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**NEW ERA RECESSION?**  
**Deflation, Irrational Exuberance, & Y2K**

July 14, 1997

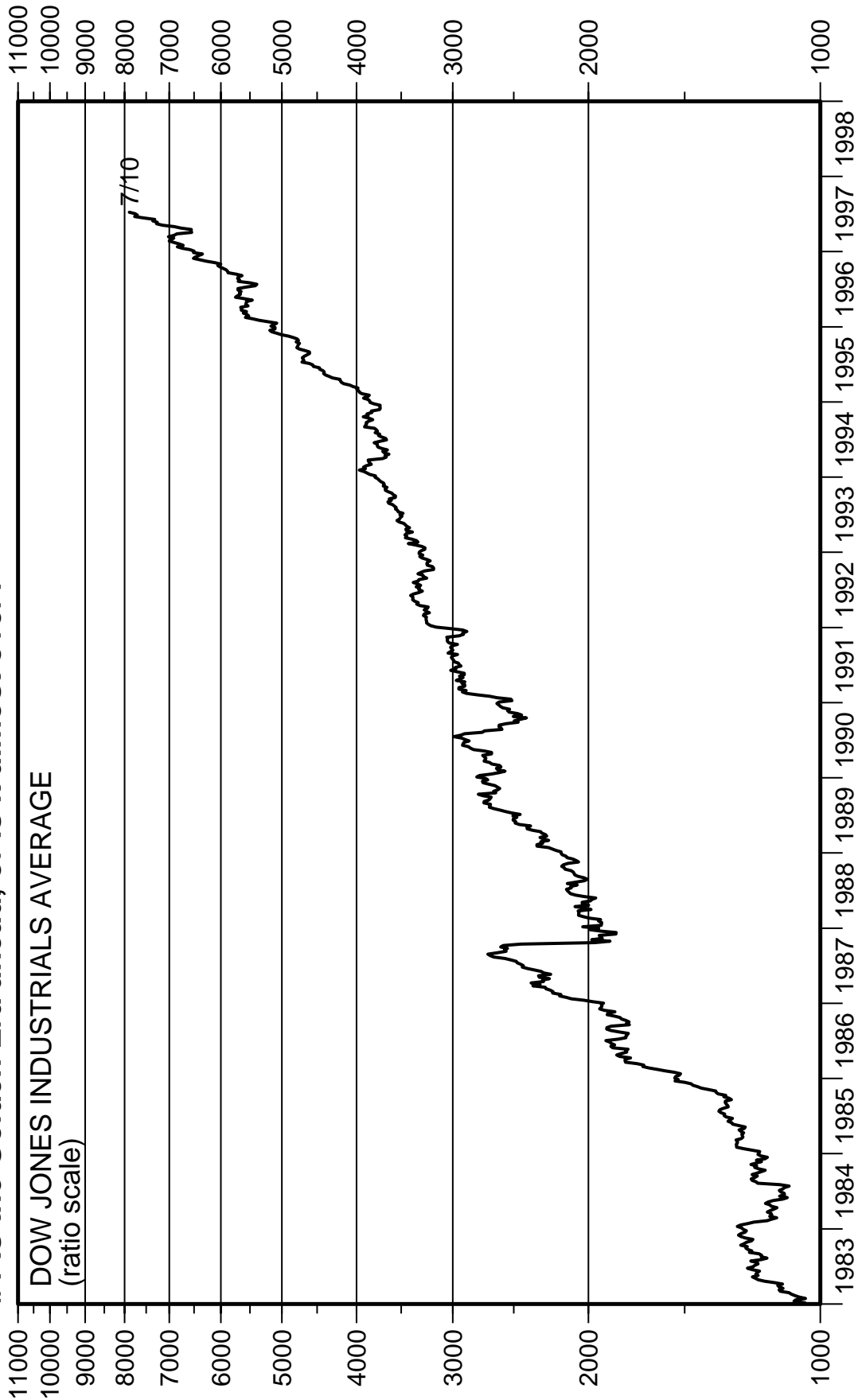


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# #1 Is the Golden Era ahead, or is it almost over?



## **I. New Eras Aren't Always Golden Eras**

I am a New Era economist. I am not a Golden Era economist. I believe that the end of the Cold War marked the death of inflation and the beginning of the High-Tech Revolution. Admittedly, since the late 1980s, I have promoted these Forces of Light and their happy economic and bullish financial consequences. Now that my optimistic New Era outlook is becoming the consensus, it is time to think about some problems that might unfold in the New Era. I see three potential Forces of Darkness:

- 1) Deflation,
- 2) Irrational Exuberance, and
- 3) The Year 2000 Problem.

Like Macbeth's three witches, these three problems could do some real mischief in the new millennium: "Double, double, toil and trouble." Indeed, I now think there is at least a 30% chance of a worldwide recession in the year 2000. I still expect the Dow Jones Industrial Average to hit 10,000 by the end of the decade (Exhibit 1). But that level could be followed by a significant drop in stock prices in the US and in other stock markets around the world. I think global investors should lighten up on stocks as their prices move higher over the next two years. I would add to bond positions right away, especially in the US and Europe. I still expect the government bond yield to fall to 5% in 1998. It could fall even lower—to 4%—by 2000.

## **II. New Versus Old Paradigms**

Old Era Pessimists attacked my optimistic outlook for the US economy and financial markets by claiming that it is based on a questionable and untested "New Paradigm." Previously, I've argued that my forecasting model isn't new at all. It is actually very old. It was first popularized by Adam Smith in the late 1700s and formulated more rigorously by Alfred Marshall in the late 1800s. The model is called Perfect Competition.

In a perfectly competitive marketplace:

1. There are no barriers to entry. Any new firm can enter any industry at any time.
2. There is no protection from failure. Failing businesses can't rely on government subsidies or intervention to bail them out.
3. Consumers have all the information they need to make the best buying decisions.
4. No firm in any industry can set the price. All firms are price takers. Firms can't increase profits by raising prices. They can increase profits only by cutting costs, boosting productivity, and through innovation.

In a world of Perfect Competition there can be no inflation. I realize this is a strong statement. Presumably, central bankers can always reflate by increasing the money supply. However, I am assuming that workers and businesses facing intense global

competition will insist on fiscal and monetary policies that will make their national economies globally competitive. I believe that Perfect Competition is becoming an increasingly accurate model of the world economy. If inflation remains near zero in the US, then the Fed won't tighten again, bond yields can fall to 5% by year-end 1998, and the Dow can soar to 10,000 by 2000.

This certainly seems like a Golden Era. In the Old Era, inflation was a big problem. In the New Era, it is no longer a problem. However, there are New Era problems that might tarnish the golden glow of the New Era. Our Goldilocks economy has been not too hot and not too cold. But even in that story there were three bears.

### **III. The Front Cover Curse**

The New Era is hot: The cover story of the July 14, 1997 issue of *Business Week* heralds "Alan Greenspan's Brave New World." The article claims that the "staunch conservative who once personified industrial era economic thinking has turned into the avant-garde advocate of the New Economy." The cover story of the July 1997 issue of *Wired* proclaims that we are in "The Long Boom." According to the cyber-mag, "We're facing 25 years of prosperity, freedom, and a better environment for the whole world."

I am glad that others are coming around to embrace my long-held, sanguine view of the US economy. However, I can't suppress my contrary instincts. Again, I am a New Era economist, not a Golden Era economist. New Eras can be golden ones, but not necessarily. And if they are golden, they may not be so all the time.

Speaking of gold, the New Era, so far, has been very bad for gold, which recently traded at the lowest prices in about a decade. The happy spin is that gold's sinking spell confirms that inflation is likely to remain near zero. The ominous possibility is that gold is signaling deflation ahead. (See the July 9, 1997 issue of our *Weekly Economic Briefing*, "Deflation message in gold?"<sup>1</sup>) Indeed, the PPI is down six months in a row for the first time in the 50-year history of this price index (Exhibit 2).

### **IV. Deflation Is The Risk, Not Reflation**

In a competitive market, the risk is deflation, not reflation. In a competitive market, the price is set by the "Invisible Hand," by the interaction of supply and demand. The price will equal the lowest marginal cost of the last item bought in the market. A producer aiming to increase profits can do so only by increasing market share, i.e., by selling more units. This can be achieved only by lowering the cost and the price of the incremental output. Successful market leaders will force their competitors to follow, or else go out of business if they can't offset lower prices with lower costs. The competitive market

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<sup>1</sup> [http://www.yardeni.com/yardeni/public/b\\_970709.pdf](http://www.yardeni.com/yardeni/public/b_970709.pdf)

leaders can't evolve into monopolists because new firms can and do enter the industry to replace those that fail.

There are two ways to restructure (i.e., to cut) costs: 1) regressive and 2) progressive. In the former, costs are slashed typically by firing workers and reducing budgets. In the latter, management finds ways to increase sales per employee through productivity and innovation. Indeed, the most progressive way to restructure is to lower prices both to gain market share and to increase the size of the market. The resulting increase in unit sales will boost productivity, which should pay for the price cuts and boost profits.

In a competitive market, prices will tend to fall. This can be a benign scenario if it is based on progressive cost cutting. If sales per employee rise, then productivity gains will pay for the price cuts. The risk in a competitive market is weak sales. In this scenario, companies cannot generate enough progressive productivity gains, so they resort to regressive means. They fire workers and slash capital spending budgets. The combination of intense competition and weak sales can add up to a very destructive deflationary spiral, which is bad for profits and bad for workers.

I'm not very concerned about this deflationary scenario. I believe that companies will find enough growth around the world—especially with all the opportunities that have opened up after the end of the Cold War. This growth will either avert deflation, or generate the productivity necessary to offset deflationary pressures, so profits will remain robust. My main concern is that the forces of deflation when combined with the other two Forces of Darkness could be troublesome.

## **V. Irrational Exuberance**

The Dow Jones Industrial Average is on the verge of rising above 8000. It is up 2000 points in only nine months. Obviously stock market investors are also embracing the New Era and expect that it will also be a Golden Era. There isn't much to worry about, and that has me worried. You might recall that on November 11, 1996—right after the national elections—I wrote an article titled “Nothing To Fear But Greed Itself.” Less than four weeks later, on December 5, Fed Chairman Alan Greenspan worried out loud about “irrational exuberance” in the stock market. The Dow was at 6437 back then. Is the Fed Chairman even more worried now that the market is 1500 points higher? Apparently not, according to the *Business Week* story cited above. He is impressed by profit margins, which have been boosted by productivity.

Should we still worry that the Fed will raise interest rates to avert speculative excesses in the stock market? Yes, but only if the Dow rises to 10,000 over the next six to 12 months instead of over the next 2½ years. Then the Fed might have to act. Baby boomers and other investors might decide that it makes more sense to put even more money into stocks rather than buy a new car, new furniture, and new clothes. There might be a negative wealth effect, rather than a positive one: Higher stock prices might depress consumer

spending rather than boost it if investors pour money into equity mutual funds at a faster rate.

Auto and nonauto retail sales were surprisingly weak during the second quarter despite solid real income gains and soaring consumer confidence and stock prices (Exhibit 3). The most reasonable forecast is that real consumption and real GDP growth will rebound during the second half of the year. However, if economic growth doesn't do so and stocks soar because equity mutual funds inflows increase significantly, then a negative wealth effect is in force.

This scenario would pose a real dilemma for the Fed. If they ease to boost economic growth, they'll be throwing gasoline onto the stock market's speculative fire. If they tighten to stop irrational exuberance, the stock market might drop, which might push the economy into a recession. I think, in this no-win scenario, they'll choose to lose by raising interest rates and take a recession.

Don't get me wrong. The stock market isn't irrationally exuberant at this point. I still expect it will move to 10,000 by 2000. The risk is that it might get there much sooner. This would be fun on the way up. But it could set the stage for a very nasty correction, maybe even a crash. How will we recognize irrational exuberance? Let's watch equity mutual fund inflows and the personal savings rate and see if they both rise significantly along with stock prices in coming months (Exhibits 4 and 5).

## **VI. The Year 2000 Recession**

I am staying up late at night lately cruising the Internet looking for information about "The Year 2000 Problem," alias Y2K. There isn't much. But what I've found disturbs me. I am now convinced that there is at least a 30% probability of at least a mild recession in 2000. Interestingly, recent converts to the New Era view seem to be unaware of this problem. For example, the *Wired* story about the Long Boom carefully lists 10 scenarios that might spoil the 25-year boom. Amazingly, Y2K isn't mentioned at all! I recently searched the huge Nexis-Lexis database for articles about The Year 2000 Problem. From 1990 to 1994, there were ZERO references. In 1995, there were 16. Last year there were 445, and 663 so far this year. The world is only now starting to recognize Y2K.

Many legacy computer systems were programmed to recognize only the last two digits of years. They will read "00" as 1900 rather than 2000. They are called "legacy" systems because they have outlived generations of programmers. Such systems often have patch upon patch of code, with little accurate documentation. Howard Rubin, chairman of the Department of Computer Science at Hunter College, conducts a yearly poll of Fortune 1000 companies and has found that only one in five knows the size of its software inventory. Still, most businesses will undoubtedly fix Y2K in time to avoid an economy-

wide disaster.<sup>2</sup> But some businesses might fail, which would boost unemployment. If they are important vendors to other companies, the domino effect could be disruptive enough to cause a recession. Companies that fix the problem will be in a great position to acquire those that haven't. The new millennium might begin with a wave of mergers and acquisitions, which might also mean fewer jobs.

As the year 2000 approaches, many companies may be forced to spend an enormous amount of money and man-hours to meet the dreaded deadline rather than on capital outlays.<sup>3</sup> After the deadline, lawsuits may also absorb an enormous amount of money and time. The July 28, 1997 issue of *Forbes* quotes one top lawyer on this subject: "This thing is going to be on the same scale litigationwise as the environment, the S&L crisis, and asbestos combined." At a meeting at Lloyd's of London recently, a year 2000 task force told underwriters to expect \$1 trillion in litigation in the US alone.

At least a few key US government agencies are likely to miss the deadline. The Office of Management and Budget just released its May 15, 1997 quarterly report, "Getting Federal Computers Ready for 2000." It is a shocker: Of the nearly 4,500 "mission-critical" computer systems the government needs to repair—which include those that handle defense, air traffic control, and income taxes—only 6% have been fixed. In a memo dated September 1996, the Federal Aviation Administration observed that unless fixed, radar and communication processors will pose "a safety risk if the systems do not function correctly."

On April 16, 1996, George Munoz, Assistant Secretary of the US Treasury, told a Congressional panel that the government has a huge inventory of legacy software. "The vendors who originally provided the software are either no longer in business or not upgrading these early versions of their products." Mr. Munoz added:

There is no one solution for all situations because of the inherent complexities. Huge legacy systems are full of homegrown routines, adapted for specific agency requirements, many of which have dates. There is no way a quick fix or new product can address all of the embedded data usage.

Close observers are warning that the government is suffering from "analysis paralysis" and that it is almost beyond "the point of impossibility." The OMB reports that 21 of 27 government agencies will implement their Y2K solutions during the last three months of 1999 (Table 1)! "They haven't left themselves with a margin for error in case something goes wrong," said Rep. Constance A. Morella (R-Md.), chairwoman of the Science Committee's technology subcommittee. (See "Government Said to Move Too Slowly on

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<sup>2</sup> A spokesperson for AT&T said that the year 2000 is "totally a nonissue."

<sup>3</sup> Chase Manhattan Bank expects to spend \$200 million to \$250 million to fix Y2K. Merrill Lynch & Co. expects to spend in excess of \$200 million.

Year 2000 Computer Problem. Partial Crash Possible if Machines Aren't Able to Recognize Data, Specialists Warn, *Washington Post*, July 10, 1997.)

Even if all the software all around the world is repaired in time, we also need to replace "embedded systems" that might not work on January 1, 2000. These are microprocessor devices that are used to control the operation of equipment, machinery, or production lines. They can be found in telephone systems, fire control systems, heating and ventilating systems, elevators, security systems, bank vaults, water and sewage systems, power stations, automated factories, airplanes, trains, buses, cars, air traffic control systems, radar systems, traffic lights, telephone switches, and satellites. They are EVERYWHERE! Hospitals will have to replace the embedded chip in every intravenous device to make sure they can be recalibrated.

Even relatively new PCs might not work. Their BIOS software might not interpret the century change correctly. Even if these input/output routines work, the ultimate source of the date and time on a PC is the Real Time Clock (RTC) embedded in a chip called CMOS. Some RTC designs can't handle the new century number. In a recent test of 2,500 PCs, 82% failed to roll over to the year 2000 properly.

American Express lowered its expected Y2K bill from an estimated \$40 million to only \$10 million. Nevertheless, a spokesman said, "We are now issuing cards with two-year expiration dates because the third-party card readers can't handle the year 2000. Next year, they'll be one-year cards."

Overseas businesses and governments are even more unprepared to solve Y2K. Around the world, most people are just becoming aware of the potential catastrophic consequences of this computer glitch. In Canada, fewer than 20% of companies are actively addressing the problem according to one estimate. Geoff Unwin, the chief operating officer of Cap Gemini, Europe's largest computer services company, says that Britain is lagging behind North America in tackling Y2K, and other Europeans are even further behind. The computer services industry doesn't have the capacity to solve everyone's problem. Big firms will be serviced, but many smaller ones may perish. Europe's computer crisis is exacerbated by the need to prepare for a single currency in 1999. Japan has a serious shortage of programmers that can solve Y2K, and the language barrier means that foreign experts, e.g., in India, can't help.

The July 14, 1997 issue of *Barron's* has an interesting article about the millennium bug, which shares my concerns about the problem. You can follow the Y2K issue on my Web site ([www.yardeni.com](http://www.yardeni.com)) in my Center for Cybereconomics.



**Table 1: Federal Government Progress and Plans for Achieving Year 2000 Compliance.**

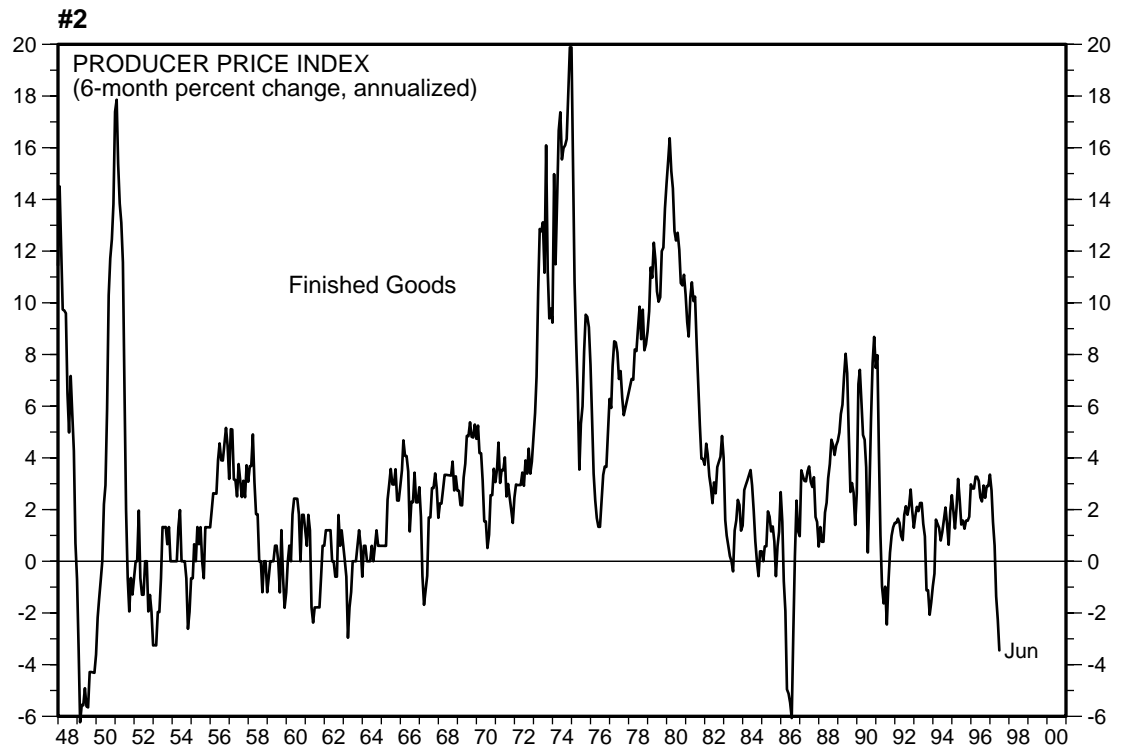
Agency	Awareness	Assessment Scope	Assessment Schedule	Renovation	Validation	Implementation
Agriculture	11/96	4/97	6/97	9/98	9/99	10/99
Commerce	8/96	12/96	3/97	12/98	1/99	10/99
Defense	12/96	3/97	12/97	12/98	6/99	11/99
Air Force	6/96	3/97	5/97	1/98	7/98	12/99
Army	12/96	3/97	3/97	9/98	12/98	10/99
Navy	12/96	3/97	12/97	12/98	6/99	11/99
Education	12/96	2/97	6/97	9/98	9/98	3/99
Energy	6/96	1/97	1/97	9/98	2/99	7/99
HHS	11/96	1/97	6/97	12/98	1/99	11/99
HUD	11/96	4/97	6/97	12/98	7/99	11/99
Interior	12/96	4/97	3/97	12/98	1/99	11/99
Justice	3/96	9/96	6/97	7/98	10/98	1/99
Labor	12/96	3/97	6/97	12/98	1/99	11/99
State	6/96	12/96	6/97	9/98*	10/98*	8/99*
Transportation	12/96	8/97	12/97	12/98	12/99	12/99
Treasury	5/96	4/97	7/97	12/98	12/98	11/99
VA	1/97	1/98	11/98	11/98	1/99	12/99
AID	11/96	3/97	8/97	TBD	TBD	TBD
EPA	12/96	3/97	6/97	12/98	1/99	11/99
FEMA	12/96	3/97	6/97	12/98	1/99	11/99
GSA	11/96	3/97	6/97	12/98	1/99	10/99
NASA	1/97	2/97	3/97	6/99	7/99	12/99
NSF	9/96	1/97	6/97	6/98	12/98	12/99
NRC	6/96	6/97	9/97	3/99	4/99	11/99
OPM	12/96	3/97*	6/97*	12/98	11/99	12/99
SBA**	4/96	6/96	9/96	12/98	12/98	12/98
SSA	3/96	3/96	5/96	11/98	12/98	11/99

\* Applies to mission-critical systems only

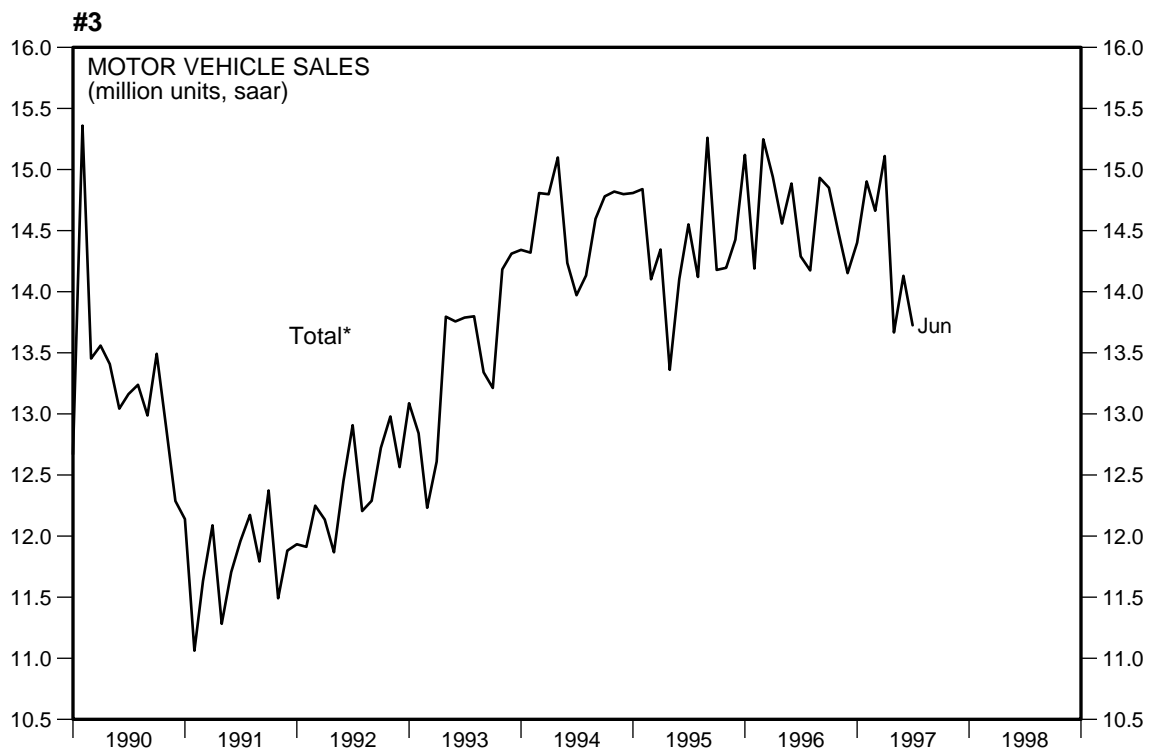
\*\* Replacing system through planned migration to client/server environment

Source: Office of Management & Budget

There's deflation in the PPI.

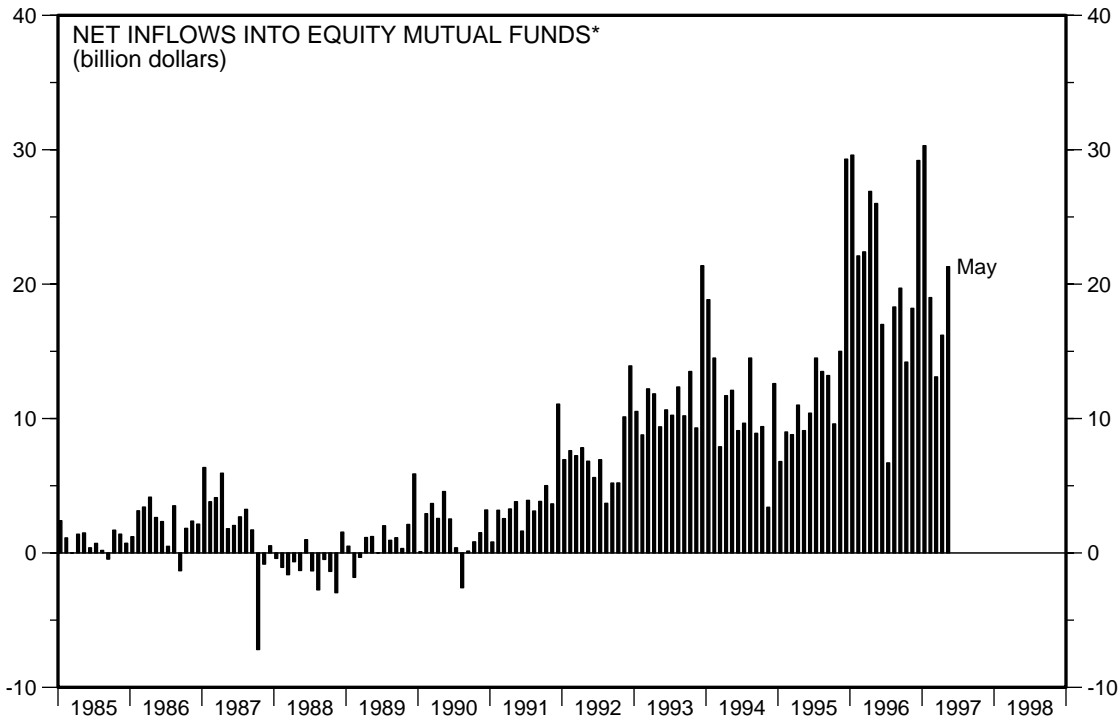


A negative wealth effect? Despite solid income gains and soaring confidence and stock prices, auto sales are weak.

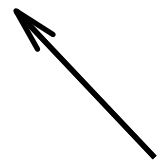


\* Includes domestic-make cars, light trucks and imports.

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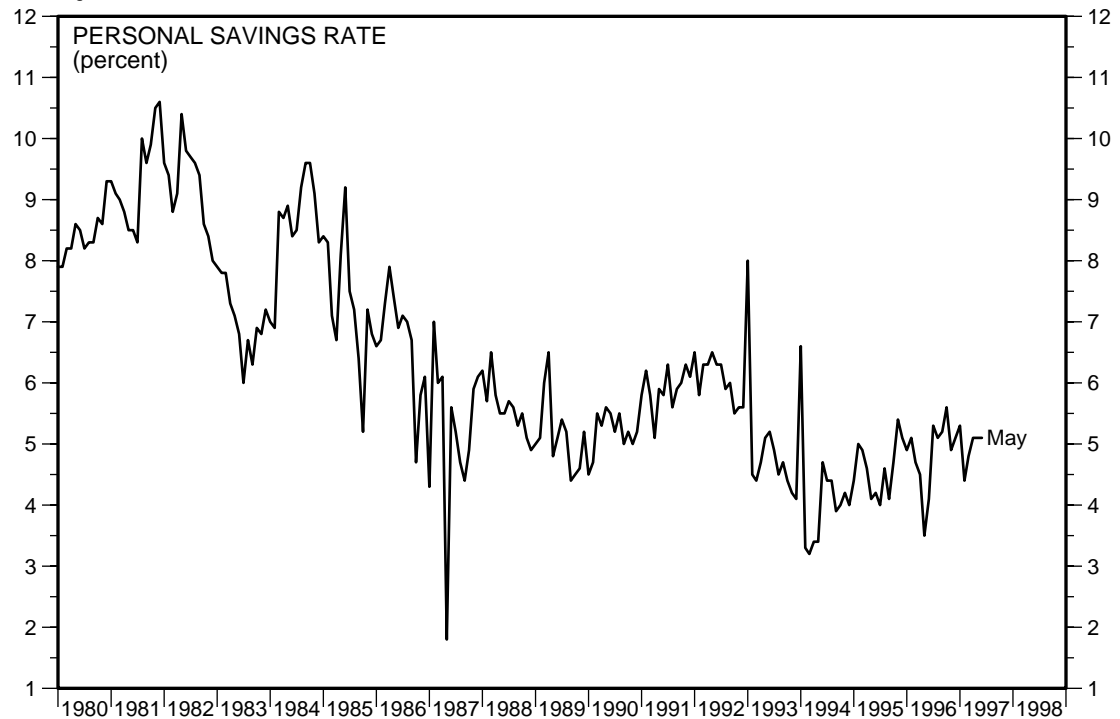


\* Source: Investment Company Institute. Figures reflect sales less redemptions, plus the net result of fund switches, plus reinvested dividends.

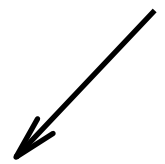


How to spot irrational exuberance: Watch for even bigger inflows into equity mutual funds and a rise in the savings rate.

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\* US Department of Commerce, Bureau of Economic Analysis.



## TOPICAL STUDIES

**Topical Studies #19 and higher are available on <http://www.yardeni.com/yardeni/topical.html>**

- #36 Dr. Edward Yardeni, *Conference Call With Alan Blinder*, June 2, 1997
- #35 Dr. Edward Yardeni, *The Economic Consequences Of The Peace*, May 7, 1997
- #34 Dr. Edward Yardeni, *Populist Capitalism And Other Wildly Bullish Themes*, February 25, 1997
- #33 Dr. Edward Yardeni, *Productivity Must Be Booming*, January 20, 1997
- #32 Dr. Edward Yardeni, *The Undefeated Forces Of Deflation*, October 28, 1996
- #31 Dr. Edward Yardeni, *Economic Consequences Of The Internet*, October 22, 1996
- #30 Dr. Edward Yardeni, *Backlash: Workers Vs. Bonds*, May 8, 1996
- #29 Dr. Edward Yardeni with Amalia Quintana, *The Baby Boom Chart Book 1996*, March 28, 1996
- #28 Dr. Edward Yardeni, *Liquidity Story Is Wildly Bullish*, February 12, 1996
- #27 Dr. Edward Yardeni, *10,000 In 2000*, November 6, 1995
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- #24 Dr. Edward Yardeni, *Hard Or Soft Landing?*, February 6, 1995
- #23 Dr. Edward Yardeni, *The End Of The Cold War Is Bullish*, September 10, 1993
- #22 Dr. Edward Yardeni, *Apocalypse Now! (NOT!)*, May 8, 1992
- #21 Dr. Edward Yardeni with Amalia Quintana, *The Baby Boom Chart Book 1991*, October 9, 1991
- #20 Dr. Edward Yardeni, *The Collapse Of Communism Is Bullish*, September 4, 1991
- #19 Dr. Edward Yardeni and David Moss, *The Triumph Of Adam Smith*, July 17, 1990
- #18 Dr. Edward Yardeni and Deborah Johnson, *Dow 5000*, May 9, 1990
- #17 Dr. Edward Yardeni, *The Triumph Of Capitalism*, August 1, 1989
- #16 Dr. Edward Yardeni with Amalia Quintana, *The Baby Boom Chart Book*, January 25, 1989
- #15 Dr. Edward Yardeni and David Moss, *The New Wave Manifesto*, October 5, 1988
- #14 Dr. Edward Yardeni, *Could Real Estate Prices Fall? And What If They Do?*, August 24, 1988
- #13 Dr. Edward Yardeni, *The Coming Shortage Of Bonds*, June 20, 1988
- #12 Dr. Edward Yardeni, *How The Baby Boomers Are Changing The Economy*, April 6, 1988
- #11 Dr. Edward Yardeni and Deborah Johnson, *The Restructuring Of Corporate America Is Bullish*, December 9, 1987

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