WIRED

The Roaring Zeros

The good news is, you'll be a millionaire soon. The bad news is, so will everybody else.

By Kevin Kelly

The good times have never been so good, but we can see the end clearly. It starts with an urgent email from someone on AOL: *You better turn on CNBC.* A single unmet expectation has spooked the New York Stock Exchange into a free fall. This is the Big One.

The market is closed the next day to "restore stability," but the server farms of the major online brokerages have already melted down. By the end of the first week, ruined daytraders are leaving the country with doctored passports, and caterers and cruise lines start getting cancellations. By the second week of the crisis, résumés flood the online databases, and the layoff announcements in the dot com sector begin. The fragile pyramid scheme that supported Stocktopia vaporizes, and with the Dow sunk to an abysmal 3,000, your own job is in jeopardy.

We have rehearsed this downfall in our minds over and over again. Each of us has clever friends who mutter about tulipmania and the madness of crowds. Any one of us can fill in the gory details. The Crash is effortless to imagine.

But what if we face, instead, a decade or more of continued good times? What if the digital bubble is made of Kevlar? What if the Dow doesn't fall to 3,000, but zooms to 30,000 in four years? What if we are just at the beginning of the beginning of a long wave of ultraprosperity?

Picture 20 more years of full employment, continued stock-market highs, and improving living standards. Two more decades of inventions as disruptive as cell phones, mammal cloning, and the Web. Twenty more years of *Quake,* index funds, and help-wanted signs. Prosperity not just for CEOs, but for ex-pipe fitters, nursing students, and social workers as well.

> **The market will fluctuate daily, but by 2010, the Dow will soar past the 50,000 mark.**

How many times in the history of mankind have we wired the planet to create a single marketplace? How often have entirely new channels of commerce been created by digital technology? When has money itself been transformed into thousands of instruments of investment? It may be that *at this particular moment* in our history, the convergence of a demographic peak, a new global marketplace, vast technological opportunities, and financial revolution will unleash two uninterrupted decades of growth.

This quick-boom scenario promises accelerating economic expansion, perhaps in the vicinity of 4 percent per year - a scenario that's simply off our charts, a prospect so unfathomable that we have refused to consider its implications.

We're the products of nearly a half-century of scientific truthfulness, media skepticism, and postmodern relativism. In other words, we've grown allergic to the actual idea of improvement. We accept success when it comes, but with a sense of misgiving; the most unthinkable thought in the closing days of the 20th century is that next year, next decade, next century, things will be a whole lot better.

Yet ultraprosperity for Americans looks more plausible all the time. The metrics point to it: a booming stock market, low inflation, high employment, steady consumer confidence, price stability, low interest rates, rising wages, lowering crime, and no sign of any of these waning. While the End of Civilization As We Know It can happen anytime (you know the script), the Beginning of Prosperity As We Have Never Known It seems equally probable. Why not rehearse both?

The beginning of every previous boom has hatched prophets claiming that "this time is different." Immediately after these claims are made, the market crashes. But sometimes, things really *are* different.

This time, for the first time, the economy reflects these four forces at once:

Demographic Peak The largest, best-educated, most prosperous generation that has ever lived is entering its peak years of productivity, earning, and spending. This is true for the US, but also for much of the rest of the developed world. This boom of producers and consumers creates a huge market for products, a huge force of creativity, a huge pile of money, and a huge demand for investments.

Technology Rush The largest deployment of novel products and services, labor-saving machines, and life-changing techniques is now under way. In addition, we'll begin to harvest the productivity gains of technology deployed in the past two decades. But most important, new technology is creating entirely new territories of economic development (the Internet and kin) that will be profitably settled in the next decade.

Financial Revolution Money itself is undergoing a revolution. The velocity of money - how often it changes hands - continues to increase, middle-class values continue to spread around the world, and financial inventions continue to proliferate. Innovations such as mutual funds, rapid IPOs, microloans, 24-hour markets, hedge funds, smartcards, reverse auctions, and mass online trading liberate the flow of capital and spur intense economic growth. And the transformation of money and markets has only just begun.

Global Openness The spread of democracy, open markets, freedom of speech, and consumer choice around the globe accelerates economic growth. Global openness not only enlarges the potential market for any invention to 5 billion customers, it also creates intense competition among governments to construct environments hospitable to progress. Prosperity can no longer be segregated to one part of the globe, and when prosperity does break out, it is amplified quickly by ever-spreading freedoms.

Fast-forward to 2020. After two decades of ultraprosperity, the average American household's income is $150,000, but milk still costs only about $2.50 a gallon. Web-enabled TVs are free if you commit to watching them, but camping permits for Yellowstone cost $1,000. Almost everyone working has signed up for a job that does not exist (at the moment); most workers have more than one business card, more than one source of income. Hard-hat workers are paid as much as Web designers, and plumbers charge more for house calls than doctors. For the educated, the income gap narrows. Indeed, labor is in such short supply that corporations "hire" high school grads, and then pay for their four-year college educations before they begin work.

What the rich have in the year 2000, the rest have in 2020: personal chefs, stay-at-home moms, six-month sabbaticals. The personal private foundation has become *the* status symbol of wealth. *People* magazine features its annual list of the world's most charitable donors. Although tax rates have lowered, the amount of money flowing into state and federal budgets is awesome. Social Security has ample funds, and hundreds of thousands of schools, hospitals, and libraries have newly opened. Ambitious, large-scale public works are all the rage; there's a scandal over whose corporate logos appear on the space suits of the first manned mission to Mars. The majority of Americans are heavily invested in the stock market, so market quotes are as ubiquitous as pop music. The abundance of cheap appliances and gadgets has devalued possessions. The most affluent consumers boast of having less of this or that, but in the end they spend a larger percentage of their income on services and products that attempt to define their identity. In the age of ultraprosperity, it's easy to make a dollar, but hard to make a difference.

Indeed, money gets dull quickly, and that becomes the greatest challenge in the age of ultraprosperity - to make money mean something, or to find meaning outside of money.

If we handle prosperity properly, it should focus our attention on the other ingredients of wealth: friendships, relationships, values, character, charity, justice, and thinking about the long-term future. What better use of prosperity than to prepare the wealth of seven generations hence? Whether in fact we'll be responsible with our prosperity in 20 years is too hard to predict. But here, in some detail, are a variety of consequences that seem possible, should this ultraprosperity happen.

The Dow at 100,000 The market will fluctuate daily, but by the end of the next decade the Dow Jones index will soar past the 50,000 mark. Barring total disaster, by the year 2025 the Dow will hit 100,000. Four analysts, using four different methods, have forecast the Dow reaching these seemingly exuberant heights in the coming decades. (See "Stocktopia".)

The Billionaire Next Door Today, 8 million Americans are millionaires. One estimate, cited by David Kaplan in his book *The Silicon Boys,* puts the number of millionaires in Silicon Valley at 250,000. Many analysts figure that one-third of Microsoft's 30,000 employees are millionaires. And it's not just in the Valley or Redmond; these days millionaires thrive across the US, in small towns as well as large. They're turning up everywhere, as suggested by the best-selling book *The Millionaire Next Door.* Based on that book's research, *Money* magazine sketches the typical American millionaire as a 57-year-old male who lives in the Midwest in a house worth $320,000, drives a Ford pickup, owns and runs a small business, and is worth $3.7 million. Of course, a million dollars doesn't go as far as it used to, so to be really rich in the next decade will require multiple millions. Today there are about 300,000 decimillionaires in the US, and 465 billionaires worldwide. But this expanding roster is not merely the effect of inflation. Adjusted for real dollars, there are more millionaire equivalents per capita than ever before. Ultraprosperity should push the number of millionaires living next door to about 20 million in another decade, and about 50 million by 2020. That would bring concentrations to Microsoft levels: about one out of three adult worker bees with a net worth of over $1 million.

Income used to drive consumption. Now consumption leads income.

The Equity Majority The percentage of Americans who own stock in corporate enterprises, either through pension funds, mutual funds, or direct stock ownership, has been rising rapidly. Today it is about 45 percent. By 2010 a clear majority of Americans will be equity holders, especially in a rising market. Historically, equity investments return greater yields than debt investments (like lending at a bank), so this equity class will prosper faster than groups that came before it. In addition, the current generation of workers increasingly demands equity stakes in the companies they work for (a practice once confined to top management), leveraging the wealth of workers and spreading the demand for further employee ownership. Equity culture is also spreading to Europe, as individuals for the first time invest their savings in mutual funds and demand equity in entrepreneurial startups. Ultraprosperity nurtures this emerging equity culture and enriches the equity majority.

Escalator Salaries for Most Those in the highest-paid quintile can expect to see their average household take-home rise to about $500,000 by 2020. The average wage will also rise, but not as fast. Membership in wage strata will remain highly mobile. Workers typically start out at the bottom and ride up the escalator to higher salaries. In one survey nearly a quarter of the workers in the bottom tier moved up the following year, never to descend again. From 1975 to 1991, less than 1 percent of one sample surveyed stayed at the bottom tier from year to year. Where do they go? Up. Three out of 10 low-income earners in 1975 rode the salary escalator to the top 20 percent of earners by 1991.

Cheap Necessities As societies become richer, people tend to spend less of their income on basics such as food, clothing, and shelter. At the turn of the century a typical American allotted three-quarters of his spending to these basics; by the 1990s this amount was reduced to 37 percent. It should be as low as 25 percent by 2010. This inverts the ratio of three-quarters for necessities to three-quarters for luxuries. Prosperity will liberate 75 percent of the average household income to be spent on nonessentials such as travel, self-fulfillment, charity, deluxe health care, risk reduction (insurance), pets, entertainment, investments, and lots of new gizmos. Another way to think of this is that the average citizen will need to work only three months a year to cover the basics of living (not counting taxes), while his or her work for the rest of the year will pay for the kind of things prosperity brings.

Consumptivity Cheap necessities breed consumption. Without consumption there is no boom. According to economist Paul Krugman, "Consumer spending traditionally lags behind the economy as a whole in boom times ... This time, however, consumers are leading the charge. While the economy expanded an impressive 4 percent ... consumption grew 5.5 percent."

But can our voracious appetite for new goods continue at this pace another 20 years? Can we possibly purchase, and enjoy, 10 times more than we now have without collapsing in fatigue? The answer is yes. As the real prices of goods continue to drop, we will continue to populate our environments with more of them. More cars. More phone lines. More bathrooms. More trips. More digital screens. More books. More of everything. Most important, we will shift from quantity to quality. As Jay Ogilvy of Global Business Network points out, we may start out by drinking lots of bottles of wine, but at some point we drink fewer bottles, of more refined and expensive vintages.

Extreme Affluence Shock High consumptivity and cheap necessities will blow the lid off the high end of premium goods. Real estate prices in trendy communities will go from outrageous to out of this world; the most expensive cars, clothes, and vacations will become outrageously ever more expensive. The deluxe end of all goods will become highly competitive, and every good and service will acquire a deluxe model. In fact, the boutique tier of the economy will not be able to absorb all the wealth aimed at it. The shock of extreme affluence (and extreme prices) will reverberate throughout society.

Jeeves Returns As go the rich, so go the rest. One can make pretty accurate predictions about how the middle class will behave by reviewing the lifestyle of the rich a generation or two earlier. Not long ago Hawaiian vacations, cell phones, and traveling in sweatpants were reserved for the very wealthy. As the ultraprosperity wave washes over middle America, the lifestyles of the working rich become a template for everyone else. What's the first thing the rich of today do? They hire Jeeves. They get personal assistants. They pay for doctors, vets, and trainers who make house calls, or chefs who come to their homes to cook for their family. They have gardeners, handymen, tutors for their kids, and all kinds of personal advisors. Time is their prime scarcity; so as wealth becomes more common, time will be purchased by buying personal services. Companies that save customers time will prosper. Ironically, the demand for such personal services raises wages for the suppliers, equalizing some of the wage difference between the no-collar folks "upstairs" and the hourly workers "downstairs." Even now, finding a good gardener can be on par with finding a good dentist.

Eight in Nine Leisure Time Ultraprosperity increases our leisure time - sort of. According to research by W. Michael Cox and Richard Alm (see "You May Already Be a Winner"), we already enjoy more leisure hours than we think. In 1870, for every hour we worked at a job, we spent roughly two hours not working - and devoted most of that free time to sleep. By 1950, the ratio was close to one hour working for four hours leisure. By 2010, for every hour of our lifetime that we spend working (including working at home), we'll spend eight hours in leisure. These gains in lifetime leisure hours come because we start working later, retire earlier, and live longer. Our leisure time is primarily bookended by youth and old age, with our working time intensely bunched during our middle years.

We can expect to finish life having worked only one out of every nine hours.

Polyemployment Today there are 20 million enterprises and 130 million workers in the US; that means there is one company for every six and a half workers. Starting a business is becoming as routine as getting a job. In another 20 years, there could be 40 million enterprises, or one company for every three bodies in the workplace. This is possible not because the average size of a company is shrinking to three people, but because so many workers double- or triple-dip, moonlighting, part-timing, consulting, or running a startup in their garage. Everybody is in business, and they are in more than one business. We're headed for polyemployment instead of unemployment.

Ten Thousand IPOs The several hundred companies a year that today invite public ownership could easily swell each year until the ranks of publicly traded companies rise to a total of 10,000. Publicly traded companies aren't necessarily better run or more profitable than privately held companies, but they tap into a tremendous supply of wealth looking for investments (see chart, facing page). And in a wonderful virtuous circle, successful IPOs generate huge amounts of wealth looking for yet more publicly accessible companies. Global 24-hour online trading of these stocks only speeds up their cycle of creation. Technology will force the invention of easier ways to invest in privately held companies without the hassle and limitations (say, minimum investments of $1 million) required now. The trend is toward maximizing the number of equity opportunities, because equity yields more than debt. This means an expanding reservoir of potential investors.

Pure Green Prosperity unleashes demand for pure water and air. The true costs of a clean environment can be faced and afforded. Air, soil, and water pollution will lower dramatically in the next 20 years. Healthy interiors, including air quality, will be the norm. Intolerance for pollutants and species extinction will be high. Once the basics of life are taken care of, quality-of-life services quickly follow - lower traces of pesticides in foods, more money spent for wildlife restoration. As the manufactured world expands, wilderness becomes highly valued. More land will be protected in the next two decades than in the last two. Ironically, technologies that diminish our impact on the environment will make more money and generate yet more prosperity.

Getting Richer Younger While fortunate times have created sudden wealth before, there has never been so much wealth in the hands of so much youth as in this wave. In the past, extreme wealth was slowly accumulated and enjoyed by people (mostly men) in the latter part of their life. Now the greatest wealth on the planet is going to an increasingly younger group of people who are also increasingly women. Workers are getting richer younger, and the young rich don't use their money in the same way as the old rich; the chief difference is that the young rich keep working. And since they are still working, still taking chances, after they buy their big house and fast cars they invest aggressively, demand equity rather than income, and keep priming the pump for more economic growth.

Big Giveaway What will the wealthiest generation in history do with all this money? Pursue philanthropy, for one thing. But giving money away is not as easy as it seems. Even today some charitable foundations whose endowments have ballooned as a result of stocktopia can't give away money fast enough. They don't have the staff to properly process the 5 percent a year they are required to give, because that 5 percent has grown so large in dollars. As prosperity takes off, the problems of giving it away compound. Hospitals and the opera won't do. Creative philanthropy will blossom; idiosyncratic quests loom. Giving big will be a status symbol. As Paul Saffo of the Institute for the Future says, "The BMW of the next decade will be the personal charitable trust fund."

Prosperity Dividend The tidal waves of wealth being generated by industry are surging into the coffers of the tax collectors. The US Congressional Budget Office expects to retire the national debt by 2009. In 2020, there could be a budget surplus in the trillions (!). As Matthew Miller, a senior fellow at the Annenberg Public Policy Center, says, "This means guns *and* butter: ballistic missile defense, universal health coverage, hefty tax cuts, *and* a Marshall Plan for Kosovo." Peter Schwartz of the Global Business Network suggests that a prosperity-fed treasury means that "we'll set out to do the Great Works - like upgrading schools, or sending a mission to Mars." The short-lived Peace Dividend gave us some idea of the difficulty in apportioning a bonus; a longer-lived Prosperity Dividend will likewise be hard to divide, all the more so as it gets bigger.

Help Wanted Forever In the ultraprosperity zone there are a million ideas, a million dollars to fund each idea, and no one to make it happen. Where do 40 million businesses find enough workers? Where do they find skilled and trained ones? Where do they find 40 million managers? People are the limiting factor in the expansion of prosperity. This plays into the strengths of people, making them the killer app. But it also makes a shortage of laborers a key challenge. Immigration may help. Retirees who never retire may also help. Extreme prosperity means perpetual help-wanted signs.

The Capital Tornado Walter Wriston, former CEO of Citibank, likes to quip that in the new economy, "money goes where it is wanted and stays where it is well treated." If ultraprosperity blooms, huge waves of money will continue to flow into US stock markets and startups as the best deals on Earth. The US economy becomes a tornado, whipping up huge gains on investments. That great sucking sound you hear is all the world's money rushing into the most booming economy. In the vortex, money is well treated, multiplying fast, sucking in yet more money. That leaves a huge arid vacancy in other parts of the world for capital. So one of the undesirable consequences of ultraprosperity may be the concentration of the world's capital into one market. On the other hand, competition for this capital becomes so fierce that many other regions of the world will do all they can to make rain and seed tornados. Several tornados of capital are likely to spin around the globe at once.

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