CHAPTER 1

Signposts in the Fog

Andy Kessler is a modern-day Investment Renaissance Man. He does it all. He was a research analyst and investment banker for some of the biggest firms on Wall Street. He wrote about his experiences in his first book, Wall Street Meat. *He then went on to co-found Velocity Capital Management, a hedge fund that raised $80 million. Kessler turned it into a cool $1 billion in a matter of five years, and then got out at the top! He chronicled those days in the book* Running Money. *He now writes* Wall Street Journal *op-eds, as well as articles for* Forbes *and* Wired*, and appears frequently on CNBC, CNN, Fox News, and Dateline NBC. And he stays in top physical shape by keeping up with his four sons!*

His latest book, How We Got Here*, talks about industrial development, from the steam engine through the Internet. Andy lives in Northern California with his wife and four sons and is working on a mysterious new project, which he promises to share with me once he has it figured out. You can find out more about Andy at www.andykessler.com, where you can also get a free download of his latest book.* —John Mauldin

Signposts in the Fog

by Andy Kessler

YEARS AGO, I DECIDED TO CLIMB MOUNT WASHINGTON, DRAGGING A RELUCTANT friend, Paul, along with me. It was a beautiful August morning in New Hampshire, not a cloud in the sky, birds chirping—couldn't be better. Paul ran marathons and had already run eight miles that morning but agreed to my "little hike." He still had his running clothes on; I was sporting a fresh Blue Öyster Cult T-shirt.

We parked the car and found the trailhead. Next to the usual warnings about poison ivy and rabid squirrels hung a huge sign that read, "STOP. The area ahead has the worst weather in America. Many have died there from exposure, even in the summer. Turn back now if the weather is bad."

I looked up at the cloudless sky and said sarcastically, "Looks pretty bad to me; let's roll."

The climb was strenuous, for me anyway, but not a killer. At some point the trees gave way to rocks, the temperature dropped, and a fog bank came out of nowhere to sit not 10 feet above our heads. We kept climbing until we were engulfed in the fog.

"Any idea where the trail is, Einstein?" Paul asked.

"No."

"I can't see a damn thing."

"I heard there were trail markers—signposts or something," I said.

"Like that?" Paul asked, pointing to a barely visible yellow rock sitting on top of a vertical stack of four larger rocks.

We headed through the fog to the yellow rock. When we got there, we were almost able to make out another yellow rock on another stack 10 or 15 feet away. And so we proceeded, making out signposts in the fog, slowly, surely—steady progress, freezing our

asses off. At one point we couldn't make out anything. You could barely see your feet. I wasn't sure if I was making out yellow rocks or just hallucinating; but we kept heading upward and, sure enough, found another yellow rock, closer to our goal.

It stopped being fun, but it was sure exhilarating. Around two in the afternoon, hungry, cold, and barely speaking, we made it to the top of Mount Washington. Rather than planting a flag, we headed into the restaurant and fought the crowds who took the Cog Railway, drove, or were bussed to the top. Paul and I both bought rather overpriced Mount Washington sweatshirts, wolfed down greasy cheeseburgers, and hung out for about five minutes until Paul said, "Ready to head down the hill?" This time we knew what we were doing.

And that, my friends, is how I learned how to invest.

INVESTING IN THE FOG

Investing is hard—as hard as Chinese arithmetic, as another friend of mine used to say. It's onerous, treacherous, humiliating, and subject to extreme weather conditions.

My old partner Fred Kittler said it best: "The stock market trades to inflict the maximum amount of pain." I don't know about you, but I have a very low threshold of pain. Yet I spent a career on Wall Street, first as an analyst following volatile technology companies, as an investment banker, a venture capitalist, and finally running what ended up as a billion-dollar hedge fund.

I did it by investing in the fog.

YOU CAN'T MAKE MONEY STANDING IN THE SUNSHINE

As any junior-year "Stocks for Jocks" course will tell you, a stock price is nothing more than the net present value of a company's future earnings. How easy is that? All you need to know is how much a company is earning today, how fast it is growing, and what discount rate to apply to future earnings to get that net present value.

This reminds me of the *Saturday Night Live* routine with Chevy Chase playing President Gerald Ford in the election debates. Asked about the effect of inflation on budget deficits, Ford/Chase answers, "Uh, I was told there wouldn't be any math."

On any given day, the math is quite easy. Widgets 'R' Us earned a dollar per share last year. Its growth rate was 12 percent. The inflation deflator is 2.83 percent; hence, the stock is worth exactly $18.42. You can get the formula out of any good economics textbook. Good luck with that.

Maybe the stock really is $18.42. Maybe it's $20 and you should short it, or maybe it's $15 and you should buy it. I wouldn't touch it either way. Why?

Because everybody already knows about the $1, 12 percent, 2.83 percent deflator. The sun is shining bright. Say what you want about the efficient market theory, if everybody knows something, you ain't gonna make money on it. "But the widget business is growing nicely," you tell me. Yeah, so what? We don't live in a static world. As my baby's bib reads, "Spit happens."

The widget business is not going to stay that way. It's either going to get better or it's going to get worse; but unless they are cooking the books, it's not going to grow exactly 12 percent for the foreseeable future. Yet the stock, today at least, is valued for 12 percent growth.

Inputs to the model change every day. That's why the stock market is open Monday through Friday. That's why it is never closed more than one day a week during holidays. Values of companies change. There are a lot of inputs to those silly formulas, almost none of them written in concrete. Sales need to be closed. Profits need to be earned. Spending plans at the beginning of a quarter only guess at how much revenue might support them. Growth is based on global economics. A butterfly batting its wings in Indonesia won't necessarily change stock values, but a coup in Thailand just might (such events happen every couple of years).

Formulas rarely have an input for risk. Even if they did, it's an unquantifiable number. A risk-adjusted growth rate is about as specific as economists can come up with.

The problem with Widgets 'R' Us, the stock anyway, is that it's

out in the open, right out there in the sunshine. Everybody can see it. Everybody agrees on its prospects. Whoop-dee-doo. The weather's gonna change.

I'd rather be out in the fog where nobody knows nothin'. Then, if I'm good, I can peer out into the fog and spot some yellow rocks to show the way to a higher level. Once I get to the signpost, it's quite clear, and my stocks based on getting to that signpost will be properly valued; so I slog on looking for the next signpost.

THE IMPORTANCE OF SPOTTING THE SIGNPOSTS IN THE FOG

If I haven't scared you away from investing yet, you are either persistent or a fool. That's good; one of these is a good attribute for successful investing.

This whole idea of investing in the fog is *not* about being a contrarian. It's about seeing things before others. If you think everybody is going to sit in Starbucks sipping lattes using laptops connected to the Internet via Wi-Fi (like I am now), that's a pretty investable idea. There might be half a dozen interesting investment ideas that would benefit from that trend. But might I suggest that you look around Starbucks, and if everyone is already sitting around sipping and surfing, you are too late. The stock market already knows about it and has discounted the potential growth for chip software and service companies. Sip enough lattes, and you too can hallucinate the future.

Investing in the fog is about seeing things others can't. Most people get in the fog and panic; but the trick is to get in the fog and feel comfortable, let your imagination run wild, imagine what things might look like up ahead, make out vague outlines in the distance, and invest as if those outlines were real things.

I remember a comedian on *Ed Sullivan* (I'm dating myself, I know, but it was funny) saying his mother-in-law drank so much, she saw color television years before anyone else. Get her a fund to run!

Over time, if those outlines become real, or even close to being real, you will have invested at such a discount to the eventual value that you will make a killing. Just don't forget that you are no longer

in the fog when you can see what was once an outline and is now living breathing reality. Get ye back into the fog. The stock market always looks ahead. A great investor has a continued paranoia concerning who knows what, what they know, and when they knew it.

Step onto any trading desk or into any money management firm and you enter a bizarre world. Lots of screens, all filled with blinking information. Stock prices, headlines, press releases, news stories, CNBC on monitors scattered around the room, often muted. Money managers read the *Wall Street Journal* cover to cover, the *New York Times* business section, *Barron's* on weekends, scan *Forbes* and *Fortune*, have their assistants read *BusinessWeek*, subscribe to thestreet.com, get MarketWatch e-mail alerts, and scan message boards on Yahoo! and Motley Fool. And that's before the market opens. They also get e-mails from every major brokerage firm, with comments from their Morning Calls, what analysts have to say about everything. Bigger firms get calls from salesmen and saleswomen from Wall Street with a synopsis, and then the analysts call as the day goes on to provide color. Every firm I know has expanded its voicemail systems, which would often stop accepting messages by 10 a.m., so full of hyperbabble they were.

Do they get stock ideas from all this stuff? I highly doubt it. The fire hose of information is for one reason and one reason only—to take the pulse of the market and figure out what everyone else already knows. Information is sunshine. I want to know everything, because then and only then can I know if my investment ideas are already out there—or are they still just figments of my twisted mind, outlines in the fog, flutters in my gut.

The trick is to figure out what the fire hose of information overload is going to say in three months, six months, 18 months, even three to five years if you are really patient. When all that information is blaring loud and clear what you squinted to see way back when, then that's it, it's over, you win. The market has caught up with you and is sitting right on top of the yellow rock you could barely make out before. You get the return for seeing it first when no one else believed it. The stocks you own based on that trend are now worth not 20 percent or 30 percent more, but two times, three times, ten times more. Now that's investing.

PICKING THE RIGHT SIGNPOSTS

Okay, okay, enough about fog and sunshine, I think you get the point. So what are these signposts or trail markers I'm talking about? Quite simply, they are big trends that you believe in, have confidence in, know in your gut to be true, have 99.99 percent probability of coming to fruition. These aren't picked randomly or without lots of work, tons of sweat, and consternation. As my hero Bullwinkle once said, holding up a drawing of two people, "This is Froth with Portent."

Pick the wrong trend and you are following signposts off a cliff. Sometimes worse—pick too obvious a trend and you'll never find your way *into* the fog to discover the hidden paths to riches. In the twenty years I spent on Wall Street, I have only been able to find two real signposts for investing in the fog. Two. How lame, really. I was a professional, recommending stocks and then running a billion of other people's money, and it was all based on two stinking trends.

Yup. But what wonderful trends they were—probably still are.

I thought about writing ten or fifteen more paragraphs about how cool these trends are and then suggest you send a thousand dollars in small bills to a post office box in Palo Alto and then I might tell you one of them. But what the heck, I've written a couple of books that more or less spilled the beans, so here they are (drum roll please):

- Elasticity: lower cost creates its own huge markets.
- Intelligence moves out to the edge of the network.

If you're disappointed and saying, "Huh? That's it? You made me read this stupid chapter and that's all I get?" take it easy and let me explain.

Elasticity in the Marketplace

Back in 1985 and 1986, I was a 26-year-old know-nothing-about-stocks electrical engineer hired to be the semiconductor analyst at PaineWebber in New York. The industry had just seen a jolt of orders in 1985 and then a big whopping recession by April of 1986. Intel, TI,

Motorola, and AMD all saw their stocks plummet. Orders dried up and prices for memory and microprocessors were plummeting.

I somehow figured out it was distributors buying chips in 1985, not IBM, so I actually had one of the rare sell recommendations on these stocks. My star was rising on Wall Street. With these stocks headed to hat sizes 6-7/8, 7 . . . I was looking for an excuse to turn around and recommend them. I read an article in *Electronics* magazine about EPROMs—Eraseable Programmable Read-Only Memories. It suggested that every time prices dropped for EPROMs, some new device would use them, or use more EPROM—16,000 bits instead of 1,000 bits (remember, this was 1986!).

Videogames, PCs, modems, each of them would somehow design in more EPROMs, or denser EPROMs, whenever prices collapsed; and at some point, when the cycle turned, even though prices were still low, sales would increase because more EPROMs would be sold. I looked it up, and the word that describes this phenomenon is *elasticity*.

As an engineer, I was forced to take Econ 101 (and blew away econ majors because they couldn't handle the math), but not much else on the econ or financial front. Good thing. Elasticity is one of those things that doesn't model well. Economists don't understand it, so they don't talk about it much (except for things that are inelastic, like cigarettes and booze, which economists may have a bit too much of).

So anyway, I went to work on this wacky concept of elasticity of chips and semiconductors, looked back in time at other cycles, and sure enough, it was real. Intel founder Gordon Moore made the observation that chip density doubles every eighteen months (in *Electronics* magazine, it turns out), and Moore's Law was relentless. Elasticity is just the financial explanation of how the industry grows whenever prices of bits or gates or functions drop. The industry magically grows (and stocks eventually go up), and a smart semiconductor analyst would get ahead of this curve.

So I went out with that call. Done selling? Great, now buy back Intel and Motorola, because elasticity will kick in and this will be a great growth market for microprocessors with faster and faster clock speeds.

I got a lot of "what the hell are you talking about" looks from my portfolio manager clients. Oddly, I was used to this look from friends and family.

So I calmly explained that every time prices dropped, some new application would open up to take advantage of the cheaper functionality. Told them I wouldn't be surprised if we saw laser printers put all that cheap memory into them to print pages faster and cheaper. Lucky for me, desktop publishing was soon born, and my elasticity argument proved out.

I've been milking this old elasticity thing ever since.

In 1996 my partner and I started Velocity Capital with the simple premise that while semiconductor elasticity was still playing out (and still, no one on the Street really understood it), telecommunications bandwidth would follow the same pattern. As bandwidth to businesses and homes got cheaper, new applications would open up to take advantage of the cheaper functionality. Modem speeds went from 14.4K to 56K to 256K DSL to 1 meg cable modem. Ten-megabit-per-second local area networks moved to 100 megabit to gigabit. Fiber optics brought multi-gigabit speeds. The Internet and all its permutated businesses were the new applications.

In practice, with every company we looked at, my partner would assess management (I never trusted anyone), and then the two of us would think out elasticity for the company. We would try to map out the next two to five years of products or services. If we couldn't figure out how the company could scale and benefit from elasticity, we would not walk, but run away as fast as we could.

Talk about the fog: In 1996 most people would respond "how cute" to our idea of bandwidth elasticity. By 1999 it was every investor's mantra in some form or another.

Elasticity still works. Bandwidth prices are in the gutter, but I'll bet end demand is still elastic. More memory goes into cameras and phones, faster microprocessors go into PCs, 10-gigabit networks are rolling out, and on and on.

Still investable? Perhaps.

But I'll bet you can find your own elastic markets (e-mail them to me and I'll send the best five ideas a Blue Öyster Cult T-shirt).

Does the healthcare business scale? Not obviously, but some

part of it must. Aspirin is a drug that was elastic over the years. Most prescription drugs are inelastic, but something might break out.

Financial services can exhibit elasticity—talk to Charles Schwab. Autos? Electronics content is rising. And on and on. Look deep, find the elasticity, and you'll be in the middle of the fog with signposts to lead the way.

Finding Intelligence at the Outer Edges

I know this book is titled *Just One Thing*, and I'm about to describe a second trend, but really, it's just a byproduct of elasticity. It's what happens when you have all these cheap PCs and smartphones and ever-cheaper bandwidth scattered around.

Sometimes you are not able to recognize elasticity, or maybe everybody already does recognize it—but if it jumps out at you, so much the better.

A sage person once noted:

> The network is too large to have all its affairs directed by a single central entity. Control at such a distance, and from under the eye of their constituents, must be unable to administer and overlook all the details necessary for the good governance of the users; and the same circumstance, by rendering detection impossible to their users, will invite agents to corruption, plunder and waste.

Who said this? Bill Gates? Bernie Ebbers? Michael Powell? Actually, it was Thomas Jefferson in 1800 (okay, I swapped *country* for *network* and *government* for *entity*, but the concept is there). Jefferson's federalist beliefs were driven by his agrarian upbringing and fear of centralized control, but actually he would have made a great tech geek.

There is a saying out here in Silicon Valley that most people live and invest by: *"Intelligence moves out to the edge of the network."* It explains the proliferation of PCs, iPods, smartphones, Tivos, GPS maps, digital cameras, and every other gadget on the constantly declining cost treadmill in techland. This is a world of few regulations,

nine-month product cycles, and a mix of massive wealth and broken dreams.

For those who live east of the Sierra Nevadas, you most likely feel the heavy hand of Hamiltonian central planners stamping out innovation. Almost every network invented before 1983 is controlled by old analog monopolies—SBC, Comcast, Cingular, Time-Warner Cable, Verizon. Rules are set by government committees. Prices are set by collusion—er, lobbied regulators. Innovation is limited to call waiting and news crawls. The center of the network is sclerotic and milked for the benefit of moguls first and shareholders second. Users are a distant last. These guys love to be regulated, as it freezes technology and innovation and business models in their tracks.

Ask SBC. It charges $20 a month for a phone service that should cost pennies. It has drab phones with twelve buttons at the edge and expensive switches and zillions of lines of code running at control centers in the network. Meanwhile, you can download a program called Skype to talk from PC to PC for free. Same service, voice in, voice out. Twenty bucks versus free. What gives?

It's the network, stupid. Literally. The beauty of the Internet is that it is plain old stupid—Blaster, not Master. Packets of information fly around effortlessly. They contain an address where they are a-comin' from and where they are a-goin'. Cisco and Juniper are two companies that make routers that move trillions of these packets around, like an octopus on speed. What is in the packet is of no concern—a Web page, a Google search result, Amazon book order, voice call to Vanuatu, pirated videos of *Dodgeball*—it doesn't matter. The network is a sprinter, not a quarterback.

Why should you care? As the post-Internet-boom phone companies consolidate, cheerleaders of these deals see a return of giants who can afford the massive spending to bring fiber to every home and business in America. Will we get it? Yup, but not from them.

The day of the Verizon–MCI deal announcement, CNBC's Dylan Ratigan interviewed Verizon CEO Ivan Seidenberg and MCI CEO

Michael Cappellas. Neither could articulate why they wanted to do this deal, until this doozy came out of Ivan's mouth:

> We need to install networks, because networks represent our lifeblood to the customer. All the intelligence gets put into the network—all the interesting features and function get put into the network.

This is what Jefferson was warning us about. Forget gadgets, Verizon wants to offer all the services it thinks you need in the network. Its track record is lame. It took Bell Labs several years to develop and certify call waiting; three-way calling took a bit longer. Caller ID took a decade and still doesn't really work.

Meanwhile, a clever programmer chugging Jolt cola can pull an all-nighter (with a few breaks for Nerf gun battles) and add features to Internet calling. Want eight-way calling? No problem. CD-quality voice? Simple. Transcripts from your last three conversations? Done.

When intelligence is out at the edge of the network, making changes or ramping innovation is simple. I know it sounds bizarre, but as long as the connecting network is dumb, the value of the network can increase.

Cellular companies have barely added features to their basic service, so they keep inventing calling plans to confuse us into paying more. But meanwhile, by opening a browser on my phone and moving packets through a dumb Internet versus "smart" voice network, I can pull up maps and directions.

Thank you, Thomas Jefferson.

The best example of intelligence at the edge is one that may not be so obvious: Google.

A hundred thousand servers sitting in data centers programmed by 2,000 programmers with doctorates doesn't sound like intelligence at the edge, but it really is. Minitel in France was a breakthrough twenty years ago by providing pages of information for the French. Weather, news, train schedules. It was centrally managed. Any new pages had to be programmed by the folks at Minitel, at much time and expense. Google, by contrast, doesn't tell you what

you are searching for; it scours the edge of the network for that information and uses an algorithm to calculate if it might be what you are looking for. The smart servers hosting Web pages and the millions of users with PCs putting up those Web pages are the intelligence at the edge. There are billions of Web pages to crawl, specifically because the intelligence is at the edge versus the center.

Subtle stuff perhaps, but I can sniff out a short-lived business, even if it is regulated to exist, if it violates this principle.

The good news is that our networks are getting dumber and our devices at the edge are getting smarter and better everyday. Megapixel cameras, programmable TVs, GPS-enabled phones—the possibilities are endless, at the edge.

A GLANCE BACK AT SATISFACTION AND REWARDS

After climbing Mount Washington, Paul and I got back to our car, hot from wearing Mt. Washington sweatshirts in such nice, cloudless weather on a summer day in New Hampshire. At the bottom of that hill we just climbed, anyway. And we were famished, in that "I could eat a horse" mood.

I got out a map, found the road that led due east, broke several state and federal speed-limit laws, and hit the coast of Maine a couple of hours later.

We pulled into the first shack we could find and ordered three 1-pound lobsters each—a just reward for the day and a perfect metaphor to reflect back upon.