

CHAPTER 1

Perception and Pattern How Mindset Affects Understanding and Action

“Fortune is directing our affairs even better than we could have wished: for you can see over there, good friend, Sancho Panza, a place where stand thirty or more monstrous giants with whom I intend to fight a battle and whose lives I intend to take; and with the booty we shall begin to prosper . . .”

“What giants?” said Sancho Panza.

“Those giants that you can see over there,” replied his master, “with long arms: there are giants with arms almost six miles long.”

“Look you here,” Sancho retorted, “those over there aren’t giants, they’re windmills, and what look to you like arms are sails . . .”

“It is perfectly clear,” replied Don Quixote, “that you are but a raw novice in this matter of adventures. They are giants; and if you are frightened, you can take yourself away and say your prayers while I engage them in fierce and arduous combat.”

—*The Ingenious Hidalgo Don Quixote de la Mancha* by Miguel de Cervantes Saavedra. [Translated by John Rutherford, Penguin Books, London (2003), pp. 63–64.]

The cliché is that a picture is worth a thousand words. A picture, visual pattern, or chart tells us more than can be expressed in “just” a thousand words. It allows instant comprehension and associations, and evokes memory and insight. Yet it is also said that pictures have little value and are not to be trusted for real science. Maybe that is because when we see a picture or watch a film, we do not necessarily see the elephant in the room. We are blind to what is right in front of us while our emotions, convictions, and preconceived notions influence our perception. A little-known, but stunning, example of this is Ötzi the Iceman. Even though the Iceman’s well-preserved 5,000-year-old remains were extensively x-rayed and examined by trained physicians immediately after they were found, it was almost a decade before scientists and specialists in diagnostics recognized the (obvious) arrow flint in his upper chest and shoulder. “How could we not have seen it!” the researchers asked.

Perhaps other theories were simply too seductive, leading them astray while the bland truth was right there in front of them. Whatever the reason, their oversight allowed years of uninformed speculation around the cause of the Iceman’s death and demonstrates how blind we can be in the face of the hard visual truth right in front of us.

Perception Drives Response to Pattern

Oversights and missing what is right in front of us is why consideration of patterns in price is incomplete without thinking about how we perceive and our individual sensibility to visual information. How, then, does one’s perception determine a recognizable pattern? And how will it trigger our actions in response to the pattern?

Let’s think about something familiar. You are out hiking in the mountains on a warm fall day with a friend who is visiting from the Caribbean. He has never been in the Alps and you want to show him the glaciers, the cold streams, and the vast views. Suddenly the wind picks up, the air turns cold as it snaps against your face, and the sky turns dark. You’ve experienced this set of conditions and sensations in this setting before. You know the pattern of weather events and how it can unfold. You perceive a rapid weather change with a storm on the way and sense possible danger. You have a twinge of fear in your stomach. Yet your visitor thinks it’s just an approaching rain shower that will cool things off and quickly pass as it always does in the island climate he is used to.

The pattern you both see is exactly the same. While your visitor is concentrating on his expected outcome (a refreshing rain), you concentrate on yours (a storm or maybe even a blizzard). Each of your expectations is built on your own set of experiences—your individual mindsets. Two hikers in

the same setting, observing the same reality and the same set of stimuli, but their perceptions, interpretations, and responses are diametrically opposed. The hikers bring two utterly different sets of experiences, memories, expectations, and resulting emotional reactions to the exact same information.

So while you instinctively scramble for shelter, your visitor scratches his head wondering, “What’s the big deal?” You react to the weather patterns on instinct. Your actions are automatic and based on understanding the scenario and knowing its potential outcome.

From this simple example, we clearly see how perception and individual sensibility drive our actions and are essential to understanding pattern recognition in life and, as we shall see, in the markets.

What Is Pattern Recognition?

Patterns are abstract, almost never exact, and many times exist only in our mind. We’ll leave it to philosophers and physicists to debate the truth and nature of patterns, as well as whether a pattern is “real” or not. For our purposes, though, we can at least agree on the premise that while your perception may differ from mine, all of us can identify and define patterns in a multitude of areas—from the weather to the price action of soybeans.

So what makes up a pattern and what do we really mean when we talk about *pattern recognition*? Most simply, a pattern emerges when we take a set of data or observations and attempt to define and classify it based on perceived similarity. Pattern recognition is a basic step in the scientific method where we reduce information and observations into orderly arrangements, or classifications, so we can deduce *intelligent* abstractions (in this case, the ability to project, conclude, and abstract additional information from a set of classifications and patterns). With classifications of defined patterns we impose order onto existing structures and behavior, and make predictions and conclusions on everything from the weather to disease progression through a population, to price development over a specific period of time. The use of pattern recognition ranges from music to medicine, to biology, psychology, and economics. We also use it in simple ways in our daily lives when we unconsciously conceptualize patterns to create order out of what appears to be chaos, as we do when, for example, looking for our friend in a sea of people on a busy city square.

It is with pattern recognition that we can immediately comprehend vast amounts of information, make conclusions and decisions, and take confident action in an instant. Patterns deliver information and help us perceive change. An outbreak of malaria in a population where malaria has never occurred before tells us there is an infestation of malaria-infected mosquitoes in the region. The patterns of cirrus clouds on a sunny day appear in advance of a cold front.

Discerning patterns is essential to the higher order of human brain function, reasoning, and behavior. Elaborate skills for pattern recognition are unique to human innovation and creativity. And capitalizing on this ability for pattern recognition (using the right side of our brain) is what assures superior performance in all of our endeavors. In trading, pattern recognition is instinctive and key to the technical analysis of price. Every day we seek predictable order in the markets, to create order out of the chaos of price behavior. Without this, we could not function or act in the markets.

Descriptions of patterns in actively traded markets are not new. They have been around since the descriptions of price patterns in the form of candlestick charting methods created by the rice traders of Osaka in the 18th century, as well as the extensive work on general price patterns of equities in the 1920s, and throughout the 1940s (a time of oscillating markets that may hold similarities to the era we now appear to be entering).

Many traders are familiar with defined individual chart patterns and their descriptions, such as *wedges*, *head and shoulders*, *rounding tops*, the “three-day reversal” or *saucer bottoms*, and so on. We may have even worked with the concepts of *Elliot Wave*, *Fibonacci price ratios*, or *Gann Theory*—all of which add quantitative dimensions to price pattern analyses. To this, over the past decades, we have also added massive computer resources and applied technology to assist us with techniques of pattern recognition and to pull repeating patterns out of seemingly random processes.

In this book, we will concentrate on the representation of price by observing the visual footprints created by market participants. We will focus on the trail of prices resulting from forces of supply, demand, and human sensibility. And while there are various fundamental background influences on price, we will not concern ourselves very much with numerical-based indicators (which are derivatives of price).

This is not to say that technical indicators or statistical modeling of frequencies of a price event or pattern have little value, or that quantified evidence-based analysis cannot tell us anything. To the contrary, there is much value in tools that help us give structure to market information. These tools not only provide discipline, but can help give order and validity to our perceptions. However, even though statistical analysis of the frequency of a price event may give us a strong indication, it is merely that—an *indication* of its validity—and will never be absolute. As we will discover, we are in the business of trading *change*. The results of frequencies of a price may be statistically significant during a period of past time, but change continues to happen as events occur and the world revolves. Remember, we are not in the business of trading statistics, but rather of understanding the nature of change in price as markets evolve.

While technical indicators such as price momentum indicators or relative price strength have value and are logical methods to quantify the

internals of price action, our interest will be to concentrate on a constellation of patterns in the context of overall market action, including background sentiment behind the price trail. The charts in the following chapters will have few indicators because we will be focusing solely on patterns and their associated trading strategies.

Some readers may challenge this method and ask, “Has this been back-tested? Can you prove the legitimacy of patterns with statistical frequency?” My answer is that science can be observed, measured, and quantified, but price patterns reflect human behavior. Statistical relationships are valid until there is a change or disturbance in the system observed. More so, our subject is random, in a state of constant change, and never predictable. Markets react to a constantly changing world with constant inputs of information such as events, very few of which can be anticipated with certainty at all times. Contrary to how markets and their participants behave, though, back tested trading systems are often built on absolutes.

Pattern Recognition Is a Tool

As market participants and traders, we seek to capitalize on *change*, not *static systems*. This leads us to the next question: Does pattern recognition work? This is akin to asking whether technical analysis works, or whether a scalpel will cure cancer. Like any tool, it works in the hands of the one with understanding of the subject, the tools, and adroitness of observation, and action. Success ultimately comes as a function of the creativity and skill of the user.

The question of whether technical analysis and pattern recognition work may not be the right one. Additionally, exact timing is almost impossible; we may accept the premise that there is no trading system that can beat the market over time. (If you believe that entirely, you’ll probably want to stop reading now.) What is generally predictable, however, are the essential and constant characteristics of human behavior: the distinctions of our humanity—fear, greed, anxiety with uncertainty, pain aversion—these are all part of our innate wiring, and are reflected in price behavior and patterns over time. This we know. Understanding ourselves and our reactions against the unfolding market patterns driven by millions of individuals can give us clarity to the perception of the pattern, our comprehension of it, and our ability to create a bit of order out of the chaos. In short, discerning all of these different variables gives you *an edge*.

The Complexity of a Transaction

A pattern in the markets is built by the tracks of price. It offers to us a map of where the players have been and what they were thinking. So, what does that last numerical tick on your screen (price) really mean? It

is the amount of money (or materials in the case of barter) paid for the exchange of a particular object, or goods, or services. But what is behind this number representing a price, which in turn symbolizes materials or money? *Price* is the meeting of what we ask for and what we get. For the buyer, price is somewhere between what we know now and what we anticipate to have value in the future. For the seller, it is what he is willing to receive in order to part from ownership at that point in time. Behind the motivations and thinking of the buyer and seller are emotions, facts, influences, and perceptions, and all this brings the two parties to the price point where a transaction takes place.

We learn that price is a reflection of supply and demand. (We'll think a bit later about the caveats on what we *learn*.) If more people want to buy a widget than the existing or expected supply, there is "price pressure," and prices move up. If we have reason to believe that there will be a greater demand than supply, or that supply will be disrupted, we want to buy and hold until we think buyers are satisfied. And a satisfied market slows the increase in prices or becomes static, where buyers and sellers are in balance and there is no sustained pressure in either direction. Then we have a pattern of a flat, "range-bound" market.

The converse of a market with upside pressure is when we have more sellers than buyers, creating downward pressure and falling prices, until the rate of selling decreases or flattens out as sellers are satisfied. You may be thinking to yourself, "Well, of course! This is obvious. It is all about supply and demand and maybe different or better information for one side of the transaction versus the other." If that were all there was to it, though, trading and investing would be simple. It would be merely about who had the best information.

This is the paradox. Trading is not and never will be simple. (If it were merely a factor of information, then we would not have witnessed, for example, the most informed institutions going bust against their own books in the banking crisis of 2008–2009.) Trading will never be easy because the influences on price are in constant flux—just as the collective human activity and sentiment behind the prices are in constant change. These things can never be quantified with absolute certainty no matter how hard we try, no matter how elaborate our models and methods, how fast our execution, or how sophisticated the algorithms we feed our powerful computers.

There is more: At times, even our notion of reality becomes distorted. Individuals and entire groups act on "wrong" perceptions and make mistakes. Markets and price reflect this irrationality in what proves to be *mispricing*. And this creates an opportunity for the one who can "see" when others are blinded. So we know that sentiment (or human sensibility) plays into price and that is why we see efforts to measure this with a degree of certainty. We try to quantify a *sentiment range* with indicators such as the VIX index,

a measurement of volatility (also considered the *fear index*), the put-to-call ratio, or the statistics of the Commitments of Traders (COT) Reports published by the Commodity Futures Trading Commission each week.¹ These and similar indicators are used to try and gauge investor sentiment with quantitative numerical tools. The utility of quantifying sentiment with this kind of data, however, is subject to debate.

Pricing by the Mob

The study of herding behavior of market participants and the resulting mispricing is a growing field of behavioral economics. Markus Brunnermeier of Princeton University, for example, hopes to pioneer a form of *neuro-financial* research regarding herding behavior around price bubbles. This, and similar work by Hersh Shefrin of Santa Clara University, who pioneered much of the work in pricing behavior, is important because at times, and as the trail of prices unfolds, perceptions and herding behavior of market participants are the *only* influence on price. Fully understanding this dynamic and the tipping points in sentiment that can happen in a flash as the herd gets spooked and changes direction could be one of the holy grails we seek for the trader. We may not know where work like this will lead us in the academic realm, but the experienced trader seeks to recognize this behavior and the telltale signs and patterns—not only patterns of price action but the behavior patterns of the participants, including the analysts and pundits (the human herd) driving price.

With pattern recognition tools we can identify the footprints of panicked crowds in the market. And as the hunter/trader, we can predict with a degree of reliability how this panic will play out as the herd is driven by universal human emotions. As long as irrational exuberance is a part of the human condition, bubbles will be with us. A symptom and pattern of this is, for example, the assumption that old limits have yielded to new and previously undreamed-of possibilities. We have all read how the Dow will always rise, as will housing prices, and that all energy will be based on ethanol and corn and prices will go up forever as the population and energy needs expand. (I still remember being told in 1988 that the Nikkei would never go down as it was structurally impossible due to the unique nature of the Japanese economy.) These and other market adages and cultural memes will never be absolute givens.

As traders and investors, we can exploit the human dynamics of price if we are tuned into the nature of why we repeat market memes (to give us emotional security in the face of unknowns. What triggers fear, exuberance, and greed in both ourselves and the crowd? Naturally and inevitably, we humans do get out of whack and when that happens, so will price. Recognizable patterns of price and behavior will emerge. It is then that the

tracks of the market will scream out to us on the charts. When *that* happens we have an opportunity (sometimes a fabulous trading or investing opportunity) sitting right in front of us. But to act on it we have to be like Sancho Panza and see what is there no matter what a particular authority or the crowd tells us. We have to stand apart to get a view away from the thundering herd and see for ourselves; as we remove ourselves from the distractions and put our own plan into action.

It's Never Simple

This all sounds straightforward, even easy: identify a pattern, shut out the distractions, throw away the newsletters, turn off the talking heads, make your own interpretation, and take decisive action without all the thinking.

Computers already help us do this. Defining the metrics of a pattern and identifying it are straightforward. Trades then can be generated automatically. But think about it: Is the pattern our computer identifies a dog or a pony—a Kurdish Kangal or a Chincoteague pony? A double or triple top in the chart? From what point in time and how? The computer may not be able to rapidly distinguish this any more than it can differentiate among the very slight, but highly significant, differences in any time series or object. But you and I instantaneously perceive subtleties in the pattern of the objects identified so we can act. Humans share a unique and highly developed capability that no computer can match. Even today, it still takes tremendous supercomputer power to recognize the simplest of patterns.

Take computer recognition of a human face. That alone may be simple enough, but can the computer recognize whether it is the face of a boy or a girl? Is it a small child, adolescent, or adult? Is it human or simply a lifelike doll? When looking at the pattern, you and I can answer these questions and more—such as the approximate age, gender, and ethnicity of the face—in an instant. As humans, we have a vast constellation of patterns of information and memory that gives us a complete picture and a depth and wealth of information. And we can also make new associations among sets of information.

This is the massive analytical power we bring to observing and analyzing the markets. No computer can match it and only the human mind can reason in this intelligent way. Even more, the human can consider the significance of new information, missing information, or emerging patterns of information. We can project possible scenarios of outcomes as far as our rational imagination allows—and not only based on past occurrences, but by understanding the significance and implications of current events that may ultimately play into price. So why do we continue to put our faith and immense resources into computers for critical decision making about the markets?

We use computers to assist in coping with large abstractions and to order massive amounts of data. The tools of computers “crunch” data into order; they create models and projections based on geometry or statistical pattern recognition arrays. These tools then give us security in the absolutes we humans seek. And in some fields, these tools can do this with a good degree of precision.

Computers deal with the cold, hard facts we feed them. They do not get tired or suffer any cognitive dissonance. They do not impose subjective human judgment when we seek only impartial results.

The other side of the enormous and uniquely powerful human capability just described is human weaknesses. Computer generation rules compensate for our fears, anxieties, hopes, greed, desires, and misplaced expectations. For instance, when we find ourselves in trades and market conditions we do not understand or have never seen before, we might enter a state of indecision. We block out significant but uncomfortable information as we look around for confirmation of our expectations and hopes in order to justify staying with the trade. And yet we expose capital under these conditions. (Some of us may know traders who emotionally expose even more capital to this questionable trade to prove themselves “right” and the market “wrong.”) With this often destructive behavior, we impose ourselves and our humanity onto perceptions of patterns. The computer does not.

Is Market-Delivered Data for Real Science?

There is something else. In the modern world, we are educated to believe that if we have enough data and facts, we can arrive at the truth, whereas in the ancient world, we dealt with (and accepted) large abstractions and unknowns; little was understood or even conceived as rational or literal and stories were told as metaphors to represent and conceptualize larger meanings. Since the “Age of the Enlightenment” of the late 17th century, we have taken the printed word for literal value and sought truth in the written word as fact and in numbers. Yet paradoxically even in physics and mathematics we deal with approximations. The ratio of the circumference of a circle to its diameter will never come to an even number. Its value can never be expressed exactly and even though it can be expressed to thousands of decimal places, we will never have the complete answer. We use computers even though quantum physics shows us that certain observations cannot be predicted absolutely. Instead, there is a range of possible observations each with a different probable outcome.

And so it is in the markets. We will never have all the data because total knowledge does not exist. We are constantly challenged with a flow of new information and change. (Remember: The *unknown* and *change* are what we are trading.) We must accept that if looking for greater absolutes or exactly what to do next for a positive outcome, we will have to go into another field.

In spite of this, there are more reasons we do trust the answer from a computer. For example, when we see a threat that may be too great to bear, we use psychological mechanisms to reduce it or block it out. This can be destructive, but is also a strong psychological survival mechanism. Traders might also do this when observing information and patterns that are dissonant to their expectations or beliefs, financial well-being, or job security. Blocking out threatening information is a side of humanity we discussed earlier. Some information, especially information we tend to block out, is simply too much to manage and still function within the chaos of ever-changing market conditions. A computer is objective and will gauge all information thrown at it. We create programs of rule-based interpretations and instructions in hopes of overriding the human failings of perception. The price we pay for this, though, is the loss of our immense human capacity for interpretive recognition of patterns. Is it possible to have both the efficient, tireless computer *and* the insight of humanity? Yes, perhaps to a degree we can train ourselves to overcome our human tendencies that hold us back and be sternly objective, while maintaining our natural abilities for extraordinary insight.

We can start by critically thinking about, for example, the tendency of even the most professional traders to build an entire strategy on a statistical probability of past occurrences. We must instead ask ourselves, What do we do when there is a gradual structural change to the market? What do we do when the outlier event occurs? What about an event that was not supposed to happen or one we could not have imagined? Do we have the tools to deal with this change? Do we blame the event, the change, or the inability of our system to adjust? Do we blame the indicators that did not capture the reality of the market. Even though we know, logically, that the markets' behavior is not science (where an experiment can be repeated over and over again in exactly the same setting and with the same materials and methods and where the results can be repeated to give real evidence of proof). No, markets are not laboratories where conditions are controlled, but arenas of human interaction undergoing constant change. And do we understand this change as risk or opportunity? Do we know what to do next?

Finally, as Warren Buffett said, "Risk comes from not knowing what you're doing," which is another way of saying not knowing what to do next. (For more about risk considerations against the patterns we trade, see Chapter 9.) We may not know exactly where the market will go next, but through ritualized methods of observation we can develop skills of recognition with systematic rules of observation, practice, and action as market scenarios unfold. We can develop a method of observation and strategic action. With this we can become a little bit more like the computer and train ourselves to know what to do next as market prices and patterns emerge.

What Distorts Perception

There is something else that can distort our perception or stand in the way of observation, understanding, and strategies. Not only can ignoring the information around us or creating false realities to make us happy be detrimental, but there is also a blindness that comes with having too much knowledge. For example, if we've been trained to believe that X always equals Y and that it is the absolute truth, and then suddenly we have information in front of us telling us that X actually equals Z , we will choose to ignore it. "Impossible," we say. X always equals Y : it is our only experience. Like our visitor on the Alpine hike at the beginning of the chapter, it is the only reality we know. However, a principle to consider both in markets and in life is, "We ignore information contrary to our own beliefs (and learned knowledge) at our own peril."

Two Monkeys

What makes the development of market price pattern-recognition skills even tougher is that we enter the marketplace with two great big monkeys sitting on our back: Hope and Greed. (We've heard about them so much it is cliché.)

With hope, there is a difference (and it can be difficult to distinguish) between healthy, independent thinking (standing outside of the group) and stubborn delusion, or even worse—the blind hope that can lead to denial and destructive actions. When this kind of hope is in control, we watch the unfolding reality of the market with our wishes and expectations imposed on it. Our desires (ego) control our perception of how the market is behaving. We cannot act on the real price information and patterns the market may give us because we do not see them. The monkey of hope is in the way, driving us to act solely based on what we hope, expect, and want from the market.

When does healthy motivation turn into motivation controlled by greed? Is your strategy built on trading for the big hit? Did you just sustain a larger loss than you ever imagined and find yourself trying to immediately get back into the market and "make it all back"? Does it become personal—between you and the market? If you step back and ask yourself these questions and find your answers along those lines, guess what? The monkey of greed is sitting on your back and he is the one pulling all the levers with each trade—not you.

When either or even both of these two monkeys are in control, it is only a matter of time before they cause your assured destruction. No player is too small or too sophisticated for the monkeys of blind hope and greed to find their way into your shop. Entire banking and governing structures or even an economy are not too large or sophisticated for greed to be in control.

For example, the well-documented and spectacular Long-Term Capital Management (LTCM) meltdown of 1998 remains a public case in point where these two monkeys were at play and in control. Simply put, what partially led to this crash was the exploitation of the fixed-income interest rate convergence among bonds issued at different dates observed over the previous few years. The strategy was built on *expectations* and *assumptions* that markets would behave *exactly* as they had in the past, and with little regard to the leverage required to reap the intended rewards as the size of the traded strategy grew. (Add to this the fact that there was no consideration given to the idea that markets do change.) Leverage increased to squeeze profits out of the ever-shrinking convergence spread until there were none to be had, and trading managers then entered trades outside of the basic strategy of bond arbitrage. New external influences came into the market and there was no strategy. No one knew what to do next under the pressure for performance and in the face of unknowns, and the fortunes of LTCM rapidly collapsed.

In this example, institutional investors followed each other and piled in, and when the market behaved outside of the perceived or expected pattern, information pointing to the flaws of the strategy was ignored and described as a temporary anomaly or simply not possible. (The monkey of hope was now working the levers.) Unfolding events proved that the risk of the entire portfolio was systemic and beyond imagination. In short, a *theoretical* model of the patterns of exact market behavior was used as a description of reality and acted upon as such. Ascribing the theoretical to the practical enabled participants to risk billions of dollars; information was ignored because it was not what we were taught or believed to be true. And in fact it was something new and contrary to our expectations and hopes. The dynamics at play here—ignoring new information, focusing on expectations (greed) and hopes, believing in delusions on a grand scale—are not merely limited to the behavior of a single trader or organization, but apply even to the broader economy, including the behavior of the most seemingly rational people, groups, and societies.

When we think back, wasn't it absolutely illogical in 2005 to believe that the ever-growing mountain of subprime loans and resulting derivative products could be sustained? Was it logical to believe that the trajectory of housing prices would only continue upward, no matter who told us that? Or that flipping ownership on homes (with 5% down made on a credit card) was the path to riches and would increase your wealth? Or that "building credit"—a euphemism for piling on personal debt—is good for everyone?

Was it economically rational that mortgage products were being packaged into *collateralized debt obligations* (CDOs), with a bit of prime sprinkled into them, only to be sold off to European and Asian insurance companies? No, but because there was no history, no past *pattern* to

understand the characteristics of subprime lending and the derivative CDO industry (one could not even get a quote on a screen for a CDO back in 2006), logical conclusions could not be made. Dissonant information was just a blip on the radar for the market participants. Why? It is a characteristic pattern of bubbles that logical questions or information counter to the expectations are ignored. Why was information rejected by highly sophisticated players? It was mostly because those on the backside of the CDOs were getting paid very well for their troubles; a perception (or rather, delusion) was created to justify being at the party. An imagined reality with a crowd of agreeing participants, each encouraging the others, was created.

Examples like these are the result of marketplace behavior where humans reject information right in front of their eyes because it is contrary to what they want to believe. Even the economists at the FDIC whose trained eyes identified the dark clouds over the mortgage market dismissed the meaning of this message when it was right in front of them—they ignored the significance of the data on the increase of undocumented loans, merely stating that “high-risk borrowers would not be able to meet mortgage payments.”² Astoundingly, the risk to lending institutions and households (which are the crux of economic health) was not considered. “Lenders have targeted a wider spectrum of consumers (read: consumers of home mortgage loans), who may not fully understand the embedded risks but use the loans to close the affordability gap,”³ the FDIC wrote. In the summer of 2006, the FDIC published a report stating the following:

Finally, if a recession or other severe economic shock were to send local home prices and incomes sharply lower, or interest rates sharply higher, this additional stress could contribute to higher mortgage losses.

However, banks and thrifts will head into the next phase of the mortgage credit cycle from a position of strength. In recent years, the industry has generated record earnings and reached near-record capital levels. Given a gradual transition to higher delinquency and foreclosure rates and assuming only modest potential declines in collateral values, it does not appear at this time that deteriorating mortgage credit performance would present unmanageable risks to most FDIC-insured institutions.⁴

Even though there was evidence to the contrary as well as logical conclusions of systemic risk, the information was blatantly dismissed. Like the flint arrow in the shoulder of Ötzi the Iceman (presented at the beginning of the chapter), the facts of Figure 1.1 presented in the very same report simply did not register. The chart reveals a hard-to-ignore, in-your-face visual meaning that the report’s supporting text simply does not illuminate.

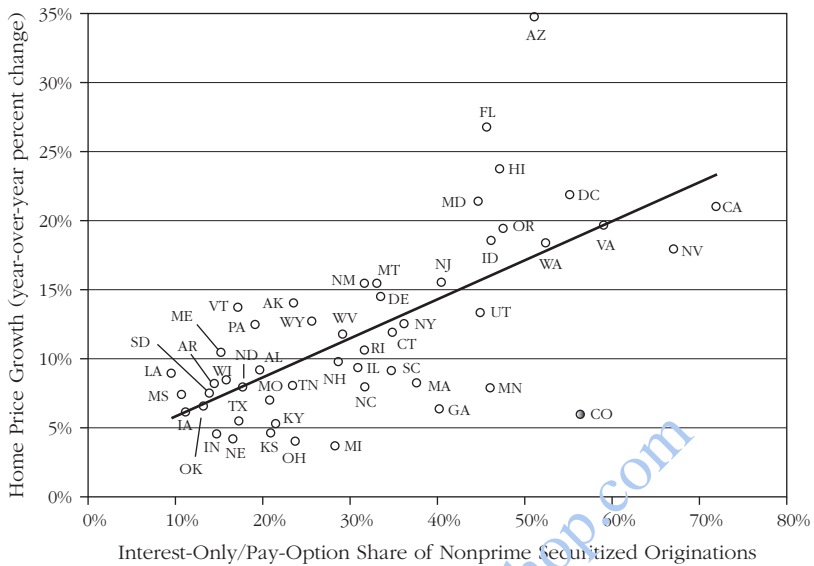


FIGURE 1.1 Nontraditional Mortgage Products Are Most Popular in States with the Strongest Home Price Growth

Source: Office of Federal Housing Enterprise Oversight; Loan Performance Corporation (Alt-A and B&C securities database).

It appears that all of the actual information in front of the authors of this report from the FDIC (and available to many others) was documented and then brushed away with the classical “wishful thinking.” All of the participants—the best and the brightest—found a reason to believe that “this time it is different”; the markets are now much more sophisticated and so well-developed that risk is eliminated. To think and act otherwise would mean being outside of the crowd, rejecting conclusions made by an authority; and that was fraught with unknown risks. Safety, our human instincts tell us, is found within the group; this is the reason for often disastrous “groupthink.”

Breaking Habits and Building Scenarios

How, then, do we break out of the cycle to clearly and openly observe, perceive, and take action, even when this demands that we act outside of or against our group? First, to see clearly, we can reduce representations of price change to the essential visual image of the abstraction of price and time. Through charts, we will identify correlations among pattern constellations and develop a framework of potential outcomes resulting

from the identified patterns. Instead of probabilities, we'll think about steps we can take with *possible* (and seemingly impossible) scenarios. For example, before entering a transaction I think about trade scenarios instead of probabilities of outcome, since we are trading *perceived change* and not *probabilities*. This encourages a mental openness to the changing (and even dissonant) information the market delivers. For scenario building to work in our favor, we must first consider the scenarios we want to avoid. Preparing yourself for an undesirable outcome is not pessimistic or negative. It puts you in control of your actions as a particular (even worst-case) scenario unfolds, and puts you ahead of the game. With this approach, your risk is greatly reduced. You know what to do.

Building scenarios of price and changes in the markets (both *for* you and *against* you) helps you become a little less of a victim of human limitations and better able to recognize the information for what it could be *earlier* than most. Just like the cold commander in a chaotic, ever-changing battlefield, you have removed the expectations of probabilities and desires and instead opened your eyes and mind to the early warning patterns. (We will discuss the unfolding patterns—with scenarios both *for* and *against* your trade—in several of the next chapters.)

Establishing Rituals

Alongside scenario building, we can also rely on methods such as practice or “plays.” I will refer to practice as *rituals* (or *trading rituals*) from here on; just as people have seasonally related rituals (as in religion, for instance) that help us navigate the seasons of the year, the phases of life, and the great unknowns, we can hone trading rituals to securely and instinctively navigate the markets.

Cultural rituals give us order and direction through the unknown. This is how we are wired. The sense of ritual became highly developed as nomadic peoples crossed the African planes on the way to the Arabian Peninsula and into the steppes of China (as the theory goes). Along that journey they were constantly dealing with change and dangerous unknowns. Rituals are created around patterns of seasons, birth, life, and death to give order, direction, and a degree of control through extremely harsh conditions. Rituals give us a method for moving forward through the unknown and to survive. They guide us in what to do next. Traders deal with constant unknowns and we need methods to give us order, direction, and control over the chaos.

Rituals also help us identify and build patterns with which we then conceptualize our world. This gives us perceived understanding and with this we can act upon and navigate our surroundings. It is how we create order out of chaos and build a framework to guide our actions. The more

sound our framework (our conceptualization), the more effective our actions and successful our trading and investing will be over time. This personal edge is independent of access to information, computing power, execution speed, or quantitative testing of mathematically based indicators.

Before building your sound trading rituals, ask yourself the following questions. Do you seek reinforcement for your decisions? Do you need approval to support your decision making after your trade is taken, remaining within the safety of the crowd? Or do you find yourself seeking a reality check with the use of indicators? Do you continue until you find one and tweak it until it fits your hopes and expectations? And if that does not work, do you make a call to a trader friend (especially one who thinks just like you)? Or do you instead routinely and critically question yourself? (Why do you enter a trade, what is your plan, and are you still on track?) Has any of the information that caused you to take a trade changed? Do you have new information? Do you still have a plan at any given moment? Do you know and stick by your daily mental trading ritual? Do you ask yourself if you have blocked out any information that is contrary to your beliefs? Have you disregarded dissonant information? We need to critically question ourselves in these areas to make sure our perceptions are as balanced as possible when capital is at stake.

It is through such mental rituals and encouraging your innate abilities to navigate the markets instead of repressing them that will give you the advantage over much of the universe of market participants.

Conclusion

A price exists when two parties take action in agreement. Price action is triggered by human desires, needs, and wishes. Real price always reflects this, and a price series will create a pattern of emotions in the marketplace over time. As markets are arenas of ever-changing human folly, we can discern patterns of behavior in price and in turn build a strategy of action on our observations of participants and price. To overcome our own human limitations and develop a method of knowing what to do, we can ritualize how we approach and take action in the markets. And with this, we can stand aside from the crowd and clearly see the truth of the market through the ever-similar patterns of price action.

Finally, there are an infinite number of similar pattern possibilities and a few hundred that an effective trading strategy could be built upon. (Some might even say that there are thousands of patterns lending themselves to a theoretical trading strategy.) Yet, like the patterns of clouds predicting a weather front with perhaps hundreds of similar and identifiable patterns, no two are ever exactly alike. In the succeeding chapters, rather than

limiting ourselves to single patterns in isolation, we will examine a series of patterns in a complete context, including their relationship to each other. Just as the experienced physician cannot make a complete diagnosis of a persistent headache without looking at the whole patient (including what may be weighing on his or her heart and mind), we cannot make a complete pattern diagnosis considering merely a brief period of time and price for a trade.

Rather than forecast, we will observe unstable price and pattern behavior to visualize possible future price direction as a market undergoes change. We will look inside ourselves, observe the crowd around us, and build price development scenarios, starting out with the least favorable. We will then take action based on the actual unfolding price events. The most important tools we have will be our eyes, for pattern recognition, and our mind, which can abstract and identify market delivered price information and constellations in an instant.

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