

## Chapter 1

# Opening the Technical Analysis Toolbox

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### *In This Chapter*

- ▶ Defining technical analysis
  - ▶ Befriending the trend
  - ▶ Figuring out your definition of trendedness
  - ▶ Getting the many names for technical analysis straight
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**W**elcome to technical analysis, which, for you, may be a new way of looking at stocks and other securities. Simply put, technical analysis is a set of forecasting methods that can help you make better trading decisions.

In this chapter, I take you on a quick tour of key technical concepts and review why technical analysis works (and why sometimes it doesn't). You may be thinking that technical analysis is all about reading charts full of squiggles and lines, and although I give you plenty of material in this book about squiggles and lines, technical analysis is also about managing market risk.

Does that sound a bit too grand? Well, building a house isn't chiefly about hammers and nails, although you need them. Squiggles and lines are just tools. Think of tackling technical analysis as a project to build better trading practices. Yes, you need the squiggles and lines, but your goal is to use those tools to make money.

## *What Is Technical Analysis?*



*Technical analysis* is the study of how securities prices behave and how to exploit that information to make money while avoiding losses. The technical style of trading is opportunistic. Your immediate goal is to forecast the price of the security over some future time horizon in order to buy and sell the security

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to make a cash profit. The future time frame is unknown at the beginning of a trade, but it's not "forever" — as it may be with buy-and-hold investing. The emphasis in technical analysis is to make profits from trading, not to consider owning a security as some kind of savings vehicle. Therefore, technical analysis dictates a more active trading style than you may be used to.

### *Trading or investing: The many faces of technical analysis*

Both traders and investors use technical analysis. What's the difference between a trader and an investor?

- ✓ A *trader* holds securities for a short period of time.
- ✓ An *investor* holds securities for a long time.

Okay, what's the difference between these holding periods?

- ✓ A short holding period is anywhere from one minute to one year.
- ✓ A long holding period is anywhere from six months to forever, depending on who you ask.

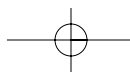
Notice that I overlap the holding period of the trader and the investor. Actually, the dividing line between trader and investor isn't fixed (except for purposes of taxation). I use the word *trader* in this book, but don't let it distract you. People who choose to call themselves *investors* use technical methods, too.



You can use technical methods over any investment horizon, including the long-term. If you're an expert in Blue Widget stock, for example, you can add to your holdings when the price is relatively low, take some partial profit when the price is relatively high, and dump it all if the stock crashes. Technical analysis has a tool for identifying each of these situations. You can also use technical tools to rotate your capital among a number of securities depending on which ones are delivering the highest gains these days. At the other end of the investment horizon spectrum, you can use technical analysis to spot a high-probability trade, and execute the purchase and sale in the space of an hour.

### *Setting new rules*

You may have the idea that because technical analysis entails an active trading style, you're about to embark on a wild and risk-laden adventure — like



that one-hour trade I just mentioned in the last paragraph. Nothing could be further from the truth. Executing the one-hour trade has less inherent risk of loss than buying and holding a security indefinitely, without an exit plan, based on some expert's judgment of its value.



Preventing and controlling losses is more important to practically every technical trader you meet than outright profit-seeking. The technical analysis approach is demonstrably more risk-averse than the value-investing approach.

That's because to embrace technical analysis is to embrace a way of thinking that's always sensitive to risk. *Technical trading* means to trade with a plan that identifies the potential gain and the potential loss of every trade ahead of time. The technical trader devises rules for dealing with price developments as they occur in order to realize the plan. In fact, you select your technical tools (from the many available) specifically to match your trading style with your sensitivity to risk. I talk about this in Chapter 4.



Using rules, especially rules to control losses, is the key feature of long-term success in trading. Anybody can get lucky — once. To make profits consistently requires you not only to identify the trading opportunity, but also to manage the risk of the trade. Most of the “trading rules” that you hear about, such as “Cut your losses and let your winners run,” arise from the experience of technical traders. (I come back to this rule and the subject of managing the trade in Chapter 5.)

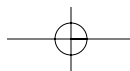
## *Making the case for managing the trade*



To buy and hold securities for a very long period of time is a well-documented path to accumulating capital, but only if your timing is good — you're lucky enough to buy the security when its price is rising. If your timing isn't so hot or you're unlucky, it's a different story all together. Consider the following:

- ✓ If you had bought U.S. stocks at the price peak just ahead of the 1929 Crash, it would've taken you 22 years to get back your initial capital.
- ✓ Since the end of World War II, the Dow Jones Industrial Average has fallen by more than 20 percent (a *bear market* — see the “Keeping your bulls and bears straight” sidebar in this chapter) on 11 occasions.

More recently, from January 2000 to October 2002, the S&P 500 fell by 50 percent. If you owned all the stocks in the S&P 500 and held them throughout the entire period, you lost 50 percent of your stake, which means you now need to make a gain equivalent to 100 percent of your starting capital to get your money back, as Table 1-1 shows. Ask yourself how often anyone makes a 100 percent return on investment.



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<b>Table 1-1</b>	<b>Recovering a Loss</b>
<i>Loss</i>	<i>Gain Needed to Recover Loss</i>
10%	11.1%
20%	25.0%
30%	42.9%
40%	66.7%
<b>50%</b>	<b>100.0%</b>
60%	150.0%
75%	300.0%



Timing your entry and exit from the market is critical to making money and controlling losses. The central part of the book, Chapters 6 through 17, covers technical methods that aim to improve the timing of your entries and exits.

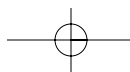
## *It's All about the Trend*

You can look at most charts and see that in the big-picture sense, securities prices tend to move in trends, and trends persist for long periods of time. A *trend* is a discernible directional bias in the price — upwards, downwards, or sideways.



The trend is your friend. If you identify trends and trade with them, you can make more money trading securities. Trend identification gives you an advantage and helps you perform two functions near and dear to the heart:

- ✓ **Create capital:** As a general rule, you want to buy securities only when their price is rising, called an *uptrend*. Buying into an uptrend makes money, providing you can figure out where to sell.
- ✓ **Preserve capital:** You make fewer mistakes and preserve capital by not buying a security when the price is falling (a *downtrend*) — no matter how charming the salesman or fascinating the story — and by selling a previously rising security when it starts downtrending. You don't know where or when a downtrend might end.



## *Focusing on the price is right (and respectable)*

Securities prices are the product of the collective decision-making of buyers and sellers. Prices incorporate (or *discount*) all known information about the security, and prices change as new information becomes available. *All known information* consists of hundreds of factors ranging from accurate facts to opinions, guesses, and emotions — and previous prices. They all go into the supply and demand for a security and result in its price. I talk about supply and demand in Chapter 2 and environmental factors that affect the price in Chapter 3 as well as Chapter 10.

Charles Dow, one of the founders of *The Wall Street Journal*, observed around the turn of the 20th century that whatever the true facts are about a security and whatever people are saying about it, the price neatly cuts through all the clutter of words and is the one piece of hard information you can trust.

Note that prices on a chart don't tell you anything about the underlying *value* of the security. Where the price "should" be is a totally different subject, named fundamental analysis. Most technical traders use both forms of analysis. Technical analysis isn't antithetical to fundamental analysis, as some critics think. The two can be used together. You can choose to trade only the highest quality securities on a fundamental basis, but time your purchases and sales according to technical criteria. This, by the way, is the basis of one of the top charting software packages (see the Appendix for the names of software and other valuable resources).



Technical analysis and fundamental analysis are compatible. The core ideas of technical analysis aren't some new and crackpot flash in the pan, but rather, they came into being over 100 years ago. Technical ideas have a respectable origin and have been embraced and explored by some very brainy and successful figures in American finance. To give you just a taste of the basic observations underlying technical analysis, Dow said

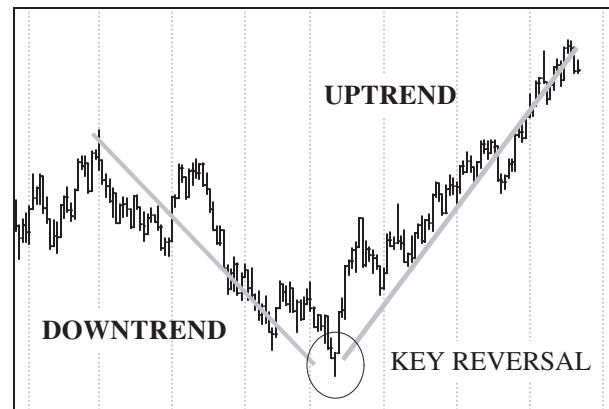
- ✔ Securities prices move in trends much of the time.
- ✔ Trends can be identified with patterns that you see repeatedly (covered in Chapter 9) and with *support and resistance* trendlines (covered in Chapter 10).
- ✔ Primary trends (lasting months or years) are punctuated by secondary movements (lasting weeks or months) in the opposite direction of the primary trend. Secondary trends, today called retracements, are the very devil to deal with as a trader. See Chapters 2 and 4 for more on retracements.
- ✔ Trends remain in place until some major event comes along to stop them.

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These ideas, and many more attributed to Dow (sometimes wrongly), are called *Dow Theory* and still cited today.

### *Charting your path*

Prices and trends rule, so you have to be able to track and identify them. And to identify prices and trends, you have to see them. So here it is, the price chart (see Figure 1-1). This chart shows a classic uptrend following a downtrend.

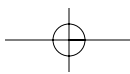


**Figure 1-1:**  
Uptrend and  
downtrend.



At the most basic level, your goal as a technical trader is to shun the security shown on the chart while it's downtrending and to identify the key reversal point — which is the best place to buy (shown in the circle) — as early as possible. Figure 1-1 is a good example of the kind of chart with which you spend most of your time. A chart is the workspace of technical analysis. Technical analysts have developed numerous indicators based on price and volume that can be expressed as statistics, tables of numbers, and other formats, but the core method remains a graphic display of prices in a chart.

You absolutely, positively must become attuned to looking at charts and trying to figure out what the prices are telling you. On Figure 1-1, is this price going to make a new high — or is there evidence that the rally is over? (Yes, it did make a new high and no, the chart shows no evidence of the trend coming to an end.) By the time you finish this book, you'll know that at a glance, too.



## *Looking at the Many Faces of Trendedness*

*Trend* means different things to different people. Trend is such a wide and flexible concept that a large variety of definitions is possible. In fact, to be pragmatic, you can say that a trend is a price move that your indicator identifies. In other words, you can define trend according to technical measures that appeal to your sense of logic and what works for you. In this book, definitions of trendedness are spread out under various technique headings so that you can choose which definition of trendedness suits your personality and trading style.

### *Quantifying trendedness*

Creating a chart like the one in Figure 1-1 is easy. To illustrate classic trend behavior, I could've taken any security out of thousands in my database and found some period of time over which the security's price looked like this chart. However, I could also have found many periods of time when this same security was not trending. In fact, some securities are frequently in a trending mode and others seldom trend, or their trends are short-lived. To complicate matters, some securities exhibit a "habit" of tidy trending while others trend in a sloppy way (with high variability around the average).

Charles Dow may have started the ball rolling in technical analysis over 100 years ago, but in the grand scheme of things, we're still in frontier days. Ask a group of technical traders, "What percentage of time are securities trending and what percentage of the time are they nontrending?" I guarantee that nobody can give you a single correct answer. Actually, most technical traders tell you that securities are typically in a trending mode about 30 percent of the time, but that statistic isn't based on hard facts. It's a guess because of two factors — the definition of trendedness the individual chooses to use and the time frame he looks at.

#### *Choosing a definition*

I trade foreign exchange and I say the pound, the euro, and the yen are trended about 60 percent of the time. I say that because 60 percent of the time, I can draw a linear regression line with a directional slope (up or down) around which currency prices cluster. (I discuss linear regression lines in Chapter 10.) Someone else may say currencies are trended only 40 percent of the time — using a different and equally valid definition of trendedness.

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Only one thing is certain — no security is trending all the time. Even the best-behaved security spends some time going sideways (nontrending) while the people who trade that specific security make up their minds what they think about it. So no trend-identification technique is going to work all the time.

I give you the key definitions of trendedness in Parts III through V. Chapter 6 describes it as a series of higher highs together with a series of higher lows (for an uptrend). In Chapter 12, trendedness is defined as the price rising above a moving average or a short-term moving average rising above a long-term moving average (also an uptrend). The rest of the chapters contain other definitions, like the linear regression slope I mention at the beginning of this section. No single definition of trendedness is the universal gold standard on which everyone agrees, so it's hardly surprising that no one can say, "Securities are trended  $x$  percent of the time," with any authority.

### *Picking a time frame*

If you're looking at ten years of daily prices, you get a different view of trendedness than when you're looking at only two years of data. Further, a security that trended in the 1990s may not trend in the 2000s. Or a security may have trended highly in the 1970s, trended by a different extent in the 1980s, and only sometimes trended in the 1990s. You can blend the trendedness rates over the three decades and get a number that doesn't represent any of them, much less tell you the degree of trendedness in the current decade. Markets are dynamic. They change (then they change back). Accept it.

You also need to consider the periodicity of your data. A security may display a trend on data captured every hour but appear to be nontrending when you look at daily data. Some securities may trend in the morning and not in the afternoon. To go to the other extreme, you may not be able to detect a trend on daily data but a weekly or monthly chart shows a trend.



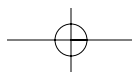
Accept the spirit of empirical investigation embodied in technical research: When you're drawing charts, experiment with different time frames.

### *Identifying your definition of trendedness*



Trendedness can be defined in various ways, but as a practical matter, you need to choose the definition of trendedness that suits you. You don't have to be statistically rigorous as long as you have rules for defining trendedness and apply them consistently. I discuss how to choose your definition — which is the same thing as how to choose indicators — in Chapter 4.

To you, a trend may be a series of higher highs with higher lows over seven bars (I describe bars in Chapter 6). To the next trader, a trend has to have a



moving average crossover that has lasted a minimum of 20 bars (see Chapter 12 to find out about the moving average — the workhorse of technical analysis). Some traders insist that to be identified, a trend has to qualify on a daily chart and a weekly chart as well.



Selecting a time frame to trade is just about the hardest thing you do as a technical trader, because you have to discover within yourself your tolerance for retracements, those minor pullbacks that occur in every trend. Tolerance for temporary pullbacks is a central aspect of your personal attitude toward risk. Psychologists and trading coaches make a good living helping traders find their comfort zone with respect to risk.

## Why Technical Analysis Does and Doesn't (Always) Work



Technical analysis works because people consistently repeat behaviors under similar circumstances. To give just one example, after a security makes a big move up, some market participants choose to take a profit by selling the security. Sellers temporarily overwhelm buyers and the price falls even though the trend is still in place. Technical analysis offers many tools to identify when a price dip is just profit-taking versus when a dip signifies a possible end of the trend.

As I show in many chapters in this book, technical methods do work to enhance your timing if you're *careful* and *consistent*. As I explain in Chapter 4 (and illustrate in Chapter 16), if you follow the buy/sell trading instructions embedded in your technical indicators, you should make gains that are higher than your losses over a sufficient period of time. It's not fair to try out an indicator, take a few losses, and throw away all of technical analysis as worthless. Technical trading does entail taking losses. The point is to have gains that are bigger than losses.

I say at the beginning of this chapter that technical analysis is a forecasting method. Like all forecasting, it uses past and current behavior to predict future behavior. To say that technical analysis is merely “looking in the rearview mirror” is to be uninformed about the art and science of forecasting. All forecasting takes information from the past and stirs it up within a set of statistical constraints, but the answer doesn't always come out as expected because

- ✓ At any moment, thousands of factors are potentially able to affect the price of a security, and you can't hope to account for all of them.
- ✓ Human behavior is somewhat predictable, but not 100 percent predictable.

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I discuss the constraints on technical analysis as a forecasting technique in Chapter 3. You need to understand the limitations of technical analysis as a forecasting tool to avoid mistakes. The biggest mistake that beginning technical traders make is attributing too much reliability and accuracy to technical methods. Every experienced technical trader knows that no technique works all the time.

Understanding why no technique works all the time helps you overcome doubts raised by critics who say that the whole field of technical analysis is not worthwhile because techniques are not 100 percent reliable. Because a method doesn't work all the time, or even a high percentage of the time, isn't the right criterion for evaluating it. Just because the meteorologist is wrong 50 percent of the time doesn't mean you should take off in your Cessna when he's forecasting a violent thunderstorm in the next hour.



In financial markets, the value of an analytical method is determined by whether it helps you to consistently make more money than you lose. Notice that this statement has two components — the method and *you*. An expert trader may use a particular method to generate high profits and low losses year after year. You may try to apply the same method, or what you think is the same method, but fail to get the same results. I discuss this puzzle in Chapter 17.

### *Viewing the Scope of Technical Analysis*

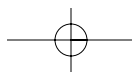
Technical analysis focuses on prices. Technical traders think the price reflects all the useful information they need to make a trading decision. But how you analyze prices can take many different forms — from drawing lines on a chart by hand to using high-powered computer software to calculate the most likely path of a price out of a zillion randomly generated paths. Technical analysis is sometimes called by other names, such as *charting*, *market timing*, and *trend-following*. All the terms are used interchangeably by the press, the public, and even technical analysis authors.



When you see these terms in this book and elsewhere, don't fret over a strict interpretation — and don't accept or reject a technical idea because it has a particular label. You could put ten technical traders in a room and get ten definitions of each term. The following sections are my interpretation of these terms and their nuances.

### *Charting*

*Charting* is probably the oldest generic term used for technical analysis. I cover “charting” techniques in Parts III and IV. Charting refers to reading supply and demand into bars and bar patterns. Some technical analysts may



reject the term *charting* because it harkens back to the days of colored pencils and rulers. They see charting as subjective, while viewing statistics-based indicators (which I cover in Part V) as “objective.” I started out this way, preferring a moving average to a support line, for example. But charting conventions developed over many decades are widely used by many traders, and they *work*.

## *Market timing*

Market timing is another term used in place of “technical analysis.” All technical trading involves timing, but to my way of thinking, the term *market timing* refers to statistical analysis that goes beyond a single chart. It encompasses many techniques, such as sentiment indicators and calendar effects, that many self-described chartists would say aren’t charting and at least some technical analysts would say aren’t technical analysis. I cover these and other tools in Chapter 3.

## *Trend-following*

The very first thing you look for in a chart is whether the price is trending. Because so much emphasis is put on the presence or absence of a trend, technical analysis is sometimes named *trend-following*. Parts IV and V contain techniques that are “trend-following.” Some analysts object to the term because you aren’t always following, but often anticipating a trend, as when you use momentum indicators (see Chapter 13).

## *Technical analysis*

Technical analysis is the broadest of the terms. It covers hand-drawn lines as well as grand theories of price cycles. But many people associate technical analysis with statistics-based graphic indicators that use price data in one way or another to represent the direction, strength, or some other characteristic of the trend. Instead of counting on your eyes, you count on math.

Using math is a breakthrough and a curse. Math may outperform human judgment and the human eye, as many an optical illusion has proved, but it’s not true that numbers never lie. Numbers lie all the time in price analysis! You can have a textbook-perfect trend with ten confirming indicators, and it can still run into a brick wall — really bad news that trashes the price of the security. Math cannot and does not overcome the inconvenient fact that fresh news, which no one can predict, may overwhelm any price trend.

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In the quest to define trendedness and formulate trading rules that maximize profit while reducing risk, technical traders run the risk of turning into obsessed and nerdy number-crunchers. They forget that behind the numbers are other human beings who often behave in irrational and inexplicable ways. Technical analysis (so far) remains an art, not a science, even when it uses scientific methods.

### Keeping your bulls and bears straight: A word about words

A *bullish market* is one that is rising and a *bearish market* is one that is falling. A *bull* is an optimist who thinks prices will rise and a *bear* is a pessimist who thinks prices will fall.

A lot of people don't like those words. They find them to be coarse, undignified, and often inaccurate. When you buy a security for an expected long-term holding period, you feel positive about the security but the word "bullish" sounds emotional and doesn't describe the deeply intellectual process you went through in selecting the security. When you sell a security, you may not appreciate being named a bear. You may not have had a negative attitude toward that security — you just wanted the money from the sale for some other purpose.

Bull and bear are oversimplifications. But those are the words commonly used in discussing securities markets. Accept them. The word "bull" applies to the long-term holder as well as the in-and-out quick-trade artist. The point is that bull and bear, or bullish and bearish, are useful short-hand words that summarize market players and market sentiment as either positive and optimistic (prices will rise) or negative and pessimistic (prices will fall).

Some critics complain that technical analysis uses far too much jargon that is not intuitively obvious, and sometimes just plain ridiculous (although bull and bear are not confined to technical analysis). The only answer is that every field has its lingo and I introduce it as gently as possible. When you take a course in cooking, you have to learn the meaning of *sauté*, *blanch*, and *braise*.

The lingo of technical analysis is no more difficult or silly than the lingo of fine cooking. But it does have some additional problems. Not everybody agrees on word usage. A *bearish market* is one in which prices are falling. It rises to the status of *bear market* (no *-ish*) when it has fallen by 20 percent or more from a peak, for a sustained period. A *bull market* is one that has risen at least 20 percent from a major low, again for a sustained period. Some writers, even experts, call *any* big move a bull or bear market when they should use a more careful phrase, such as "the market has a bullish tone." In short, market commentators are prone to exaggeration and sloppy use of language. Be aware of this shortcoming. Check facts.