

The Electronic Herd

In September 1997, Malaysia's Prime Minister, Dr. Mahathir Mohamed, used the World Bank meeting in Hong Kong to denounce the evils of globalization, after Malaysia's stocks and currency were ravaged by global and local investors. Mahathir blasted "morons" who trade in currencies, and he accused the "Great Powers" and financiers such as George Soros of forcing Asians to open their domestic markets to global speculators and manipulating their currencies to destroy them as competitors. He compared today's global capital markets to "a jungle of ferocious beasts," and implied that they were directed by a Jewish cabal. Listening to Mahathir's rant, I tried to imagine what then-U.S. Treasury Secretary Robert Rubin, who was in the audience, would have said to the Malaysian leader had he really been able to speak his mind. I think it would have been something like this:

"Ah, excuse me, Mahathir, but what planet are you living on? You talk about participating in globalization as if it were a choice you had. Globalization isn't a choice. It's a reality. There is just one global market today, and the only way you can grow at the speed your people want to grow is by tapping into the global stock and bond markets, by seeking out multinationals to invest in your country and by selling into the global trading system what your factories produce. And the most basic truth about globalization is this: *No one is in charge*—not George Soros, not 'Great Powers' and not I. I didn't start globalization. I can't stop it and neither can you—except at a huge cost to your society and its prospects for growth. You keep looking for someone to complain to, someone to

take the heat off your markets, someone to blame. Well, guess what, Mahathir, there's no one on the other end of the phone! I know that's hard to accept. It's like telling people there's no God. We all want to believe that someone is in charge and responsible. But the global marketplace today is an Electronic Herd of often anonymous stock, bond and currency traders and multinational investors, connected by screens and networks. And, Mahathir, don't you play dumb with me. We both know your Central Bank lost 3 billion dollars speculating on the British pound in the early 1990s—so don't give me that innocence crap. The Electronic Herd cuts no one any slack. No one. It does not recognize anyone's unique circumstances. The herd knows only its own rules. But the rules of the herd are pretty consistent—they're the rules of the Golden Strait-jacker. Now, the herd feeds in 180 countries, Mahathir, so it doesn't have time to look at you in detail all the time. It makes snap judgments about whether you are living by its rules, and it rewards most lavishly those countries that are transparent about what they are doing. The herd hates surprises. For years Malaysia seemed to be living by those rules, and it attracted massive amounts of direct investment and portfolio investment, which enabled you to raise your per-capita income from 350 dollars to 5,000 dollars in a couple of decades. But when you started to break the rules by overborrowing and then overbuilding, well, the herd sold you out. Did you really need to build the two tallest office buildings in the world? Have you rented even half their office space? I hear not. So the herd stampeded you and left you as roadkill. The KLCI Index, your Dow Jones, fell forty-eight percent in 1997, and your currency hit a twenty-six-year low. But when that happens you don't ask the herd for mercy, you don't denounce the herd as a 'Jewish conspiracy,' you just get up, dust yourself off, put your Golden Straitjacket on a little tighter and get back with the flow of the herd. Sure, this is unfair. In some ways the herd lured you into this problem. It kept offering you all this cheap money and you took it and then overbuilt your dams, your factory capacity and your office towers. But that's what's really scary, Mahathir: *The herd is not infallible*. It makes mistakes too. It overreacts and it overshoots. But if your fundamentals are basically sound, the herd will eventually recognize this and come back. The herd is never stupid for too long. In the end, it always responds to good governance and good economic management. Hey, America had similar fluctuations when it was an emerging market,

with our railroad busts and booms. You just have to manage them and build in as many shock absorbers as possible. I track the herd's movements all day on the Bloomberg screen next to my desk. Democratic votes about a government's policies once every two or four years. But the Electronic Herd votes every minute of every hour of every day. Anytime you want to know, the herd will tell you exactly how you look in a Golden Straitjacket and whether it fits well or not. I know you think that I'm the all-powerful U.S. treasury secretary. But, Mahathir, I live just like you—in terror of the Electronic Herd. Those idiots in the media keep putting me on the front page, as if I'm actually in charge, and I'm sitting here terrified that if our Congress refuses to grant the president authority to expand free trade, or busts the budget ceiling, the herd is going to turn against me and trample the dollar and the Dow. So let me tell you a little secret, Mahathir—and don't tell anyone else. I don't even keep a phone on my desk anymore, because I know better than anyone: *There's nobody to call.*"

Like it or not, my imaginary treasury secretary is basically talking the truth. Countries cannot thrive in today's world without plugging into the Electronic Herd, and they cannot survive unless they learn how to get the best out of this herd without being overwhelmed or shocked by its inevitable surges. The Electronic Herd is just like a high-voltage wire that comes into your house. In normal times it can warm you, light your home and provide many of your energy needs. But if you don't have the right electricity regulators and surge protectors, and there is a sudden power surge or drop, it can shock you, fry you to a crisp and leave you for dead.

The Electronic Herd today consists of two basic groups. One group I call the "short-horn cattle." This includes all those people involved in the buying and selling of stocks, bonds and currencies around the world, and who can and often do move their money around on a very short-term basis. The short-horn cattle are currency traders, major mutual and pension funds, hedge funds, insurance companies, bank trading rooms and individual investors. They include everyone from Merrill Lynch to Crédit Suisse to Fuji Bank to the Charles Schwab Web site, where anyone with a PC and a modem can trade on line from his living room.

The other group I call the "long-horn cattle." These are the multinationals—the General Electrics, the General Motorses, the IBMs, the

Intels, the Siemenses—which are increasingly involved in foreign direct investment, building factories around the world or striking international long-term production deals or alliances with overseas factories to make or assemble their products. I call them the long-horn cattle because they have to make longer-term commitments when they invest in a country. But even they now move in and out, like a herd, with surprising speed.

Though the Electronic Herd was born and nurtured in the Cold War era, its members could never gather the critical mass, speed or reach in that overly regulated, walled-up system. Most countries maintained capital controls (at least until the 1970s), so capital could not move across borders the way it can in today's globalization system. This made it much harder to get a global herd together. In the relatively closed economies of the pre-1970s Cold War system, a government's own monetary policy completely dominated the setting of its own interest rates and a government's own fiscal policy was far and away the dominant instrument for stimulating growth. Also during the Cold War, the U.S. and Soviet governments could easily justify the high taxes needed for fiscal policy by invoking the Cold War: "We need your tax dollars to fight the enemy, put a man on the moon first and build a new highway system so we can move our army around faster." At the same time, many developing countries could muddle through by milking one of the superpowers—namely, the United States, the Soviet Union or China—or international lending institutions to fund a dam, support an army or build a highway. And because the citizens of these developing countries were not nearly as aware as they are today of how everyone else in the world was living, they were ready to tolerate the lower living standards that come from having a relatively closed economy.

But with the gradual lifting of capital controls in the 1970s, the democratizations of finance, technology and information, the end of the Cold War system and the fall of walls everywhere, there suddenly emerged a vast global plain where investor herds from many different countries could roam freely. It was on this wide-open plain, later expanded into cyberspace, that the Electronic Herd could really graze, grow, multiply and eventually gather in powerful Supermarkets. By the late twentieth century the dominant fact of the global financial system was that the private sector—what I call the Electronic Herd and the Supermarkets—had become, as U.S. Treasury Secretary Larry Summers

once put it, "the overwhelming source of capital for growth," replacing the public sector. This has been true both within countries and between the developed countries and developing countries. According to the U.S. Treasury, in the 1990s nearly \$1.3 trillion in private capital has flowed to the emerging market economies, compared to roughly \$170 billion in the 1980s and a relative pittance in the 1970s. There is no better indicator for the way in which the Supermarkets have replaced the superpowers as sources of capital for growth.

The Supermarkets are the megamarkets of Tokyo, Frankfurt, Sydney, Singapore, Shanghai, Hong Kong, Bombay, São Paulo, Paris, Zurich, Chicago, London and New York. They are where the biggest members of the Electronic Herd come together, exchange information, execute their trades and issue stocks and bonds for different companies for the herd to feed upon. According to University of Chicago globalization expert Saskia Sassan, by the end of 1997 twenty-five Supermarkets controlled 83 percent of the world's equities under institutional management and accounted for roughly half of global market capitalization—around \$20.9 trillion (*Foreign Affairs*, Jan. 1999).

This Electronic Herd—and the Supermarkets where it gathers to feed and procreate—have become important international actors in the globalization system. While they cannot go to war or invade a country, like nation-states, they are able to shape the behavior of nation-states in many areas. And that is why I contend that while the Cold War system was a system based on a balance between states, the globalization system is based on a balance between states and other states, and between states and the Electronic Herd and Supermarkets. Ever since, the invention of the transatlantic cable, in the pre-World War I era of globalization, some sort of Electronic Herd has been at work, but during the Cold War system it was never as important as it is today. What is new about today's herd is not so much a difference in kind as in degree. Because of globalization, today's Electronic Herd—both its short-horn cattle and its long-horn cattle—combines size, speed and diversity to a degree never seen before in history. A mouse has a tail and a Tyrannosaurus Rex has a tail. They are both called "tails," but when one swings it has a very different effect on the world around it than the other. The Electronic Herd in the first era of globalization was like the tail of a mouse. Today's Electronic Herd is like the tail of a Tyrannosaurus Rex, and when it swings it reshapes the world

around it in some fundamental ways. This chapter explains how this herd has become such an irresistible source for economic growth today and, at the same time, such an intimidating force that it can even topple governments when it swings.

The Short-Horn Cattle

The first thing that strikes one today about the short-horn cattle is the incredible diversity of financial products they can now feed on. The cornucopia of stocks and bonds, commodities and futures contracts, options and derivatives being offered from scores of different countries and markets around the world means that you can make a bet on almost anything today.

Indeed, when I look at the feed bag now being offered the Electronic Herd, I am always reminded of that scene from *Gays and Dolls* in which Nathan Detroit wants to bet Sly Masterson on whether Mindy's sells more cheesecake than strudel. It goes like this: Nathan Detroit: "I would be interested to hear. Offhand, would you say that Mindy's sells more cheesecake or more strudel?"

Sly says that going on his own preference, he would guess that Mindy's sells more cheesecake than strudel. What follows is a spirited exchange about how much Sly would be willing to bet on cheesecake over strudel—with Nathan, who has already checked with the kitchen and knows that strudel sells better than cheesecake, trying to lure Sly into putting his money where his stomach is. Now, Sly Masterson is a man who loves to bet. Normally, he would bet on cheese spreads as quickly as a Solomon Brothers bond trader would bet on interest-rate spreads. But Sly smells a setup. Nathan is just too eager to make a thousand-dollar bet.

So rather than taking it, Sly offers him some wisdom instead. "Nathan, let me tell you a story," he says. "On the day when I left home to make my way in the world my daddy look me to one side. 'Son,' my daddy says to me, 'I am sorry I am not able to bankroll you to a very large stock. But not having the necessary lettuce to get you rolling, instead I am going to stake you to some very valuable advice. One of these days in your travels a guy is going to show you a brand-new deck of

cards on which the seal is not yet broken. Then this guy is going to offer to bet you that he can make the Jack of Spades jump out of this deck and squirt cider in your ear. But, son, you do not accept this bet, because as sure as you stand there you are going to wind up with an ear full of cider." Now, Nathan, I do not suggest that you have been clocking Mindy's chesecake . . ."

Nathan: "Would I do such a thing?"

Sky: "However" (cupping his hand over Nathan's bow tie), "if you are really looking for some action, I will bet you the same thousand bucks that you cannot name the color tie you have on. Have we got a bet?"

Nathan: "No bet."

Then, looking down at his bow tie, Nathan exclaims: "Polka dots! In the whole world nobody but Nathan Detroit could blow a thousand bucks on polka dots!"

Well, if Nathan and Sky were around today there would probably be a bond they could buy that would be based on the sales of both chesecake and strudel at Mindy's. And there would probably be some customized financial instrument they could buy in order to hedge their bets, whether they put their money on strudel or chesecake or polka dots. Because of the democratization of finance, and the explosion of securitization, almost anything today can be turned into a bond. You can even issue bonds in yourself and your own unique talents, as the singer David Bowie did. He raised \$55 million in Bowie bonds in 1997, backed by his projected royalties. *The New York Times* said it all in a headline, "You too can be rated AAA."

My friend Lesley Goldwasser, a leading bond trader on Wall Street, is an expert in turning yet-to-be-made movies into bonds. She explains how it works: "Suppose you are a home mortgage company in Minneapolis and you have a hundred home mortgages out in the local market. And those hundred home mortgages involve an outlay by the mortgage company of a hundred million dollars and they bring in one million dollars a month in interest and principal payments. That mortgage company can bundle all its home mortgages together and then issue them as bonds that you or I can buy for a thousand dollars each. The advantage for the mortgage company is that it can get its hundred million dollars back right away, without having to wait for all these people to pay off their mort-

gages over thirty years. The advantage for the bondholders is that they are paid off by the cash flow from the interest and principal payments that come in each month, and the interest rate will be a few points higher than a money market or savings account would pay. What's more, the bonds will be backed up by actual homes, and since there are usually several hundred in each bundle, even if a few default the odds are that most of the others will pay off their loans accordingly. Well, people figured that if you could bundle home mortgages, why not bundle Hollywood movies—even unnamed Hollywood movies. Say you are a movie company and you don't have any credit rating. What if my investment bank will do is bundle together ten of your movie ideas. They don't even have to be in the production stage yet, just in the pipeline. We will then do a statistical analysis of the probability of how ten such movies will perform, based on historical precedents: One will be a megahit, one will be a big hit, two will be minor hits, two will be flops and four will more or less break even. On the basis of that probability analysis we'll figure out how much money you will earn over a period of five years. Let's say we think the movies will cost five hundred million dollars to make and will together earn six hundred million. Then we will advance your movie company four hundred million at an interest rate equal to that on a three-year Treasury bond, plus another percentage point or two. Your movie company will have to come up with the other hundred million in production costs itself. Then we'll take that four hundred million we loaned your movie company and chop it up into bonds, selling for a thousand dollars apiece, that you and I can buy. The interest and principal on those bonds will be paid by the movie receipts as they start to come in. Presto, your movie company, which has no credit rating and only a small amount of capital, gets money to make its films that it would never be able to raise from a bank, and you, the investor, get to buy a piece of it and earn a little higher return than you normally would at the bank. That's how it works. As long as what you are doing, manufacturing or performing produces a cash flow that can be statistically predicted over a period of time, we can turn it into a bond."

And it doesn't matter whether it is the chesecake sales at Mindy's, home mortgages, credit card receivables, bad debts, auto loans, commercial loans, remakes of *Titanic*, Brazilian corporate debt, Lebanese government T-bills, auto financing for General Motors or the income stream

of rock star David Bowie. The more capital controls have fallen between countries, the more everyone is offering everything for sale as stocks, bonds or derivatives. This move toward securitizing everything has "fundamentally changed the character of the credit markets," says the veteran Wall Street economist Henry Kaufman. It's easy to see why. In the old days your parents' home mortgage, car loan, credit card debts, life insurance policies or even the loans taken out by the government of Brazil from your parents' bank were never traded on an open market. They were carried on the books of your parents' bank or insurance companies at their original face value, and they were usually held by those institutions as assets until they reached their date of maturity. But as the 1980s rolled around and all of these things got securitized, packaged together and then sold as bonds to you and me and my Aunt Bev, they could be traded, and their prices would fluctuate every day in the marketplace—depending on how these bonds seemed to be performing, depending on general economic conditions and depending on their rates of return compared to other assets. The net effect, says Kaufman, is that this securitization has opened up literally trillions of dollars' worth of assets—which either were never traded before or no one ever dreamed could be turned into bonds—"to the harsh glare of changing market circumstances." All of this together has added incredible diversity to the markets—giving the Electronic Herd so many more things to feed on than ever before—and has added an element of fluctuation to assets that were never previously traded.

The people who can tell you this best are some of the lead bulls in the Electronic Herd. They remember what it was like to graze in the old fenced-in days of the Cold War. Leon Cooperman, the former director of research for Goldman Sachs, and now a hedge-fund manager at his own firm, Omega Advisors, remarked to me in 1998: "During my whole career at Goldman Sachs—1967 to 1991—I never owned a foreign stock or a foreign emerging market. Now I have hundreds of millions of dollars in Russia, Brazil, Argentina and Chile, and I worry constantly about the dollar-yen rate. Every night before I go to bed I call in for the dollar-yen quote, and to find out what the Nikkei is doing and what the Hang Seng Index is doing. We have bets in all these markets. Right now Paul over there"—he points to one of his traders, who is looking down at a handheld device that provides him real-time quotes for all key stock and bond

indexes—"is long on the Canadian dollar. We have bets all over the place. I would not have worried about any of these twenty years ago. Now I have to worry about all of them."

Cooperman then pulls out a copy of that day's *Wall Street Journal* and starts reading the different bets he can make: "Let's see here . . . Eurodollars, U.S. Treasury bonds, S&P futures, British pounds, soybeans, heating oil, light sweet crude, Singapore bonds, Venezuela bonds, NASDAQ 100, Japan index, Dow index, mutual funds, utility bonds, high-yield bonds, corporate bonds, intermediate bonds . . ." As I get up to leave a minute later, he is still reading the list.

This diversity of investment instruments and opportunities has been a godsend for both developed and developing countries and companies. It has enabled some of them to grow at previously unimaginable speeds. As *The Economist* once observed: "Poor countries, with large investment needs, are no longer hamstringed by a lack of capital. Savers are not confined to their home market, but can [now] seek investment opportunities that offer the highest returns around the world" (Oct. 25, 1997). Today, every major U.S. mutual-fund family offers at least one exotic "emerging market" investing option.

When you have so many different products, with so much information always available at such high speeds, your ability to get an edge on the competition and seize on an opportunity before everyone else sees it gets smaller and smaller. So investors have to do all sorts of different things now to find that little edge that might steal a march on the rest of the market.

"When I joined Goldman Sachs in 1967," Cooperman recalled, "I was the head of research and I hired analysts. In those days, a typical analyst covered seventy-five companies and maybe six different industries. I was recently talking to one of the analysts I had hired back then and he told me he was terribly overworked now because he had to cover twelve companies. I just laughed. Only twelve companies? But you have to look into those twelve companies so much more deeply now in order to get some edge that it takes up all of his time. It is the same with economic data. [In the old days] when the government would issue the unemployment number all everyone looked at was the rate of unemployment. Then they started to look underneath that general number at the payroll figures—are total payrolls up or down?—because that might

indicate something [you could bet on]. Then they started looking at the composition of payroll figures. Who is up and who is down and what does that tell you? The amount of work you have to do to gain an edge to make money now is just so much greater."

I know a hedge-fund trader who spends hours poring over weather reports. Weather reports! The idea, he explained to me, "is to look for unconventional trends and how they might affect economic data. For instance, the fact that we had no winter in 1998 may have given us a stronger-looking economy than really is the case, so I might find a way to use that knowledge to make a certain bet on what will happen with interest rates. Or take the fact that we had terrible mudslides on the West Coast in the exact week when economic data was collected by the government for some major statistics, like the consumer price index. Since this economic data only matters at the margin, a few mudslides at the right time in a major state, like California, can make a difference in the statistics. So I might say, 'Gee, the stock of Home Depot, which sells all kinds of home-repair products, would probably benefit from mudslides and tornadoes.' Or I might notice that there happened to be a huge snowstorm the week that the government put together the unemployment numbers. And that might lead me to conclude that there is really a blip in those numbers. Maybe everyone is expecting 250,000 new nonfarm jobs to be created, but because of the weather, the number actually came in at only 150,000 new jobs, which suggests that the economy might be slowing and is softer than people thought, but in reality it is not, because this weather anomaly is reflected in the numbers. But because the numbers came in that way you know that people might conclude the economy is slowing and interest rates might be coming down and that would be good for bonds. So you might go long on bonds in advance of the unemployment numbers—just based on the weather report—ride them up when the unemployment numbers come in lower than expected, but sell them out quickly afterward, before the next month's numbers come in, because they will show that the previous month's numbers were anomalous due to the weather. It's an opportunity to make a few bucks by just using the weather report. You could use the weather that way to speculate on oil futures, heating oil or interest rates, electricity futures, natural gas futures, consumer price index futures, corn, soybeans, gasoline, unleaded gasoline, Brent crude, gas oil, hogs, copper, gold, silver..."

So many markets, so much information, so little edge. So when all else fails, don't call your broker, call the weatherman.

In order to make money in such a market, the short-horn cattle need not only that tiny extra edge: they also need to make larger and larger bets on top of it. Imagine a billion dollars stacked on the head of a pin and you have the right idea. This is usually done by fund managers employing exotic trading products—swaps, futures, forwards, options, derivatives and indentations—and then leveraging them by borrowing even more money than their investors have given them in order to expand each of their bets. This has contributed to the huge increase in the volume of transactions sloshing around the world every day. As a fund manager, when you win big now, you can win very, very big, and when you lose now, you can also lose very, very big. That is one reason why in recent years we have seen whole brokerage houses (Baring's bank being the most prominent) brought down by the bets of a single broker using leverage. It is also what exaggerates the swings of the Tyrannosaurus Rex's tail. A friend of mine at a major American investment bank told me one of the bank's clients was a hedge fund that had \$200 million in original capital. Through the miracle of leveraging, though, this hedge fund acquired \$900 million in Russian bonds and \$5 billion worth of Salite Mae bonds. (These are bonds made up of bundled American student loans.) When Russia crashed in August 1998, this hedge fund lost virtually all its capital in Russia. So what did it do? It suddenly sold a large position of American student-loan bonds to pay off its Russian losses, sending the student-loan bond market into a temporary tailspin and destroying some of my friend's positions in that market, which should have had nothing to do with Russia.

Not only is the herd's feed bag more diverse, but so too is the herd itself, particularly the short-horn cattle. As Kaufman notes: "The relative weight of traditional commercial banks, savings and loans and insurance companies has diminished. Instead, a new breed of institutional participants has come to the fore. These institutions are distinguished by their emphasis on short-term investment performance, their heavy use of leverage and their ability to move in and out of markets, whether equities, bonds, currencies or commodities, wherever they believe the returns

will be the highest." The most prominent of these new players are the so-called hedge funds, which bring together large pools of cash from wealthy individuals and institutions, then magnify that pool by borrowing from the banks to make high-risk, high-reward bets on currencies, stocks and bonds around the world. But what has happened in recent years, notes Kaufman, is that many major banks, brokerage firms, investment banks, insurance companies, corporate treasury departments of major multinationals and even the trading rooms of major world central banks have felt a need to establish their own hedge-fund-like trading operations. It is not unusual for a major investment bank to be the broker for a hedge fund's trades and also to be mimicking that hedge fund's trades with its own private trading operations.

Naturally, the more the fences come down, the more people start roaming into areas they know nothing about. Imagine it working like this: The Thai Farmers' Savings & Loan Bank gets a call from the Bangkok office of First Global Investment Bank, headquartered in the Cayman Islands, and they say, "Hey, you guys should really be in Russian bonds. They're paying twenty percent, and even if the ruble devalues a bit, you can still make a fortune." Suddenly the Thai Farmers' Savings & Loan is sitting with \$20 million in Russian bonds on its books, and when those bonds tank, a bank that was chartered to make loans to Thai rice farmers goes under. The world was shocked and amazed by how many Korean banks were holding Russian bonds when Russia started to collapse in 1998. When credit becomes easily available, what tends to happen is that "the marginal moron," the person who would never get funded in a more cautious or recessionary period, is able to get money from investors and banks and make bets along with the more serious players. These marginal morons can really exaggerate swings in the global market.

The combination of the Supermarkets and the Internet has made global investing fast and easy not simply for the big guys, but for Mom and Pop as well, who can now trade from their bedroom through an online broker. Competition between these online brokers is now so intense that they charge virtually nothing to execute a trade. Because global investing has become so much easier and more accessible, it can pull people into thinking that every market in the world operates the same as Wall Street. As Treasury Secretary Larry Summers likes to say: "It is

like when you build better highways, people tend to drive faster. And actually more people end up dying in auto accidents on these new highways, because they make a mistake in estimating how fast they can drive, and they end up driving much faster than they should."

So First Global Investment Bank calls the Thai Farmers' Savings & Loan and says, "You really should be in Turkish bonds. You could make a killing right now." The Thai banker says, "Turkish bonds are paying twenty-five percent, eh? I didn't know Turkey had a bond market. Sure, I'll take a few million. If you say so." But here's the rub. When people hear "Turkish bond market," they think, "Oh, Wall Street has a bond market, Frankfurt has a bond market, Tokyo has a bond market and now Turkey has a bond market. Isn't that nice." But while the Turkish bond market may quack like a market, walk like a market and look like a market, it is nothing like the Wall Street bond market. And you discover this when your Turkish bonds go down and you want to sell them. That's when you find out that the Turkish market is so small that when just a few major players want to sell their bonds, there are no buyers, there is no liquidity on the downside and therefore no exit. As Kaufman notes, globalization of markets creates the illusion that all markets "are efficient, liquid and symmetrical" and that there is perfect information and transparency in each market. Far from it. Just think about this: The total value of all Microsoft stock in late 1999 was around \$600 billion. At that time, this one U.S. stock was worth far more than all the stocks on all the emerging-market stock markets in all the rest of the world put together.

And everybody is playing. In 1980, 4.6 million American households owned shares in mutual funds. By the year 2000, more than half the U.S. population was invested in the stock market, either through equities they purchased themselves or through mutual funds or through their pension-retirement plans. I did a short interview one day in mid-1999 for CNBC. I was listening to the show with half an ear before I went on the air. Appearing on the show before me was this stock guru who was dispensing advice about different stocks to callers telephoning from around the country. At one point the announcer said that the next caller was "Adam from Michigan." He sounded like a little boy. So Ron Insanta of CNBC asked him how old he was. Adam said he was twelve years old! He asked the guru, "I recently bought CVS [pharmacy stock] and I wonder how much it could go up?" (I found this a revealing, but rather disturbing phe-

nomenon.) Mutual-fund assets in retirement plans, such as IRAs, grew from \$412 billion in 1992 to \$1.6 trillion in 1997. Of these mutual-fund assets, about 10 percent were invested in global stocks. For the first time in American history both Joe Six-pack and Billionaire Bob are watching CNBC to see how their shares in the market are faring. Indeed, a 1998 commercial by Charles Schwab, the discount brokerage firm, shows a middle-class couple, Marion and Rick, sitting on a couch talking about their summer vacation.

Marion: "When we were traveling cross-country and we stopped at a place, they had the Business Channel. We started watching and the market was going down and we said that there were these stocks that we wanted to buy and from the road we called up . . ."

Rick: "Called up Schwab because we didn't have a phone modem in our motor home, so we couldn't trade online. Where were we?"

Marion: "Utah."

Rick: "Utah?"

Marion: "We were in Utah."

Rick: "On a pay phone talking to Schwab."

Marion: "Trying to get . . ."

Rick: "Buying the stocks. And there was a feeling of exhilaration. Hey, we've done it . . . And then we get back in the motor home, traveled on our way."

Marion: "And those purchases have done well."

Rick and Marion, welcome to the Electronic Herd. I am glad they did well, but the fact is this proliferation of investment instruments has lulled a lot of Ricks and Marions into markets they have no business being in. I cannot prove this, but I would guess that never before in history have more people invested more money in more places that they cannot find on the map. As Leon Cooperman points out: "In the last five years the guy who would normally take his savings and buy Treasury bills, to make sure he never lost any of that income, has gone out and bought bonds instead. And the guy who would normally buy bonds, because he was ready to take a little more risk to get a little more return, has gone out and bought emerging-market bonds, from places like Russia or Brazil, and the guy who would normally buy emerging-market bonds is now out buying emerging-market stocks. What has to happen, and it will happen,

is that some people who have moved up this risk ladder will lose a lot of their money and then they will move back."

Global integration has raced ahead of education. Thanks to globalization, we all definitely know "of" one another more than ever, but we still don't know that much "about" one another. What's scary is that the diversity of players in the Electronic Herd has so expanded that it's not just the dentist in New Jersey who doesn't know what's going on, it's even some guys running big emerging-market funds. My favorite quote in this regard was the unnamed hedge-fund manager who told Moisés Naím, editor of *Foreign Policy* magazine, after the 1995 Mexican debt crisis: "We went into Latin America not knowing anything about the place. Now we are leaving without knowing anything about it."

While we are on the subject of the diversity of the Electronic Herd, there is one other critically important thing we should always keep in mind about it—this herd is not simply an exogenous force. It is not just made up of stateless offshore money funds, Internet investors from abroad and distant Supermarkets. It is also made up of locals in every country that has opened itself to the herd. What gives the herd its power is not only the fact that when capital controls in a country are lifted foreigners can easily come in and buy and sell currency, stocks and bonds. *It is the fact that the locals can easily go out!* The biggest untold secret about the Electronic Herd is that most stampedes don't begin with a hedge fund on Wall Street or a big bank in Frankfurt. They begin with a local banker, local financier or local money manager moving his money out of a country by converting from his local currency into dollars or betting against (shorting) his own country's currency in the forward market. The 1998 IMF study "Hedge Funds and the Financial Market Dynamics" noted that careful analyses of the 1994-95 Mexican peso crisis all found that "domestic residents and not international investors" played the leading role in that crisis. In a world of globalized financial markets, the IMF concluded the following: Foreign investors managing internationally diversified portfolios may find it difficult to keep abreast of conditions in myriad countries. The smaller the emerging market, the less the incentive for large investors to do so. Consequently, domestic residents with a

comparative advantage in accessing and processing the relevant information about that market may often be the first to take a position against a fixed currency. And the deregulation of domestic financial markets and international financial transactions, which long inhibited position-taking by domestic residents, makes it much easier now for them to do so. In other words, it was *local* Mexican financiers, local Indonesian speculators, local Thai bankers who began the stampedes against their own currencies, stocks and bonds—with the rest of the Electronic Herd following. And of course this makes sense, because the local folks are almost always going to be better informed through family, friends and business contacts about what's really happening inside their country and therefore they are going to be the first to move to where the grass is safer. And today they can do it very easily—without having to smuggle out money or get some friend to open a foreign bank account for them, as was the case in the old days of capital controls.

Richard Medley, who does political and economic risk analysis for many international banks and hedge funds, told me he started warning his clients about a possible downturn in Asian markets and currencies five months before it actually happened in 1997, not because he was such a genius but because he was listening to the local herds. "The first thing I look for," he explained, "is when local financial institutions are demanding loans in a foreign currency instead of their local currency. If a Thai bank won't lend to a Thai businessman in Thai baht, but insists instead on lending in dollars or yen, it means it knows that something is wrong with the Thai currency and it might not hold its value. You have to depend on this sort of anecdotal evidence, because in many countries the economic data lags. In highly personalized economies, like those in Asia, I always assume that the locals know more than I do."

The Chinese government has been reluctant to make its currency fully convertible, as its neighbors have done, not just because it's afraid that it could not control the investments that would come in from outside but because Beijing fears it wouldn't be able to control what its own people would transfer abroad. They have good reason: A huge black market already exists in China for speculating against the Chinese currency. An American financial wire service reporter in Shanghai told me of a conversation he had with a Chinese friend who was complaining about the "conspiracy" of Western bankers and hedge funds who sold out

the currencies of Thailand, Malaysia, South Korea and Indonesia during the 1997-98 Asian economic crisis.

"Why are they doing this to us?" the Chinese businessman asked this American reporter.

"Tell me," the American financial reporter answered, "have you sold any [Chinese] yuan for dollars lately?"

"Yes, I have," the Chinese businessman conceded. "I'm a little worried about the situation."

Remember: When the Electronic Herd starts to stampede, the first bull is always a local.

Not only is the Electronic Herd bigger and more diverse than ever before but it is also much, much faster and much, much more connected. Joseph Sassoon, a partner in Goldman Sachs's London office, joined the Electronic Herd back in 1982. "In London in 1982, because we were five or six hours ahead of New York, we usually didn't find out what the Dow closed at in New York until we came in the next morning," he once told me. "A few people had Quotron machines, but that was it. Goldman Sachs thought it was really smart back then, because some guy in the New York office realized one day that he could pay a kid to come into the office at three-thirty a.m. New York time. The kid would make a photocopy of the two key *Wall Street Journal* columns, 'Heard on the Street' and 'Abreast of the Market'—stock-tip columns that often moved the market—and then he would relay the contents to London. It gave us a four-hour head start on all the other London brokerage firms, so we could go out and push stocks with our clients that were being touted in New York before our competition ever knew about it, because they were waiting until their New York offices opened before getting the *Journal*. It took them a while to figure out what we were doing. This was just 1982, but when I tell people around our office about it today, they look at me like I'm telling them about Great-grandpa."

No wonder. Walk around a hedge-fund office in New York today and you will see people carrying around palm-held market monitors wherever they go, which track any market, any stock or bond, in real time, so they can be connected even when they go to the bathroom, let alone go home. The wheels today have been so thoroughly greased that huge

amounts of what economist David Hale calls "gypsy capital" can move around the world to exploit buying and selling opportunities anywhere, with transaction costs that are virtually zero, transmission costs that are virtually zero and speeds that are virtually instantaneous. The state of play can be summed up by the punch line from an ad that Cr dit Suisse/First Boston began running in 1998 for its service, called Prime Trade, that offers the fastest possible execution of any trade in any of the world's listed derivatives exchanges. The ad says: "Prime Trade: Any market. Any time. Anywhere."

The fact that so many more people now have the instantaneous connections and information to trade from anywhere all the time is another reason today's Electronic Herd is so much bigger and potentially more volatile. It was long assumed that the more information investors had, the more stable this would make markets. But, in fact, the opposite seems to be true. I have learned that firsthand. Many passenger planes in the United States today provide a GTE cell-phone service, with a phone plugged into the middle seat in each row. In 1999, GTE connected those cell phones to the Dow Jones Industrial Average, the American Stock Exchange and the NASDAQ. So you can now sit in your seat, if you happen to be flying during trading hours, and watch in real time what the U.S. markets are doing every minute. In fact, if you are in the middle seat, you almost can't avoid watching it. The little screen on the back of the phone that tracks the markets is right in front of you. I found myself on a flight to Colorado one day tracking a stock I owned. I used a device in the GTE phone that enables you to get a quote on any stock off Bloomberg by punching in the stock's initials, using the letter keys on the phone's dialing pad. On this three-hour flight from Washington to Denver, I checked my stock five times, and sold it from a pay phone in Denver airport as soon as I landed. I never would have had the information or the ability to track and sell that stock with such immediacy a decade ago.

But that isn't necessarily going to make markets more stable. Edward Chancellor, in his book on the history of financial speculation, *Devil Take the Hindmost*, explains why the conventional wisdom was so wrong about the impact of more information on the stability of the Electronic Herd. Most commentators, he noted, "viewed advances in information technology as a boon. If markets were inherently efficient, they would

become even more so when supplied with better information. They might even become rather dull, like a reliable motorcar. In fact, there is little historical evidence to suggest that improvements in communications create docile financial markets or better informed investment behavior. If anything, the opposite appears to be the case. In the past, the wider availability of financial information and improvements in communications have tended to attract impulsive new players to the speculative game: the first generation of daily newspapers stimulated the South Sea Bubble, the new 'money market' columns of the British newspapers contributed to the mining mania of 1825, railways facilitated railway speculations in the 1840s, just as the ticker tape assisted stock market gambling in the Glided Age and radio programmes in the 1920s excited a later generation of speculators. More recently, the Internet has brought the stock market into the home, where it has thrived . . . This has led to the appearance of hordes of 'day traders,' amateur speculators who operate mostly from their homes, using their computers to access the cheap share-dealing services provided by on-line brokerages. By the summer of 1998, five million Americans had accounts with Internet discount brokerages and around a million of them were day traders. Average turnover on these on-line accounts was twelve times heavier than at conventional brokerages. Some traders reportedly carried out a thousand trades a day." Indeed, NASDAQ market-makers will tell you that it isn't the long-horn cattle in the Electronic Herd—the big mutual funds—who push Internet stocks up and down like a roller coaster. It's the little short-horn day-traders, impulsively buying 200 or 300 shares at a time on one whiff of news or another. Most of them don't even know the companies they are buying or selling, but are just trading symbols.

To be sure, if the herd comes your way, it can, in short order, rain billions and billions of dollars on your country's stock and bond markets, as well as directly into plants and factories. That is why more and more countries are interested in doing whatever it takes to plug into this herd. But when for political, economic or social reasons markets in one country become unstable or weak, the Electronic Herd can transform what might have been a brutal but limited market adjustment downward into something much more painful and exaggerated, and it can also transmit instability much more quickly between markets, and from bad markets to good markets.

As Alan Greenspan has noted in speeches, the very same financial globalization "which has induced such dramatic increases in private capital flows has also exhibited significantly improved capacities to transmit ill-advised investments." The Federal Reserve chairman adds that "one can scarcely imagine the size of losses (\$1 billion) of a single trader employing modern techniques that contributed to the demise of Barings in 1995 being accomplished in the paper-trade environment of earlier decades. Clearly, our productivity to create losses has improved measurably in recent years." Or as Egypt's Minister of Economy, Yousef Boutros-Ghali, likes to say: "In the old days you panicked in a room with a hundred bankers, now you panic everywhere. Panic has been democratized."

There is only one saving grace with all this. What goes around faster comes around faster, but then it also goes around faster again. While problems can come faster, so too can solutions—*provided your country does the right things*. When everything is speeded up, the world has a shorter memory. Mexico stiffed creditors in 1995 and by 1998 it's a darling of international investors again, and no one remembers 1995. Korea nearly goes bankrupt in 1997 and by 2000 Wall Street is lining up again to buy Korean bonds.

The Long-Horn Cattle

While it is often the big short-horn cattle of the Electronic Herd, such as George Soros, who make the headlines these days, the long-horn cattle play an increasingly important role. The long-horn cattle are multinational companies who engage in what is known as "foreign direct investment"—meaning that they don't just invest in a developing country's stocks or bonds, but rather invest directly in its factories, utilities, energy plants and a whole host of other projects that take time to plan and build and can't be pulled out overnight. The long-horn cattle are companies such as Ford, Intel, Compaq, Exxon and Toyota. Thanks to globalization they are investing more money abroad in more ways and in more countries than ever before.

Under the Cold War system, when countries often protected their local markets with tariff walls, multinational companies would make

long-term multimillion-dollar investments in big-market countries primarily for the purpose of jumping over those walls. In other words, Toyota would get around the American quota on Japanese auto imports by building a factory in the United States that would make Toyotas to be sold almost exclusively in the U.S. market, and Ford would do the same in Japan. In order to survive in a world of walls, multinationals had to build factories in key markets so that they could become better *local* producers and sellers in that market.

Once the democratizations of technology, finance and information blew away many of the Cold War walls, however, the long-horn cattle in the Electronic Herd had a much greater, and somewhat different, incentive to build factories abroad. Increasingly, there was a single, open global marketplace, and cyberspace, where a multinational company could sell anything anywhere or make anything anywhere. This has sharpened competition and squeezed profit margins in many industries. As a result, every big multinational needs to try to sell globally, in order to make up in volume for shrinking profit margins, and it needs to try to produce globally—by slicing up its production chain and outsourcing each segment to the country that can do it the cheapest and most efficiently—in order to keep manufacturing costs down and remain competitive. This has led to more multinationals investing in more cost-lowering production facilities abroad, or making alliances with cheaper subcontractors abroad—not to survive in a world of walls, *but to survive in a world without walls*. In the era of globalization, multinationals increasingly need to expand overseas, not because it's the only way to be an effective local producer in these countries, but because it's now the only way to become an effective global producer.

USA Today's Kevin Maney had a story in the April 24, 1997, edition that captured how IBM is now using all sorts of foreign partners and subsidiaries to become a better, smarter global producer in a world without walls. Maney reported the following: "A group of computer programmers at Tsinghua University in Beijing is writing software using Java technology. They work for IBM. At the end of each day, they send their work over the Internet to an IBM facility in Seattle. There, programmers build on it and use the Internet to zap it 5,222 miles to the Institute of Computer Science in Belarus and the Software House Group in Latvia. From there, the work is sent east to India's Tata Group, which passes the

software back to Tsinghua by morning in Beijing, back to Seattle and so on in a great global relay that never ceases until the project is done. "We call it Java Around the Clock," says John Patrick, vice president of Internet Technology for IBM. "It's like we've created a forty-eight-hour day through the Internet."

In the 1970s, the Canadian-owned shoe company Bata might have had a dozen shoe factories in key markets around the world, but each would have been targeting that local market, adapting to the local styles and demands and selling virtually 100 percent of its output in that market. Today, by contrast, Nike can design a shoe in Oregon and transmit by fax or E-mail its latest design adjustments overnight to its factories and subcontractors all over Asia who will start turning out a new track shoe for global consumption the next day.

While it is true that the Fords, Ciscos, Nikes and Toyotas—the long-horn cattle—don't move their capital around as fast as the short-horn cattle, they are shifting it from country to country faster than many people realize. A lot of the foreign investing that the long-horn cattle do these days is not building factories anymore. It is developing alliances with locally owned factories, which serve as affiliates, subcontractors and partners of the multinational firms, and these production relationships can be and are moved around from country to country, producer to producer, with increasing velocity in search of the best tax deals and most efficient and low-cost labor forces. Cisco has thirty-four factories around the world manufacturing its equipment, but only two of them are owned by Cisco. The others are alliance partners intimately tied into the Cisco design, inventory and marketing system through the Internet. Cisco calls them "virtual manufacturing" facilities. Thanks to the Web, by which they are tied together, they behave as though they are one wholly owned factory, but they are not, and production can be shifted instantaneously between them.

The long-horn cattle can and do play off every developing country against the others. Each of these countries is desperate for multinational investments, because it is the quickest way for them to make technological leaps. Nike first established its Asian production facilities in Japan, but when that got too expensive it hopped over to Korea and then went to Thailand, China, the Philippines, Indonesia and Vietnam.

"They are a necessary good," says Brazilian management consultant

Joel Korn, speaking about multinational firms. "Latin America is still highly dependent on external capital, because domestic savings are simply not enough to sustain high economic growth. So we need direct foreign investment. [These long-horn cattle] also bring international standards and technologies and help us become attuned to the patterns of different markets, and they also bring foreign partnerships, which themselves bring technology transfers and new markets of their own. If you don't let [the long-horn cattle] in today, it's as if you're living alone on a different planet."

Although this sort of globalized production began in the Cold War system, it has vastly expanded in the era of globalization, as the long-horn cattle have been very busy procreating. According to the World Bank, the share of total world output by the local affiliated factories of multinational corporations has gone from 4.5 percent of world Gross Domestic Product in 1970 to double that amount today. While these percentages may seem small, the dollars behind them are enormous, because we are talking about total world output. In 1987, foreign direct investment in developing countries accounted for 0.4 percent of their total GDP. Today it is over 2 percent and it is now spread out, not just to the ten big emerging markets, but all over the world. If you look at all U.S.-owned foreign affiliates—companies such as Ford Motor Mexico, for instance—and ask what percentage of their sales were exported in 1966 and what percentage were sold to the local markets, the answer would be 20 percent was exported in 1966 and 80 percent locally consumed. Today, 40 percent is exported and only 60 percent locally consumed. No wonder Craig Barrett, the chairman of Intel, told me he has a string of ambassadors and statesmen from all over the world calling on him every month in Silicon Valley, with one message: "Come hither with your factory."

George St. Laurent is chairman of Vitech, the Brazilian-based computer manufacturer that he founded in Bahia state in northeastern Brazil, and he is a typical long-horn member of the Electronic Herd. He knows that in his own way he has a lot of power today, and he explained to me one afternoon in Brazil that he does not hesitate to let the Brazilian authorities know exactly what he needs if he is going to keep his computer company there, with all the jobs and technology transfers that come with it. He said: "I have to have a stable currency to continue to

attract foreign capital, so they have to have their budget in balance and inflation under control and the size of the government down. One of our primary goals is to bring investment capital here, and the capital won't come in if it is not sure at what value it is going to be when it wants to go out. [Moreover,] I have to be convinced that the politicians have the same sense of client-supplier relations as I do. If you are my customer, to get you to buy my computer notebook I will get on my hands and knees. The politicians here don't like to think like that, because they are not used to ever having to assume the role of the vendor. They are used to having everyone come sit at the foot of their throne, and they dole out goodies and power as they see fit."

Indeed, as St. Laurent suggests, the increasing power of this Electronic Herd is something many traditional leaders are just beginning to understand and adjust to. I first discovered this while visiting Mexico at the depths of the 1995 peso crash. My education began on the flight in. I was feverishly filling out the customs form they passed out on the plane, when line 3 stumped me. It said you had to find and circle your occupation and listed nine different choices. "Columnist" was not one of them, but there was "farmer," "driver of a vehicle," "livestock raiser" and then one that just leapt out at me. It said: "bondholder." That word told me everything about Mexico's predicament at the time. Mexico had become so dependent for its economic growth on foreign investors who would buy its government and commercial bonds that foreign "bondholders" had their own category on the customs form.

Unfortunately for Mexico, most of the people who were checking that box at that time were going out, along with their money, not coming in. When I went to interview a shell-shocked official of Mexico's central bank, he asked me about these global bondholders who were dumping Mexican paper. "Why were they so mad? Why the vengeance?" he asked. I didn't know how to tell him that hell hath no fury like an American mutual-fund holder with a cell phone who just saw his investment devalued. Then I went to see Enrique del Val Blanco, an official of Mexico's Human Services Ministry, and he sounded to me like a man living through *Invasion of the Body Snatchers*. He told me: "Everyone feels their life is determined by someone outside, and everyone wants to know who is this person? Who is this force? We thought that we were on the path to the First World and suddenly something went wrong. One minute

the World Bank and IMF were saying Mexico was the best example. Now we are the worst example. What did we do? We are losing control. If we don't find another type of development, we are finished. We surrender."

That same day I went across town to the Los Pinos presidential palace to see President Ernesto Zedillo, who was still reeling from the peso collapse. I don't remember much of what he said, but I will never forget the scene. I and my colleagues from the *Times* were ushered into the palace by a guard and told to go upstairs and down some halls to the President's office. It seemed as if no one was around. We went through one set of doors, then another, and then another, until we came to a secretary's small desk and she pointed us to the President's cavernous office. We walked in, and there, sitting alone at a table in the corner, was President Zedillo, listening to Tchaikovsky's "1812 Overture" on the office stereo, and looking a lot like Napoleon after Waterloo.

In the last decade a whole generation of postcolonial leaders—Zedillo, Mahathir, Subarto, even Boris Yeltsin—have found out what it is like to get hammered by the Electronic Herd. It is not pretty. The herd proved to be unlike any of their familiar domestic enemies. They could not arrest it, censor it, ban it, bribe it and often could not even see it. Some, like Zedillo, just bowed to its dictates. Mahathir and Subarto, though, adopted a different tack. They called the herd names, alleged conspiracies, vowed to avenge its brutalities and, in Mahathir's case, eventually tried to shut it out with capital controls. Mahathir and Subarto grew up in a Cold War system that often inhibited either superpower from really speaking harshly or directly to Third World leaders, whose support was coveted in the Cold War game. But once the Cold War system ended, those restraints went out the window. And today, the lead bulls of the herd, they're not like the State Department, the UN or the Nonaligned Movement. They don't tell you that they feel your pain, or that they understand your grievance because of your colonial experience. They don't tell you that you are so unique, so important to stability in the region, that they won't lay a finger on you. They just have their way with you and move on. The Electronic Herd turns the whole world into a parliamentary system, in which every government lives under the fear of a no-confidence vote from the herd.

I was speaking to Malaysia's then-Dputy Prime Minister, Anwar

Ibrahim, in Kuala Lumpur at the height of the 1997 Asian economic crisis, before he was ousted by Mahathir. Anwar told me that as Mahathir kept accusing the Jews, Soros and other conspirators of deliberately driving down the Malaysian currency, Anwar and some of his colleagues finally went to Mahathir with a chart and said to him something like the following: "Look, you said this about Soros on Monday, and the Malaysian ringgit fell to here. You said this about the Jews on Tuesday, and the ringgit fell to here. You said this about global investors on Wednesday, and the ringgit fell to here. SHUT UP!"

In Suharto's case, the Electronic Herd actually helped to trigger the uprising that ousted him from power in early 1998, by so undercutting the Indonesian currency and markets that the Indonesian public and army lost all confidence in Suharto's leadership.

Supachai Panichpakdi, Deputy Prime Minister and Minister of Commerce of Thailand, today wears the battle scars of someone whose country tried to box with the herd and lost: "We made one mistake—linking our currency [the baht] to the dollar for six months too long without devaluing," he said of the 1997 crisis. "It should not have been a disaster, but because of the bandwagon effect [of the herd], everyone jumped on our currency. So instead of just going down fifteen or twenty percent, it went down fifty percent. Because the market is globalized [the herd] learned about our lack of reserves. The first time they attacked our currency was in February, and then in March, and then in April. And each time the Thai Central Bank defended the currency with reserves and each time our Central Bank came out and said, 'We won.' But they actually lost each time. Because the reserves were being run down. We thought the world didn't know about our reserve levels, but the markets knew—our own people didn't know—but the markets knew. My friends in Singapore and Hong Kong knew, and they were calculating each time we defended our currency how much reserves the Thai government had left to intervene with. When you ask our former Prime Minister he will tell you that none of this information was being presented to him. But the market had it figured out and they knew when there had been a turning point, when we couldn't defend the currency anymore. And that's when they really went after us."

Adjusting to the power of the Supermarkets and the Electronic Herd requires a whole different mind-set for leaders, particularly in emerg-

ing markets. In the past, members of the Electronic Herd competed to see who could make themselves most attractive to governments, both domestic and foreign. For it was governments that passed out most of the goodies. Now governments compete to see who can make themselves the most stable, inviting and attractive to the Herd. Because it is now the Electronic Herd that increasingly passes out the goodies. To put it in a phrase: All world leaders have to think like governors now. Governors in American states get to make some decisions, just like presidents and prime ministers. They even get to send out the National Guard sometimes. But their main job these days is enticing the Electronic Herd and Supermarkets to invest in their states, doing whatever it takes to keep them there and constantly living in dread that they will leave. That's why the world today is increasingly ruled by governors, no matter what their specific title happens to be. And that is why the preeminent political leader of the globalization era is the governor of all governors, the governor of the United States, William Jefferson Clinton.

Kings, dictators, emirs, sultans, traditional presidents and prime ministers—they're all being reduced to governors now. In the fall of 1997, I visited Qatar, the tiny Arab oil state off the east coast of Saudi Arabia, and was invited one afternoon to have lunch with the emir, Sheikh Hamad bin Khalifa al-Thani. He is a delightful man, and smart like a fox, but he is a man used to giving orders, not taking them. He was asking me about the economic crisis in Malaysia and Southeast Asia and I was telling him how the Electronic Herd and the Supermarkets were punishing Malaysia for Mahathir's excesses, including his building of the world's two tallest buildings. Sheikh Hamad listened, and then said something that sounded so much like a governor, not an emir. He said, "Well, I guess I better not build any tall buildings here. The markets might not like that."

The way in which leaders, individuals, investors and companies are all learning to adjust to this new system of globalization is really the hallmark of the late twentieth century. There is just one more thing I have to say about it, though: You ain't seen nothin' yet.

As I have tried to explain, the democratizations of technology, finance and information—which have changed how we communicate,

how we invest and how we look at the world—gave birth to all the key elements in today's globalization system. They are what blew away the walls. They are what created the networks which enable each of us now to reach around the world and become Super-empowered individuals. They are what created the links and the space for the Electronic Herd and the Supermarkets to really emerge. They are what blew away all the old ideologies, other than free-market capitalism. They are what created the incredible new efficiencies that every business either has to adapt to or die. They are what lowered the barriers to entry into virtually every business. They are what is forcing people to change from thinking locally first and then globally, to thinking globally first and then locally.

It is because of the Internet that I say you ain't seen nothin' yet. The rise of the Internet, which came in the last stages of the democratizations of technology, finance and information, certainly contributed to this new era of globalization. But as the Internet proliferates, it is going to become the turbocharged engine that drives globalization forward. The Internet will ensure that how we communicate, how we invest and how we look at the world will be increasingly global. Because from the moment you log onto the Internet you can communicate with anyone globally practically for free, from the moment you log onto the Internet you can invest in any market globally practically for free and from the moment you start a business that has an Internet Web site, wherever you are in the world, you will have to think globally—in terms of both who your competitors might be and who your customers might be.

In early 1998 I went out to Silicon Valley to talk about some of this with John Chambers, the president of Cisco Systems, which makes the pipes and black boxes that connect the Internet around the world. He said to me at the time: "The Internet will change everything. The Industrial Revolution brought together people with machines in factories, and the Internet revolution will bring together people with knowledge and information in virtual companies. And it will have every bit as much impact on society as the Industrial Revolution. It will promote globalization at an incredible pace. But instead of happening over a hundred years, like the Industrial Revolution, it will happen over seven years."

As Chambers spoke, I wrote down what he had to say and even quoted it in a column, but it never really sank in with me. I look it to be the sort of typical exaggerated talk you hear from technologists. "Yeah,

yeah, yeah," I thought, "the Internet is going to change everything. That's what they always say." But the more I wrote this book, the more I realized that what Chambers said not only was true, it was understated.

A few months after I visited Chambers, his office sent me a box of cups, pens and a shirt bearing Cisco's new advertising campaign logo, which you may have seen on TV. It's very simple. Cisco's TV ads consist of people, young and old, from all over the world looking straight into a camera and asking: "Are you ready?" Again, when I got the box of stuff with that logo on it in the spring of 1998, I looked at it and said to myself, "What's all this junk? What a strange ad campaign. I mean, 'Are you ready' for what?"

But as 1999 became the year of the Internet, the year when the Internet achieved a critical mass and really did begin to define both commerce and communication, I started to understand exactly what Cisco meant by "Are you ready?" The Internet is going to be like a huge vise that takes the globalization system that I have described in this section of the book—the Fast World, the Electronic Herd, the Supermarkets, the Golden Straitjacket—and keeps tightening and tightening that system around everyone, in ways that will only make the world smaller and smaller and faster and faster with each passing day.

Think about it: thanks to the Internet, we now have a common, global postal system, through which we can all send each other mail. We now have a common global shopping center, in which we can all buy and sell. We now have a common global library, where we can all go to do research, and we now have a common global university where we can all go to take classes. By 1999 more than half the adult U.S. population, 100 million people, were online. It is increasingly common in America to run into people who have bought not just a book online, but also a mortgage, a new computer and a car. And it's not just happening in America. Look at India. In the poor regions around Delhi, an Indian start-up cellular phone company, called the Usha Group, has Indian-style Avon ladies who go house-to-house in the poorest villages, carrying cellular phones to people who don't have phones in their homes. For a small fee, villagers can use the phones for a few minutes to make all their calls. Now Usha is installing public call centers in many of these villages—with cheap Internet access.

Treasury Secretary Larry Summers likes to tell this story: "Some

time ago, I visited Mozambique—by some measures the world's poorest country—to discuss issues relating to debt relief. Seated at a lunch with the local business community, I inquired of the person next to me how business was. He responded, 'Pretty good, but I am worried about the future.' When I asked why, he explained that he was the monopoly Internet provider in Mozambique but feared that competition was coming and would erode his profits."

And he was right to worry. Adjusting to this next phase of Internet-driven globalization, with the world getting smaller and faster by the day, is going to be a huge challenge for all of us—individuals, countries and companies. The next two sections of the book—"Plugging into the System" and "The Backlash Against the System"—explain what I mean.

Are you ready?