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VISUAL GUIDE TO CHART PATTERNS

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Visual Guide to

Chart Patterns

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Contents

How to Use This Book

The *Visual Guide to* ... series is designed to be a comprehensive and easy-to-follow guide on today
most relevant finance and investing topics. All charts are in full color and presented in a lar
format to make them easy to read and use. We've also included the following elements to reinforce k
information and processes:

- **Definitions:** Terminology and technical concepts that arise in the discussion.
- **Key Points:** Critical ideas and takeaways from the full text.
- **Bloomberg Functionality Cheat Sheet:** For Bloomberg terminal users, a back-of-the-bo summary of relevant functions for the topics and tools discussed.

Go Beyond Print

Every Visual Guide is also available as an e-book, which include the following features:

- Video tutorials to show concepts in action.
- Quizzes to reinforce your newfound knowledge and skills.
- Pop-ups with definitions for key terms.

Acknowledgments

I like dealing with the best. That is why writing and publishing a book is made easy by John Wiley Sons and Pamela van Giessen. Thanks, Pamela.

Thanks also to the other Wiley workers that played their part in acquiring or creating this boo Evan Burton, Meg Freeborn, Chris Gage, and Stephen Isaacs.

Introduction

Sometimes before I trade, an inner voice speaks to me. Some may call it the voice of experience, b I prefer to call it the voice of knowledge and wisdom. When I have listened to that voice, it h saved me money. One goal of this book is to provide the knowledge so that you can create your ow trading voice.

Whether you are a professional trader, money manager, or retired schoolteacher trying to boost th inheritance for the grandchildren, this book is for you.

From the expert to the novice, there is information about chart patterns that you do not know may have forgotten. This book will provide a visual guide to learning about chart patterns in a manne that is simple and easy to understand.

Consider this book an instruction manual for recognizing chart patterns, discovering why th behave as they do, and learning what it means when you see one. You will learn to see not squiggles o price charts, but footprints of the smart money; not a mountain range, but double tops, rectangl and head and shoulders.

The basics come first so that we speak the same language. What you learn in this section ma surprise you. The basics provide a foundation for what follows.

Then we cover the most important and popular chart patterns. This is where you discover that no every peak or valley is a chart pattern. What to look for and why they form are in this section.

Completing the book are buy and sell signals. I do not offer mechanical trading systems, but visu ones that can help make you money or avoid losing it.

When you turn the last page of this book, my hope is that you leave with a greater understandi and knowledge of chart patterns, knowledge that can serve as food for the inner trading voice. Shou that voice speak to you, listen. It could save you a bundle. And if you find yourself arguing with th inner voice at the grocery store, then blame me.

PART I

The Basics

This section of the book reviews the basics: minor highs and lows, trendlines, gaps, throwback pullbacks, support, and resistance. I provide many exhibits so that we agree on terms and techniqu The basics will become important when we move to identifying chart patterns and then using them t signal trades.

CHAPTER 1

Pattern Recognition Made Easy

While working at Tandy Corporation, I hung on my office wall a price chart of the company's stoc I did not know if the head-and-shoulders top I found was one or not, but it looked like a person head in the middle of a pair of shoulders. To the left and right of that pattern, price dropped back earth, making it seem like the pattern was a ghost rising from a moat.

That was my first attempt at finding a chart pattern. Since that time, I taught myself to recogni chart patterns—a skill almost anyone can learn. Let us begin looking at a few charts to see how recognize patterns.

The Empty Chart

The empty chart is not empty at all, is it? Price bars form a mountain range that climbs higher un July after which a hiker walking on those bars would probably fall to their death. (See Exhibit 1.1.)

In that brief description, we have learned two things: Price rises until July and then dies. If yo owned this stock, you would be looking for chart patterns that predict the coming decline. Wh Because you might want to sell before the tumble or act to protect your position.

In October, in addition to searching for the remains of our dead hiker, you would be looking f signs that the downward price trend had reversed. If it had, then you might want to buy the stock buy more to capture the recovery.

How do you find patterns that predict a decline? Begin with peaks.

Finding Peak Patterns

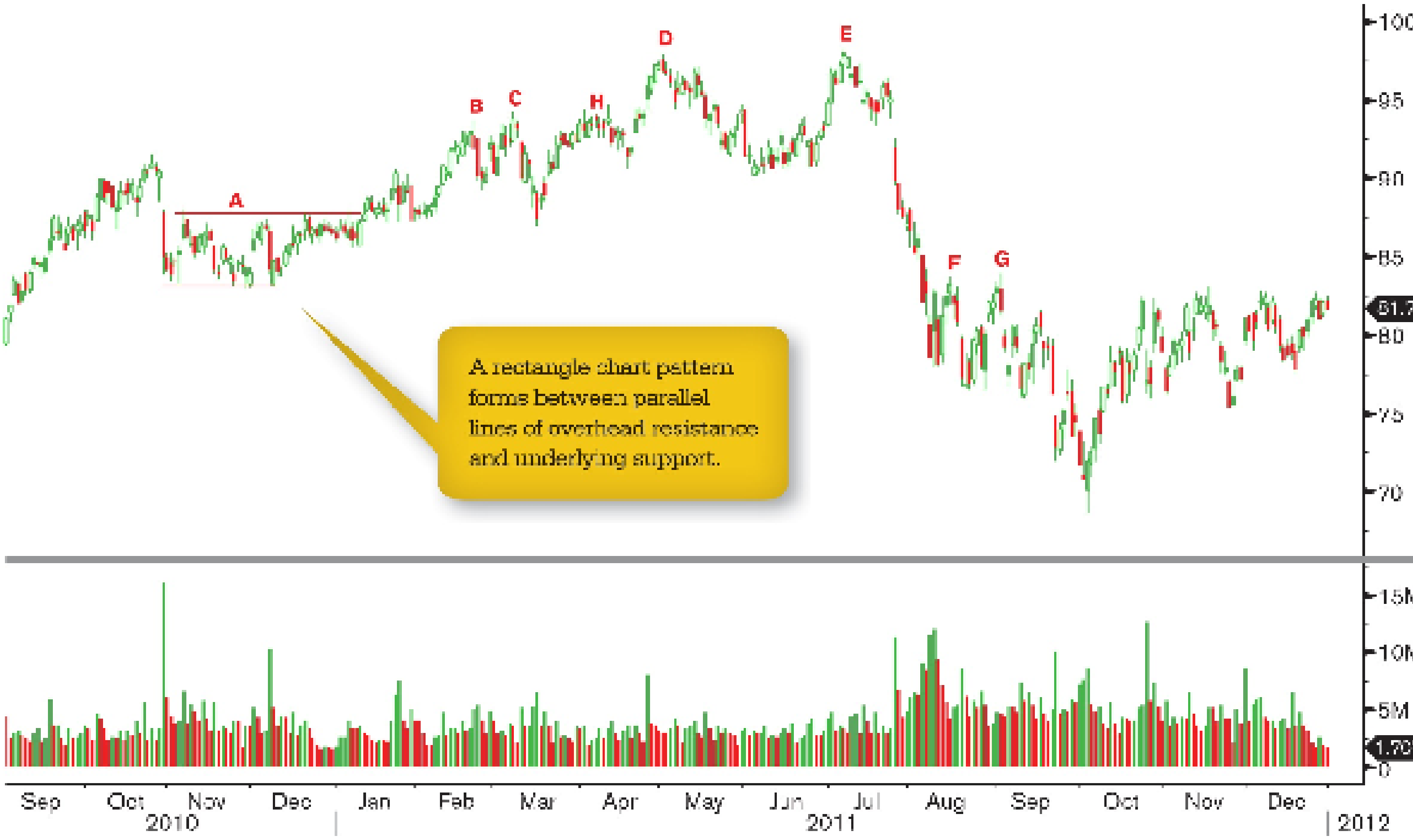
When I look at a price chart, my eyes find peaks that stop at or near the same price. At line A, f example, several peaks approach or touch the upper red line. That line represents overhea resistance. When price finally breaks through that ceiling, it signals a change in trend from movi sideways to up. (See Exhibit 1.2.)

Exhibit 1.1: MMM US Equity (3M Co)

After finding the top horizontal red line, look for a corresponding line parallel to the top one, b drawn along the valleys. I show that as the lower red line. The two lines form a rectangle chart patter The name of the chart pattern is not as important as how I found it. Just imagine a horizontal line tha touches several peaks and another line that touches several valleys.

Peaks B and C also exhibit overhead resistance. How do I know that? Because they top out near th same price. An imaginary ceiling exists above those peaks, holding the stock down—for a time. Peak slams its head against that ceiling, too.

Exhibit 1.2: MMM US Equity (3M Co)



> **SMART INVESTOR TIP**
>
> Chart patterns tall and wide (large patterns) tend to perform better than narrow and short ones (small patterns).

Compare the BCH trio with peaks and E. The DE pair form twin tops, b further apart—larger. Larger patterns ten to be more important than smaller on Price will tend to drop further after a lar pattern than after a small one. In this cas the stock declines more after DE than aft BC.

Peaks F and G are another pair showing overhead resistance. In this case, a downward price tre leads to this pair whereas BC and DE appeared in an upward price trend.

Peak pairs BC, DE, and FG show the major ingredient of double top chart patterns, that of tw peaks finding overhead resistance near the same price.

Exhibit 1.3: MMM US Equity (3M Co)

Finding Valley Patterns

Exhibit 1.3 highlights price valleys. In a manner similar to peaks, look for two or more valleys tha bottom near the same price. Those valleys may rest upon a floor where support is strong enough t launch another move up. One example is CD.

I highlight this pair because it forms underlying support. Price finds a floor at C and bounces off at D. Eventually, though, the stock tunnels its way through support at E, and plummets like a ston through water.

Valley patterns are useful for determining when a downward price trend changes to horizontal o upward.

Notice the peaks that bump up against line G, shown in red. The first two poke through the lin but that is fine since rarely will peaks or valleys stop at exactly the same price. The line represents temporary barrier to an upward move.

For the moment, ignore the V-bottom at I. Search below line G for valleys that bottom near th same price. I found them and drew line F. It represents a support area connecting bottoms J and H and extending to the right with additional touches along the way.

Does the GF trading range mean price is changing trend from down to up? Perhaps. It is too early t tell for sure.

What about the emergency dive to I? That submarine plunge may have been panic selling, forcin the stock down to a level low enough that it represented a steal to value investors. The needle shape of the V bottom supports this theory (that is, price remained at I for just one day before dumping its ballast and rising).

Notice pattern HIJ. It is an inverted (upside down) head-and-shoulders pattern. H and J represent shoulders and I is the head. K could be a cancerous growth on the neck, but lab results have not come back yet. It is not important to the survival of the pattern.

Another head-and-shoulders bottom (a synonym for an inverted head-and-shoulders) occurs at ABC. This one is unusual—and rarer—because price trends upward into the pattern, not downward.

For now, though, the inbound price trend is not important. What is important is to train your eye to find peaks that top out near the same level and find valleys that bottom near the same price. When you can do that, you can find chart patterns. It is that simple.

Curved Patterns

After finding peaks and valleys that align, try imagining price tracing curves. I show two examples in Exhibit 1.4.

Notice that the price bars at A begin rising, following a straight line of trend, but then curve at the top. Connecting the underside of price bars in a rising price trend often shows the curve better than connecting the tops. Either way is fine.

Pattern A is called an inverted and ascending scallop. The chart pattern appears often on the charts, but it is not popular or well known. The fishy sounding name refers to the bowl shape and not the mollusk. If you find one, never eat it.

> **SMART INVESTOR TIP**
> In a rising price trend, try forming curved patterns beneath price bars. In a falling price trend, curves often appear smoother along the tops. Either method works.

The rounding turn at B forms another curved pattern. The B turn would be a rounding bottom, but price needs to enter the pattern trending down and not up. B is an example of a failed cup with handle pattern. The handle is at C. Cups have many qualifications, so strictly speaking this is not one. However, the pattern does show the important parts: a rising price trend followed by a rounded turn and a short handle.

Diagonal Patterns

> **SMART INVESTOR TIP**
> Train your eyes to find peaks that top out near the same price and valleys that bottom near similar prices.

Staying with the same chart, look at pattern D on the left. What happened to the rectangle bottom identified in an earlier chart? It is still there, of course, but the new lines form a different chart pattern. Chart patterns can nest (one inside the other) and the same pattern can appear as two different types. Think of it as explaining the words "there," "their," and "they're" to someone learning English. They sound the same, but are different.

Exhibit 1.4: MMM US Equity (3M Co)

SMART INVESTOR TIP

Chart patterns can nest—one inside the other. The same price pattern can also appear as two (or more) differently named patterns.

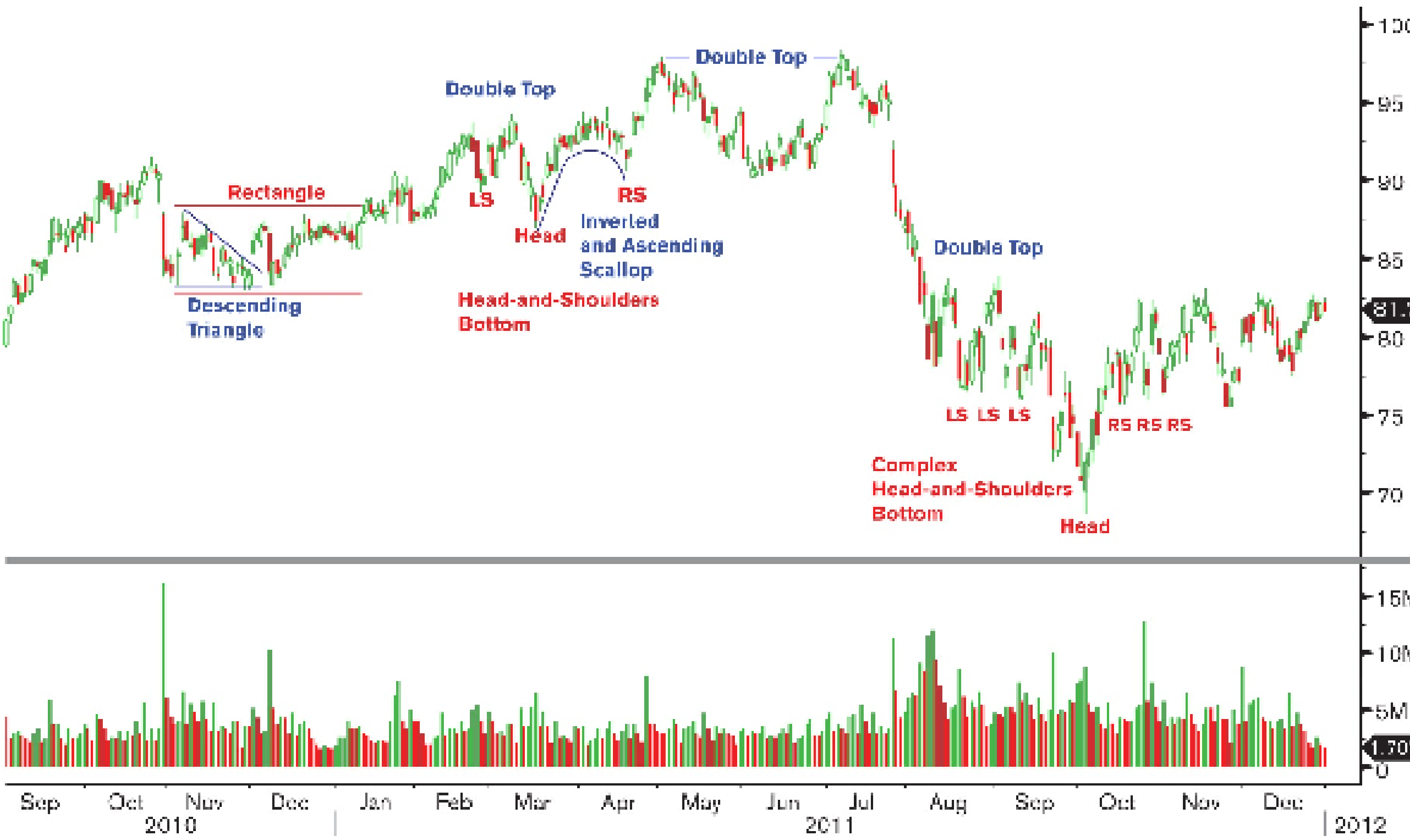
Look on the chart where price form diagonals. I show one as a slanting bl trendline above D. The line touches pri three times as marked. Another trendli touches the pattern's bottom, also thre times. The blue pattern is an example of descending triangle.

Constructing Patterns

When you look at a price chart, train your eyes to search for peaks that top out near the same pric They may form chart patterns (double tops) that warn of a coming trend change from up to down.

Train your eyes to find valleys that bottom near the same price (double bottoms). Bottomin patterns can alert you to a stock ready to fly like the model rockets I launched as a kid (not th homemade gasoline one that ignited a water puddle—sorry about that, Mom).

Exhibit 1.5: MMM US Equity (3M Co)



Patterns that form diagonals (descending triangle, for example) or curves (scallops, roundin bottoms, or cup with handles) also foretell the direction that price may take.

Visually connect peaks, valleys, curves, and diagonals to form chart patterns.

Exhibit 1.5 highlights the valid patterns identified so far.

LS means left shoulder and RS means right shoulder. A complex head-and-shoulders botto (lower right) takes the place of the rectangle bottom. A complex head-and-shoulders bottom h multiple shoulders and multiple heads, but rarely both.

Think of pattern recognition as like trying to find the Big Dipper or Cassiopeia in the heavens a night.

In the next chapter, I begin to develop a common language, starting with minor highs and lows. I not be alarmed. This is not as hard as learning French. However, I could be lying because I neve learned French.

TEST YOURSELF

CHAPTER 2

Minor Highs and Lows

Minor highs and lows are synonyms for peaks and valleys except that they have strict definitio that can help with pattern recognition. I will use these terms throughout this book, so we mig as well go through the pain of learning what they mean and how to recognize them.

A minor high does not refer to an overdose, and a minor low is not lingo for a bad trip. Rather, th represent the building blocks of pattern recognition. If you can program a computer to find them, th you can automate pattern recognition. For example, a triple top has three minor highs near the san price.

Since you are a human computer, I have created definitions for minor highs and lows to help yo find them until your eyes become trained to spot them. String them together in your mind an patterns will emerge, patterns that repeat, patterns that can make you money.

Peaks: Minor Highs

A minor high is a significant peak on the price chart. What does *significant* mean? I had to answer th question when I wrote Patternz—free software that automatically finds chart patterns. I discovere that peaks between three and five days apart led to the best pattern recognition (the exact number pattern specific).

Use five days between peaks for minor highs, but be flexible.

Exhibit 2.1 shows each peak highlighted with an asterisk that is at least five days away from higher peak. For example, point A is the highest high from at least five days before to five days after th peak.

Notice that peak B does not have an asterisk. According to my computer, it is not a minor hig Why? Because C has a high that is above peak B, and C is five days away from B.

Exhibit 2.1: GE US Equity (General Electric Co)

The same situation occurs at D with a higher high occurring three days later. Nevertheless, consider peaks B and D to be minor highs. Grasp the concept that a minor high is a significant peak a price trend and worry less about counting days between peaks. Once you train your eyes to s minor highs, you will not need to count. It also helps if you are sober.

Valleys: Minor Lows

In a manner similar to minor highs, **minor lows** are valleys separated by at least five days from a low low. That means five days before to five days after the minor low.

Exhibit 2.2 shows an example, with asterisks highlighting minor lows.

Exhibit 2.2: GE US Equity (General Electric Co)

For example, valley A is below the adjacent price bars such that none are lower than it is for at lea five days on either side.

Look at B. Notice the absence of an asterisk. If you count five candles to the right of B, you will s that a price bar is slightly lower than B (it may be hard to tell, so just take my word for it). Candle B not strictly a minor low, but I consider it one anyway.

Candle C is another example of a bottom that is not strictly a minor low because it is too close lower candles. However, if this were the left shoulder of a head-and-shoulders bottom, then I wou probably consider it a valid minor low.

In other words, be flexible when searching for minor lows. If it looks like price is making a turn, the it is a minor low. If you need to count the price bars to be sure it is a minor low, then do so.

The inset shows bottoms with two days of separation instead of five, highlighted with asterisk Notice that point E qualifies, but does it look like a minor low? No. It appears as part of the upwa price trend and not a significant turning point. It is not a minor low.

In the next chapter, I discuss trendlines, and there are three types. Can you name them?

Need a hint? One is curved, but the others are not straight and diagonal. Wait until you read m exercises. You may find it easier to eat a bowling ball than to get them right!

For Further Reading

You may find my free website useful, including the link to Patternz:

TEST YOURSELF

CHAPTER 3

Trendlines

Trendlines are to technical analysis as hammers are to carpentry. Knowing how to use trendlin properly can save you money and allow you to enter a new trade with confidence.

At the end of the last chapter, I asked if you could name the three types of trendlines. They a internal, external, and curved. Before I get to that, let us discuss scaling (this is not a fish joke).

Exhibit 3.1 shows a chart on the logarithmic price scale. Notice that the price divisions at A (low right) are spaced further apart than they are at B (upper right). On charts that show price maki large moves (such as charts using weekly or monthly data), the log scale will make chart patter taller at the lower end of the scale so you can see them better.

I drew a line connecting the peaks. The line slopes downward and touches each peak using straight line.

The same exhibit on the linear scale looks warped, but it could be your eyeglasses. Check f scratches. (See Exhibit 3.2.)

A curved line touches the same peaks. Why? Each vertical division is the same height whereas the prior exhibit, price was on the log scale.

Which scale should you use to view chart patterns? Hint: I prefer the log scale. Most of the charts this book are on the linear scale.

For an example of why scaling is important, look at Intel during the technology bubble of 200 (monthly, linear scale). Exhibit 3.3 shows a price mountain that would make Tenzing Norgay pause.

> **KEY POINT:**
>
> The logarithmic price scale gives a clearer view of historical price data when the stock makes a large vertical move. Chart patterns are easier to see on the log scale.

A descending triangle appears in 199 Notice that at the lower price ranges, yo cannot see any other chart patterns. Th price looks smooth as if a giant stomped c the foothills (until 1995, anyway).

Compare the same chart using a l scale. (See Exhibit 3.4.)

The rugged terrain becomes apparent. Other chart patterns appear, too, such as a rising wedge an a second descending triangle. Which scale would you rather use?

Exhibit 3.1: ABGX US Equity (Abgenix Inc)

However, whenever you need to physically measure the height of a chart pattern (like using a rul held up to a computer screen), use the linear scale. For example, measuring one inch on the line scale may mean a $10 rise, but on the log scale, that same one inch could measure $50. Heig becomes important for the measure rule, which I will discuss later in the book.

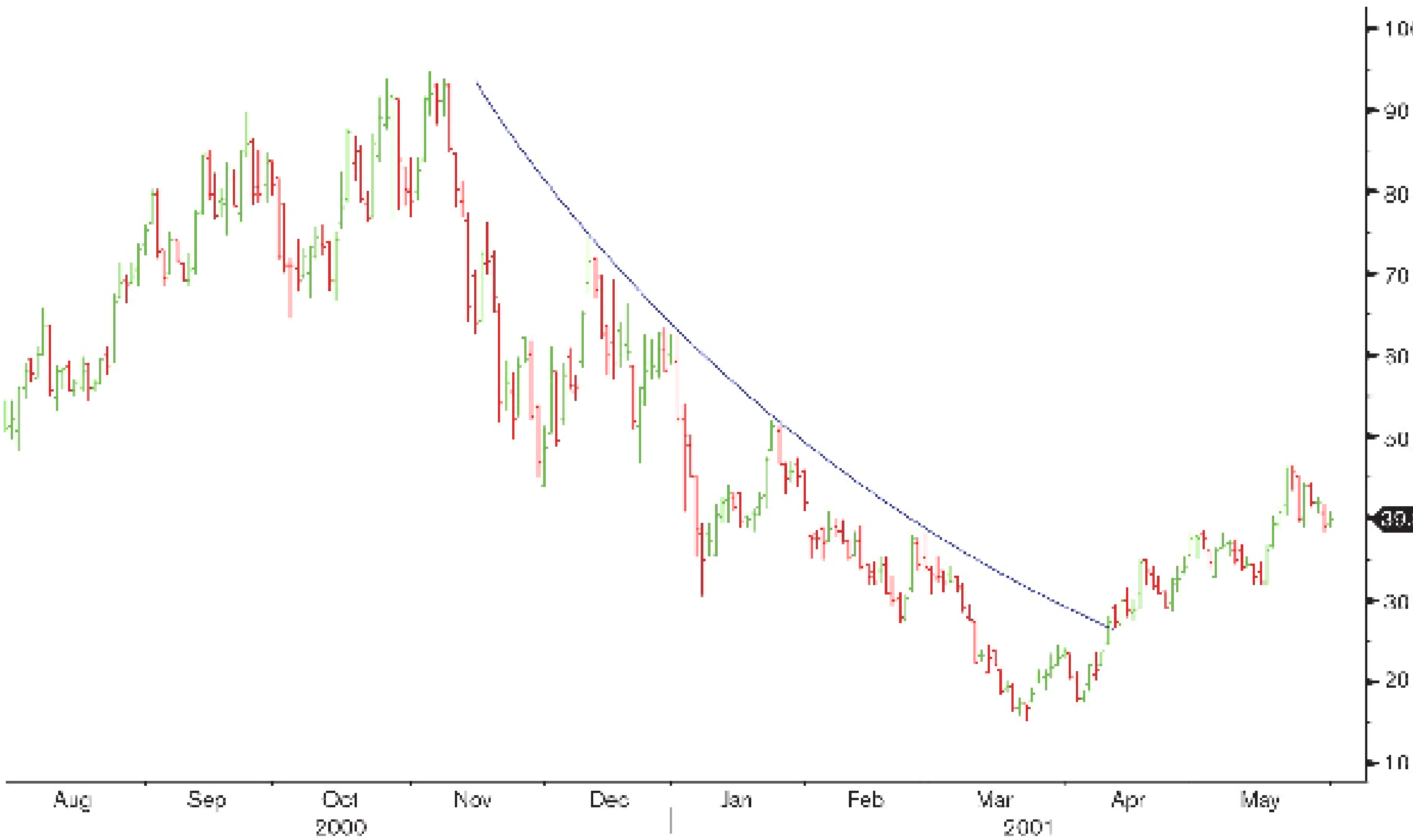
Whichever scale you decide to use, do not go flipping from log to linear to log. It will only confu you. Pick one scale and stay with it when searching for chart patterns. Only switch when needed.

Uptrend Connections

Price forms trends. Sometimes, you can connect those trends with lines, called **trendlines**. Most ofte those lines will be diagonal and straight, but not always.

When you look at a price chart, look for places where price trends. In your mind, connect the valle with a straight line, highlighting an up-sloping trend.

Exhibit 3.2: ABCX US Equity (Abgenix Inc)



For example, Exhibit 3.5 shows price trending at blue line A (far left). The line works well, meani
it follows the minor lows until F, G, and H. Those candles poke through the line. In fact, H begins a ne
trend downward.

> **SMART INVESTOR TIP**
>
> Use the linear/arithmetic scale when physically (think inches, not price) measuring the height of a chart pattern.

Line B shows a horizontal price tren also drawn along the minor low Trendlines C and D are about the san length as A and at nearly the same slope.

As you experiment with drawi trendlines, you may discover that stee up-sloping trendlines do not last long. Why? Because traders take profits if the stock rises too fa That selling pressure will force the stock to move sideways or down, piercing the trendline—at lea temporarily.

> **SMART INVESTOR TIP**
>
> In a rising price trend, draw trendlines along the valleys to detect a change in trend, from up to down.

Shallower trendlines tend to powerhouses. From them, strong mov are born. In between the shallow an vertical trendlines are the also-rans. Th show breaks in the prevailing short intermediate-term trend only to see a ne trend emerge, perhaps at a shallower angle.

Look at trendline E, drawn in red. It is the longest on the chart, and it is also the most importar

Why? Because price plunges through it in July, signaling the end of the uptrend.

Exhibit 3.3: INTC US Equity (Intel Corp)

Notice that I have drawn each up-sloping trendline along the valleys and not the tops. Why? T
signal a trend change. Up-sloping trendlines drawn along peaks will not do that.

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