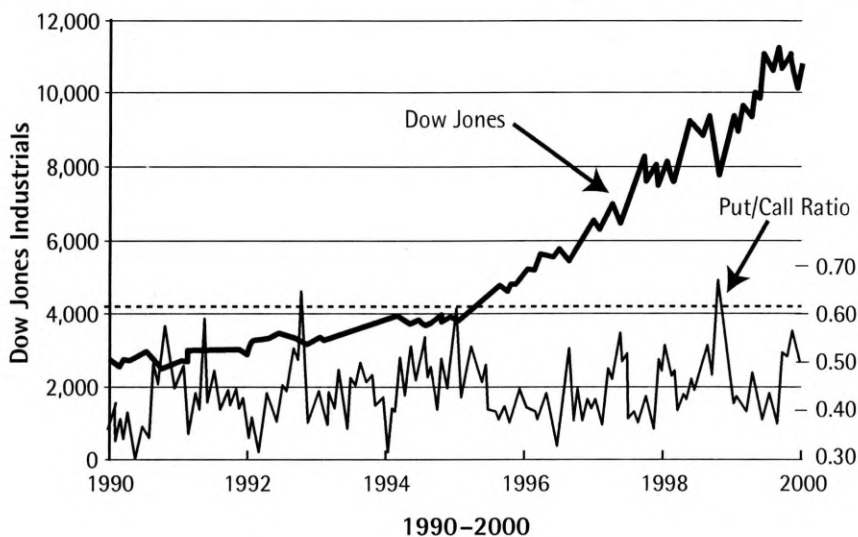


Figure 5.2 The CBOE puts to calls ratio from 1990 through 2000.

Note I know that the expansion in financial products over the last 20 years is good—I often trade the index options. However, from another point of view, I am disappointed to have lost first the old short selling indicators and then the index options as good and reliable indicators for helping predict what the market is going to do. This is especially true as we enter a sideways market period, when these tools would have been very useful.

Polling Investors

The second method of measuring investor sentiment actually involves polling the investors. As you will see in the next two sections, a number of services attempt to do just that.

Futures Polling Services There are two or three services designed for futures and commodity speculators—people who buy and sell the stock market via index futures—that poll future traders. However, the results of these polls show that futures traders are notoriously short-term-oriented. The numbers often go from a bullish extreme to a bearish extreme over a few weeks. This fact highlights

Is Sophistication a Factor?

*I*n its basic form, the theory of contrary opinion doesn't say anything about the sophistication of the investors whose activity or opinions we are measuring. Some analysts think it's necessary to consider exactly whose opinion they are measuring, based on the assumption that sophisticated investors probably have more accurate opinions than unsophisticated investors do. Thus, many people have tried to classify investors into sophisticated and unsophisticated groups. However, I have carefully studied these efforts, and after many years, I have come to a different conclusion. My experience has shown that any large grouping of investors (whether sophisticated or not) seems to hold the wrong opinion at important market junctures.

the importance of always knowing the time intention of the trade, as mentioned in Chapter 1. In my experience, futures polling information is useful only when you take long-term moving averages of the reading of each service and then add them together. By combining the data in this way, you can produce a broader statistical foundation on which to base conclusions about investor sentiment. In general, unless I'm particularly interested in shorter-term movements, I avoid futures polling services, because their data can be misleading.

The Guru Index The oldest and most reliable of the polling services is called Investors Intelligence, which was founded in 1963 to measure and compile the opinions of the people who write newsletters about the stock market. Because the newsletter writers are often considered the gurus of the stock market, I call it the Guru Index.

Each week, Investor's Intelligence compiles and presents the percentage of newsletter writers who are bullish versus the percentage who are bearish (there is a third category of writers expecting a correction, but I have never found this number to be useful). The bullish and bearish numbers have become a wonderful contrary opinion indicator because time has shown that newsletter writers

often hold incorrect opinions at critical market junctures. Although it had one major failure in 1974 when it failed to predict the last major wave down in the 1973–74 bear market, its overall history as a contrary opinion indicator is very good. In practice, I take 10-week moving averages of these percentages to help smooth out the readings. When I refer to the Guru indicator, I'm referring to a 10-week average of these numbers.

Figure 5.3 shows the percentage of the bullish newsletter writers back to the earliest data available. You can see that extreme bullish sentiment would be over 60%, and extreme bearish sentiment would be readings under 30%.

Sometimes technicians use the Investor's Intelligence bearish reading more than the bullish ones, or they take a ratio of the two. However, I have found this to be an unnecessary finesse. The simple bullish reading works quite well, and it is also easier for most people

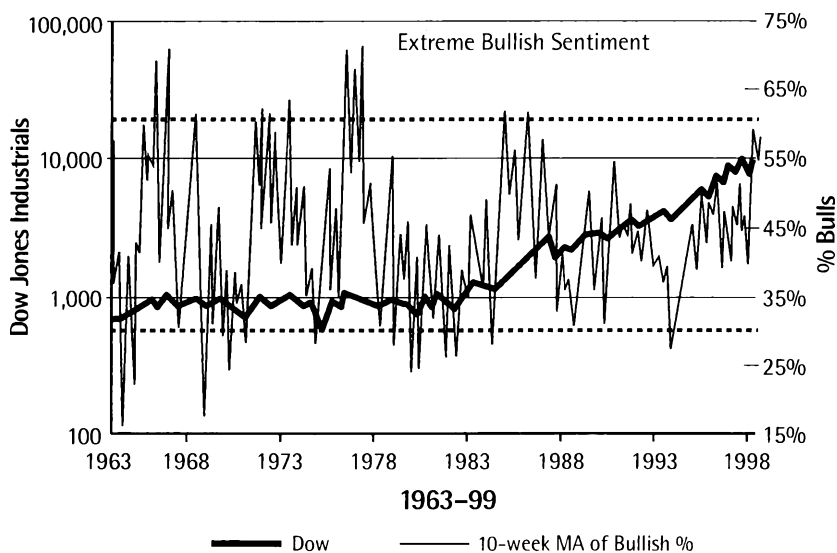


Figure 5.3 This chart plots a 10-week moving average of the Investor's Intelligence percent of newsletter writers who are bullish. The chart starts in 1963, the earliest data available. (Source: Investor's Intelligence, 30 Church St., New Rochelle, NY 10801, 914-632-0422.)

to understand. However, for the study I conducted to test the theory of contrary opinion described in the next section, I decided to use the percentage of newsletter writers who are bearish.

The Theory of Contrary Opinion—The Proof

Remember as I explained in Chapter 1, that the stock market is random and unpredictable most of the time except at certain moments when it becomes highly predictable. In my experience, the best way to discover these predictable moments is to use contrary opinion. I've learned this after many years in the stock market. However, it's one thing to say this and another to prove it. So, I did an interesting unbiased study using the Investor's Intelligence bearish readings. I believe this study proves the statement that the market is random most of the time, but predictable when sentiment is at extremes.

The assumption in this study was this: If sentiment *is* useful at predicting the market, I would find that the market did well after extremely high bearish readings and poorly after extremely low bearish readings. Readings between extremes should show no correlation. On the other hand, if sentiment wasn't useful at all and the market was completely random, I would see no correlation of any kind. All I would see was average market performance no matter what the sentiment reading.

Gathering Data

I started the study in 1970, when Investor's Intelligence began weekly sentiment readings and calculated how the stock market performed over the next 6 months after each reading (each weekly reading was that week's 10-week moving average). I chose for this study the percentage of advisors who were bearish. There were 1,447 weeks over 28 years of data, so there were 1,447 sentiment readings and 1,447 corresponding 6-month performance numbers.

I then divided the results into groups. Each group represented a tight bracketing of the sentiment reading. The idea was to see how the market did on average each time a particular grouping of sentiment was registered. For example, the first grouping comprised all the times bearish sentiment was between 0% and 10% (historically

an extremely low level of bearish sentiment). Over 28 years, such a low level of bearish sentiment occurred only 13 times. The average stock market return for these 13 times was -5%. Bearish readings of between 10% and 20% occurred 200 times, and the average performance of stocks for these 200 times was 0%. Readings between 20% and 30% occurred 309 times, and the average 6-month performance was 7.7%. Readings between 30% and 40% occurred 482 times, and the average return was 13.9%. Readings between 40% and 50% occurred 310 times, and the result was 6.9%. Readings between 50% and 60% (which I consider measurements of extreme negativity) occurred 118 times, and the average 6-month result was 22.8%. There were only 15 times when the reading went over 60% and the average return 6 months later was 25.3%. The average return from the Dow Jones Industrials over the 28 years was 8.8%. (Note: These results do not take into account dividends, but their inclusion would not change the results of the study; they would lift all the total return numbers a little, but not change the relative performance of each group with respect to the average Dow Jones return.)

My study went into much greater detail than this, but the data I've given here is enough to make my point. The chart in Figure 5.4 summarizes the results I just presented. The chart plots the grouping of bearish sentiment (on the x -axis) against the average 6-month market gain for that grouping. The returns have been annualized.

Examining the Results

As you can clearly see in Figure 5.3, the performance of the stock market correlates well with extremes in sentiment. Market performance immediately following extreme low bearish sentiment (people expecting higher prices) was much lower than normal. Market performance immediately following extremely high bearish sentiment (people expecting low prices) was much higher than normal. Sentiment readings between these extremes show no correlation with market performance over the following 6 months.

As you'll recall, I explained in Chapter 3 the dangers of using technical indicators to predict markets past six to nine months. Because sentiment is classified as a technical indicator, I measured

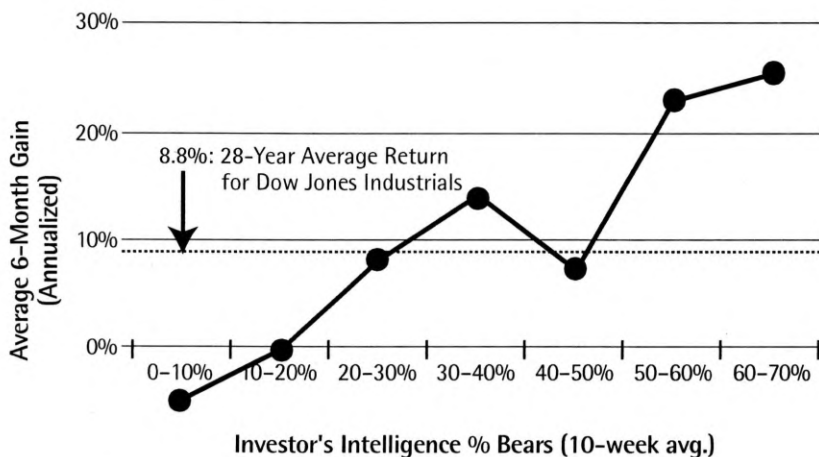


Figure 5.4 *Testing the Theory of Contrary Opinion.* Each point represents the average Dow Jones for the next six months for all the times the bullish sentiment was in that grouping.

the market performance over six months, and not over a year, for this study. Even so, it's acceptable to make an exception to the six-month rule and to use the sentiment readings to forecast longer-term trends. With extreme readings, I think it's fair to stretch the point somewhat and assume they can signal a major bull or bear market. *This is especially true if the extremes in sentiment are also occurring during a period of extreme public interest and speculation in the stock market.* I'll explain a little more about this when I get to the topic of BABES and O'BUCS later in this chapter.

The Theory in Practice

Keep in mind that the theory of contrary opinion holds only when there are extremes in sentiment. In practice, many market technicians make the mistake of attempting to apply the theory before sentiment (whether bearish or bullish) has reached an extreme. I know because I've made that mistake enough to know it can be a major weakness. In general, I found myself doing this when I was pressing

to figure out what the market was saying. I think it is a very common error made by many market technicians.

For example, suppose the market enters a sideways trading range and it is not yet clear exactly which way the market will go. The trading range lasts for a long time and you get impatient. You look at the sentiment readings and find that 55% are bullish and 45% are bearish, at which point you might conclude that people are bullish and the market is ready to break out of the trading range and decline. This would be a mistake. You should hold the ground and take the stance that a major move will not begin until sentiment has reached an extreme.

Something as powerful as contrary opinion has many applications, and using contrary opinion to help determine market trends is also a fine art. The next sections explain what I've learned about it over the years, especially its capability for determining where you are in the Elliott Wave cycle.

Using the Theory

When I first began studying the market I thought that contrary opinion was only useful for finding major market tops and bottoms over movements that last from six months to a year. I thought the best approach was to

- wait for an extreme reading to signal the start of a movement (whether up or down).
- wait for an opposite extreme reading to signal the end of the movement.

I assumed that a major market movement wouldn't begin or end until an extreme reading had occurred.

I still generally believe this, but I've found some other ways of using contrary opinion that are just as helpful. It would be hard to test these methods (as I did the Investor's Intelligence data), but personal experience has proven them useful.

For example, I have found that contrary opinion is very useful at determining whether, after a really good advance, the market will still go higher. For instance, suppose the market has had a good upward run for two or three months and then goes into a sudden three-day

sell-off. In this situation, you need to watch the put/call ratio and, at the same time, keep track of what the market commentators on television and radio are saying. Naturally, after a long run-up, you will probably hear a chorus claiming that the market is ready for a correction. Such a sudden increase in caution is good. According to the theory of contrary opinion, the market will continue higher.

This phenomenon reflects the old adage that markets continue to advance against a wall of worry. Quite often, after a long run-up, there is a sudden sell-off, and then the market recovers to its previous highs, at which point a second sell-off begins. This second sell-off (the final C leg of an ABC correction, as you learned in Chapter 2) usually generates much more skepticism, because more people think that there was a rally that failed, the run-up is over, and the market is rounding over. At such a time, be sure to watch the put/call ratio. If the ratio jumps the movement is probably a sideways correction before another lengthy thrust (see Figure 5.5). However, if put buying doesn't increase and there continues to be

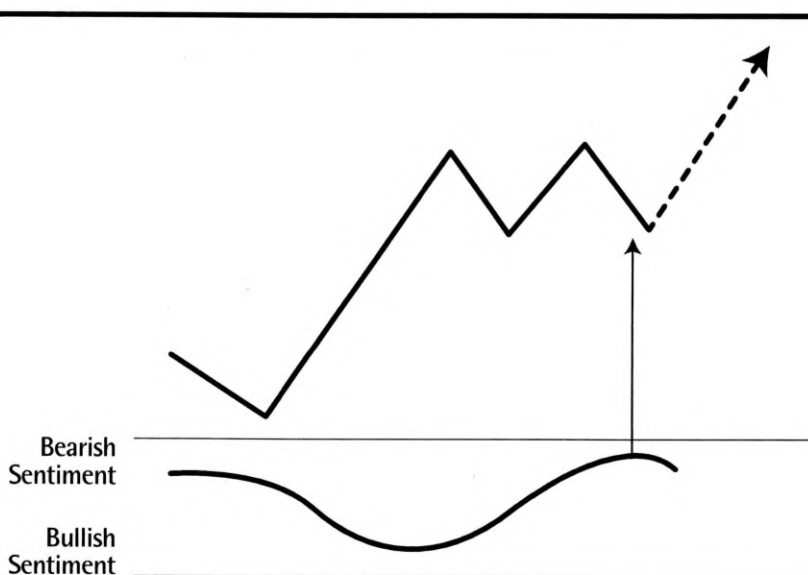


Figure 5.5 Watch for a rapid rise in both bearish sentiment and put buying during a sideways correction after an extended advance: It is a good signal the rally will continue.

high call buying, be very careful, because there is probably more movement behind the correction.

How the Theory Helped in Navigating the 1994–99 Market Let's look at one use of contrary opinion that helped my clients stay fully invested through most of the great bull market of 1994 to 1999. The story starts in December of 1994 when, at my year-end client seminars, I pulled out the Investor's Intelligence readings for the first time. I did this because the Investor's Intelligence reading was showing the highest bearish sentiment since the bottom in 1987. I told my clients this probably meant a major advance was imminent so they should stay put with their stock investments. I explained to them contrary opinion, much as I have throughout this chapter. After the move started, we religiously provided updates of the Investor's Intelligence readings at our client seminars every six months.

One fact kept slapping us in the face: As the advance continued, we noted no swing toward the type of bullish sentiment readings that would indicate a market top. In fact, the bullish readings stayed very muted, and they were accompanied by news magazine articles illustrated with pictures of bears, in which many analysts argued that the market was overvalued. These naysayers represented the proverbial wall of worry (see Figure 5.6). True to what I said in the beginning of this chapter, we kept the theory of contrary opinion senior to any data about the economy. It was highly unusual, and to us much more important, to have such a visible wall of worry after such a strong run up. So, we just stayed with this bullish idea, and in this case, it worked very well.

Understanding the Consensus Opinion and How It Changes

It is important to watch how quickly investors change their opinion about market direction. As a general rule, a rapid and sudden change in investor sentiment when the market starts into a correction or rally means that the prior trend will soon continue. This is particularly true in bear market rallies. For instance, suppose the market goes into a severe three-month sell-off. Extreme bearish expectation is registered at the bottom. The market makes bottom, stays there for awhile, and then starts a sudden rally. If during this rally sentiment goes very rapidly to the bullish side and stays there, you can assume

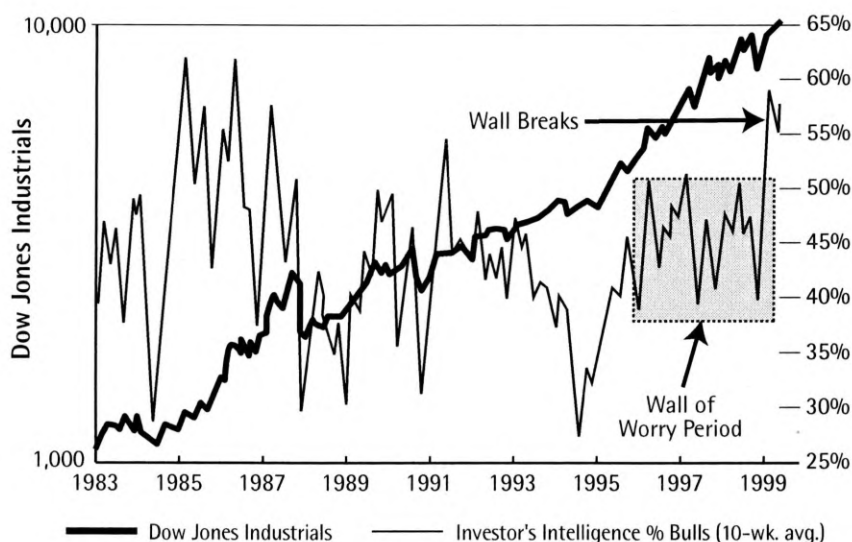


Figure 5.6 *The Wall of Worry.* It is an old cliché that markets continue to rise against a wall of worry and doubt. You could actually see this cliché in action from 1994 to 1999 by watching the Guru Index. Bullish sentiment refused to rise until the beginning of 1999, when the wall finally broke.

that it is only a bear market rally (rather than a sustained upward move) and that another leg down is imminent. As a rule, sustainable rallies off market bottoms hold the bearish sentiment even as the market rallies. There is a “wall of worry” all the way up.

I mentioned watching and listening to the opinions of market analysts on television or radio. Because these commentators are talking to a mass audience, they will generally make only statements with which their audience will agree. Both their caution and enthusiasm generally reflect the overall feelings of the investing public. However, *don't pay any attention to the reasons behind what they are saying!* This is very important and I can't overstate it. *Only—and I mean only—tabulate the overall conclusions (bullish or bearish) of the viewpoints being broadcast.* Although this can be difficult to quantify, it is sometimes *very* useful as a confirming indication of a statistical measure.

Finding the Correlation Between Group Emotions and Market Volume

People like to say that two emotions drive the market: fear and greed. But this simplistic picture is incomplete and doesn't explain what is actually observed. For one thing, greed isn't an emotion, it's a vice. Second, a great many other emotions are manifested in the stock market besides fear. It is important to understand emotions, because human emotions help generate human activity. For example, investors can become emotionally apathetic about investing, especially after a major bear market. Someone who is in the state of apathy about life does very little. So, what kind of volume would you expect if most investors were in the group emotion of apathy? Very, very low volume.

I've seen angry markets, a phenomenon that usually occurs when investors—who have missed a large price movement and have been waiting for a correction that hasn't come—get frustrated. They get angry and charge the market, buying in a huge surge of volume and paying any price.

Because of the strong correlation between an emotion and the character of the activity associated with it, you can often measure the group emotions of investors by closely following volume. Table 5.1 summarizes a few emotions and the volume characteristics expected from groups in each emotional state. This is important because major tops and bottoms of the market are usually associated with investors showing certain group emotions. For example,

Table 5.1 *Group Emotions and Market Volume*

Emotion	Buying Characteristics
Rising optimism, enthusiasm	Constant, high volume
Boredom*	Low, flat volume
Frustration, anger	Medium, rising volume
Fear, panic	High, rising volume, climactic
Apathy, no interest	Very low, flat volume

* Normally formed during long fourth-wave correction

bear markets often end in selling climaxes. Volume builds as panic sets in; but such an increase in volume, reflecting fear, is usually followed by the emotion of apathy and very low volume. It's also common for investors to lapse into boredom during a long protracted Elliott fourth wave, just before a quick fifth wave that takes the market to new highs. In such a situation, volume will dwindle during the boredom phase.

Of particular interest is the emotion of enthusiasm or exhilaration, which shows up during the final stages of a long protracted bull market and accompanies high levels of speculation. The effects of enthusiasm usually play out something like this: After a long period of advancing stock prices, investors get the feeling that making money is easy, and so start to feel cocky. After seeing many examples of small stocks or highly speculative investments rising dramatically in value, investors lose their normal caution and become willing to gamble on these seemingly sure things. As a result, the volume activity in these investments rises dramatically compared to more stable, investment-quality issues.

Table 5.1 shows just a few examples of the association between volume and group emotions in the marketplace. We still have much to learn about this complicated relationship. In an attempt to advance their knowledge, analysts have devised various speculation indexes to measure the amount of enthusiasm in the market. Only two are really of note, and both involve measures of volume. These unfortunately are no longer useful due to structural changes in the market. I'm presenting them here, however, to make the point that volume measures have always been a classic indicator of a major market top and that technicians have developed indicators to track it.

Back in the 1960s and 1970s, the popular speculation index was the ratio consisting of volume on the American Exchange divided by volume on the New York Stock Exchange. Because the American Exchange contained smaller and more speculative companies, this ratio indicated when investors were turning their attention to riskier ventures. The second speculation index was the ratio of puts to calls, as compared to stock exchange volume. Unfortunately, because of structural changes in the marketplace, neither of these indexes is useful anymore. Thus, at this time, we have no good, clas-

sic way to measure the extreme swings in speculation that might indicate long-term tops and bottoms. However, we don't need speculation indexes today to tell us that the level of overspeculation in the current market is extraordinarily high. You only need to look at the high P/E ratios of stocks, the wild ride in Internet stocks, and the interest in new offerings to see that rampant speculation is the order of the day. I'll have more to say about this in the next chapter when we try to figure out what will happen in the first decade of the new millennium.

Problems Associated with the Theory of Contrary Opinion

I've made a clear case for the value of the theory of contrary opinion in predicting intermediate term movements of the stock market. Of all technical indicators, sentiment is by far the most valuable tool for this particular task. Nevertheless, using it presents us with problems.

Resistance to Applying the Theory

Through my seminars, I have found that the general public sees the logic of the theory of contrary opinion but, at the same time, refuses to take it seriously; therefore, investors have trouble applying it. Why? Because to apply the theory, you have to ignore the pressing economic circumstances that are making the vast majority of investors either bullish or bearish. You have to be willing to say "This economic scenario that everyone is talking about must be wrong, even though it seems so obviously right." Because most people consider economic facts and figures more important than the theory of contrary opinion, people find it hard to ignore the economic data and go with what contrary opinion is indicating. I often hear my clients say, "Yes, we know everyone is currently bullish, but this time there's good reason to feel that way." This is the classic problem with the theory of contrary opinion. As I said in the beginning of this chapter and as I will repeat here, *you will successfully apply the theory of contrary opinion only if you elevate it beyond any economic data*. When you do this, however, it immediately leads us into the concepts I call BABES and O'BUCS.

Understanding BABES and O'BUCS

If contrary opinion is a fundamental theory in predicting stock prices, it follows that there must be a BABES and an O'BUCS. BABES is an acronym for Broadly Agreed to But Essentially wrong Scenario. O'BUCS stands for Occluded But Ultimately the Correct Scenario. This says that, at points of extreme sentiment readings, the obvious economic explanation that is making the consensus so extreme must be wrong—there must be some holes in the data or the thinking about the data. This is the key to resolving Paradox 4. Thus, in applying the theory, you use contrary opinion to try to find what the correct economic scenario is, to find the O'BUCS idea. *That is, finding today the economic explanation that will emerge in the future to explain why the market moved in the opposite direction to what everyone expected.*

Definition

BABES *Broadly Agreed to But Essentially Wrong Scenario.* This is the economic reason, or story, that has been erected to “explain” why the stock market will be doing what the majority of investors expect it to do. It is the economic “why” that supports the extreme bullish or bearish feeling.

O'BUCS *Occluded But Ultimately the Correct Scenario.* This is the obscured or hidden economic reason that will emerge in the future which will explain why the stock market went in the opposite price direction to what everyone thought.

How can this be? I don't fully understand how. I can describe it and tell you that history shows that it is this way, but I can't tell you exactly why. What I do know is that the stock market, by its price activity, is telling a story. The long-term price pattern has an economic reason behind it, a financial story that evolves over time and makes sense pricewise. You can always see that story after the fact. However, it is difficult to see the story while it is unfolding. It's really like a book where the author has hidden the story really well and the whole story becomes clear only near the last chapter. At the point where everyone sees the story, it ceases to exist as the story. The story ends not when the pages end, but when everyone understands

the story. The final pages just disappear. At the moment of recognition, a new book is pulled out and a new story begins.

The only explanation I have is this. At any point, there are two forces at work in the market. One builds the economy up, the other tears it down. These two forces coexist and the price of stocks always reflects the consensus viewpoint regarding which of the two is dominant. In truth, however, people have a tendency to be sloppy with their thinking. At critical market junctures, if you study investor sentiment long enough, you usually can find holes in the consensus thinking. Some great traders, the geniuses, spot these holes naturally and quickly. George Soros and Warren Buffet come to mind. They see the correct but opposing view, the O'BUCS idea, almost instinctively.

In applying contrary opinion, when you have extreme sentiment, you must reject the consensus story and search for the new, correct, emerging story—and have confidence that it will be there. This is the key.

Chapter 6

The Coming Market Correction—How and Why*

As we begin the millennium, this 18-year bull market shows all the technical, fundamental, and speculative signs of completion. I am not saying that we are entering a bear market, which, when ended, will then allow the resumption of the current bull market. I am saying that we have been in the topping process that will lead into a larger-scale correction. I do not believe we are facing a market crash. I think we're facing a time correction, an extended sideways up-and-down movement that encompasses a number of bull and bear markets.

In March 1982, I gave a talk on the long-term future of the stock market. At the time, it occurred to me that the generation born after the war had never experienced a major bull market period. The baby boomers had witnessed the Dow Jones remain below 1000 for 17 years, and stocks were not considered a serious contender for their financial future, as highlighted in the 1978 *Business Week* article that announced, "Stocks Are Dead." During that talk, I said that every generation usually has the opportunity to experience the fantastic potential of stock investing, to get carried away and overspeculate, and then learn about the negative side of it all. I also said that this baby boom generation would probably be given the same opportunity. At the time, I thought it might last about 10 years. Never did I imagine it would last 18. I believe the first part of this learning cycle is completing. It is time for the baby boom generation

* This chapter was written in late 1999. Every effort has been made to bring the charts as close to publishing date as possible.

to learn first-hand, as their parents did, about the negative side of stock investing—then their education will be complete.

Why do I think this 18-year bull market is completing and the negative side of that learning curve is about to begin? This will become clear as you read this chapter, which applies the ideas from the previous chapters to the stock market in mid-1999. There is no doubt that predicting the market is an art and not a science. Recall from the Introduction that the secret to success is to consider only simple, basic ideas and to jettison all the ideas that complicate the picture. I intend to be true to this, so you won't read any comments about balance of trade, low employment causing possible inflation, or any ideas not covered in the previous chapters. If I believed other ideas could help predict the stock market for next 5 to 10 years, I would have included them. *In my experience, adding more information to the equation actually causes our ability to predict the stock market to deteriorate.* This surprises most people. They think that adding more information can only improve prediction. I hold the opposite view: Too much data, unless it is vital information, simply diverts attention to unimportant and distracting data and muddies the picture.

The previous chapters contain all the information I feel is needed to explain the current market condition and what will happen in the first decade of the new millennium. So in the remainder of this chapter, I will take up and explore the current technical, fundamental, and Elliott Wave picture of the current stock market as I outlined in those chapters and what they are specifically saying.

The Technical Picture

As mentioned in Chapters 3 and 5, the core information in technical analysis revolves around two basic concepts—the measurement of various manifestations of internal market divergences and the theory of contrary opinion. We will first cover the subject of divergence in today's market.

Exploring the Effects of Divergence

Chapter 3 pointed out that the primary measurements in technical analysis center around divergence. The basic concept of technical

analysis is that a market top is not an event but a process that takes place over time, and divergence is what shows up as that process occurs. Major divergences appeared in the U.S. stock market in mid-1998, as you can see in Figure 6.1, which shows the advance decline line versus the New York Composite Index for 1997 through March 2000. A divergence such as this indicates that as the major averages are reaching new highs, fewer and fewer stocks are participating. The handful of stocks that are moving are usually making extremely large gains. The advance is narrowing.

However, recall that technical analysis does not reliably indicate movements beyond nine months. This divergence by itself means only that the market may experience an intermediate decline or correction, even a sideways movement in terms of many months. But this divergence, along with the beginnings of extreme bullish sentiment and indications of overspeculation, is a confirming indication of a major top.

Recently I've heard some market technicians say that these divergences do not mean anything. They cited past periods where these divergences appeared and the market did not decline. My

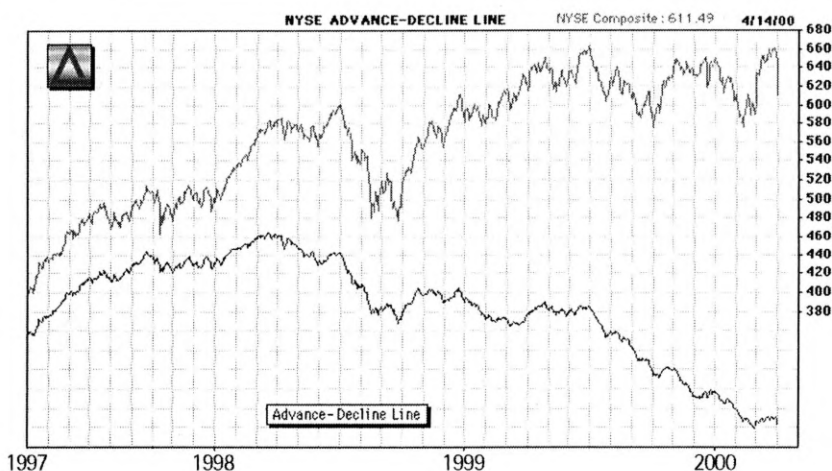


Figure 6.1 The building, long-term divergence between the New York Composite Index and the advance decline line. (Source: © DecisionPoint.com.)

response is that nothing is perfect. However, it is standard technical analysis that market divergences are a sign of a topping market. These technicians should not abandon their discipline just because the market didn't immediately decline when the divergence first appeared. They fail to understand that a top is a process and not an event. They think that indicators should act like intersection stoplights—go or stop. Indicators don't work this way.

Here is a very true saying about market tops: *Stock market turns are as obscure while they're occurring as they are obvious after they have occurred.* It is normal during the topping process to become very confused about what is going on, and this confusion can last for some time. I believe we are in the topping process and have been for two years—and most people don't even know it.

Exploring the Effects of Market Sentiment

A second—and perhaps more important—technical tool is market sentiment. Recall from Chapter 5 that extreme bullish sentiment can indicate longer-term bull and bear markets. Almost no other technical indicator can provide this indication. *The classic sign of a major long-term market top is the occurrence of two events: extreme bullish sentiment accompanied by historically high levels of public interest and speculative fever for stocks.* This situation definitely exists today. Will this time be any different? I don't believe it will.

There is no doubt in my mind that we are nearing the end of this bull market cycle. The sentiment indicators that I follow are displaying extreme readings. Let's look at the Investor's Intelligence chart, a 10-week moving average of the percentage of bullish advisors, shown in Figure 6.2. You can see the reading for the last 6 months has been more than 55%, which I consider extreme bullish sentiment. There have been previous periods when it went higher.

I would like to see this indicator reach the levels that occurred in the late 1960s and early 1970s, because I think the greatest bull market of our generation should end with historically high readings. I also would like to see this indicator stay at these high-level readings for some time. We don't have that yet. It remains to be seen whether we will get those readings. If they occurred, that would be the actual death knell for the whole move.

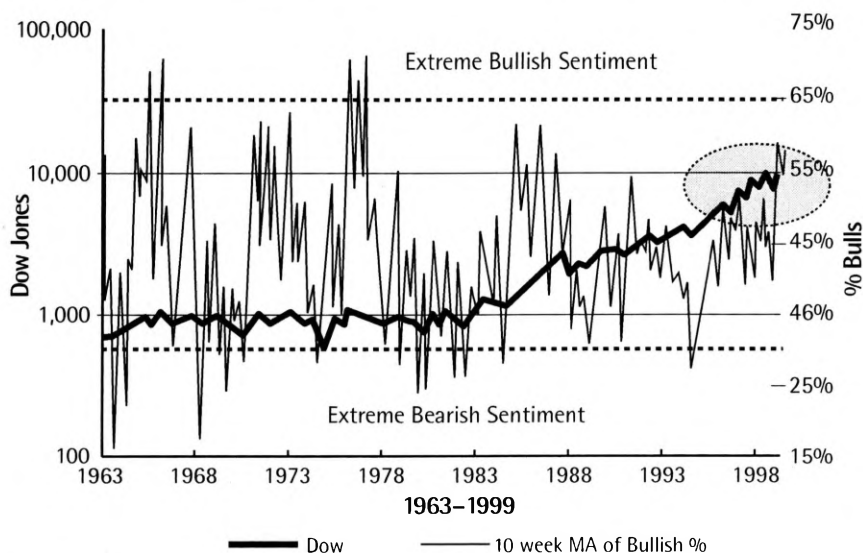


Figure 6.2 *The Guru Index.* Investor's Intelligence chart showing bullish sentiment. In the beginning of 1999, bullish sentiment started reaching extreme readings (circled) and has pretty much stayed there since. (Source: Investor's Intelligence, 30 Church St., New Rochelle, NY 10801, 914-632-0422.)

I believe we are entitled to a situation opposite to the one that existed in the 4 years prior to this 18-year bull market. What do I mean? If you look at Figure 6.3, you can see the extremely low bearish readings between 1977 and 1982. There was pervasive bearish sentiment that lasted 4 years before the 18-year bull market took off. It fits my theory of contrary opinion that we are also entitled to extreme deep and pervasive readings of bullish sentiment before the final top is made. Later in the chapter, when we look at the Elliott Wave, I'll explain the actual price pattern I'm expecting the market to follow as it finishes its movement.

It is difficult for me to envision a higher level of stock speculation than exists today; yet, it probably will occur. I'm only cautioned from becoming immediately and extremely bearish by another Wall Street adage: "Never underestimate how far the public can bull a market once they get the bit in their teeth."

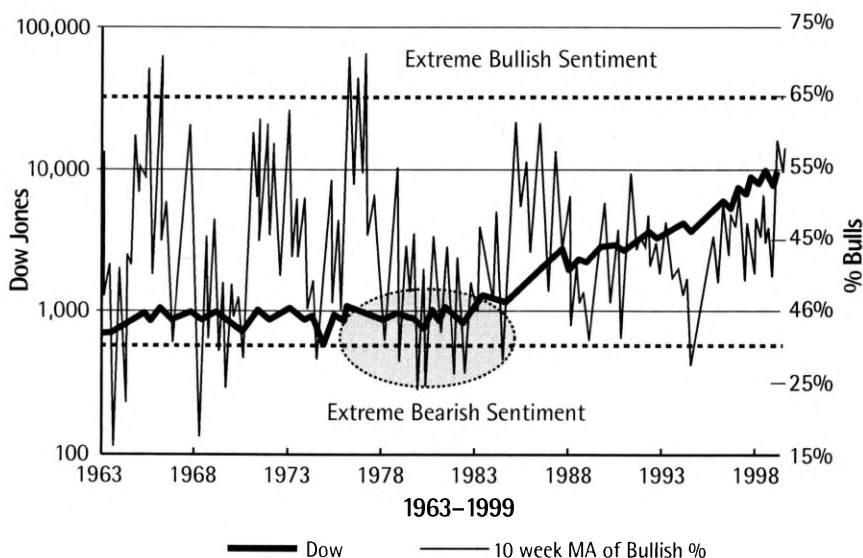


Figure 6.3 The deep and pervasive belief that a bull market was not on the horizons, indicated by the low Investor's Intelligence bearish readings from 1978 to 1982, was the prelude to the long, 18-year bull market. The opposite situation, consistent extreme bullish sentiment, is starting to exist today. (Source: Investor's Intelligence, 30 Church St., New Rochelle, NY 10801, 914-632-0422.)

The Fundamental Picture

With the technological and scientific revolution of the last 15 years, it seems as if both the United States and the world will experience high economic growth for a long time. Inflation and interest rates are low. Earnings growth seems high. From our symbolic formula D/I , this is the best of all worlds. Optimism is everywhere because

- the bull market has raised the net worth of most Americans.
- unemployment is low.

On the surface, there doesn't seem to be any economic reason to support a declining or stagnant stock market period. You often hear analysts say that the long-term fundamental picture looks good. This is currently the widely agreed-to scenario.

In Chapter 5, I explained that extreme investor sentiment is always more important when predicting the direction of stock prices

The Public's Shifting Market Sentiment

During the last 15 years, I have been fortunate to witness directly the changing speculative opinions of investors. I can tell you year-by-year the general public's acceptance level for different types of investments, especially regarding retirement distributions. It has consistently moved from the conservative to the speculative.

In 1985, the average retiree invested his or her retirement distributions almost exclusively in U.S. government bonds, Ginnie Maes, and maybe some safe high-yielding utility stocks. With the Dow Jones hovering around 2000 and the long flat stock market period fresh in their minds, few people would consider investing in stocks. If you even offered them a balanced portfolio of 50% stock and 50% bonds, you would often lose the account to a much more conservative advisor. Because I felt that stocks should be considered for these accounts, I started offering our market timing method, which I outline in Chapter 7. With this safeguard in place, they often had the courage to try stock investing.

By 1990, things started to shift. The 1987 crash was receding from memory and the long rise in the stock market after the Kuwaiti war brought a little optimism. By 1992, the average retiree was willing to invest 40% to 50% of his or her retirement distributions into stocks. But few were willing to buy speculative stocks or individual issues. Most wanted a conservative blue chip mutual fund with a good track record. Fidelity Magellan was the order of the day.

Since 1994, the pace of accepting stock investing has quickened. A number of investors today are selling their diversified stock funds to buy individual stocks. Previously, investors believed that a professional manager should select the stocks. Today, they are willing to believe that anyone can pick the winners. I even had a few individuals who wanted to put over 30% of their pension and 401(k) retirement assets into Internet stocks. I heavily cautioned against it. My initial reaction to all this is to recall the old Wall Street adage: "Never mistake brains for a bull market."

than are the popular economic scenarios and supporting data. I introduced BABES (Broadly Agreed to But Essentially wrong Scenario) and O'BUCS (Occluded But Ultimately the Correct Scenario) to explain this conclusion. Not elevating contrary opinion, when that opinion is at extreme, to "information of the highest importance," is the primary reason why people have such a hard time applying the theory in practice.

Investors often agree with contrary opinion, except when they have to apply it. Today's situation is a perfect example of why. To become negative or cautious on the market you have to disagree and ignore an economic scenario that seems so obviously right and one the stock market seems to be proving daily. It's as if you are walking outside on a beautiful day and someone tells you that a storm is coming. You look around but you see only a clear sky. You are being asked to take a negative viewpoint when there is an absence of negativity. That is exactly what you have to do with investing—that's what BABES and O'BUCS are all about.

Finding the Current O'BUCS Explanation

The O'BUCS will slowly emerge over the next few years and explain why the market went sideways. But remember, the theory of contrary opinion doesn't require this. The theory says that the only necessary and sufficient condition for a significant market advance or decline is that we have extremes in sentiment. This is a good exercise because it forces you to try to invert the relative importance of investor sentiment to economic reasons. It helps flip the relative importance of market sentiment over the top of the economic thinking.

Simply put, the stock market has gotten way ahead of itself in its speculation phase, and the implied economic growth these high prices require will not be realized over the next 10 years. We will have economic growth, but it will be far less than is implied by current prices. Let's look at current prices and what they imply.

To start, consider an important financial ratio—the *dividend yield for stocks*, which is calculated by dividing dividends from the last 12 months by price. The result is the yield on stocks, a comparable financial number in the stock market to yields on bonds. As

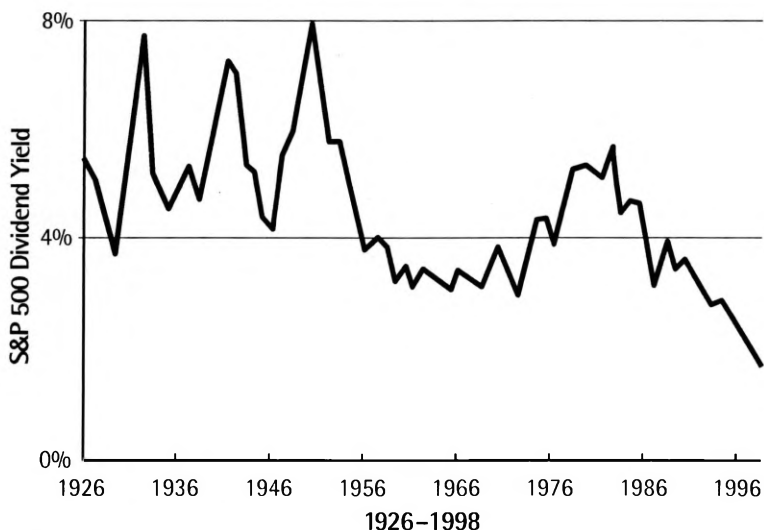


Figure 6.4 *Current Dividend Rates on the S&P 500.* At any given moment the dividend yield represents Wall Street's expectation for earnings and dividend growth.

shown in Figure 6.4, the current dividend rate on the S&P 500 is 1.3%—the lowest reading in history. But what does this dividend yield for stocks ratio measure?

One of the most common errors occurs when analysts say that low dividend yields means that the market is overvalued. This is wrong. *The stock dividend ratio doesn't measure value—it measures, at any given interest rate, the consensus expectation for growth in earnings and dividends for a number of years into the future.* A stock price always represents Wall Street's consensus expectation for earnings or dividends growth. A low dividend yield means those expectations are high. The only way we find out whether the current price is valued correctly is when the growth that the dividend yield implies is eventually realized. If growth comes in below the implied rate, we know that prices were overvalued. If growth exceeds the implied numbers, we know that the current price was undervalued. No one knows now whether prices are currently too high or too low. All we

know is that Wall Street's growth expectations for earnings and dividends are higher now than at any time in history.

The word *overvalued* is a powerful one. For the last four years, investors heard numerous people say that stocks were overvalued, and they refrained from buying stocks because of these statements.

If there is no economic indicator that can tell us whether current prices are overvalued, is there any other way that will indicate it? In my opinion, yes: It is the extreme bullish sentiment coupled with the high levels of public speculation that indicates what will happen. What these two facts indicate, according to my understanding of markets, is that the high expectations for earnings and dividends growth will not be realized.

Let's be very clear about this. We can have very good continued earnings and dividend growth, and *still* have a major market adjustment. Current prices allow for almost no disappointment of any kind, and if anything less than record-breaking numbers appears, there will be disappointment. In the speculative phase of the market, prices are way ahead of themselves, and sooner or later, we must pay the piper. Growth can occur for only so long and expectations can rise to the moon, but eventually the price of stock must be rooted in a fundamental basis (D/I).

Unfortunately, it always takes a while for investors to finally agree that this is the case. It's not as if someone rings a bell and everyone suddenly recognizes what is happening. Usually, a consistent erosion of expectation dashes the resurgences of hope along the way. When that happens enough times, there is a sudden change in thinking and reluctant but widespread acceptance that a less-than-rosy period has emerged. In today's market, by the time that happens, we'll be well into the major correction I'm predicting.

Finding a Possible Endpoint

Did you know that a long time ago, stock dividend yields were higher than bond yields? As you can see in Figure 6.5, from 1928 to 1957, stocks yielded more than bonds. Then the pattern switched and bonds yielded more than stocks. This has continued for so long that it seems as if this is the only way it should be. But dividend payments are much riskier than bond payments, so why shouldn't

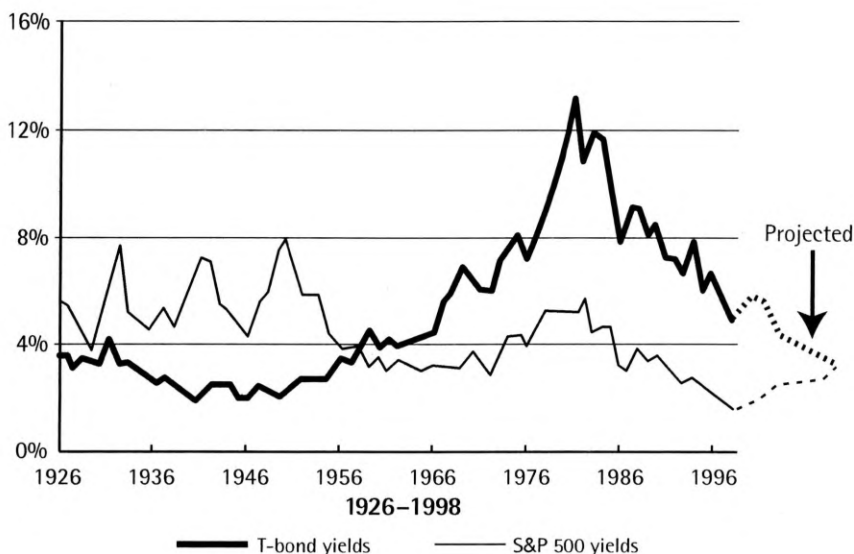


Figure 6.5 *Comparison of Stock and Bond Dividend Yields.* If the expectation for long term earnings and dividend growth were ever widely and broadly reduced, then stock yields would once again exceed bond yields.

stocks yield more than bonds? Because D/I says that although the risk is there, stock yields should be less if expected growth of earnings and dividends is high enough.

The shadow of the Great Depression hung over the period from the 1920s through the 1950s and seemed to destroy any thought that companies could have nice long-term growth. The risk was too great that it might not happen. So investors priced stocks with the expectation of very low growth. We know from D/I that when this happens, stock yields can exceed bond yields. History shows that this was the wrong idea at that time (another example of BABES and O'BUCS). As the economic environment changed and a new generation emerged, the expectation for growth and risk changed, and eventually stock yields fell below bond yields. I believe history will also show that the current expectations of high growth will not be achieved and that the actual growth may eventually be so low that D/I will again call for a reversal. But this would be many years away.

Oh So Right—But Oh So Wrong

One mistake forecasters can make is to be right too early, especially if their forecast is the opposite of the prevailing consensus view. This happened to Merrill Lynch. In 1982, Merrill Lynch made one of the greatest calls of this century. It was in the summer and short-term interest rates were 16%. Suddenly full-page ads appeared in Barron's, The Wall Street Journal, and other major newspapers, announcing the greatest buying opportunity in bonds in a generation. At that time, however, the overwhelming consensus was that rates were headed much higher. When the ads came out, a number of commentators said that it was proof that rates had to go higher. They did go higher, for about three more months. Merrill Lynch was ridiculed and pulled the ads in defense.

However, it was one of the greatest calls in bond market history. Those last 3 months when rates continued to climb were the tail-end of a 30-year rising rate period. Since then, interest rates have been declining for 19 years. Yet, few remember the call or applaud the people who figured it out. Because the call was too early by 3 months, people labeled it wrong and dismissed it. Had it been 3 months after the peak, the Merrill Lynch team would have been heroes. It just goes to show: You can be so right—but then so wrong.

The Elliott Wave Pattern

As I explained in Chapter 2, the best roadmap to use if one is trying to forecast or outline what the market will do in regards to price is the basic Elliott Wave pattern. As I mentioned, the basic pattern can be very general, and the art of applying the theory rests in trying to find ways to limit some of the variations to come up with reasonable and tighter restrictions on what to expect.

Defining Time Correction and Price Correction

People almost always expect a long bull market to end in a crash. In their minds, the world is white or black, good or bad, boom or bust.

In truth, gray always exists, and the market generally reflects this middle ground. Corrections are usually sideways movements, or sawtooth patterns. The Dow theory calls them *lines*; the Elliott Wave Theory calls them *flats*. A flat is a correction where the declining waves A and C stop near the same price, and the rally that separates them—wave B—stops near the high price of wave 5. In essence, it is really a time correction rather than a price correction.

What do I mean by a time correction? In Figure 6.6, I've plotted the S&P 500 from 1928 to 1999. Notice that from 1982 to 1999, the price growth has been much higher than its average, or normal, rate. (The normal rate is shown as the trend line below the actual price growth.) The market has gotten ahead of this normal rate. There are two ways it can correct and return to its normal rate. One way is to experience a big decline over a short period of time—a crash. After the crash, the market will return to its more normal rate. However, a crash seldom occurs. What usually happens is the second way: Prices move sideways for a long period, so that the high price reached is, in effect, stretched out over time,

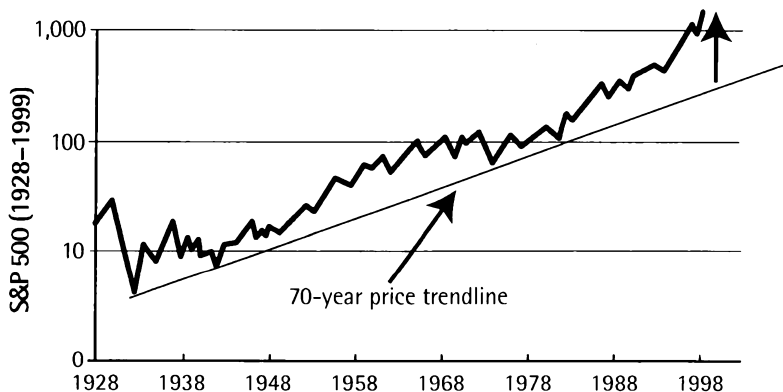


Figure 6.6 The stock market has gotten far ahead of its 70-year growth rate. It would be normal to adjust by going through a time correction—that is, marking time by making little price progress. But what would look like a sideways move on this long-term chart would be experienced by investors as rather lengthy bull and bear markets.

ultimately bringing the rate of return back to the average. Crash-type corrections such as 1929 can occur, but they should not be expected; the sideways correction is the normal expectation. However, long sideways corrections can be difficult, just as devastating, and much more frustrating than a crash.

Using the Elliott Wave Count as a Projected Roadmap

Many Elliott Wave practitioners feel that this top is actually the top of the 70-year movement shown in Figure 6.6, and they expect a major crash. I believe it is a mistake to plan for a big decline, because this assumes that all booms are followed by crashes. I think the more probable event is to assume a normal ABC or horizontal correction that will bring us back to the trend line as drawn. If the wave turns into something more devastating after that or an irregular correction of some sort brings much higher prices, the trend should be determined then, not now.

Where are we in the Elliott Wave count from the more recent bottom (point A) in 1982? I've shown where I think the count is in Figure 6.7. Some market indexes show this count clearer than the S&P 500 (there obviously is some debate on this count), but given the levels of bullish sentiment and overspeculation I think the figure is close. *I believe that we are in the final fifth wave of this 18-year movement and that that fifth wave started in 1990. Of this fifth wave, we are beginning a lengthy fourth-wave correction after the recent five-year wave 3. This means that after the lengthy fourth wave (horizontal correction) we still have one final fifth wave to go.*

So in summary I'm expecting the following: An extended fourth-wave sideways correction that will last from two to four years. During the fourth-wave correction, investors will become very disenchanted and suffer severe market losses in a number of areas—especially technology. A final fifth-wave movement will occur, raising the market to new highs and completing the bull market.

A fourth-wave horizontal correction looks like Figure 6.7. A long correction such as this usually occurs after a long extended advance, as we've had since 1994. The characteristic of the movements in a horizontal correction is that the pattern breaks down very clearly into three wave patterns.

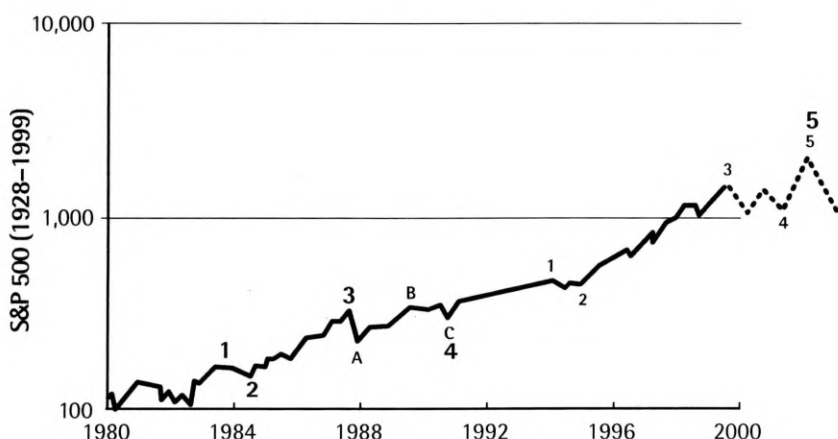


Figure 6.7 *Projected Elliot Wave Count.* This chart gives greater detail to the price pattern I'm expecting after an extended 4th wave correction that should last 2 to 4 years. After that there is still the final fifth wave ahead. But it should be much smaller than the previous advancing waves and probably quickly retraced.

During this period, there should be a number of events occurring. First, during the correction, the relative strength between value stocks and growth stocks should oscillate a number of times. Second, it is my feeling that before the correction is over, the growth and technology stocks will suffer a very severe three-year setback that drives prices down to such low levels that investors will wonder why they ever believed that technology stocks held so much promise. They still do, and at the end of that setback, there will again be a major buying opportunity.

It is very important to understand the investment consequences of this scenario. For example, the buy-and-hold strategy or a passive investing strategy won't produce much of a return. To continue to make money, you must try to *catch* these movements in two general ways. The first way uses contrary opinion with the other technical tools that I've outlined. The second way uses some form of trend-following technique. Chapter 7 details studies that I've done with this technique in mind.

Expectations Must Be Pared Back

The investment consequences of the projected scenario can be summarized in one sentence: It is going to be much more difficult to make money in the United States over the next 10 years! Expectations must be pared back. We should have low inflation (even deflation), low interest rates, and a roller-coaster stock market. Although there is little similarity between the economies of Japan and the United States, the financial results in U.S. markets over the next 10 years may be very similar to those experienced in Japan over the previous 10.

What does this mean financially? Consider Japanese investors. Since 1990, it has been very difficult for Japanese investors to make money. Interest rates have been below 2%, stocks have gone down, and real estate have been declining. So how have Japanese investors or retirees created income or growth to live on? It's been very difficult. Many have had to spend some principle, hoping that growth will come later to make it back. I believe American retirees are walking into a similar but much less severe situation—an extended period during which stocks are flat, interest rates low, and the real estate market is stagnant.

Chapter 7

Investment Strategies for a Roller-Coaster Market

In this chapter, I pull together all the information from the previous chapters and recommend strategies that might be helpful in the trading-range market I'm expecting. There have been thousands of books written with strategies for both bull and bear markets, but this might be the first book written with strategies targeted for a

Caution

This chapter presents a number of investment strategies. They are based on back-testing, that is, taking numbers that occurred in the past and seeing how well a strategy would have done. In back-testing a strategy, you must assume that all of today's tools and investment vehicles were available in the past and that the results of these studies would have been possible. For the purpose of the study, I assumed that we could have used the same index mutual funds, spiders, and today's low commissions and narrow spreads (the difference between the bid and ask price) in the past, even though none of these was available. I am not implying that anyone actually achieved these results or could have during the period of the study. This is a theoretical study with certain assumptions. My belief and hope is that if these strategies produced a positive result over the last sideways period they may be useful in the next.

long up-and-down, trading-range market. This chapter shows you that, although it's harder to make money in this type of market, it can be done in a number of ways.

In Chapter 1, you learned that one of the main reasons people get confused about analysts' predictions is that the time scale of the study is not defined. It's important to understand clearly the time scale of the movements involved.

The title of this book could have been *Dow 12,000 by 2004*. The Dow is already at 10,000 in the year 2000. If it begins the year 2004 at 12,000, with dividends included, that would be a natural return of around 6.5% per year for the next 4 years. However, if the market does something like this, it won't do it in a straight price line. Over the 4 years, I expect bull markets that last 1 year and go up 30 to 40%, and then bear markets that decline 25 to 30% for 9 months to a year or more. In the sideways market I'm describing, there will be a lot of up-and-down motion, but with little overall gain. It might seem strange to try to make superior gains if stock prices are in essentially a back-and-forth trading range. One way to attempt to make money during such a period is to try to "time" the market—to try to catch the up moves and sidestep the down moves.

In long bull markets, such as the one we have been in since 1982, the buy-and-hold strategy works best because there are no significant declines to "market time." The inherent errors in any market timing method worsen the situation, which in hindsight required no intervention. Just "waiting the market out" seems to correct any errors in judgment. During these times investing is easy—you don't have to do anything except just let the market "do its thing." However, this same strategy does not work during long sideways periods—periods where the market goes up and down a lot but makes little progress.

The last time the market experienced a long sideways trading range was from 1966 to 1982. After the Dow Jones hit 1,000 in 1966 it bounced between 700 and 1,000, making little progress for 16 years. Although I'm not expecting anything nearly that severe this time, this often-ignored period can provide us with fertile ground to test various strategies that might work well during another trading range.

Approaches to Market Timing

There are two general approaches to market timing. The first approach uses contrary opinion, interest rates, and other technical tools to try to determine when the price trend is ready to reverse. It attempts to find the exact moment of a transition point—the exact top or bottom of a move. The second approach to market timing doesn't try to find the tops or bottoms, but instead attempts to define when a new price trend has established itself. It uses indicators that give signals *after* a top or bottom has been made. The idea behind this second method is to let the market make top or bottom, look for indications the market has started a new price trend, and then ride the trend.

You can usually classify an indicator into one of these two approaches: does the indicator attempt to signal an exact transition point (a top or bottom) or does the indicator respond after a top or bottom, indicating in some way when the market has established a new trend? It should be noted that these two approaches will always conflict, and this is one reason why technicians often hold different opinions about the market. Some technicians look for exact tops and bottoms, and others think it best simply to measure and follow market trends. In truth, the art is in knowing when one or the other approach is the best to use at a given point. A transition indicator, such as contrary opinion (looking for tops and bottoms), will always look the most bullish when the trend is the most bearish, and vice versa. So keep them separate in your mind; their goals and targets are completely different.

The studies I did for this book used indicators from the second method—indicators that help define price trends of the market. To lead into these indicators and how I applied them to study the last roller-coaster period between 1966 and 1982, I will begin by first describing how I used them in an original study I did in 1984. The findings from this older study are still of value, and they help explain many of the concepts that you'll need to understand my recent, broader study of sideways markets. Because both studies use something called *moving averages*, I'll first explain what a moving average is.

Market Timing Using Moving Averages

Moving-average indicators are part of the second approach to market timing—they are a mathematical technique useful in spotting past market trends. To create a moving average, you add up an index or indicator for a specific number of days and then divide that sum by the number of days in the period. Moving averages act as filters; they help filter out the price movements that occur over shorter time periods (which you're not interested in). By filtering out short-term price fluctuations and looking only at price changes over longer periods, long-term trends often become easier to see.

Definition

moving averages is the mathematical technique in which you total an index or indicator for a specific time period and then divide that sum by the number of days in the period. It is called a "moving" average because every day you add a new number to and drop off the last number from the previous sum.

Here is an example. To create a moving average, consider any time period—for example, 23 days—and then calculate the average price of a stock or market index over that period. The average price "moves," or changes, a little every day because the time period—in this example, the last 23 days—is always changing. You have to calculate the average again every day. Figure 7.1 shows a 23-day moving average of the S&P 500 over the 18-month period between 1/31/97 and 7/31/98.

A moving average has the effect of smoothing out the price "wiggles" that occur within the time frame of the average. In our example of a 23-day moving average, a sharp movement over 2 days will be softened because you're averaging those 2 days against the other 21 days. Likewise, if you had a 200-day moving average, a sharp movement that occurred over 2 or 3 weeks would be blended away by all the other days in the average.

After you've calculated a moving average, how do you use it? There are a number of ways to use moving averages to define market trends. The method I use is the following:

The market trend is up when the current price is above or higher than the moving average. Likewise, the trend of the market is down when the current price is below the moving average.

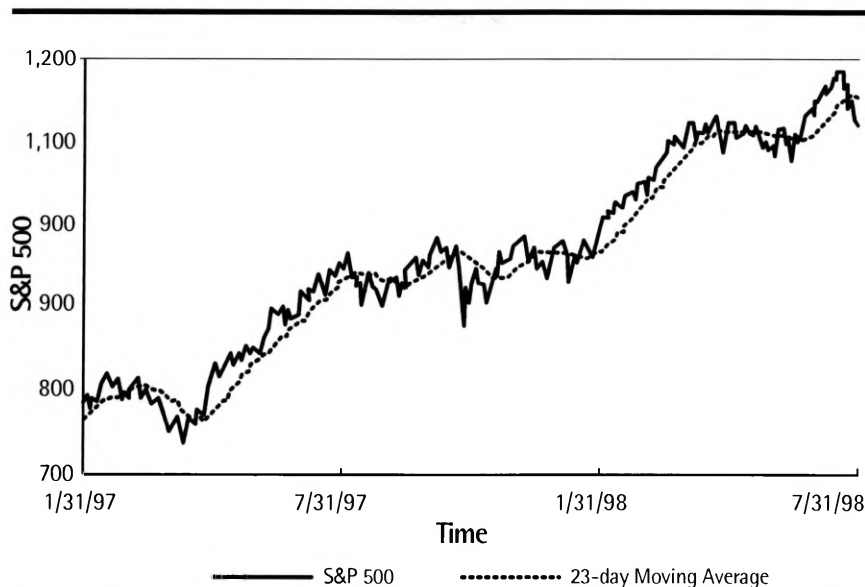


Figure 7.1 *Example of a Moving Average.* Notice how the moving average (the dotted line) smooths out the price jiggles and also lags behind the most recent price.

I think it is clear from this idea that longer-term moving averages would be sensitive to long-term price trends and that shorter-term moving averages would react to and show short-term price trends.

Time Cycles in the Market

Over the years, I watched as different market advisors used different moving averages in their work. Some used a 200-day average to detect long-term trends. Others used a 39-week (195-day) average. Some used a 100-day average to find intermediate-term trends, and others used 10-, 25-, 50-, or 75-day averages. Nowhere did I see any study to indicate why they chose these time periods. It seemed suspicious that they always used numbers that ended in 10s or 5s—10, 20, 25, 50, 100, 195, or 200. Why not 73 days for example? Where was the study that indicated which moving averages seem to work best at finding the different trends of the market?

For example, it has been a long-standing convention that a 200-day moving average is a good measure of long-term market

trends. But who chose 200 days and why? I'm not saying it isn't right, but where is the study that made people agree to use 200 days? Or was it just started up by someone in the distant past, with no proof, and everyone fell in line with it? So with this in mind, I set about to test every moving average I could—from 5-day to 200-day. My goal was to find which moving averages produced the best return over a long period of time. But I also had another motive for doing this study. I realized that the moving-average study would allow me to test, in a rather unique way, the long-held belief that the stock market might be following certain natural time cycles.

For many years people have believed that the stock market might contain certain repetitious time cycles. In the 1950s, 1960s, and 1970s, analysts talked about the $4\frac{1}{3}$ -year business cycle. Major market bottoms often occurred about $4\frac{1}{3}$ years apart. Figure 7.2 illustrates the popular $4\frac{1}{3}$ -year market cycle. Repetitious time cycles of other frequencies also seemed to occur. Some effort was made to find these time cycles.

One of the original works on the subject of stock market cycles was *The Profit Magic of Stock Transaction Timing*, done by J. M.

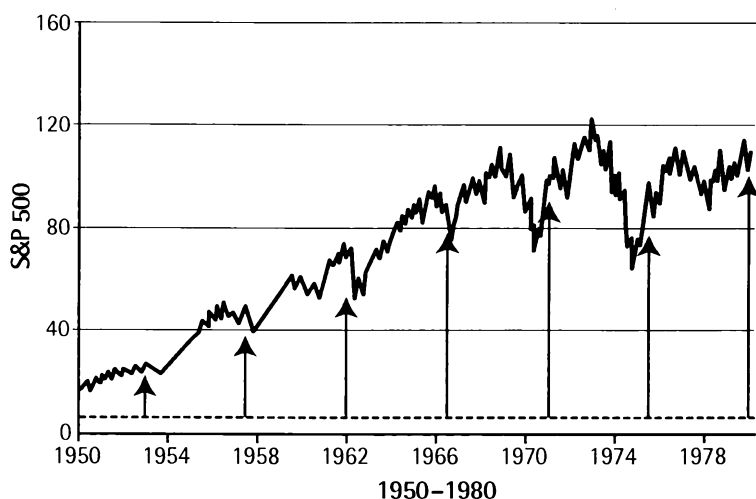


Figure 7.2 The often talked about $4\frac{1}{3}$ -year business and stock market cycle. The reason for the belief in its possible existence is readily seen from this chart.

Hurst. He used a type of mathematics developed by the French mathematician Fourier. Fourier's method shows how any curve can be broken down into the sum of a long series of cycle waves of specific frequencies. I never found this approach worked well with the stock market price curve, so I decided to approach the question from another angle, using a concept from physics called *resonance*.

Using Resonance to Find the Time Cycles in the Market

They say the Walls of Jericho fell because of resonance. What is resonance? If an object has a natural frequency of vibration, when you start pushing on it with a force that goes back and forth at that same frequency, you get a large vibration. The frequency of the force must be close to the natural frequency of what it's pushing against; if the force vibrates at other frequencies, you get a much smaller effect. In the story of Jericho, presumably, the sound frequency of the trumpets matched the natural frequency of the walls, causing them to vibrate wildly and fall apart. Another example is a tuning fork, which also has a natural frequency. When you play music around a tuning fork it vibrates. However, it is only the frequency in the sound that is near the fork's natural frequency that produces much effect on the fork. The other frequencies make it vibrate, but much less so.

Definition

resonance is the state produced in a system when an unusually large vibration is produced in response to an external stimulus, that is the same frequency (or nearly the same) as the natural vibration frequency of the system.

Figure 7.3 shows the standard mathematical chart that indicates when resonance occurs. The graph shows how loud a tuning fork gets when you start forcing it to go back and forth at different frequencies. The loudest point is when the frequency of the sound hitting the fork exactly equals the fork's natural frequency. This basic pattern will be important when we get to the results of the studies.

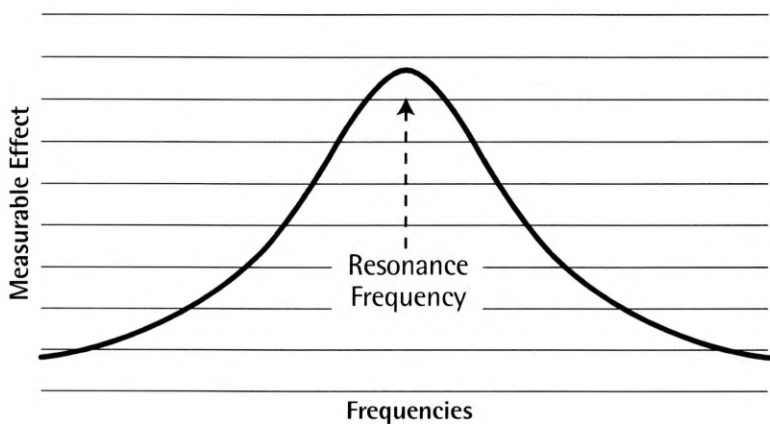


Figure 7.3 This is the type of curve you find in a system that has resonance. The natural frequency of the system is at the peak point of the curve.

If the stock market has resonance (natural time cycles), how do you force the market to vibrate at different frequencies to test for them? Well you really can't do that—but you can do something very similar. You can take the price curve of the S&P 500 for the last 70 years and see what happens when you try different moving averages to see which one produced the greatest profit. Trying every moving average is like trying to force the market to respond to different time frequencies. If there are natural frequencies to the market, moving averages close to that time cycle would probably be in better “harmony” with the market's price movements than moving averages of different time spans. They would catch any natural price movements closer to the bottom and closer to the top than other moving averages. This is similar to trying different frequencies of sound against the tuning fork to see which one produces the most powerful effect.

The Original Moving-Average Study

I did my original study in 1983. I repeated the study in 1992 and again in 1999 for this book. The results haven't changed since the

first study. In the study, I tested how every moving average did over the 70 years from 1929 to 1998. I used every moving average from 5 days to 200 days. I set the start date at January 1, 1929, and assumed that there were 196 accounts with \$1 in each. The first account would be invested using the results of the 5-day moving average. The second would be invested using a 6-day moving average, and so forth. When a moving average was positive—for example, when the S&P 500 was above its 5-day average for that account—the account was invested in the S&P 500. Any dividends declared while invested would be included and compounded. When the S&P 500 closed below that average, the computer sold the S&P 500, and the funds went into a T-bill account. As long as the price stayed below the moving average, the account remained in a T-bill account. When the closing price again moved above that moving average, the computer bought the S&P 500. I monitored on a daily basis the value of each \$1 as it grew over time for each moving average. Even though money markets weren't available in the beginning, the T-bill rate was a good number to use because it represented the interest rate you might earn while out of the stock market.

Moving-Average Variations

The graph in Figure 7.4 shows the 70-year results of a slight variation of the simple moving averages as I explained them. Besides testing every moving average, I also tested many variations of these moving averages. For example, I tested what would happen to the results over the 70 years if I shifted every moving average up or down a little. I tried many different shifts for every average. This shifting seemed to have the effect of fine-tuning, much like going back and forth on a radio dial helps find the exact point of best reception. Figure 7.4 reflects the results of this fine-tuning. I obtained the best results by moving all the moving averages downward by 1.5%. In other words, the cutoff to buy or sell the S&P 500 was .985 times the moving average. This fine-tuning boosted the result at the highest point to its maximum.

Over the 70 years of the study, buying and holding the S&P 500 with dividends reinvested produced an average return of 10.3% per year. This return becomes the benchmark to compare how different moving averages on the S&P 500 performed. This benchmark return is represented by the dotted line in Figure 7.4.

In this same chart, I plotted the average percentage gain each moving-average strategy would have produced over the 70 years. For example, over 70 years the 5-day moving average returned 8.8% per year, the 6-day returned 8.5%, the 7-day returned 8.2%, and so forth. I plotted each of these results from 5 to 200 days. The upper line in the figure represents these moving-average returns.

This chart shows that using shorter-term moving averages produces a lower return than the S&P 500 average. Nevertheless, the longer-term moving averages do much better than buy-and-hold average—as much as 2% better. The basic pattern was what I had hoped. There appears to be a resonance peak at the 130-day moving

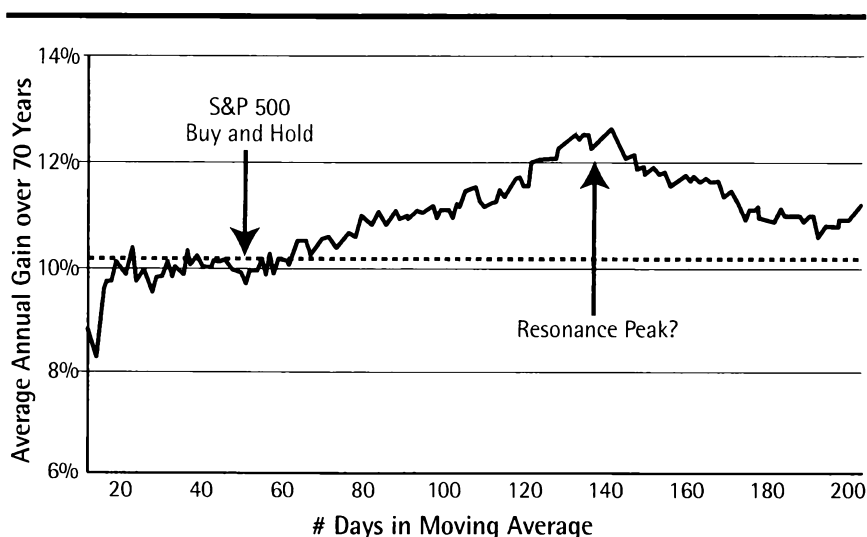


Figure 7.4 *Moving Average Timing vs. S&P 500 Buy and Hold.* This chart shows the back-tested result of using different moving average timing methods on the S&P 500 over 70 years (1929 to 1999). This study assumes that the free exchange privilege was done and that the exchange was done the day after a signal was given. The results shown are those of variations on the normal moving averages. These results are for those moving averages that were down-shifted on the price scale by 1.5%. This was important.

Study Restrictions

When I first did this study in 1983, I put certain restrictions in the study to match the investment restrictions of the time. In 1983, it was possible to invest in the S&P 500 only by way of an index mutual fund. One disadvantage to this method is that when you buy or sell you are limited to getting the closing price at the end of the day. Even if you decide to sell a mutual fund in the morning, you still get the price of the S&P 500 at the close of that day. So I put in the study the restriction that the price you buy or sell at is always the next day's price after a signal is given. This is necessary because we have to wait until the close to do the new calculation. If a signal is given, it can't be acted upon until the next day, at which time you get the next day's closing price. So my initial study had this restriction— if the moving average gave a signal to buy or sell, you bought or sold using the next day's price.

However, one advantage of using a mutual fund is that you can use the free exchange privilege it provides. The free exchange allows an investor to move from the stock fund into a money market fund and back again without paying a charge or commission. Some funds put restrictions on the number of times you can do this, but with the longer-term moving averages, the number of exchanges is minimized and this would not be a problem. This means that you don't have to erode the value of the investment due to commissions or the bid-and-ask spread, which is the momentary price difference between what you can buy a stock for and what you can sell it for.

It is very difficult to calculate the effects of taxes on a timing strategy. Nevertheless, it is an important consideration and one that should be carefully analyzed. There is no doubt even if a timing strategy does better than a buy and hold strategy it may not be true if taxes are considered. Therefore, it is my opinion that it is best to implement this type of strategy in a tax-deferred account, such as a tax-deferred annuity, a tax-free (Roth) IRA, or a deferred retirement account.

average, which produced an average return of 12.5%, about 2% better than the average S&P 500 buy-and-hold result.

After the 70-year results were obtained, I focused on the high point: the 130-day moving average. I wanted to determine how this moving average produced this superior result day-by-day, year-by-year over the 70 years. Figure 7.5 shows the daily growth of the \$1 using this adjusted 130-day moving average, doing the free exchange from the S&P 500 to T-bills and back-plotted this against the growth of \$1 in the S&P 500.

This was my original study. Because it covered the 70 years that included the Great Depression, two long bull markets, and a 16-year trading range, it presents a timing method that seems to work well over a long time period and through markets of all types. Besides presenting this very interesting result, this study helps introduce the concept of timing using moving averages, shows how to test them, and how to display and compare the results. This gets us ready for the new study that focused on the 16.5-year period between 1966 to 1982, looking for moving-average strategies that would have worked the

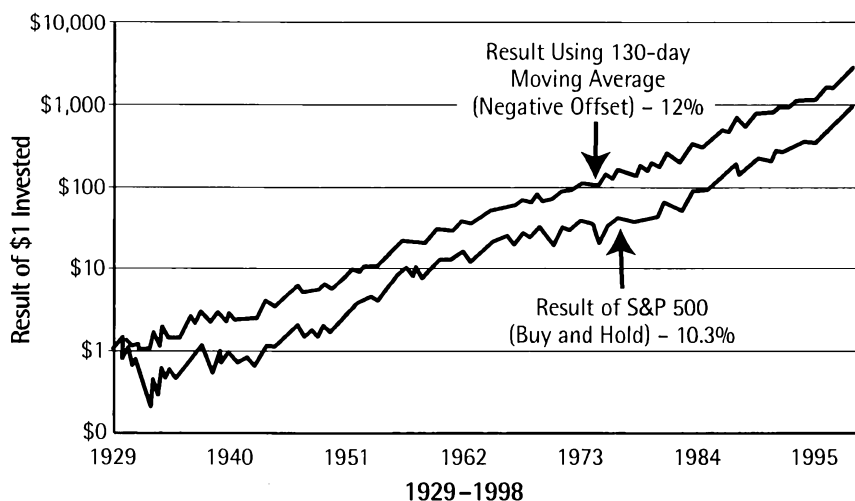


Figure 7.5 *Best Moving Average Result vs. S&P 500.* I chose the 130-day moving average (downshifted 1.5%) and calculated the daily value of doing this over the 70 years. This graph compares that daily value against the daily value of buy and holding the S&P 500.

best through just that period. However, before we do this, I need to caution you about whipsaws, a problem inherent in using moving averages.

Factoring in the Whipsaw

Using moving averages to help determine market direction is not a panacea. Moving averages have drawbacks that can be very frustrating—and costly. The major drawback is called a *whipsaw*.

A whipsaw occurs when the price moves above the moving average, signaling a buy into the market, and then the price reverses, causing an exchange back-out, during which you often end up selling at a lower price than you paid. It is important to understand that when using moving averages, approximately two-thirds of all exchanges will end with a negative result and that this is probably unavoidable.

Yet these studies also seem to indicate that even with the erosion from whipsaws, a well-planned, trend-following method can work well over many market cycles. If the moving average is chosen carefully, the plus of being in the major advances and out of the major declines, minus the loss of the whipsaws, can often do better than buying and holding over long time periods. Back-testing through all types of markets seems to support that belief.

Definition

whipsaws are false signals. When the price gets close to the moving average, it can at times move above and below the moving average many times before it firmly establishes a trend, producing a false signal to buy or sell. These whipsaws can cause you to buy high and sell low; whipsaw movements can be extreme in volatile markets and can erode gains.

The New Moving-Average Study of the 1966–1982 Trading-Range Market

In the original 70-year study, the 130-day moving average (downshifted 1.5%) did very well. This 70 years was composed of four separate market periods: the Great Depression, a long 20-year post-World War II bull market, a long 16-year sideways period (1966–1982), and the latest 18-year bull market. A careful study of the year-by-year results showed the general reason this moving average did so well over the whole 70 years.

Through both long bull markets, market timing using the 130-day moving average did worse than simply buying and holding the S&P 500, because market timing during a long bull market generally hurts or impedes the return. The gain using the moving average occurred during the Great Depression and also during the 1966 to 1982 trading ranges. It was the fact that the moving average prevented giving back some of the gains that made the overall strategy work well through the entire period. The price declines through these periods were big enough and long enough for the 130-day moving average to “fit” within the movements, causing selling near the top and buying close enough to the bottom to gain on the market. Nevertheless, the strategies were still not optimized for just a sideways period. So the task became finding what moving average did the best through such a period.

Figure 7.6 shows the S&P 500 from 1950 through 1982. Between the years 1966 and 1982, the market moved back and forth in a broad trading range, which is highlighted by the boxed area (although the S&P 500 doesn't show it as clearly as the Dow does, the

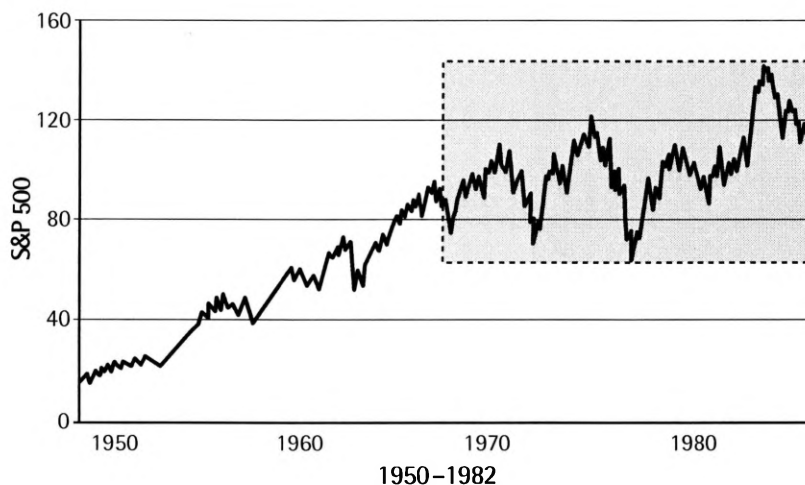


Figure 7.6 January 1966 to August 1982 is the period of time for testing strategies that might work during an extended sideways market.

consensus is that the postwar bull market ended in 1966 when the Dow hit 1000). I believe we are entering a similar trading range period but over a much smaller time frame—from 3 to 4 years. This previous period might provide fertile ground to test various moving-average strategies that might work well during the next roller-coaster period.

But my assumption that the market was about to enter a trading range allowed me to test another idea that might also work well in a trading-range market but, in general, wouldn't work in a long bull market. Let me explain.

If you are expecting an up-and-down trading range, it is possible to consider a strategy that tries to buy when prices are at the lower ends of the range and sell after they've risen to the top of the range. The problem is that you know only where the tops and bottoms of the range are after the range has existed for awhile—after the fact, so to speak. What if, by careful mathematical selection, it were possible to find the extremes in past trading-range stock markets? Then a strategy might be set up in anticipation of a similar type of movement. I reasoned that the best chance of finding these past extremes might be a technical tool called Bollinger Bands.

Using Bollinger Bands

The best way to explain Bollinger Bands is to show them to you. You can define a set of Bollinger Bands for every moving average. Figure 7.7 shows you a set of Bollinger Bands using a moving average of 132 days. The moving average is the centerline, and there is a top Bollinger band and a lower one. Each is equidistant from the moving average. Notice that at times the two bands get closer to the moving average and at other times they get farther away.

What are these bands? Sometimes the stock market becomes very active and prices move around a lot. At other times, prices can become very tame and go nowhere. There is a mathematical way to measure whether the market has been active or tame: the *standard*

Definition

Bollinger Bands are a mathematical technique developed by market technician John Bollinger that uses market volatility (standard deviation) to produce two bands (which are actually lines) that attempt to bracket a price movement. Each moving average would have its own set of bands.

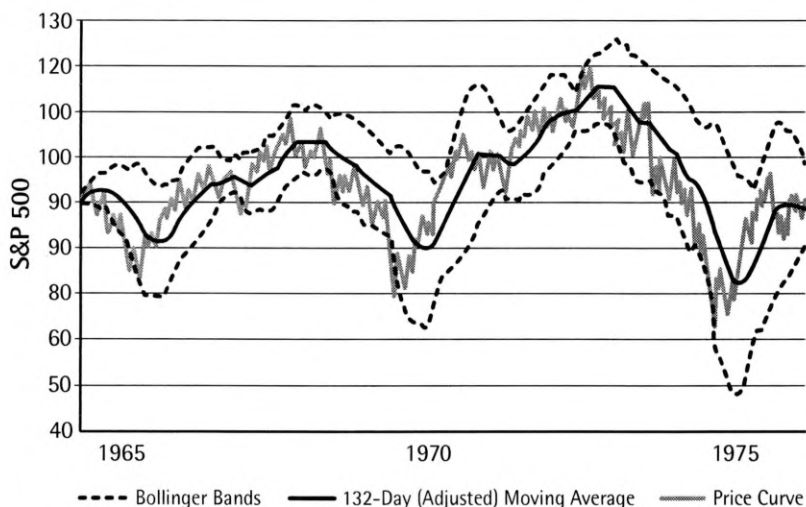


Figure 7.7 *Sample of Bollinger Bands.* These bands, developed and popularized by market technician John Bollinger, present a wonder tool for possibly anticipating price if one believes the market has entered a back-and-forth trading range (buy at low band and sell at high band). The bands shown are those of the 132-day moving average using a 2σ factor.

deviation. Bollinger Bands are determined using standard deviation; the bands broaden when the market has been active and get closer when it has been tame. They thus become candidates for a good mathematical cutoff when trying to define the tops and bottoms of price ranges.

At John Bollinger's Web site (www.bollingerbands.com), his example of Bollinger Bands uses two standard deviations as the separation between the moving average and the top and bottom bands. In fact, the lines could be at any multiple of the standard deviation. In my study, I tested every possible multiple of separation during the study and interestingly enough, I found that two standard deviations worked very well.

In my new study, I decided to try to use Bollinger Bands to define when prices were at the top or bottom of a range. For example, if the S&P 500 rallied strongly and went above the top Bollinger

Band, I assumed that prices had reached the top of the range and the computer sold the S&P 500 and went into T-bills. Likewise, if prices declined below the lower Bollinger band, I assumed they'd reached the bottom of the range and the computer took the money out of the money market and purchased the S&P 500.

With this as the basic idea, I asked the \$64,000 question: What moving-average and Bollinger Band set worked best during the 1966–1982 period? In other words, what moving-average and Bollinger Band spacing would have both caught most of the upswings while sidestepping the downswings and also bought and sold at the tops and bottoms of those swings using Bollinger Bands?

I decided that I would back-test these two strategies concurrently. The first was to test every moving-average strategy between 1929 and 1998 (just like the first study) to see which moving average caught the trends the best through the trading range. The second was to test every Bollinger Band strategy through the same period to see which worked the best at finding the extremes.

Summarizing the Test

In this study, I tracked two pools of money over the 16.5 years. One pool, *Strategy 1*, followed the moving-average strategy. The other, *Strategy 2*, followed the Bollinger Band strategy. Preliminary studies of many combinations indicated that a good mix occurred when Strategy 1 pool contained 60% of the assets and Strategy 2 contained 40%.

Strategy 1: *Test every moving average between 5 and 200 days, including 8 vertical shifting variations up and down per moving average.* I tested 1,755 moving averages. For each moving average, the strategy was to buy the S&P 500 at the close when the S&P 500 closed above the moving average, and sell the S&P 500 at the close when the S&P 500 closed below the moving average (and the funds would go into the money market).

Strategy 2: *Test Bollinger Bands that are two times the standard deviation away from their moving average. (Preliminary tests showed that this spacing worked well.)* I tested 1,755 Bollinger Bands, one set for every moving average. The strategy was to sell the S&P 500 at the

Restrictions on the Recent Study

Since the original study, new investment vehicles have been developed that overcome one of its major limitations: having to get the next-day closing price after a signal is given on the close. Remember that this was imposed because, in practice, you had to use a mutual fund and its free exchange to implement the strategy.

Now there are spiders (representing one share of stock in the S&P 500) and programmed trading methods (for institutions) for buying and selling baskets of stock that mirror the S&P 500. These methods of investing in the S&P 500 are available for buying or selling any time during the trading day. Because of this, for this study I decided to assume the capabilities that these new trading vehicles would allow. I assumed that we could monitor the condition of the moving average or the Bollinger Bands right up to the close. If a signal were given, it would be executed, buying or selling the S&P 500 right at the close. In practice, this might be difficult to do if the moving average or the Bollinger Bands were very close to the price at the close. In general, I think it would be possible to do this in most cases.

These new ways of investing in the S&P 500 would change one of the earlier assumptions. For one, because the free exchange of a mutual fund isn't being used to buy or sell, a transaction cost for each buy and sell would have to be assumed. For the study, I assumed a round-turn transaction cost to buy and sell that would include commissions, and the spread between the bid price and the ask price of 35 basis points, which is 35/100 of 1%.

close and put the money into a money market when the price went above the top band, stay in the money market until the price declined below the moving average, at which time the investment would follow Strategy 1. Buy the S&P 500 at the close when the price goes below the lower band, stay in the S&P 500 until the price rallies above the moving average, at which time the investment would follow Strategy 1.

A great deal of preliminary work went into this, and I cannot show you the entire study because it would be too detailed for a book of this scope. Although the study identified several good strategies, I'm going to show you one of the most successful results (see Figure 7.8). It follows the same idea as Figure 7.4.

Over the period from January 1, 1966 to July 31, 1982, the total return from the S&P 500 with dividends reinvested was 5.06%. In the figure, this buy-and-hold return is shown as the dotted line. The other line plots the average annual return each moving average produced (maintaining an asset mix of 60% moving average and 40% Bollinger Band). The two moving averages that are highlighted are the 72-day and the 132-day. Both produced back-tested average returns of just over 10%. That was 5% more

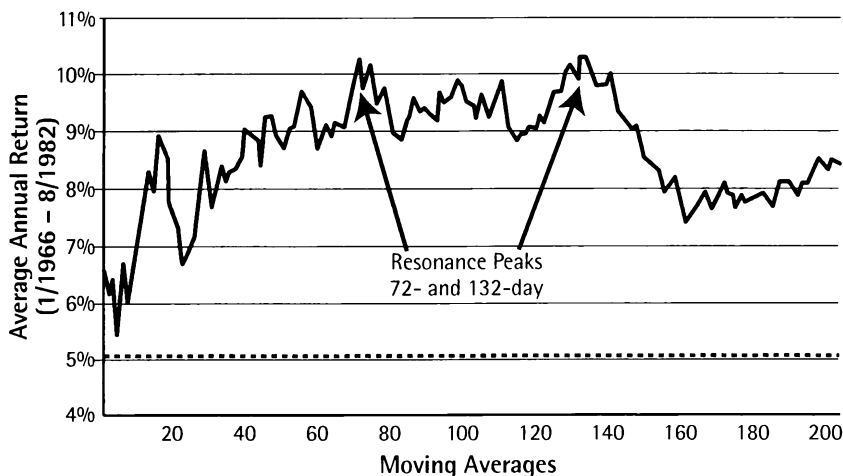


Figure 7.8 1966–1982 Study. There is a lot more to the study, but this chart shows the essential information. The line at the bottom shows the S&P 500 buy and hold over the period. These results show that in a sideways market the two moving averages, 72-day and 132-day, did pretty well. These results are the result of running two concurrent strategies—60% of the assets following the moving average signal and 40% following the Bollinger Band strategies. Again these results are those of a variation of the simple moving average (raised 1% on the price scale). In this study, the assumption was that one would buy and sell the S&P 500 spiders and used the price on the S&P 500 on the close of the day the moving average signal was given. A 35-basis point allowance was given for the spread and the commission.

than the buy and hold produced. The chart also seems to indicate that almost any market-timing method works better than buy and hold through long trading-range markets.

Recall from my earlier study that I tested a number of variations on moving averages by adjusting the moving average line up and down, searching for a relationship that would increase returns over a buy-and-hold strategy. The curve in Figure 7.8 plots the variation that produced a good result. The variation in this case was made by shifting all the moving averages upward by 1%. In other words, I calculated the moving average and then multiplied it by 1.01. This multiplication raises the moving average on the price axis. This has the effect of generating sell signals earlier and buy signals later.

One very important point is that moving averages around 130 days worked well in almost all studies of various market periods. They worked the best for the entire 70-year study *and* for the 16.5-year sideways market. The difference was only in the shift. Over the entire 70 years, the 130-day moving average shifted downward 1.5%. During just the sideways period, it was a 1% upward shift.

The Results

I have always found it easier to visualize how these strategies performed by looking at the day-to-day back-test of each moving average. Figure 7.9 shows the day-by-day result of the 132-day moving-average strategy (60% Strategy 1 and 40% Strategy 2), and Figure 7.10 shows the 72-day results (also 60% Strategy 1 and 40% Strategy 2), both plotted against the S&P 500 buy and hold. It's easy to see from these figures how the strategies work to produce the return during the period. The moving averages and their Bollinger Bands were a good time measure to catch the major up moves early while sidestepping most of the declines, and also catching the extremes of the movements.

Because both moving averages (132-day and 72-day) gave consistent returns and ended up over the 16.5 years with approximately the same result, I decided that a combined strategy using both would probably do the best. An average of both would produce the same

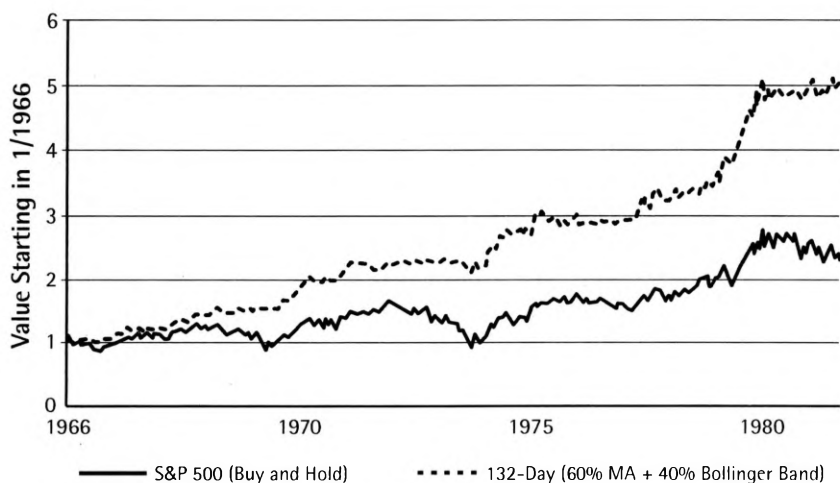


Figure 7.9 Plotting the day-by-day value of the 132-day result (moving average and Bollinger Band) versus the daily S&P 500 buy and hold.

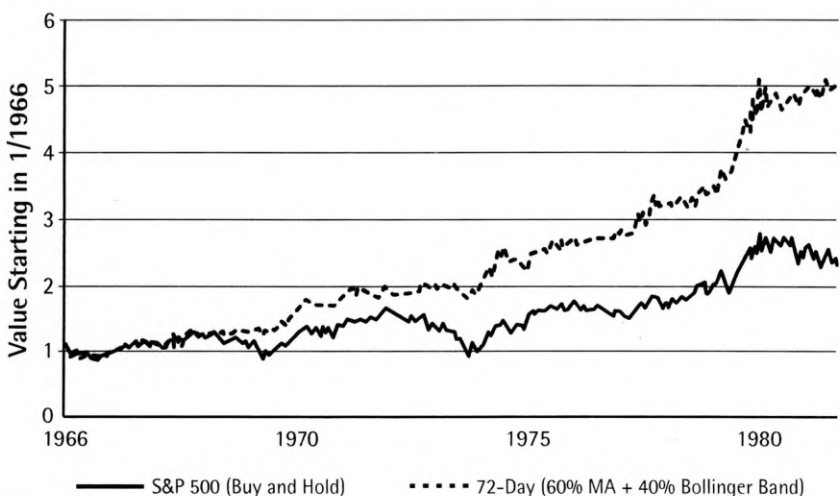


Figure 7.10 Plotting the day-by-day value of the 72-day result (moving average and Bollinger Band) versus the daily S&P 500 buy and hold.

total return as either one, but the path to get there would be smoother for the same reason we diversify in portfolio theory. (When one zigs, the other might zag.) The total return for such a combination was 10.3% per year from 1966 to July 1982. Table 7.1 shows the combined yearly results.

Moving Averages and Feedback Loops

Recall from Chapter 1 that my stock market model says that the price of stocks equals a fair value modified and stretched by the action of three feedback loops. These loops are generated by the emotional reaction of investors focusing on three different time frames. The conclusions from these moving-average studies seem to show that these feedback loops, once started, continue consistently for specified periods

Table 7.1 *Combined yearly results of doing both the 72- and 132-day moving-average strategies from 1966 to 1982.*

	S&P 500	Combined 72-Year and 132-Day MA
1966	-10.1%	-0.1%
1967	23.9	19.3
1968	15.5	13.7
1969	-9.2	4.6
1970	2.2	18.0
1971	15.4	17.8
1972	19.4	7.3
1973	-14.8	1.6
1974	-26.7	-4.5
1975	34.1	21.0
1976	22.9	14.8
1977	-7.2	0.8
1978	6.6	12.6
1979	17.7	8.5
1980	35.3	38.6
1981	-5.4	1.4
1982	-9.9	1.9

of time. In other words, the economic factors (fair value) can change as the economy changes, but the one constant—the human being and his or her reaction to events—is nearly the same through all eras.

The moving averages that did the best seem to be the ones that fit or harmonized best with how groups of investors react and create market movements as feedback loops. As I explained in Chapter 1, these feedback loops can only run for a maximum of about 13 weeks, but the psychological effects can carry over after that for approximately 3 more months. The 132-day and 72-day moving averages fit within the time scale we would expect of feedback loop movements.

Will this change over time? I'm often asked this question by people who note that the market of today is different from the market of the past. There were only 400 mutual funds in the mid 1970s and now there are over 10,000. Today we have the Internet, where people trade on a daily basis for a small commission. It would seem that the relative number of investors in the three time realms—short-term, intermediate-term, and long-term—is not a constant but rather changes over time. Won't this modify the size of the various feedback loop movements and their relationships, disturbing how these realms interacted in the past? I believe it will have an effect, but it is difficult to calculate exactly what the effect would be.

The increase in day trading should cause the short-term feedback loops to change; perhaps that will bleed over and influence some of the intermediate-term traders. The definite increase in short-term price volatility reflects the larger numbers of traders who trade for short time periods. In other words, the short-term feedback loop has been magnified. My hope is that the 72-day, and at least the 132-day, moving averages are long enough to blend away some of these changes and will still work even if these realms change in relative size and dominance from one to the other.

Using Other Strategies

There will be other ways to invest through a period like the one I'm expecting. Besides using the strategies I presented in this chapter, using the standard technical and fundamental lessons learned during the 1970s and 1980s will still be an option. Some of this information

is summarized in the indicators and ideas I presented in Chapters 2 and 3. These ideas cannot be back-tested as well as the methods shown in this chapter; however, the good track records of some technicians who have navigated that period show the potential of knowing and applying this information with experience and expertise.

There are other strategies that you can use. For example, there will be a time to buy technology stocks again. What do I mean? I believe that before this trading range correction is over, a complete reversal in the extreme speculation that occurred in the technology sector must occur. I think that someday we will hear a chorus arise saying, "How could we have seen so much potential and have been so wrong?" When I hear that chorus, it will be one important sign that the end of the correction is near and a new investment cycle in technology is ready to begin.

Another strategy is called "market neutral investing." With this strategy, you try to short the overpriced stocks and buy the undervalued ones. Or, more correctly, you try to buy the stocks that are out of favor but expected to go into favor and to short the ones ready to recede from favor. Although this idea has potential and sounds promising, it is always difficult to apply in practice. Market pricing can become so irrational that there are long periods when undervalued stocks stay undervalued and get more so, while overvalued ones get even more overvalued. This can be very disappointing. Some very good money managers, however, have good success with this idea.

Finally, even in a lengthy trading-range market there will be a select number of sectors or groups that will continue in or begin a new bull market. You can only really know which stocks and groups will do this after the fact or after a pattern has emerged. It has been 10 years since the last recession. This is abnormally long. If we enter a recession soon, the picture will be clearer regarding which groups and stock are really the strongest and deserve our focus. It is a truism that really strong stocks that hold up well through recessions will do very well during the next recovery.

Conclusion

A lot more went into this 16.5-year study that I could not cover in this book. If a strategy becomes popular and it is used by too many

people, it ceases to work as well. Therefore, I have to keep certain strategies proprietary for my clients' benefit. However, I believe that the strategies you have learned in this book will be useful in helping you invest successfully in the coming sideways market.

Whatever your strategy, be assured that the coming 4 years or so will be vastly different from the last 10 and I believe investors will have to change their thinking if they are to capitalize during the coming years.

Glossary

advance decline line is the accumulated difference between the number of stocks advancing and the number declining.

arbitrage short selling is done solely to lock in an investment gain, and the amount of arbitrage short selling going on in the market today completely swamps the amount of speculative short selling.

BABES is an acronym for **B**roadly Agreed to **B**ut Essentially wrong Scenario. This is the economic reason or story that has been erected, that “explains” why the stock market will be doing what the majority expects it to do. It is the economic “why” that supports the extreme bullish or bearish feeling.

back-testing is the process of taking numbers that occurred in the past and seeing how well a strategy would have done.

bid-and-ask spread is the momentary price difference between what it costs to buy a stock and what price you can get for selling the stock.

Bollinger Bands are a mathematical technique developed by market technician John Bollinger that uses market volatility (standard deviation) to produce two bands (which are actually lines) that attempt to bracket a price movement. Each moving average would have its own set of bands.

buy and hold is the philosophy that you should buy a large basket of good stocks and hold them over long periods, ignoring the intervening price swings.

call is an option to buy a stock at a specified price for a specified time.

climax is the peak of the sell-off by investors reacting to a market decline.

divergence is when two things that were acting together in a certain way start acting apart, or differently, than they did earlier.

dividend yield for stocks refers to the dividends for 12 months divided by the price per share.

Elliot Wave pattern is a pattern noting that each section, or wave, in the price pattern also consists of three smaller waves. Likewise, the movements of each correction are also subdivided into finer movements.

extension is an Elliot Wave variation in which one of the primary waves can be so large that the smaller movements that make it up become as large as the two other primary waves.

flat is a common Elliot Wave correction in which waves A and C end up at the same level.

fractal is, according to Benoit Mandelbrot, “a geometrical shape that can be separated into parts, where the shape of every part is a reduced-scale version of the whole.”

fundamental analysis is the process of compiling and considering economic data—such as sales, earnings, and dividends—in an effort to predict stock prices.

horizontal triangle is an Elliot Wave correction, which usually occurs as a fourth wave correction after very large waves 1 and 3 with a small wave 2 separating them. It's as if all the correction for the whole move is being saved for one long wave 4. A horizontal correction is composed of five waves and is not a simple ABC pattern.

inter day is the term used to describe the prices that occur during trading hours.

internal market is the statistical measurements, such as the number of stocks making new highs or lows and the number of advancing stocks versus decliners, that describe what is happening to the mass of individual stocks as the overall market moves up or down.

irregular correction is an Elliot Wave variation in which the B wave continues up and exceeds the top of the preceding wave 5.

iteration is the process of doing a simple action repeatedly.

Koch curve is a perfectly predictable fractal that develops over time. It starts with a straight line that is broken by a V pattern. This V pattern further breaks each occurring straight line ad infinitum.

Mandelbrot curve is a fractal, which has come to represent the entire subject of fractals.

market breadth is the daily measurement of the number of stocks advancing versus the number declining.

market timing is the philosophy that it is better to try to buy stocks just before significant market upswings and to try to sell just before significant market downswings.

model is a mental construct or physical system that parallels or behaves like a real system. Studying the model gives insight and an understanding of how the actual stock market behaves.

moving averages refers to the mathematical technique in which you total an index or indicator for a specific time period and then divide that sum by the number of days of the period. It is called a “moving” average because every day you add a new number and drop off the last number in the previous sum.

O’BUCS is an acronym for Occluded But Ultimately the Correct Scenario. This is the obscured or hidden economic reason that will emerge in the future which will explain why the stock market went in the opposite price direction to what everyone thought.

program trading is the instantaneous buying and selling short of a stock or index to lock in an abnormal difference in price between two similar or identical investments.

put is an option to sell a stock at a specified price for a specified time.

puts to call ratio is the ratio between a put, an option to sell a stock at a specified price for a specified period of time, and a call, an option to buy a stock at a specified price for a specified period of time. By calculating the ratio of the number of puts and calls, it is possible to get a good idea of what investors are thinking.

resonance is the state produced in a system when an unusually large vibration is produced in response to an external stimulus, and the frequency of the stimulus is the same (or nearly the same) as the natural vibration frequency of the system.

short selling is selling borrowed shares of stock under the expectation of being able to buy them back at a lower price and returning the shares you borrowed. This strategy makes money if prices decline and loses money if prices rise.

sideways correction or trading range is the idea that after a long advance in stock prices there comes time for a rest. Since you can’t stop time the rest manifests itself as stock prices going up and down, while making little headway. The up-and-down motion creates a range. For example in the 1970’s the market went to a high of around 1000 and a low of around 700, It is called a trading range market because the only way to make money is to try to buy at the lower end of the price range and sell near the upper end.

stacking the money is the “cash flow theory” or the “time value of money theory.” It is the mathematical procedure for finding the current worth or value of any investment that will throw off a future stream of income or cash. The current value of any investment—stocks, bonds, real estate—should be determined using this or some variation on this idea.

technical analysis is the process of compiling and considering information gathered on the stock exchange floor—such as volume, current stock prices, and short interest—in an effort to predict stock process.

theory of contrary opinion states that when the vast majority of market participants think stock prices will advance they usually decline. Likewise, when the vast majority think prices will decline they will advance.

time intention of the trade is the time—measured in minutes, days, weeks, or months—between the start of a transaction and its intended conclusion. It is a clear statement of the intended time duration of the investment.

whipsaws are false signals. When the price gets close to the moving average, it can at times move above and below the moving average many times before it firmly establishes a trend, producing a false signal to buy or sell. These whipsaws cause you to buy high and sell low; whipsaw movements can be extreme in volatile markets and can erode gains.

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