

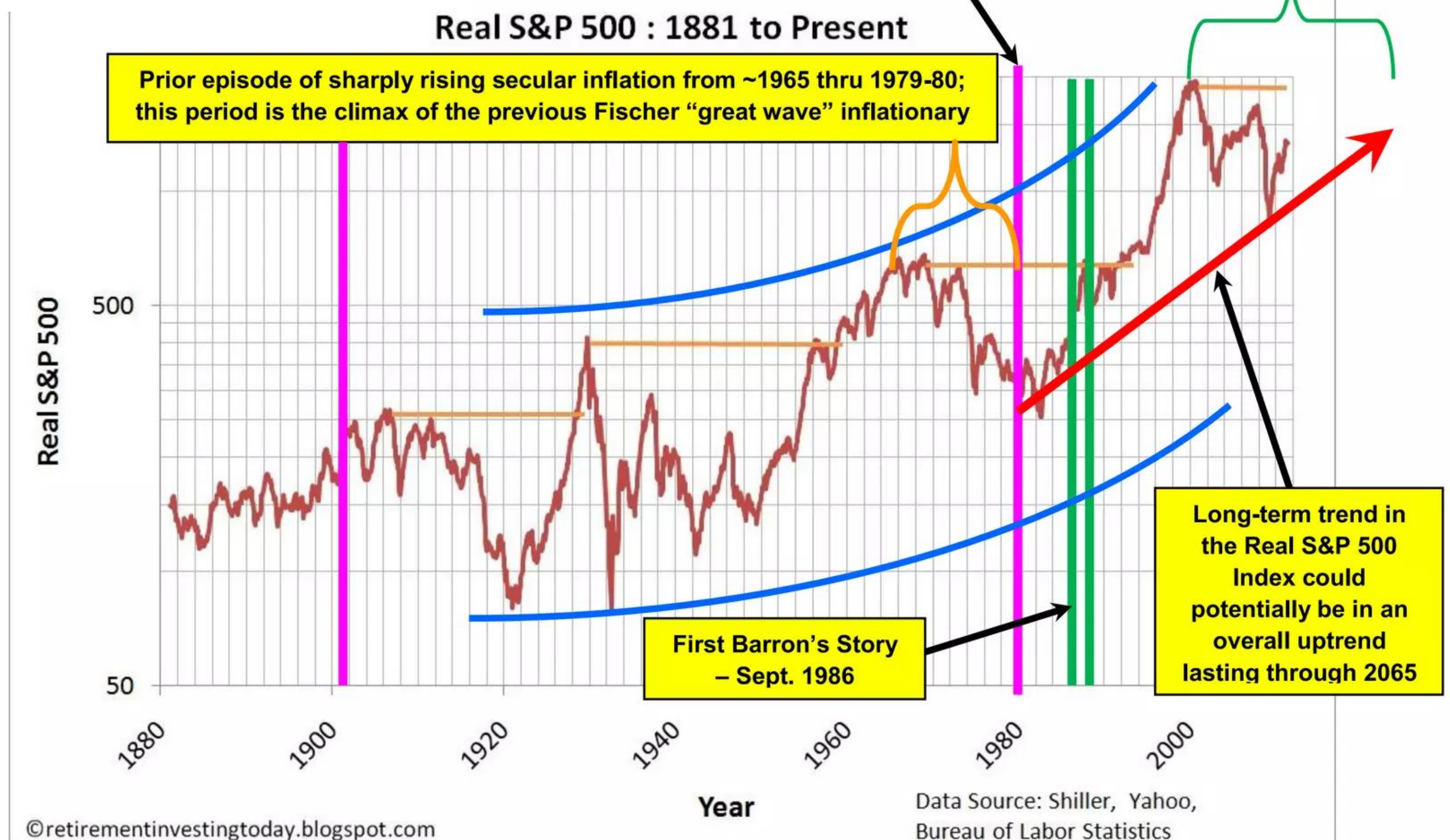
Month and year of <i>Barron's</i> story	September 1986 Labor Day Cover DJIA ~1,750 ~10% yield on 30-year US Treasury bonds	February 1988 ~1.5 yrs later DJIA ~1,833 ~9.5% yield on 30-year US Treasury bonds	January 1999 ~13 yrs later DJIA ~11,000 ~6.0% yield on 30-year US Treasury bonds	Month? 2011 ~25 years later DJIA ~12,500 ~4.2% yield on 30-year US Treasury bonds
Market and economic milieu at time when published	<p>"Apocalypse chic" fashionable on Wall Street – overall gloom and doom about America's future – nothing can stop <b>Japanese</b> economic and manufacturing juggernaut – US workers will all end-up working as "hamburger flippers" for Japanese companies – US giving-up its role as a economic and military superpower like England after W.W.II – almost no one thought bull market offing</p>	<p>Fed started tightening short-term credit when they probably shouldn't have done so; this triggered a short, violent downturn in the stock market in October of 1987. The 'crash' scared many people into thinking that the modest recovery in stock prices up to that point had been just a 'flash in the pan' and that we might be heading into a depression or maybe even a return to high inflation.</p>	<p>Market's future looked pretty rosy just then. Unbeknownst to most market participants, the huge stock market boom of the 1990s was almost about to top-out. The dot.com 'crash' (really just a necessary correction to huge market P/E pricing excesses) was one year in the future (<b>2000</b>). <b>2001</b> WTC attack and related ongoing massive fiscal disruptions of Bush's 8 year, two-front "<i>war on terror</i>" were still 2 years ahead in the future</p>	<p>In wake of worst economic crisis since Great Depression in 1930s, "<i>Apocalypse chic</i>" redux to Wall Street and in Congress – overall gloom and doom about America's future – only this time <b>Chinese</b> economic and manufacturing juggernaut is unstoppable – US educational system in crisis – pundits say that high-paying good jobs may be a thing of distant past for America's 'dying' middle class</p>
Main themes of <i>Barron's</i> story	<p>'Futurist' Lewis Larsen saw very different future ahead for America –revitalization of manufacturing, explosion in new technology, major boom in stock market would be coming in near future --- major Wall Street economists and pundits all disagree with that idea – <b>Larsen said nominal DJIA would hit ~3,000 by 1990 - actually reached 2,905 in mid-1990 - then soar "far higher in ensuing decade" (nominal DJIA temporarily peaked at ~14,000 in 2007)</b></p>	<p>Larsen reiterated key macroeconomic &amp; technological trends identified in 1986 story still intact. We said, "<i>You ain't seen nothin' yet</i>" <b>Predicted: "Computer networks will link customer and supplier symbiotically ... Such computer integration depends on elaborate software and systems integration ... in other words, computers of disparate size, manufacture and function must be made to talk and work together."</b> <b>This foretold Tim Berners-Lee's invention of http (World Wide Web) (1989); first website was at CERN in 1991</b></p>	<p>Review of 1996 book by Brandeis University history Prof. David Fischer, "<i>The Great Wave – Price revolutions and the rhythms of history.</i>" In 1979-80, world may have entered a Fischer "period of equilibrium" which typically lasts for 60-100 years (avg. ~85) based on ~800 years of his historical economic data – in this piece, we discuss Larsen's new conceptual model of exactly how new technology innovation and capital investment interact in time with Fischer's inflationary "<i>Great Wave</i>"</p>	<p>Lew Larsen now researching and publishing scholarly articles as a physicist and working as Founder/CEO of 10 year old Chicago technology company, Lattice Energy LLC; developing new "green," low-cost nuclear energy technology, LENRs. Successful commercialization of LENRs could revolutionize carbon-free energy production and democratize access to affordable energy for every inhabitant of the planet; no more 'oil addiction' for vehicles</p>



## Real (constant dollars) DJIA from 1920 through May 2011

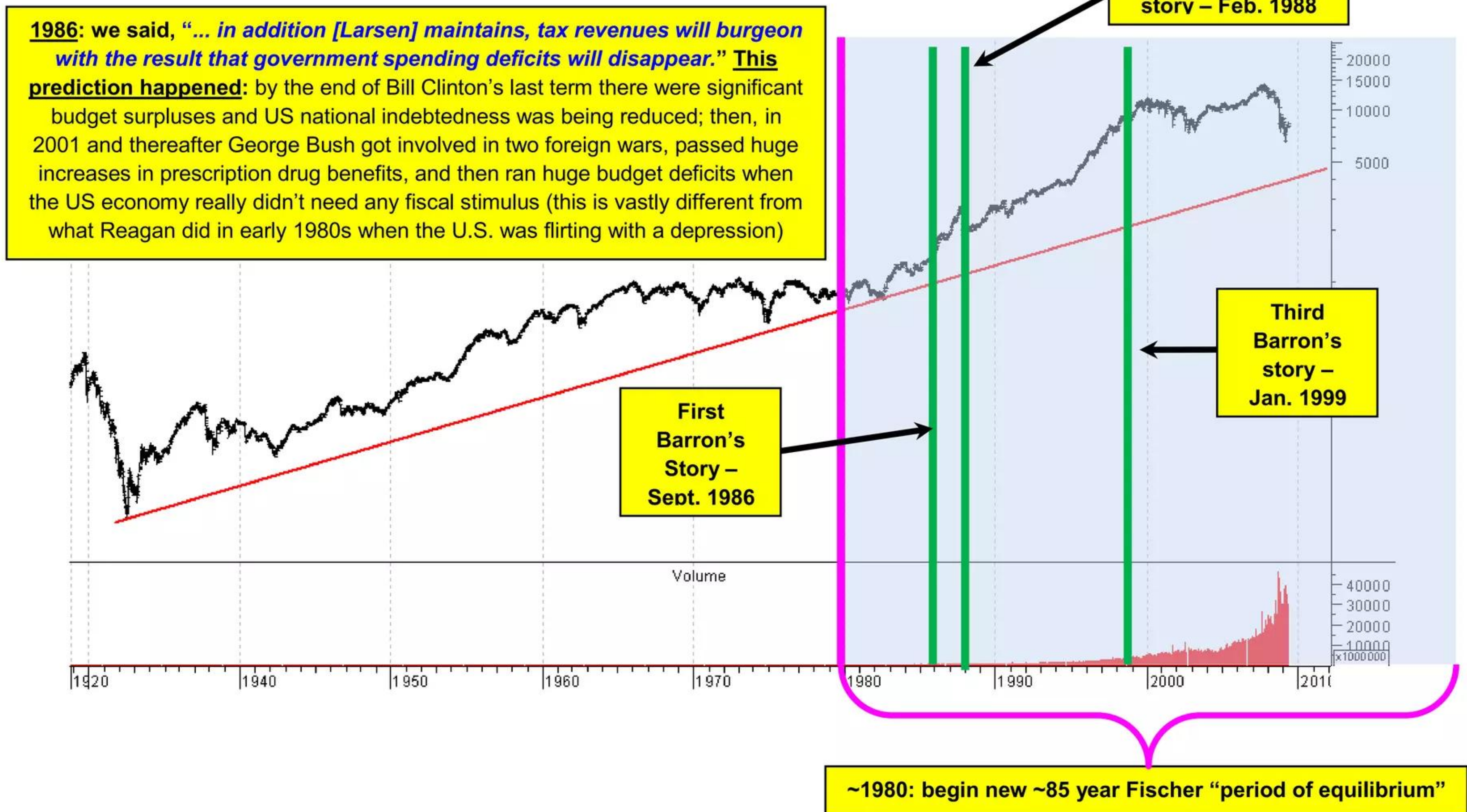


## Real (constant dollars) S&P 500 from 1880 through May 2011





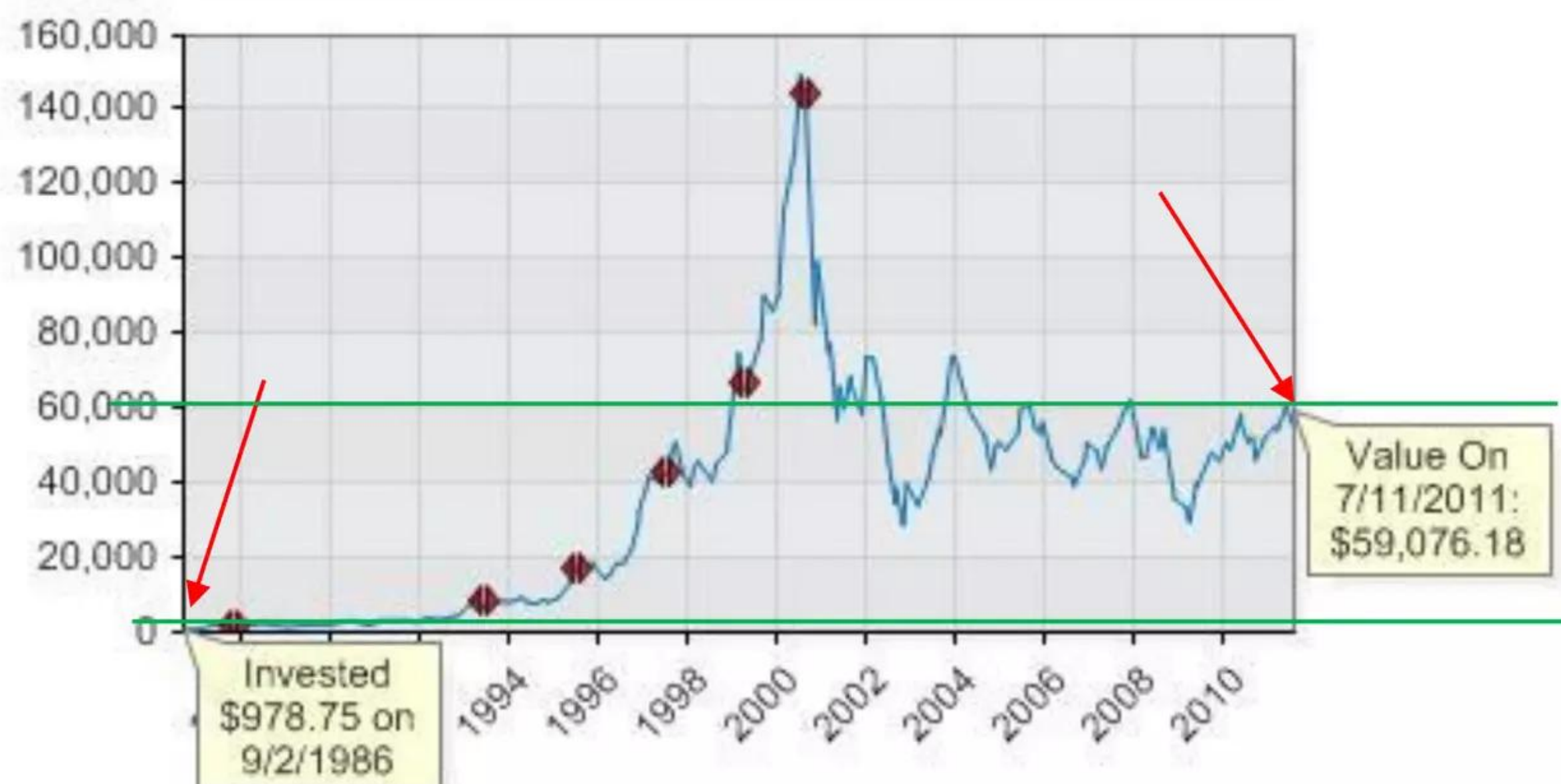
## Nominal DJIA from 1920 through late 2010



For example, we recommended Intel in the first Barron's story on Sept. 1, 1986

If an investor had gone out the following trading day, purchased ~\$1,000 worth of Intel common stock and simply held onto it until today, here's roughly what it would be worth:

Investment date of Intel share purchase (45):	Original Shares:	Original Value:	Current Shares:	Current Value:	Percent Return:
09/01/86	45	\$ 978.75	2,642	\$ 60,389.72	6,070.09%

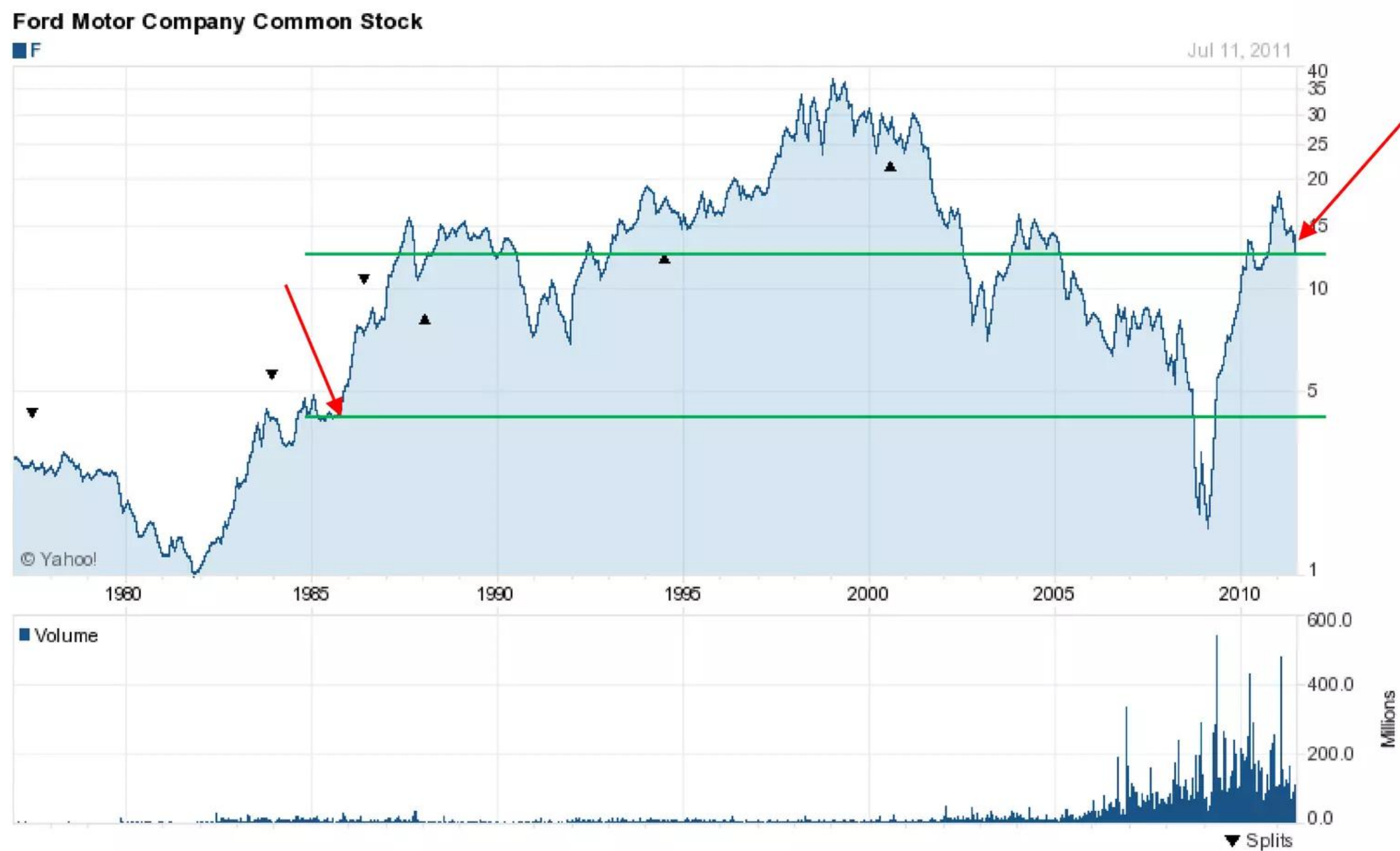




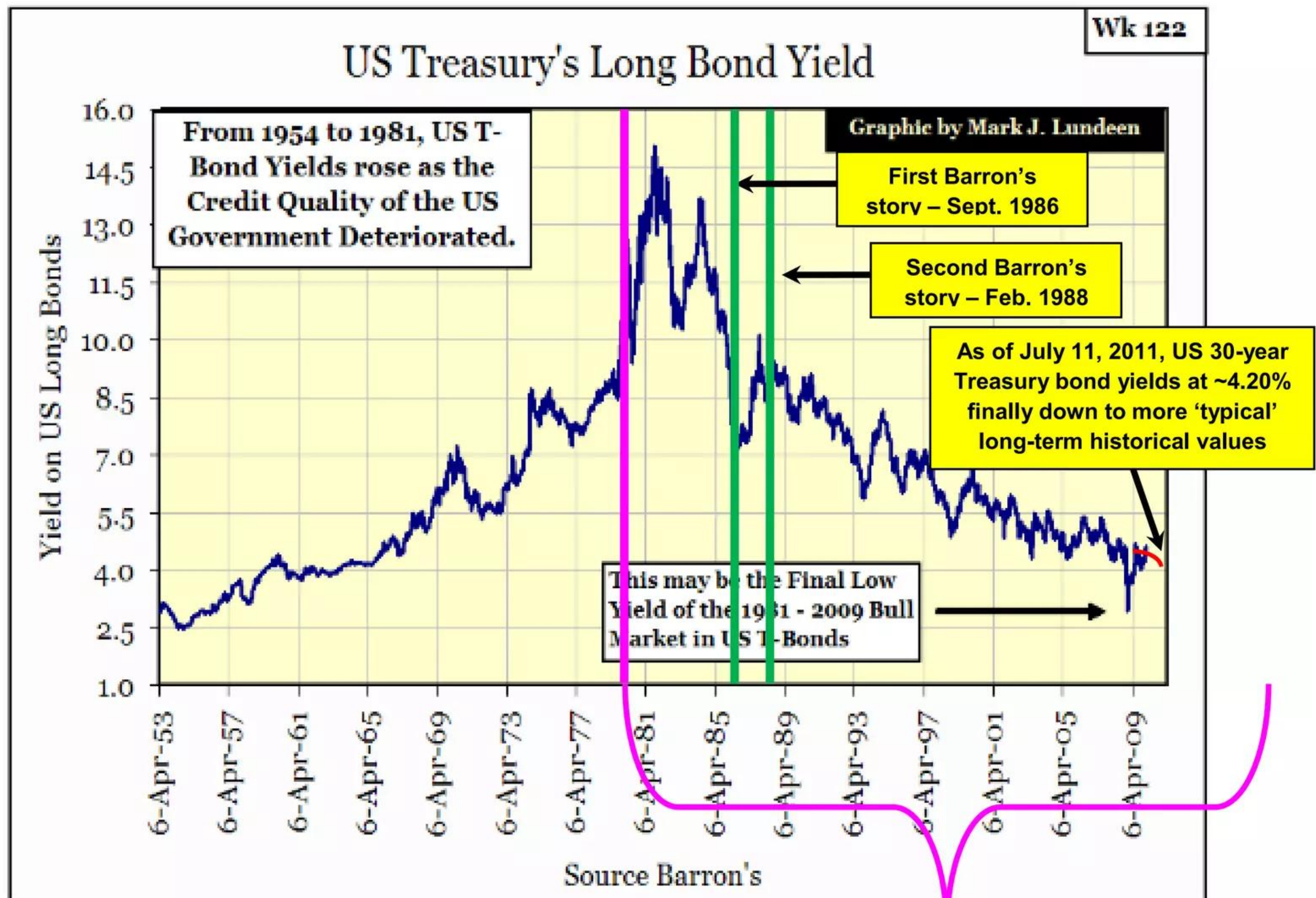
## We also recommended Pfizer, Inc. in the first Barron's story on Sept. 1, 1986



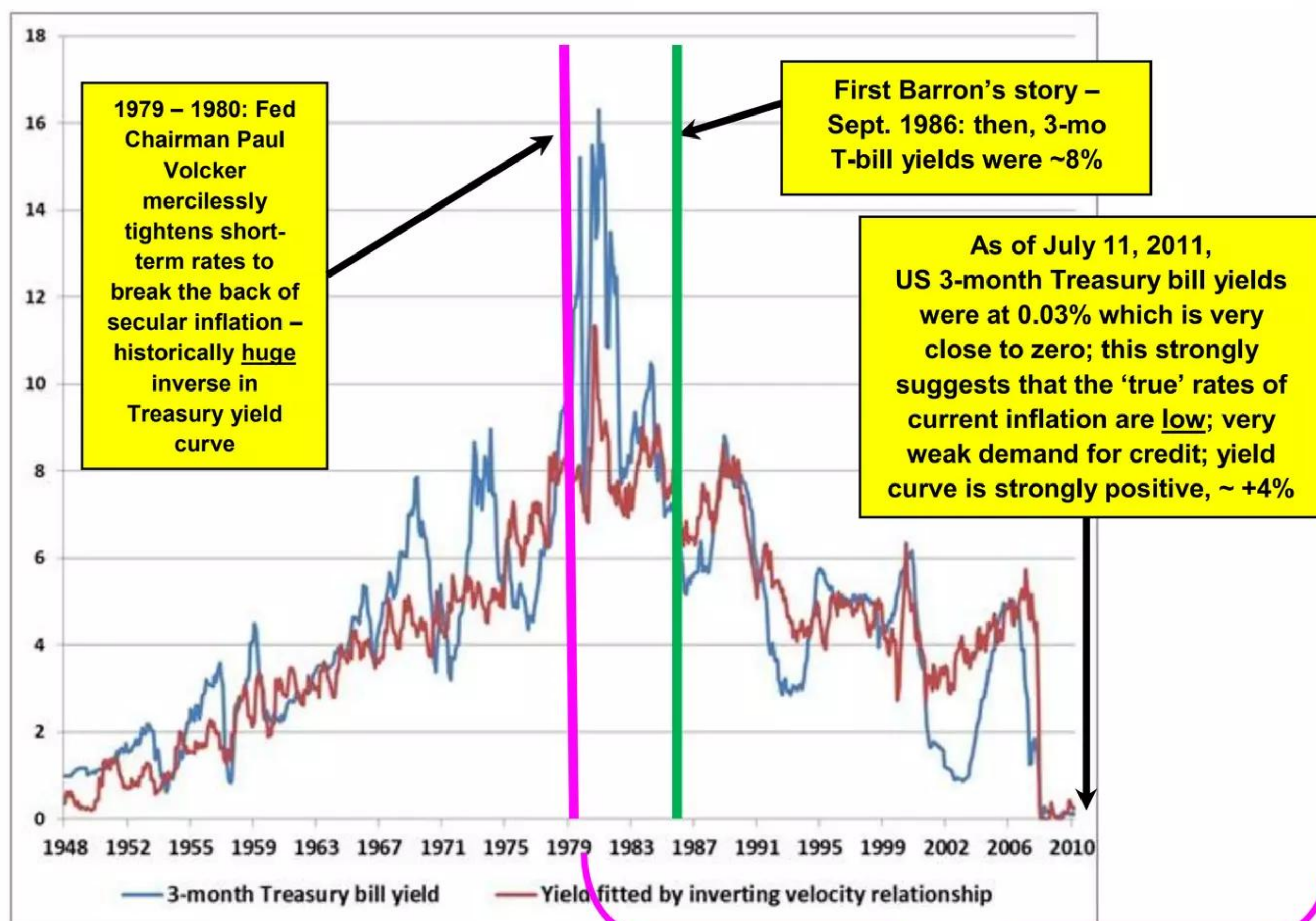
**Also Ford Motor Company in the first Barron's story on Sept. 1, 1986**  
While it had much tougher sledding than with Intel or Pfizer, investor still has some profit







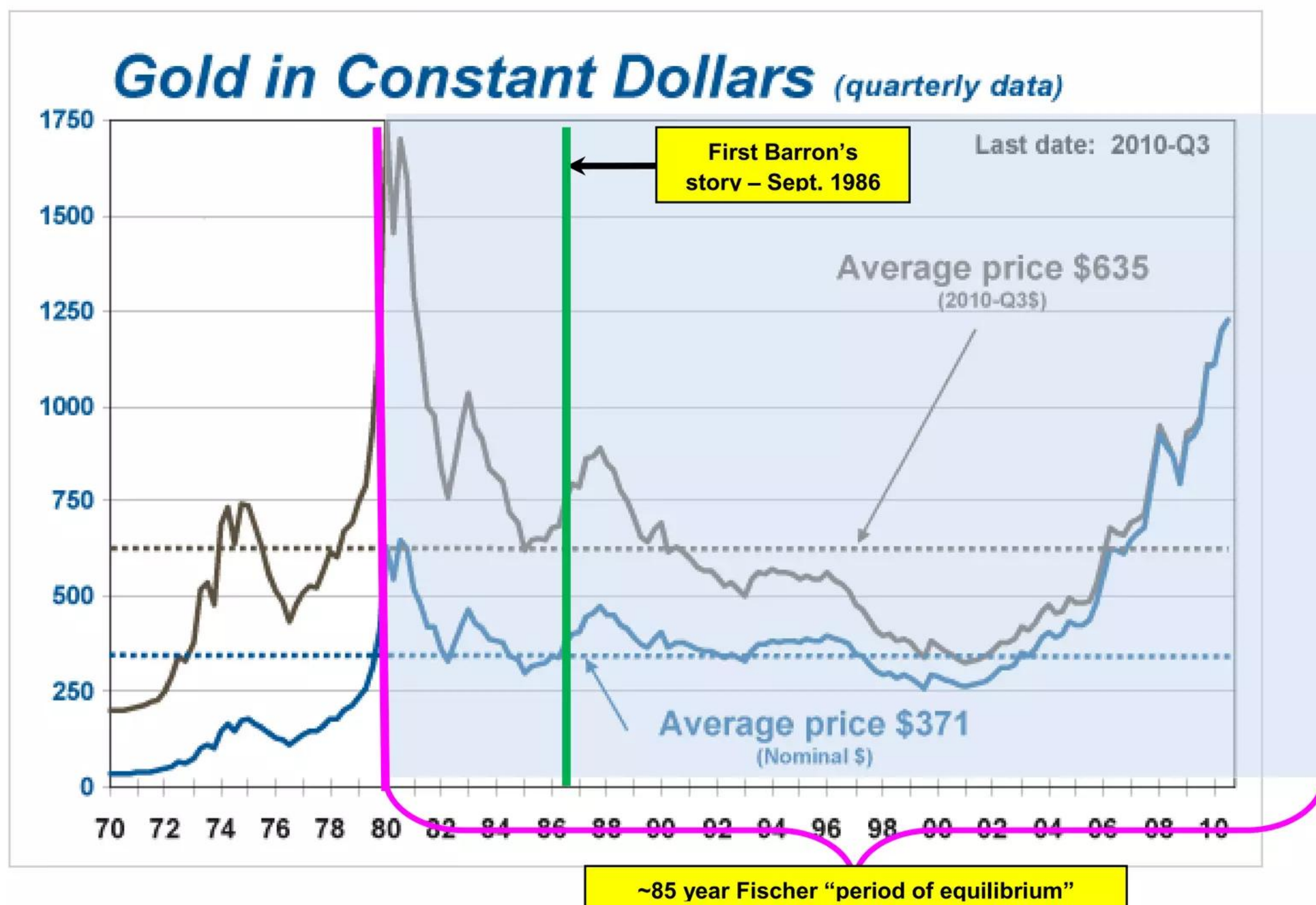
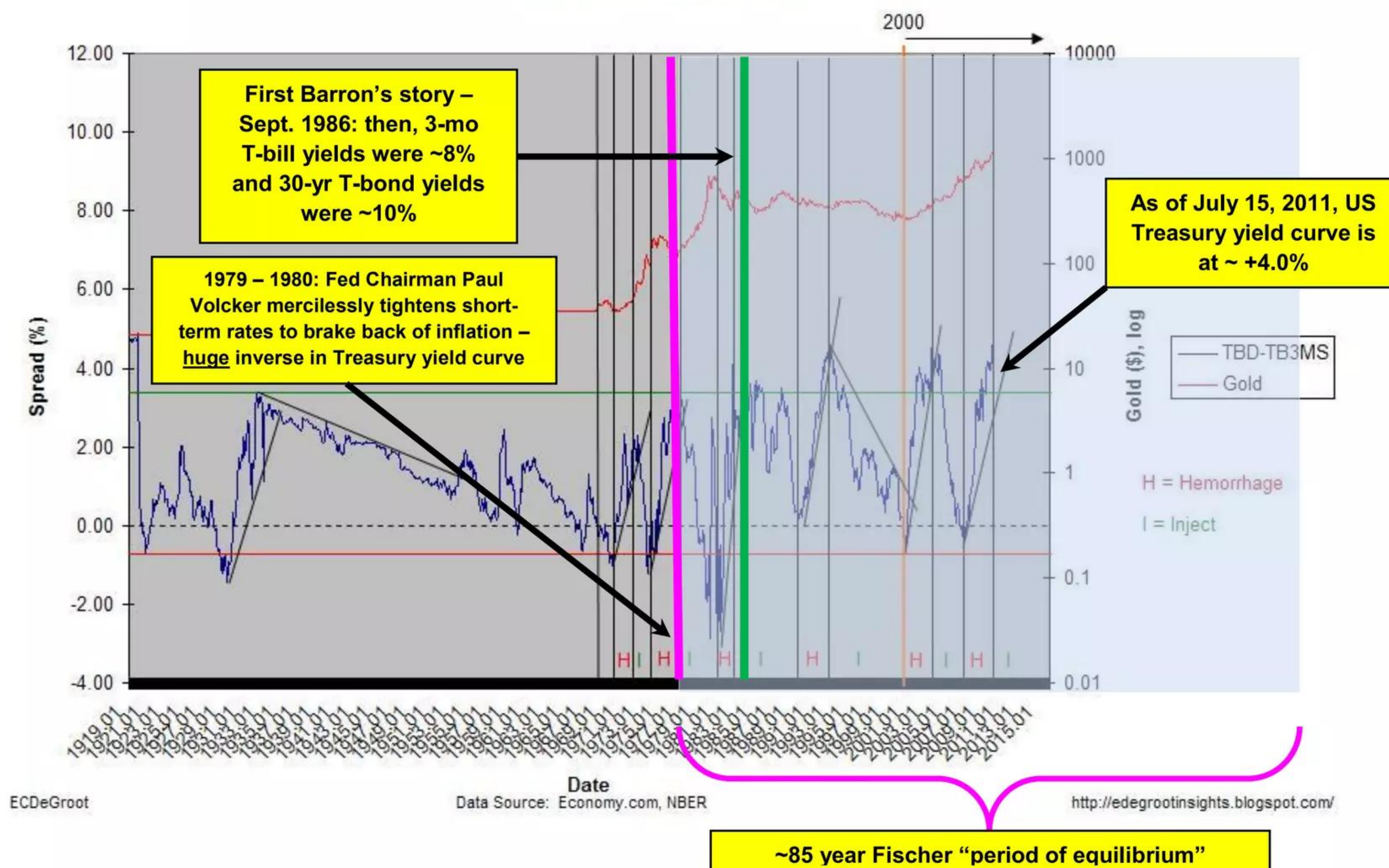
Enter ~85 year Fischer "period of equilibrium"



Enter ~85 year Fischer "period of equilibrium"

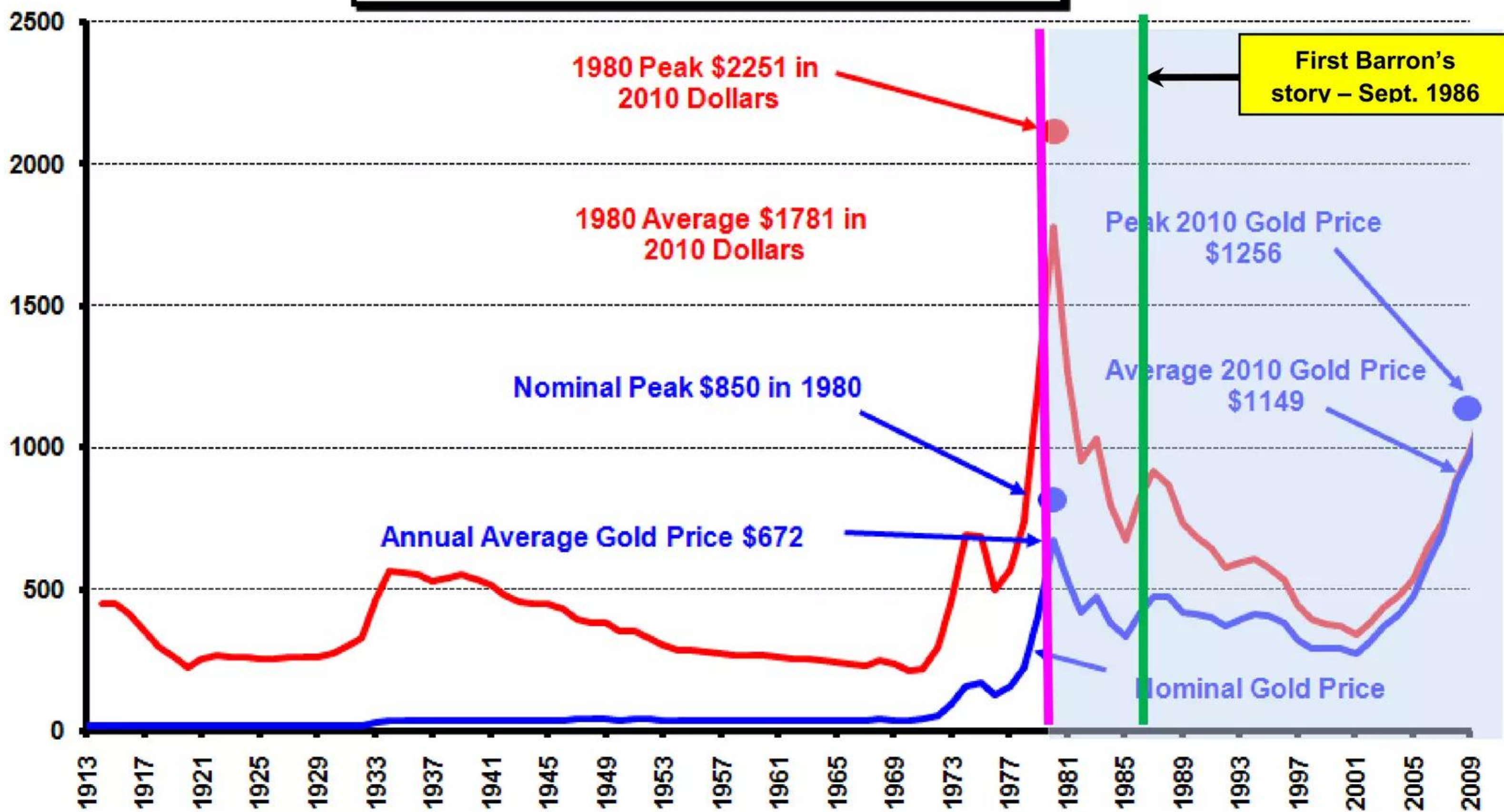


# U.S. Treasury Yield Curve: US LT Treasury Bond Yield- 3M US Tbill Yield (TBD-TB3MS) and Gold London PM Fixed

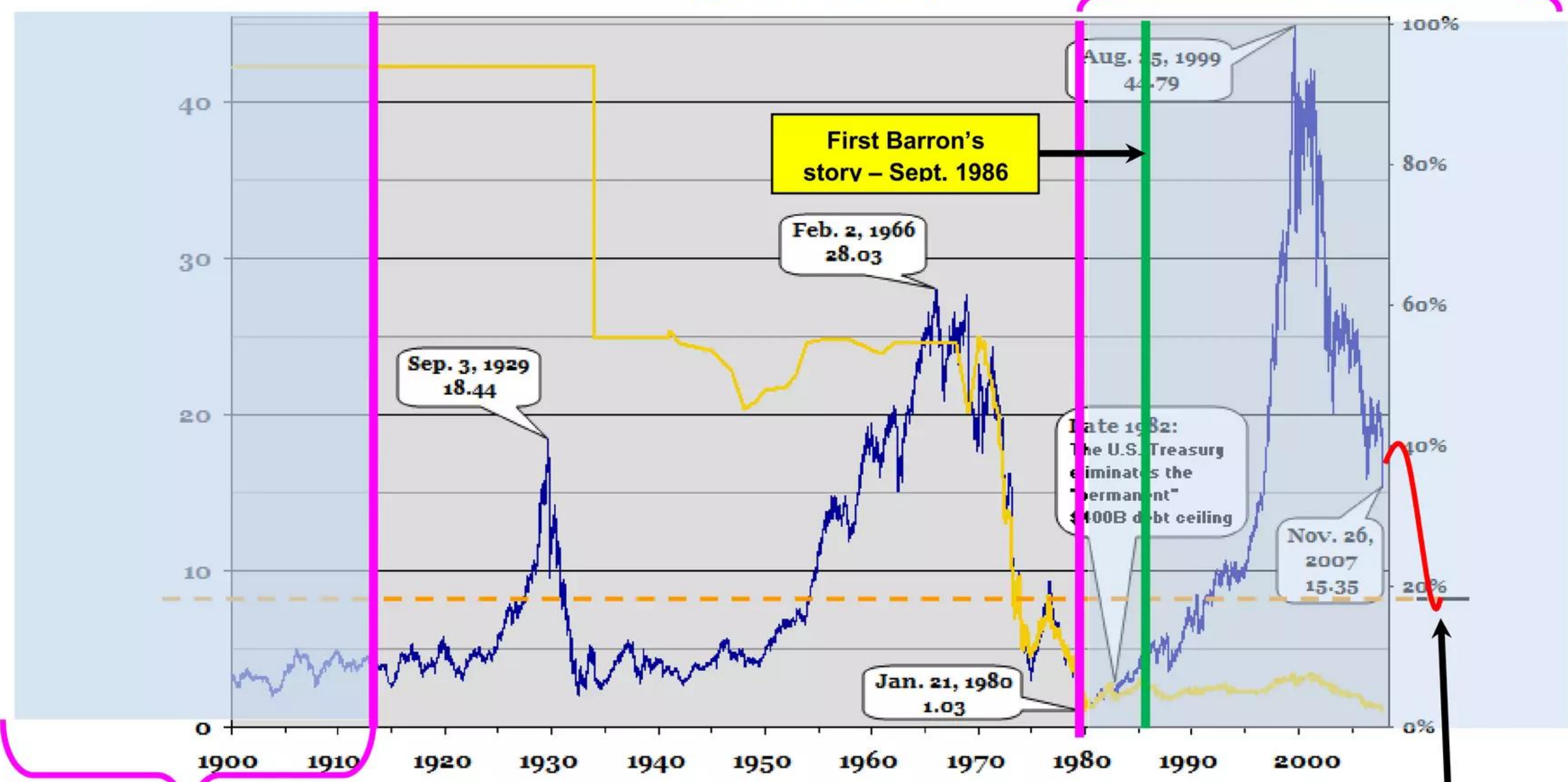




**Inflation Adjusted Annual Average  
Gold PRICES (1914-2010)**  
In May 2010 Dollars  
© www.InflationData.com  
Updated 06/24/2010



**Dow / Gold Ratio vs. Gold / Constitutional Dollar  
(1900 - Nov. 2007)**



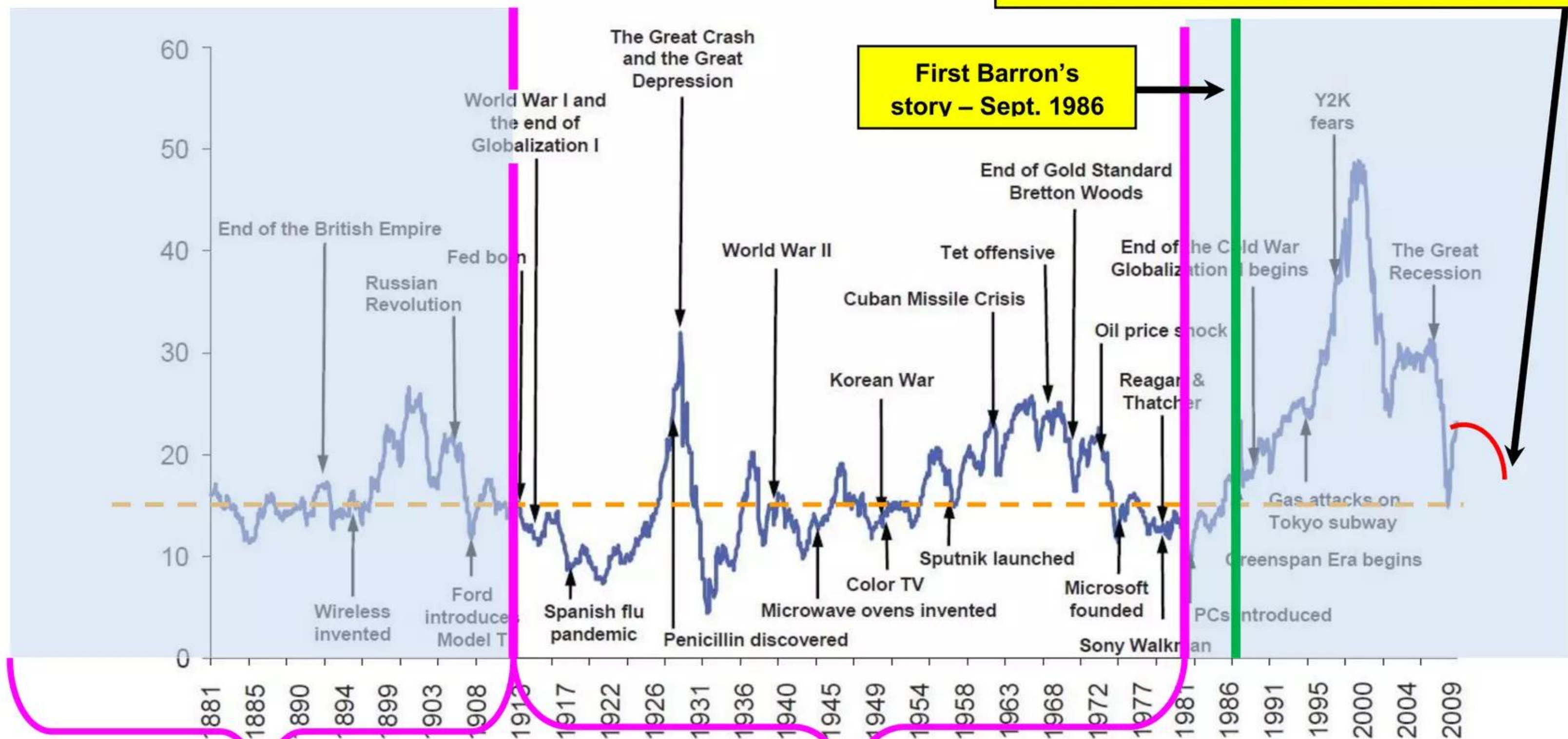
Ending of earlier "period of equilibrium" is ~1913

On July 12, 2011, Dow/Gold ratio = ~8.0 thus stocks not very expensive by this measure



**Exhibit 6: The Only Constant Is Change!**  
**The Graham & Dodd P/E for the S&P 500**

On July 15, 2011, S&P 500 P/E ratio = ~16.7  
 stocks not very expensive by this measure

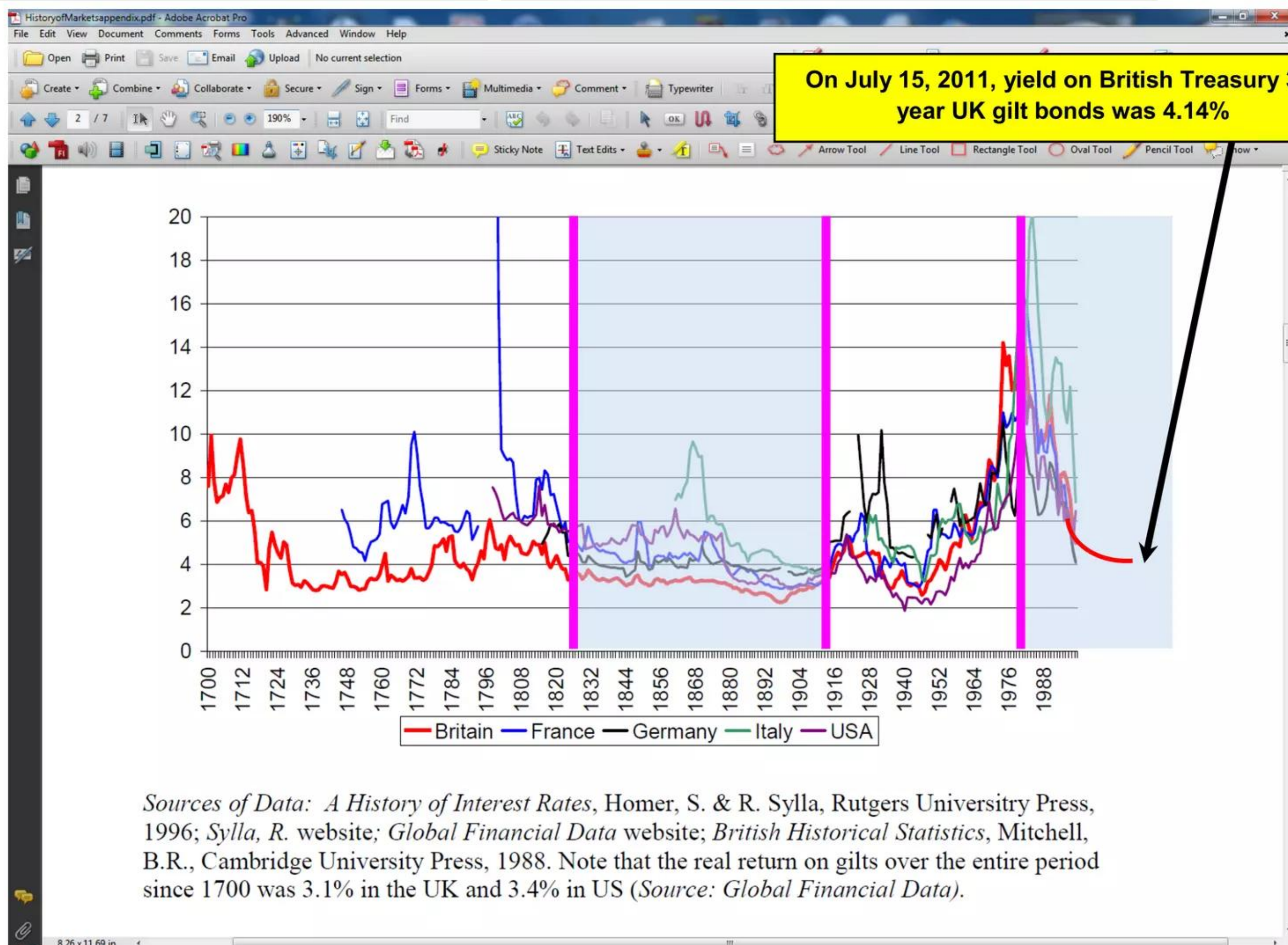


Source: GMO, Shiller

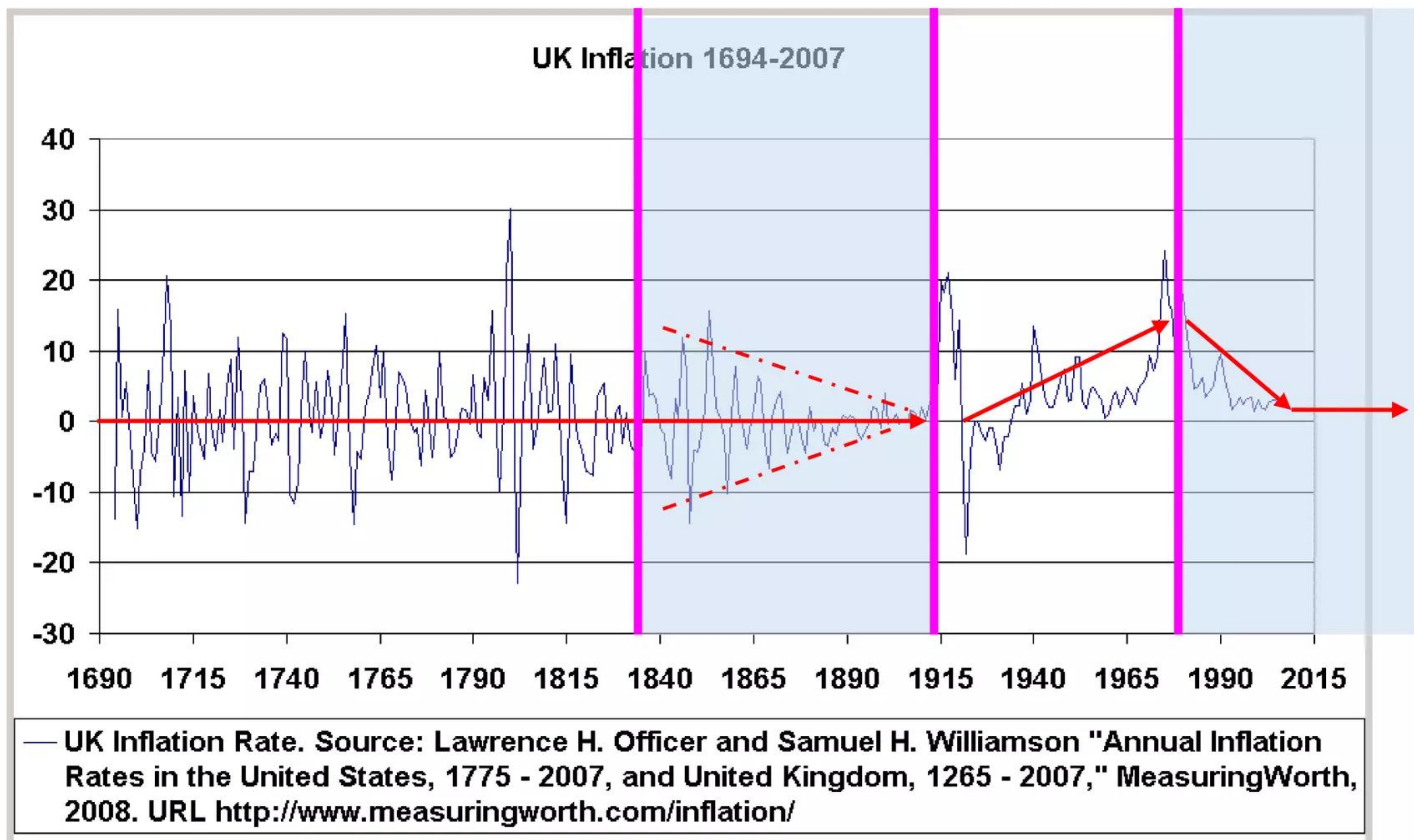
Earlier "period of equilibrium" from ~1828 to 1913

Fischer "Great Wave" of inflation from ~1914 to 1980

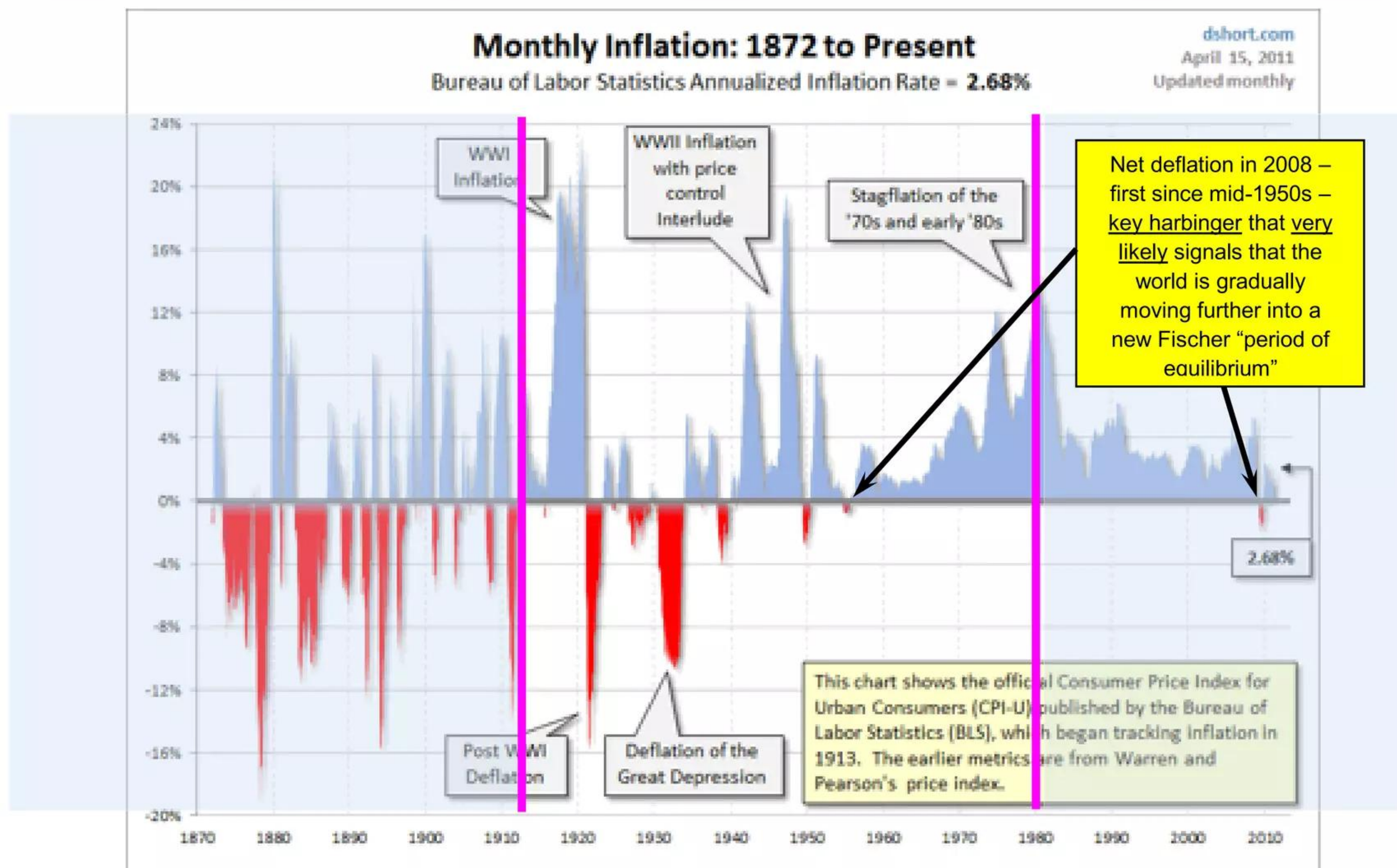
On July 15, 2011, yield on British Treasury 30-year UK gilt bonds was 4.14%







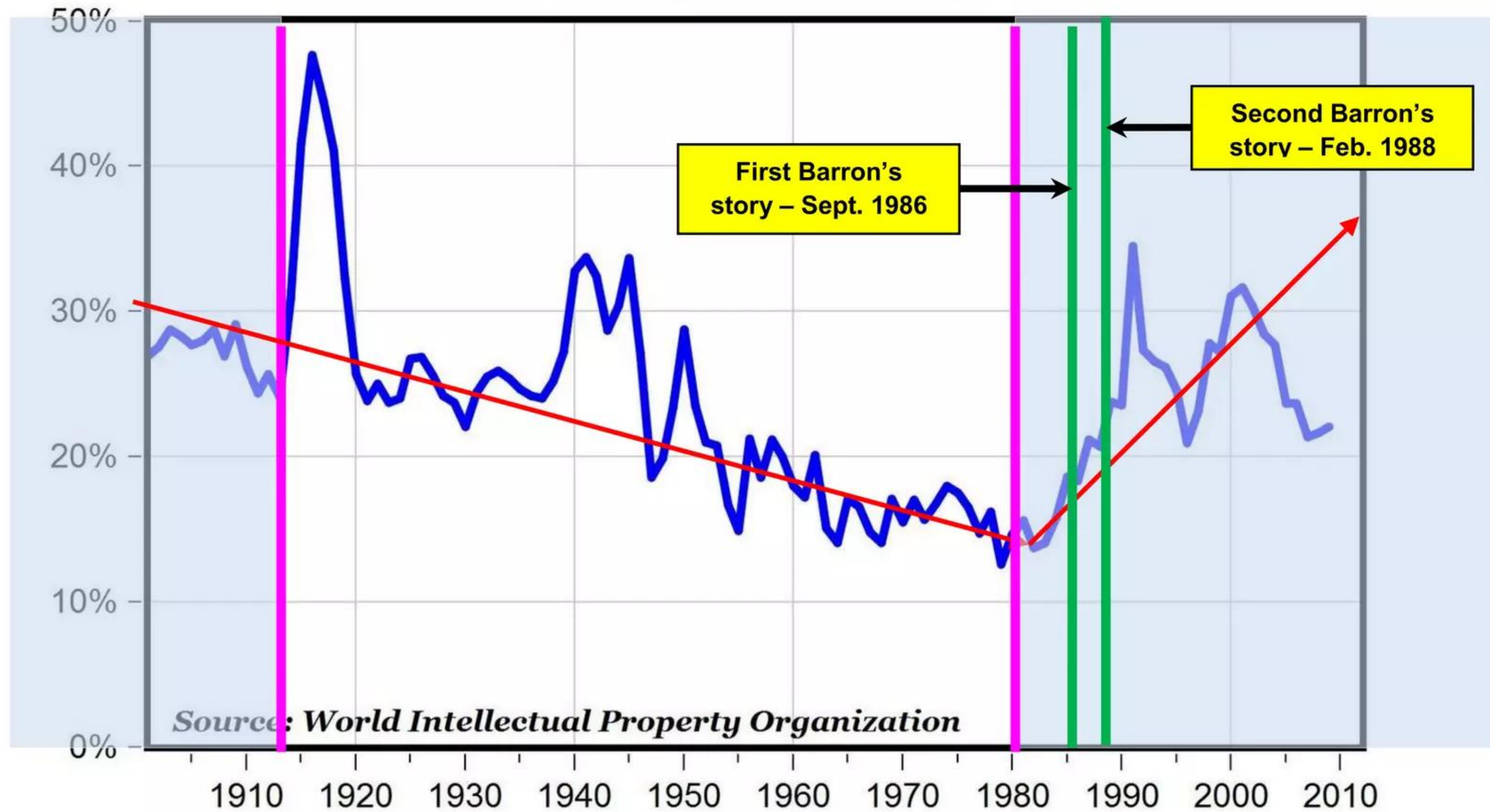
**Difference between earlier equilibrium period and inflationary era are clear below**



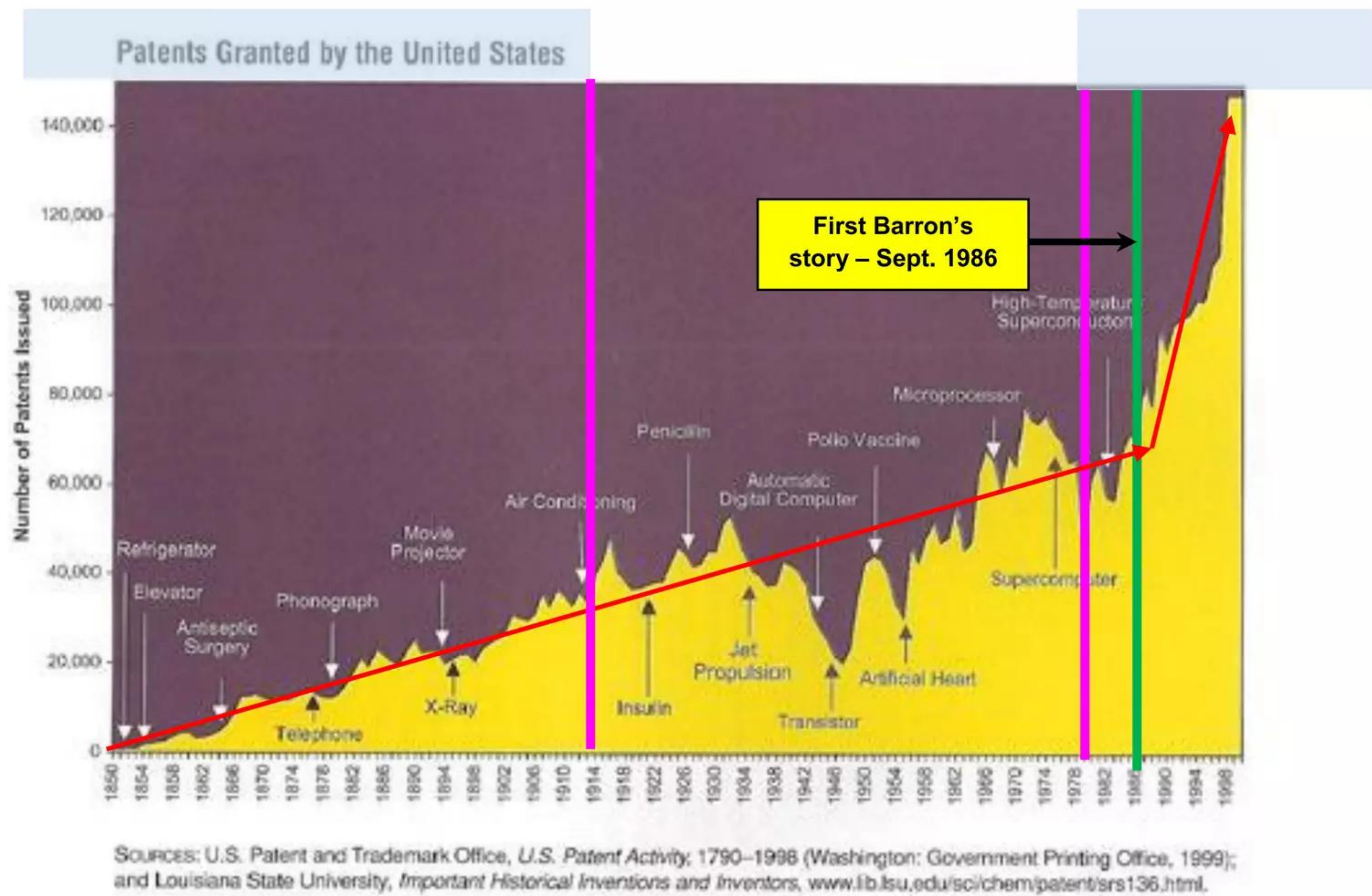


**2010 was all-time record year for the number of newly issued US patents**

## U.S. Share of World Patents: 1883 to 2009



**Many articles in popular press re recent worldwide explosion in patenting**





***“The Third Industrial Revolution is based upon 5 Pillars:”***

- 1 Shifting to Renewable Energy
- 2 Converting Buildings into Positive Power Plants
- 3 Hydrogen and Other Energy Storage Technology
- 4 Smart Grid Technology
- 5 Plug in, Electric, Hybrid, and Fuel Cell based Transportation” [END QUOTE FROM WIKIPEDIA]

**In 2009, officials of the European Union again opined on Third Industrial Revolution (quoting in part):**

**Source URL** = <http://www.energypolicyblog.com/2009/02/10/european-union-at-the-eve-of-the-third-industrial-revolution%E2%80%9D/>

**“European Union at the Eve of the “Third Industrial Revolution”**

**February 10th, 2009 by Andris Piebalgs, European Commissioner for Energy**

“Over the last 4 years the EU has begun the process of moving towards a sustainable, secure and competitive energy future. Indeed it has undergone an energy revolution. This can be seen not just in the policies that it has agreed, but the simple fact that for the first time in its history it has taken a conscious decision to collectively direct its own energy future, rather than simply leaving the market to provide its needs. I would like to reflect on what has already been achieved towards the creation of a new European Energy Policy and, probably more importantly, reflect on the direction that our energy policy will now need to take to meet the future, much greater, energy challenges that face us.”

“It is clear that we are at the beginning of what has correctly been called the ‘third industrial revolution’ – the rapid development of an entirely new energy system. We can expect a massive shift towards a carbon-free electricity system, huge pressure to reduce energy consumption and transport on the basis of renewable electricity. To make this shift in a manner that maintains, and in fact increases the EU’s competitiveness, means that stimulating rapid technological development in these areas has to be a central part of the EU’s energy policy. Indeed, this is at the heart of the question: how can the EU turn the challenges of climate change and energy security into an opportunity?”

**Another typical example of recent lecture circuit talks on this topic occurred at UCLA back in May (quoting):**

***“The Third Industrial Revolution”***

Speaker Woodrow W. Clark II, PhD, co-recipient Nobel Peace Prize

Thursday, February 10, 2011, 2:00 PM - 3:00 PM, School of Public Affairs Bldg, Room 3343c

“Europe and Asia (especially Japan and S. Korea) have been into The Third Industrial Revolution (3IR) since the early 1990s. China has now leapfrogged into it. This is the topic of my forthcoming book. The 3IR is a dramatically different paradigm including issues from the public policy leadership and economics to renewable energy, wireless, electronic and chemical nano-technologies to smart green communities. It replaces The Second Industrial Revolution (2IR) of fossil fuels, massive pollution with detrimental environmental impacts of global warming and the education, careers and skills of mechanical technologies to dependency on limited infrastructures of 2IR that started in the late 19th Century. The USA is not in the 3IR yet and lagging behind by two decades now. The evidence of the 3IR ranges from high speed rail systems, economics, public policy(s) and integrated infrastructures that mitigate climate change to education and careers for creating sustainable communities.”

**1986 Barron’s story:** we said that, “,,, *the US will overtake it [Japan] because of the U.S.’s lead in ... developing software to link hierarchies of computers*” and “*Computer networks will link customer and supplier symbiotically ... Such computer integration depends on elaborate software and systems integration ... in other words, computers of disparate size, manufacture and function must be made to talk and work together.*”

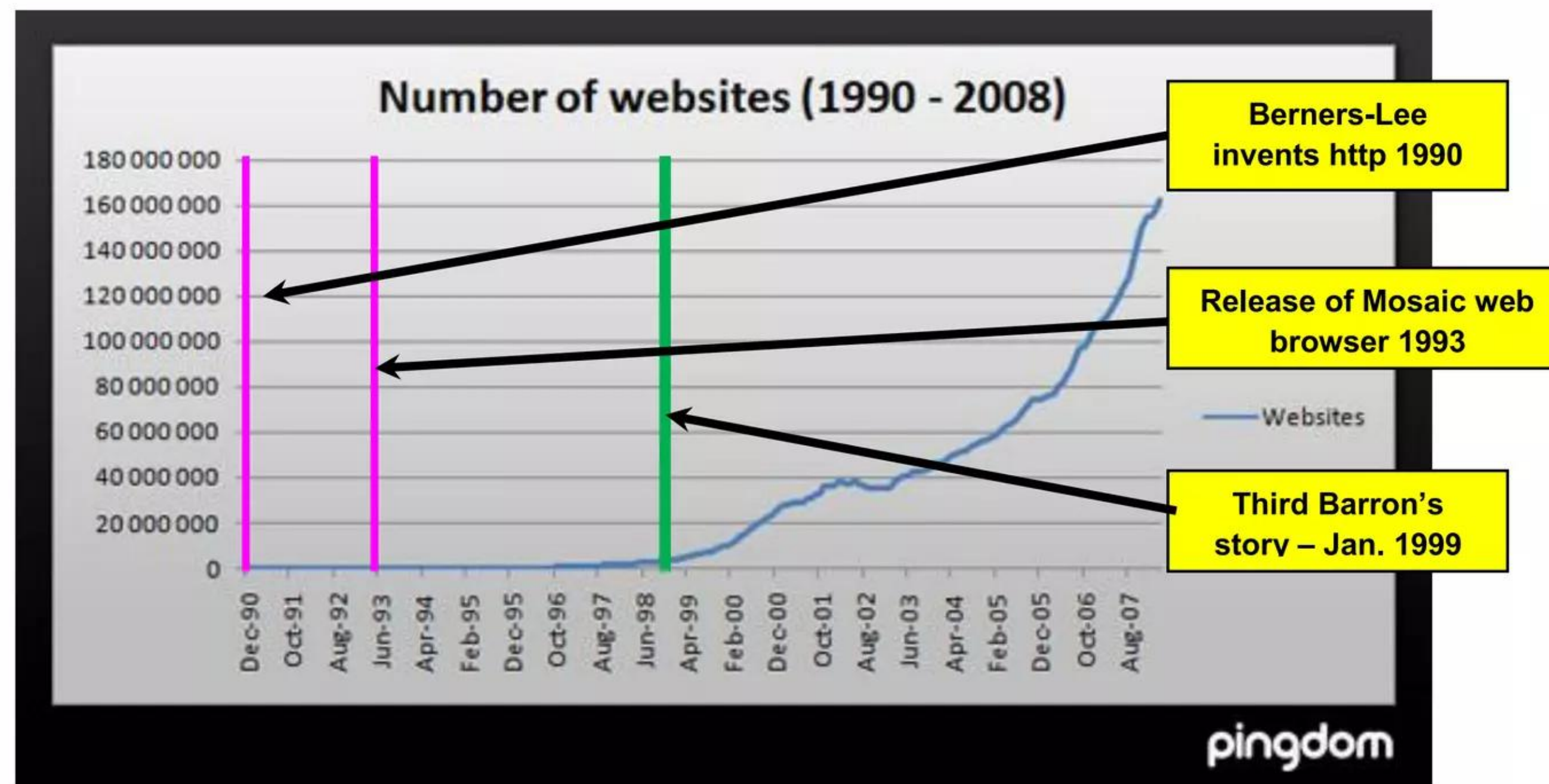
What we stated above accurately foretold Tim Berners-Lee’s invention of http (World Wide Web) (1989-90); world’s first website was at CERN in 1991. The first publicly available description of HTML (the Internet *lingua franca* that enables disparate computers to easily communicate) was a document called *HTML Tags*, first mentioned on Internet by Berners-Lee in late 1991; today it’s XML. The Mosaic browser was developed at Univ. of Illinois and deployed 1993.



**Source URL** = <http://spectrum.ieee.org/robotics/robotics-software/singular-simplicity>



**Quoting Wikipedia:** “Mosaic is the web browser credited with popularizing the World Wide Web. It was also a client for earlier protocols such as FTP, NNTP, and gopher. Its clean, easily understood user interface, reliability, Windows port and simple installation all contributed to making it the application that opened up the Web to the general public. Mosaic was also the first browser to display images in-line with text instead of displaying images in a separate window... **Mosaic was developed at the National Center for Supercomputing Applications (NCSA) at the University of Illinois Urbana-Champaign beginning in late 1992. NCSA released the browser in 1993...** [18] years after Mosaic's introduction, the most popular contemporary browsers, Internet Explorer, Mozilla Firefox and Google Chrome, retain many of the characteristics of the original Mosaic graphical user interface (GUI) and interactive experience.”

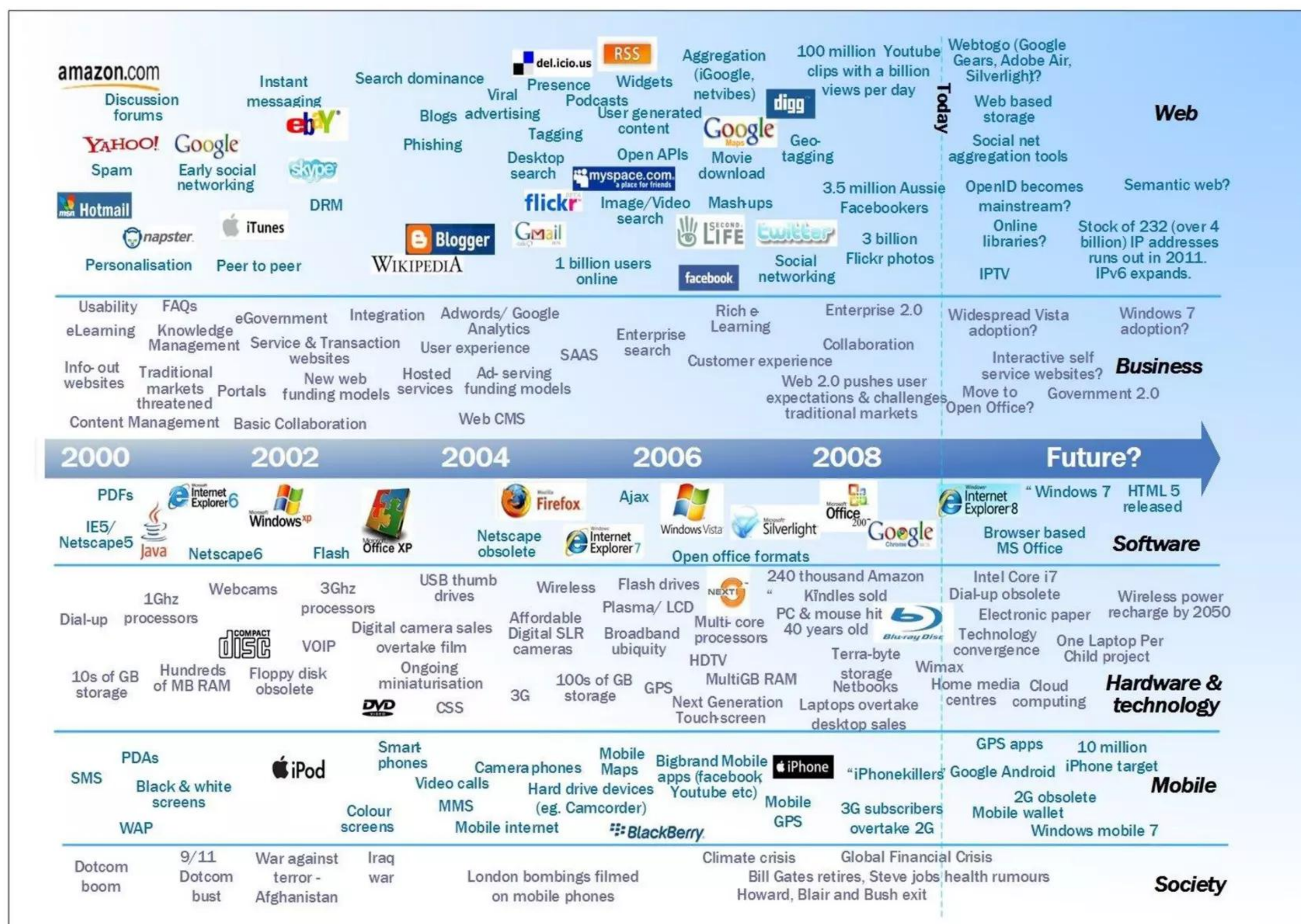


**Quoting from Lattice's 2010 White Paper:** “California’s Silicon Valley venture capital firms were instrumental in financing the development of a broad range of technologies. Their successful commercialization efforts were responsible for the world-changing personal computer and Internet revolutions. Altogether, it took roughly 30 years to get from the pre-PC era to where we are today... Starting with Apple, Inc. (1977), Radio Shack (1980), and IBM Corporation (1981), personal computers (PCs) based on low-cost Intel/Motorola microprocessors, commodity DRAM memory and hard disks, and related microcomputer software, created a worldwide revolution. PCs beat mainframes and minicomputers on price/performance by dramatically reducing the price of computation. This created low-cost global software base and related computational backbone that enabled the rise of the Internet. Indeed, Google probably would not exist in the absence of low cost commodity PCs coupled to affordable application software and standardized communications protocols.”



**Domination of the Internet by U.S.-based companies is readily apparent in the following timeline:**

**Source URL** = <http://www.stayonsearch.com/what-will-the-internet-be-like-in-2025>



**Source URL** = <http://en.wikipedia.org/wiki/Nanotechnology>

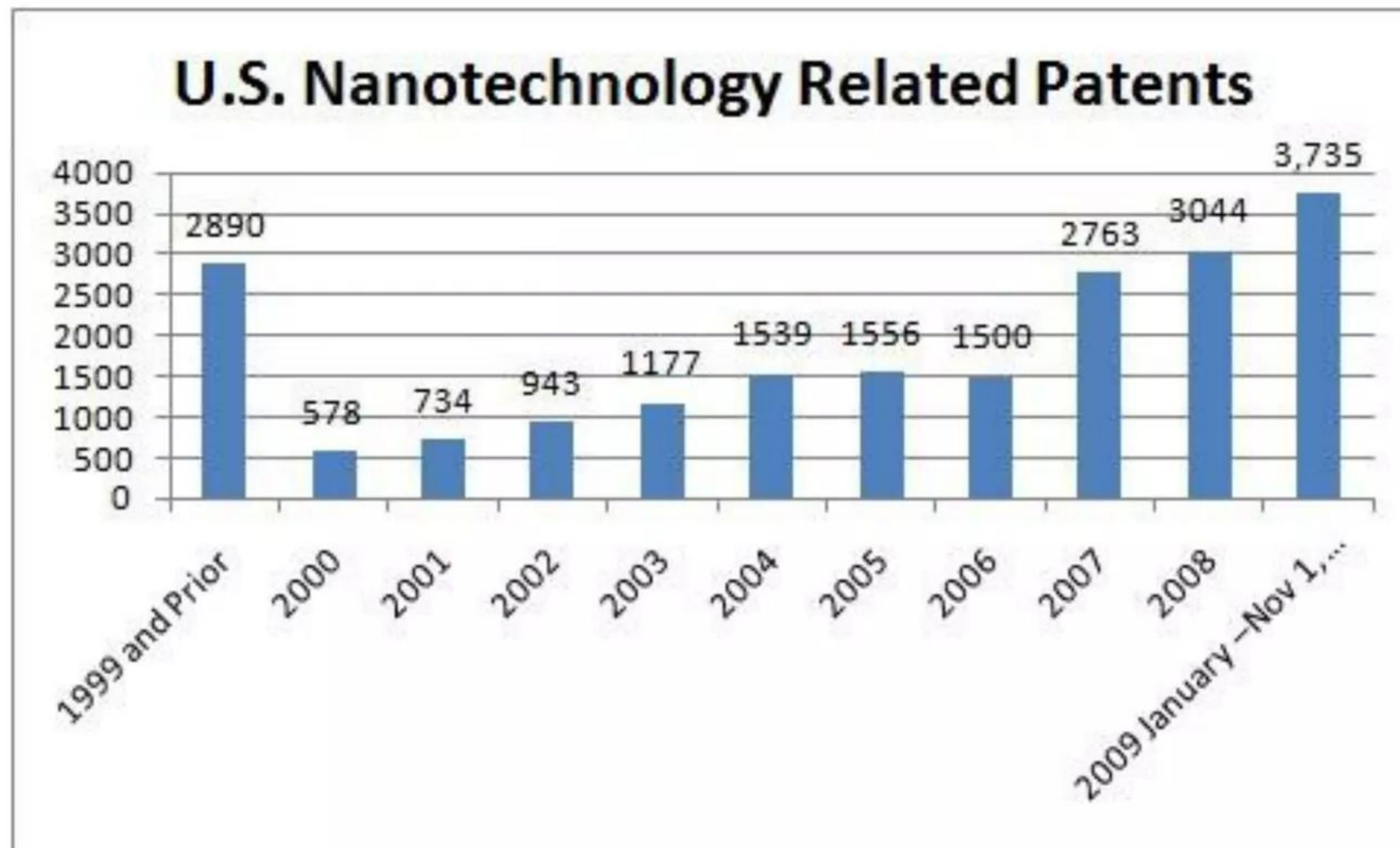
**Quoting from the Wikipedia article:** “Nanotechnology (sometimes shortened to “nanotech”) is the study of manipulating matter on an atomic and molecular scale.

Generally, nanotechnology deals with structures sized between 1 to 100 nanometre in at least one dimension, and involves developing materials or devices possessing at least one dimension within that size. Quantum mechanical effects are very important at this scale, which is in the quantum realm. Nanotechnology is very diverse, ranging from extensions of conventional device physics to completely new approaches based upon molecular self-assembly, from developing new materials with dimensions on the nanoscale to investigating whether we can directly control matter on the atomic scale. There is much debate on the future implications of nanotechnology.

Nanotechnology may be able to create many new materials and devices with a vast range of applications, such as in medicine, electronics, biomaterials and energy production .... emergence of nanotechnology in the 1980s ... Around the same time, K. Eric Drexler developed and popularized the concept of nanotechnology and founded the field of molecular nanotechnology ... The term “nanotechnology”, which had been coined by Norio Taniguchi in 1974, was unknowingly appropriated by Drexler in his 1986 book *Engines of Creation: The Coming Era of Nanotechnology* ... field was subject to growing public awareness and controversy in the early 2000s, with prominent debates about both its potential implications, exemplified by the Royal Society's report on nanotechnology, as well as the feasibility of the applications envisioned by advocates of molecular nanotechnology, which culminated in the public debate between Eric Drexler and Richard Smalley in 2001 and 2003 .... early 2000s also saw the beginnings of commercial applications of nanotechnology, although these were limited to bulk applications of nanomaterials.”



## Patents in area of nanotech are also exploding



Having an extraordinarily broad range of important commercial applications, utilization of nanotechnology is crucial to further development of a variety of existing and entirely new technologies. For example, energy technologies strongly impacted by nanotech range from batteries and solar photovoltaics to entirely new types of 'green', carbon-free energy sources such as Low Energy Nuclear Reactions (LENRs). While the new science of nanotech is presently dominated by the United States, many different advanced foreign countries are beginning to recognize its technological potential.

### Quoting from Lattice's 2010 White Paper:

*"The PC era collapsed the inflation-adjusted price of computation and democratized access to computers for at least a billion people worldwide. The rise of the Internet democratized low-cost worldwide access to all forms of information, ideas, goods, services and human knowledge; it is gradually knitting the entire world together into a vast, complex skein of diverse, electronically interconnected humanity."*

### My present comments:

The next major wave of extraordinarily important technological development (now underway) involves further elaboration of utilization of the Internet (e.g., social networking, Internet search technologies, increasingly portable web-connected portable electronic devices, computer-integrated customizable small-batch manufacturing, etc.) and an explosion in the physics, chemistry, and materials science that are intimately associated with nanotechnology which impact many things, including a whole array of new energy technologies.

*Importantly, US-based companies and academic institutions continue to dominate these 'great New Frontiers' of 21<sup>st</sup> century technology. To insure that such dominance continues, we need to fix the American educational system and insure that these key areas get favorable tax treatment and the huge levels of low-cost, high-risk capital investment that will be necessary to fully develop a rapidly growing array of important new technologies.*

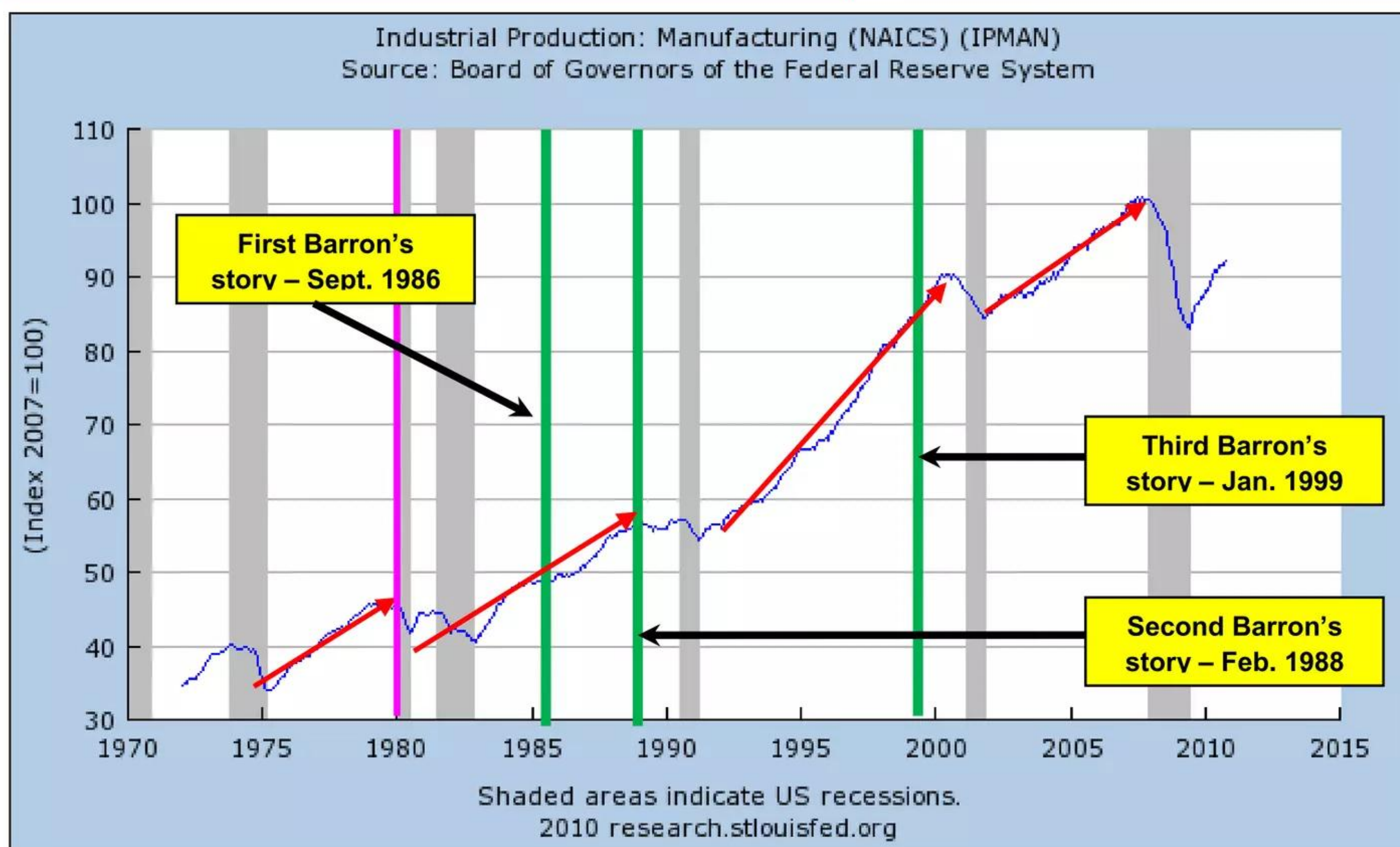


**As we said in 1986 and 1988, manufacturing is definitely not 'dead' in the U.S.**

## We Don't "Make Anything" Anymore

One of the biggest myths about the U.S. economy is that we don't "make anything" anymore. This simply is not true. The U.S. is a manufacturing powerhouse.

The difference is that fewer people are employed in manufacturing. Productivity and output have soared. Since 1983, manufacturing production has doubled.



**In fact, long-term real growth in US GDP per capita is actually ACCELERATING**

### Long-term real growth in US GDP per capita 1871-2009

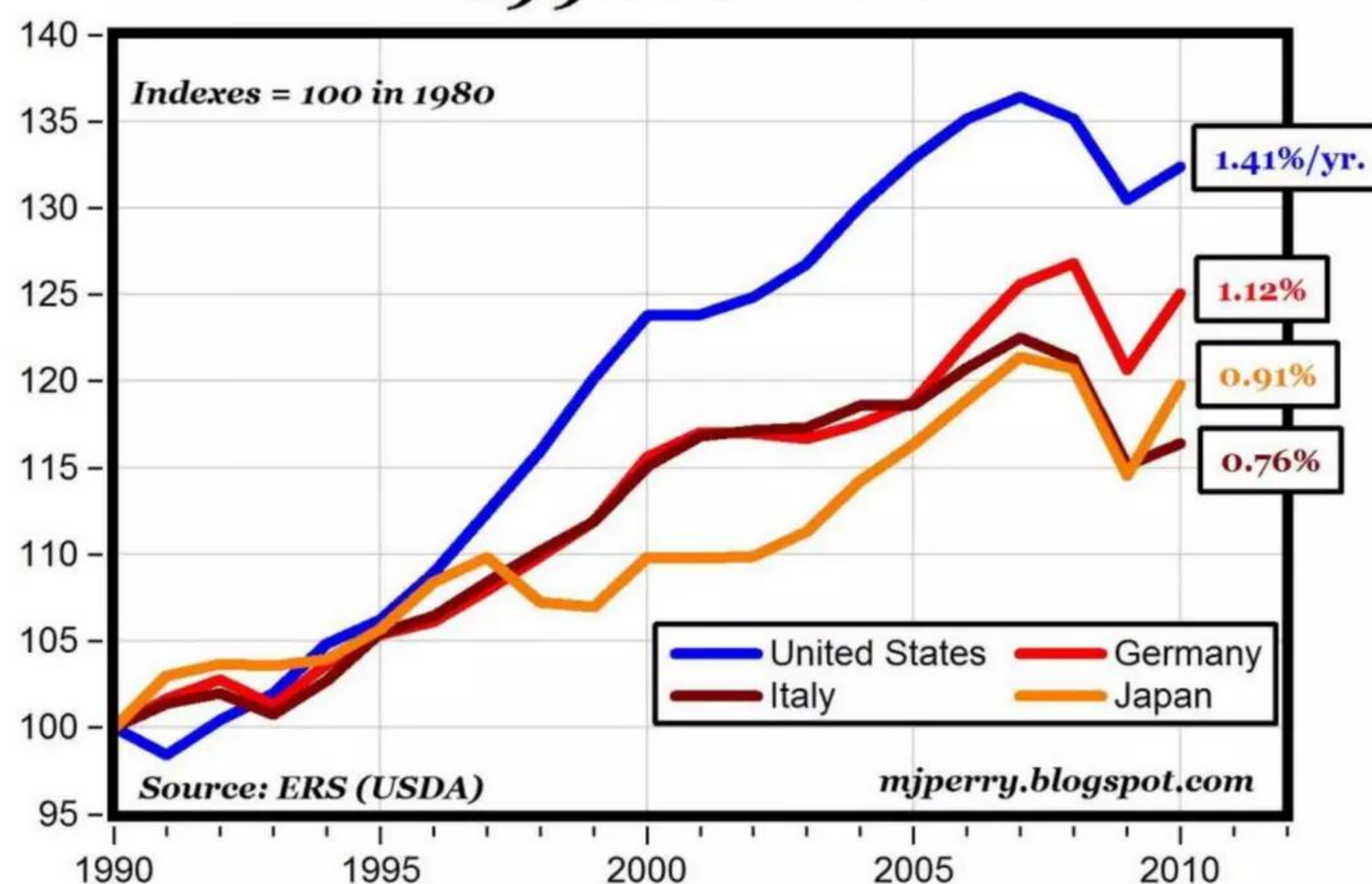
GDP per capita adjusted for inflation using 2005 dollars



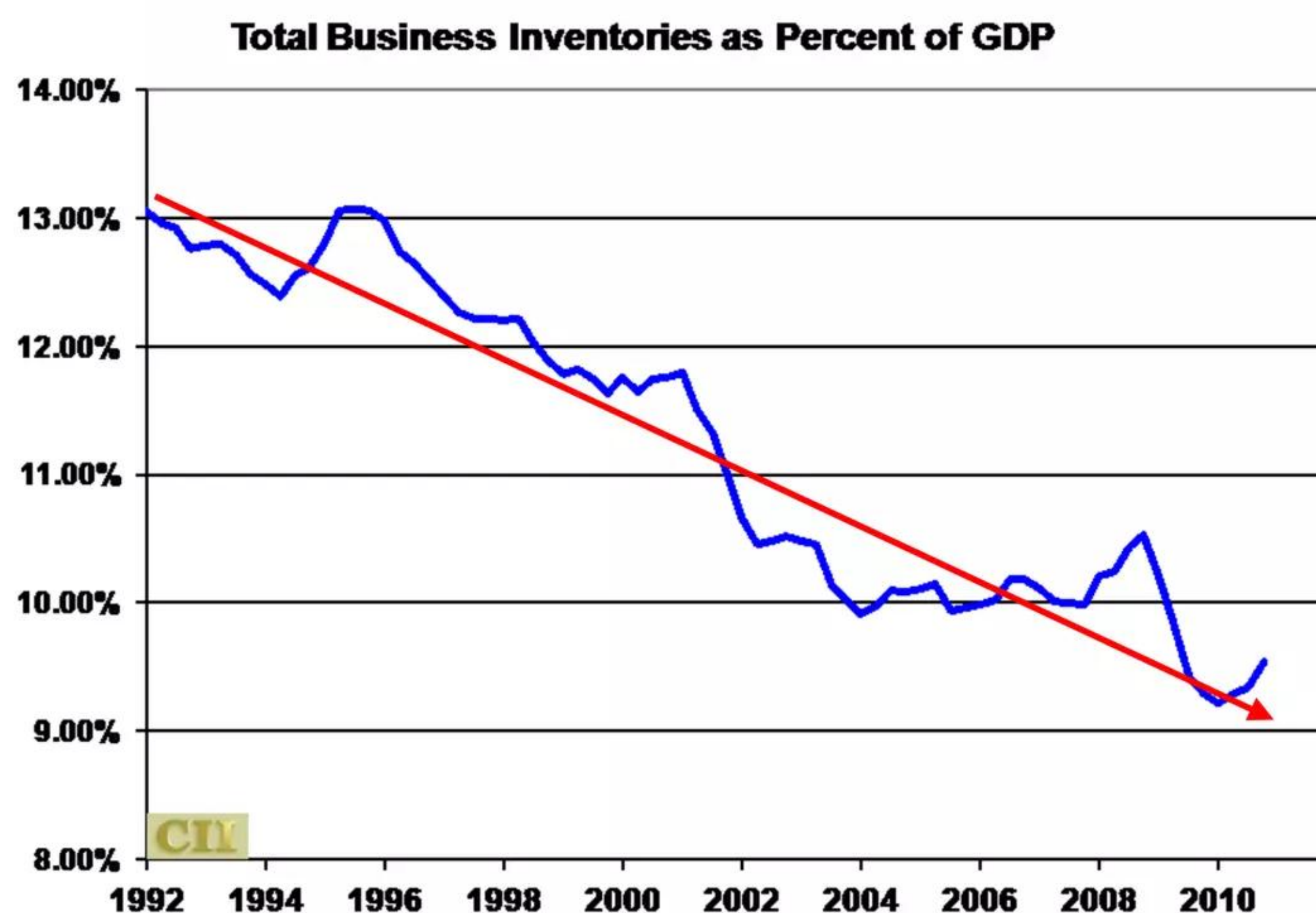


**After 1995, US real per-capita GDP surged ahead of Japan, Germany and Italy**

## Real Per-Capita GDP: U.S., Japan, Germany and Italy 1990 to 2010



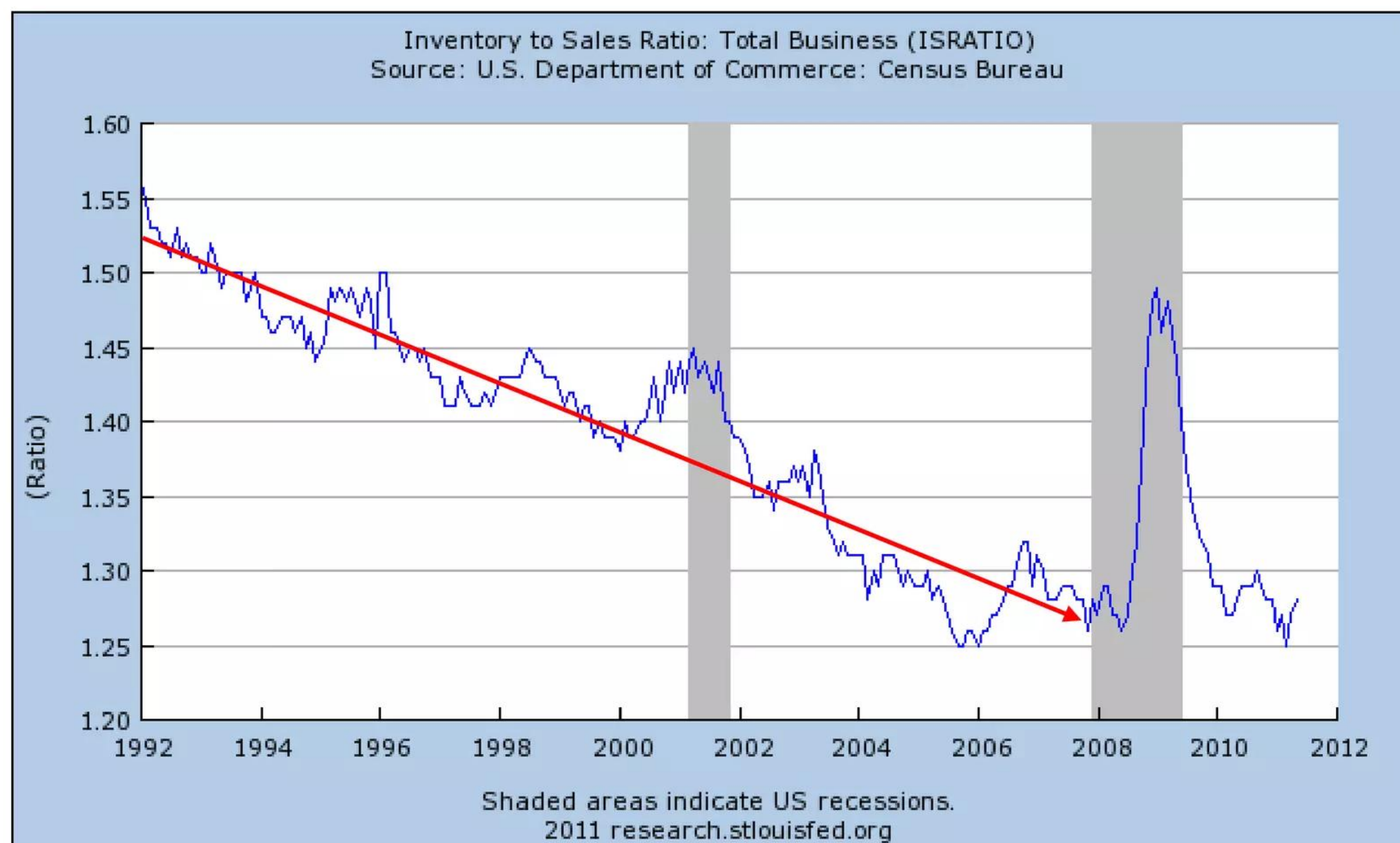
**In 1986 and 1988 *Barron's* stories, we talked about the spread of just-in-time inventory management practices in the US; as readers can see, that key trend has also continued: it is still reducing total business inventories as a % of GDP**



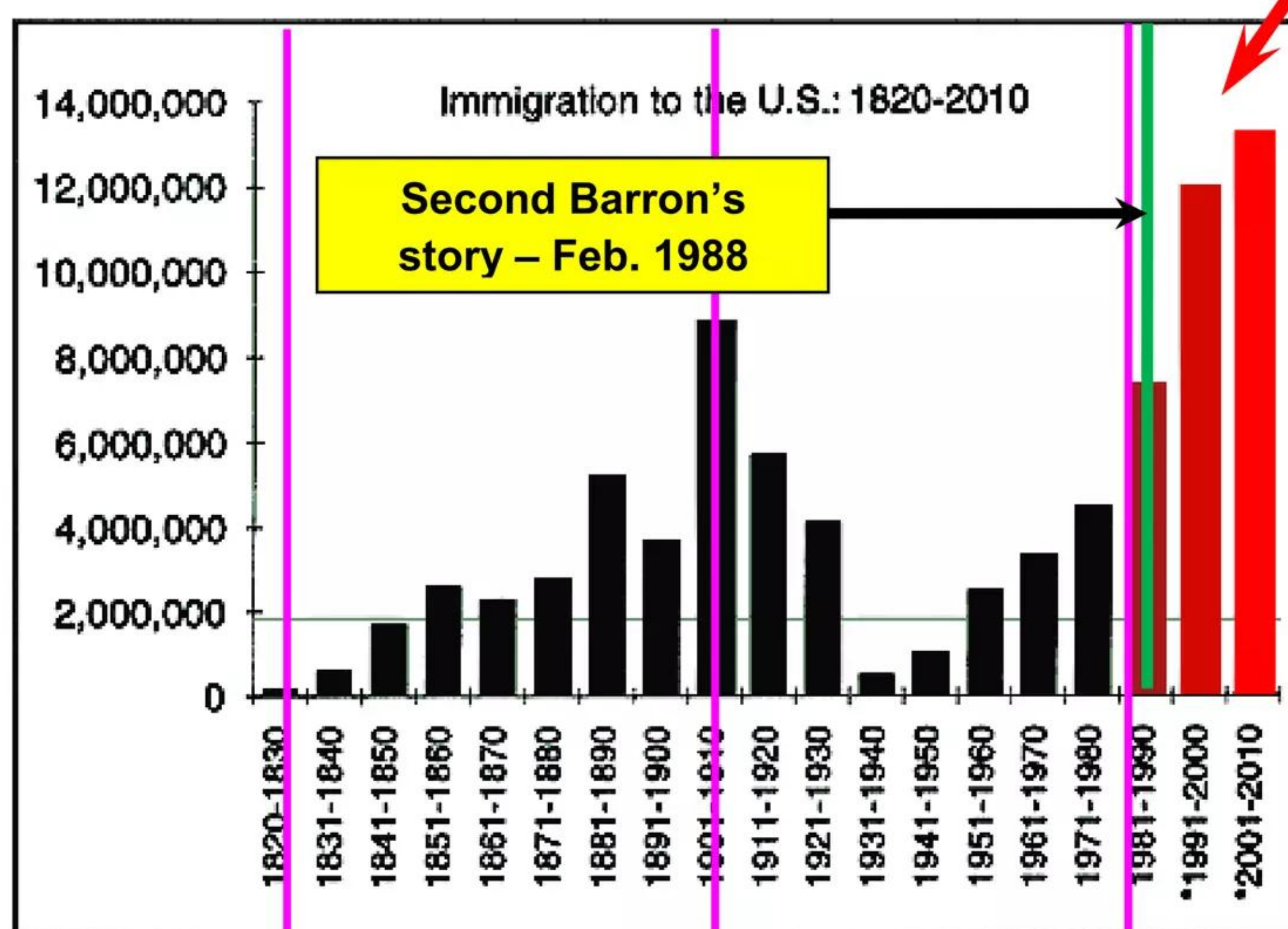
**Spread of just-in-time inventory management practices in the US is also evidenced by the continued decreases in inventory-to-sales ratio (see US Dept. of Commerce graph on next page)**



## Just-in-time inventory management lowers US long-term inventory-to-sales ratio



Since the 1988 *Barron's* story, net immigration to the US has also SURGED



**1988:** we said that (quoting), *“Both periods also have witnessed major pulses in net immigration, which drew in not only cheap labor but also scientific and technical talent from outside the U.S.; likewise the U.S. incurred heavy foreign debts during both era in building up its productive capacity and infrastructure, according to Larsen.”* **2011:** see chart above --- that is exactly what has happened since 1988 (our biggest foreign debt today is owed to China --- a mutually good arrangement, I would hazard to say)

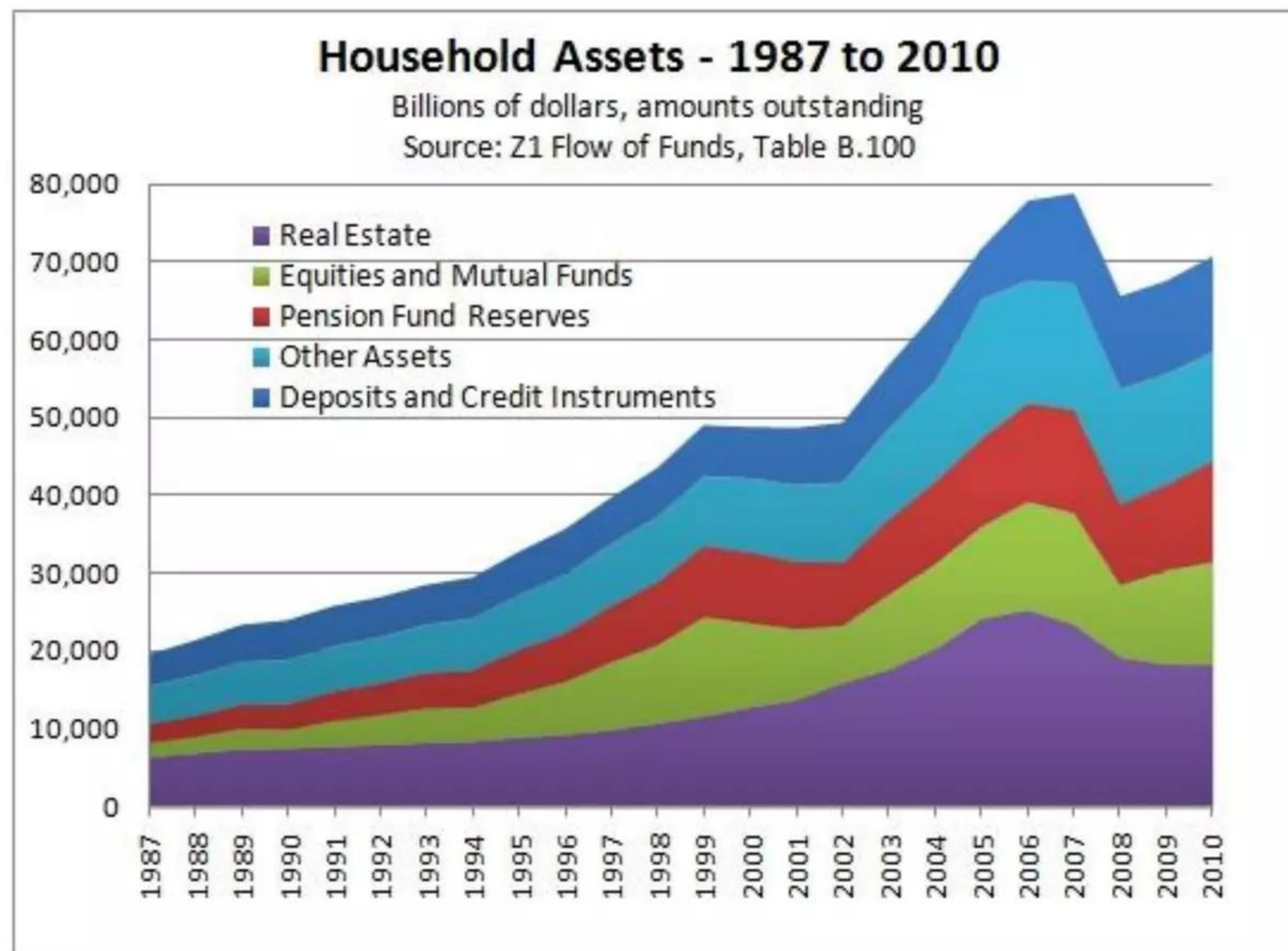
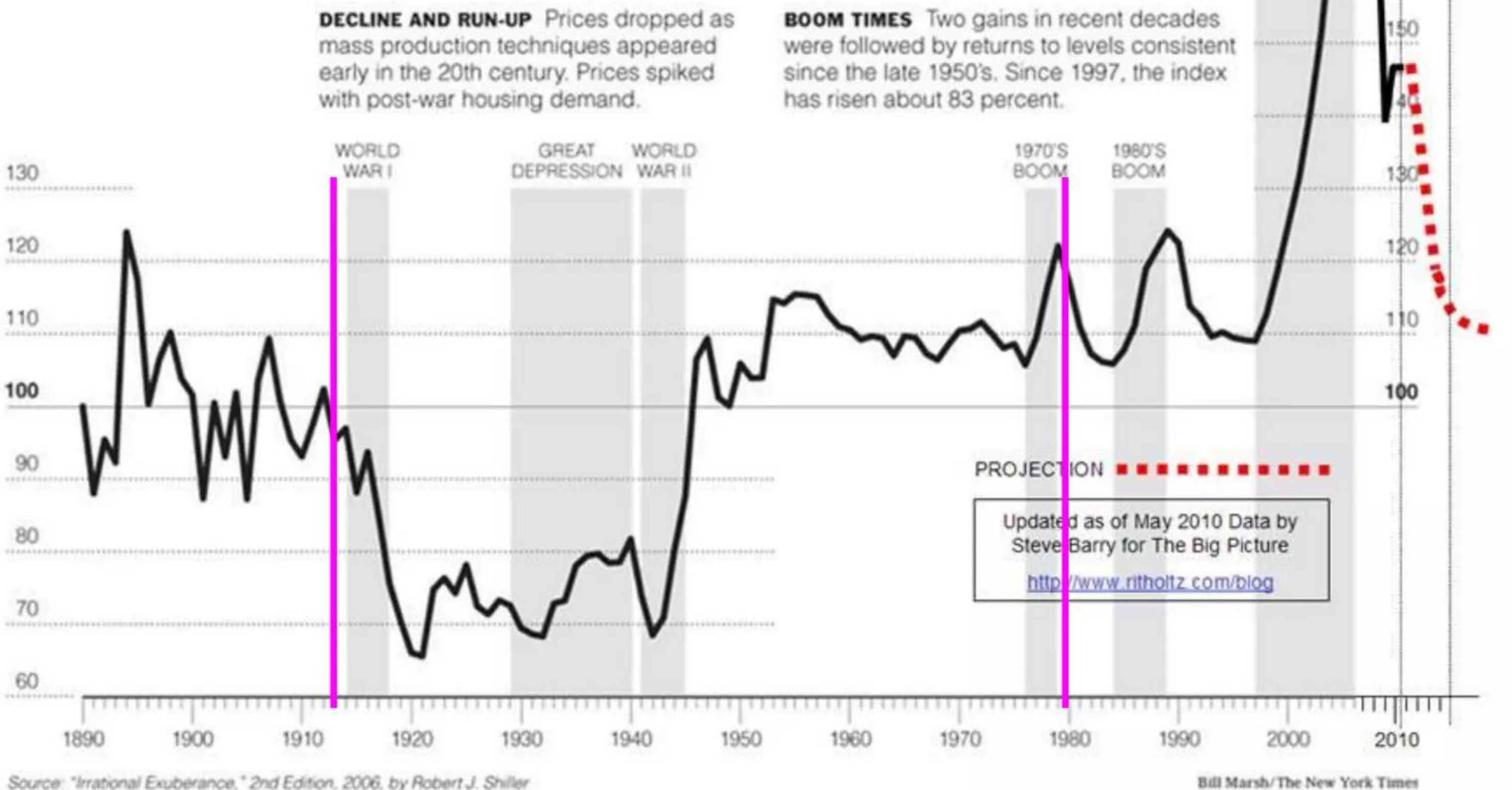


## In past 15 years, US housing market was 'goosed' then crashed very hard

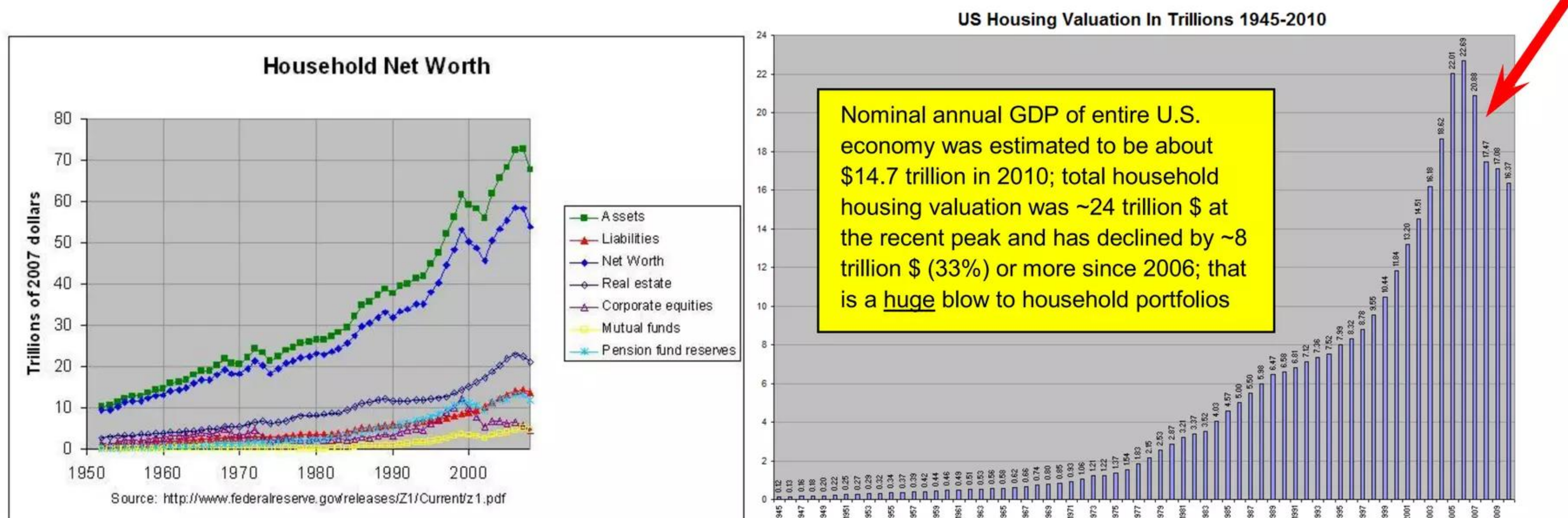
### A History of Home Values

The Yale economist Robert J. Shiller created an index of American housing prices going back to 1890. It is based on sale prices of standard existing houses, not new construction, to track the value of housing as an investment over time. It presents housing values in consistent terms over 116 years, factoring out the effects of inflation.

The 1890 benchmark is 100 on the chart. If a standard house sold in 1890 for \$100,000 (inflation-adjusted to today's dollars), an equivalent standard house would have sold for \$66,000 in 1920 (66 on the index scale) and \$199,000 in 2006 (199 on the index scale, or 99 percent higher than 1890).







## Discussion of US housing market crash and implications for economic recovery

The world's recent brush with near-global financial collapse, subsequent U.S. recession beginning in 2008, and long-lingering economic malaise today, were all caused by an explosive, self-reinforcing mixture of randomly juxtaposed serendipitous economic events (e.g., major stock markets temporarily topped-out in 1999-2000, causing consumers to shift their behavior and invest excess 'savings' in the 'roof over their heads' --- real estate) and investment-distorting systematic factors within the tax and financial systems (e.g., favorable IRS tax treatment for home mortgage interest expense, US government policies fostering residential home ownership via Fannie Mae and Freddy Mac, increased leverage allowed in investment banks, and most of all, the securitization and sale of subprime US mortgage-backed securities all over the world by globalized investment banks) that fueled a huge increase in US residential home prices, as is clearly seen in Robert Schiller's historical index of home prices (see chart above).

This complex mélange of causative agents for the 2008 – 2010 'recession' is very well explained on pp. 203 - 222 in Chapter 13 "*The U.S. subprime crisis: an international and historical comparison*" in a new book by Carmen Reinhart and Kenneth Rogoff, "*This time is different: eight centuries of financial folly*," Princeton University Press (2009).

As we predicted in *Barron's*, from 1986 through the end of the 1990s US households did in fact increase equities on a relative basis as a % of total household assets. The 1990s were a period of rapid growth in total household net worth; there were no significant recessions during that time --- fully-employed consumers had lots of 'spare liquid assets' to invest in either tangible or intangible assets. When the stock markets more-or-less appeared to top-out in 1999 – 2000, a 'perfect storm' of causative factors induced even more household investment dollars to flow into real estate assets, which caused a gigantic boom in home prices, as shown in Schiller's famous chart copied above.

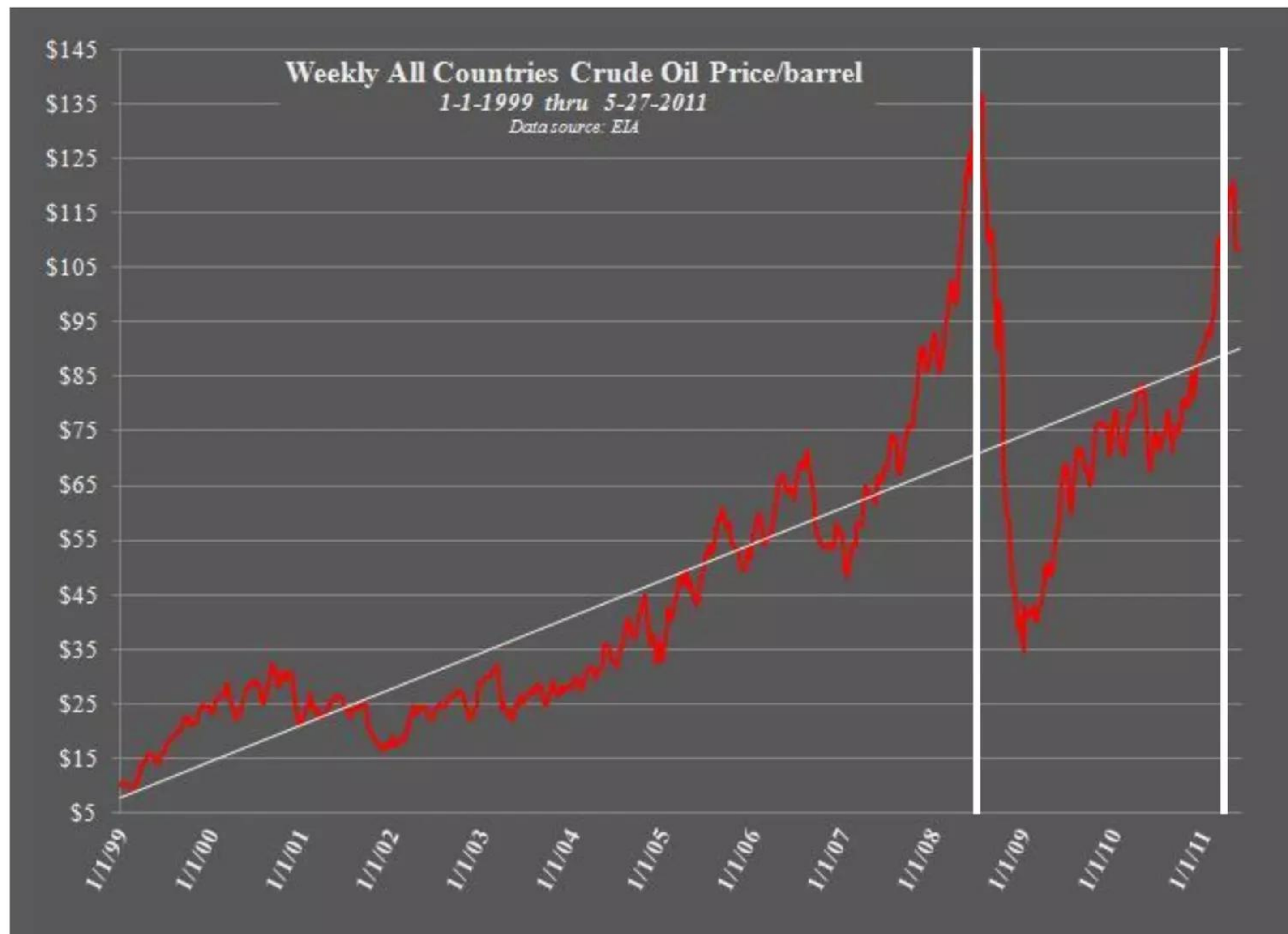
**A la what we said in *Barron's* in 1986, real estate, the single largest component of US household net worth got hammered into the ground price-wise in the still ongoing real estate market crash. As far as the SCALE of asset destruction from a household's perspective, this latest catastrophe very likely rivaled if not exceeded the Great Depression in the 1930s. This is a major reason why the deep recession is lingering-on so long and why consumer spending still very subdued.**



**Thanks to recent development and global spread of energy crops that compete for acreage with food crops, the price of energy and food prices have become even more closely linked because of various types of hedging and price arbitrage**

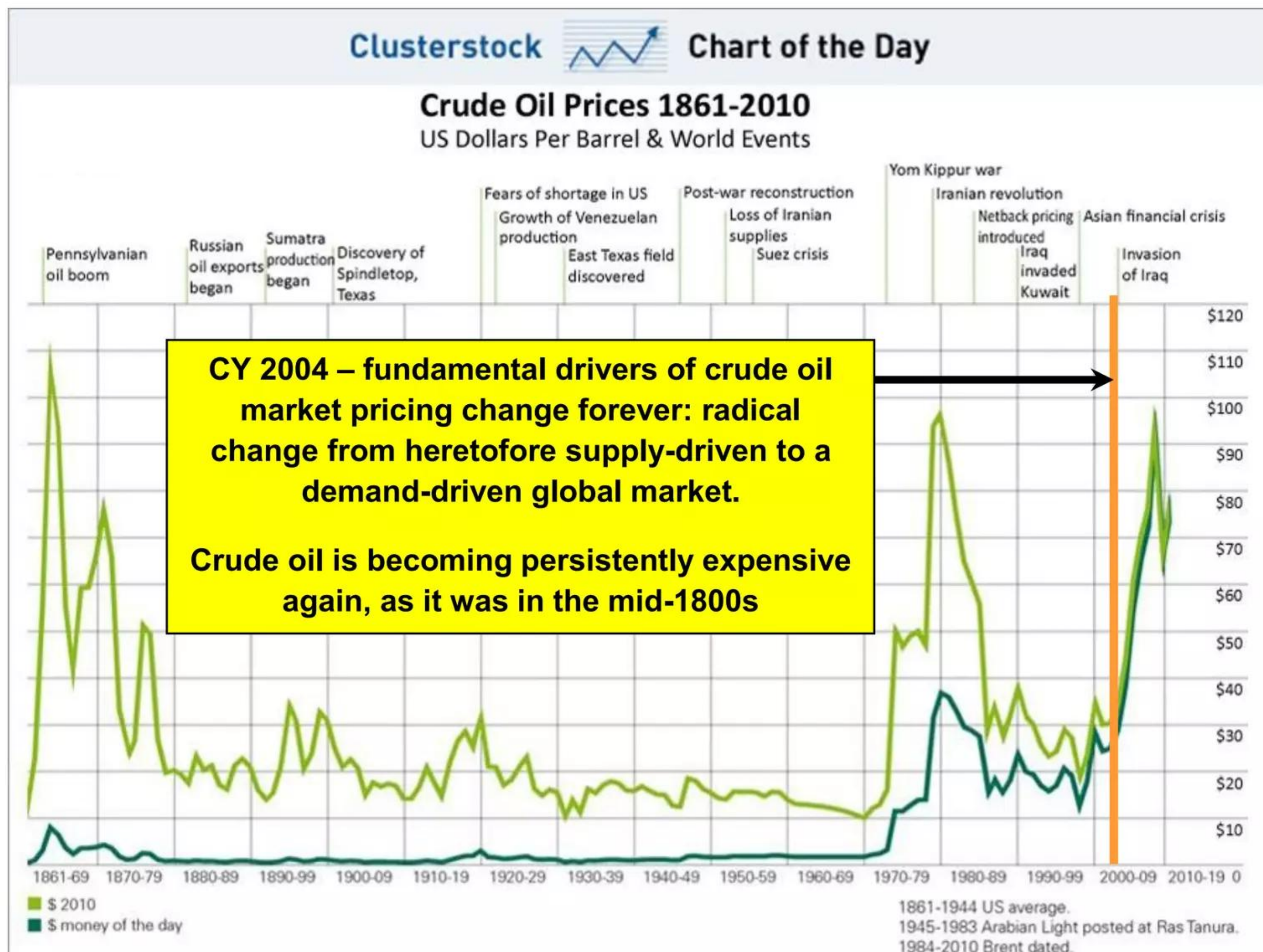


**Note close temporal correlation of price movements in food index vs. crude oil**



**Crude oil (a proxy for the price of energy) is finally becoming expensive again**





The fundamental change in oil prices that occurred in 2004 (as evidenced in the chart above) is very well explained on page 39 of Thomas Friedman's latest book, *"Hot, Flat, and Crowded"*, where he says,

*"The pivotal year that told us we were in a new era in terms of global energy supply and demand was 2004, says Larry Goldstein, an oil expert at the Energy Policy Research Foundation. 'What happened in 2004 was the world's first demand-led energy shock.' Here's what he means: In 1973, 1980, and 1990, we saw sudden oil price spikes because of wars or revolution in the Middle East, which sharply limited the supply of oil. What happened in 2004 said Goldstein, was a price shock that was simply the product of long-term trends that pushed demand well ahead of supply, spurred in large part by a sudden leap in demand by China...Two things happened that year. All the shock absorbers, all that spare crude, product, and refining capacity, disappeared, and demand for energy took a great leap forward, due to China's growth. At the start of 2004, the International Energy Agency [IEA] predicted that global demand for crude oil would grow by 1.5 million barrels a day that year, said Goldstein. 'Instead, it grew by three million barrels a day, and [demand in] China alone grew by over one million barrels a day,' he said. And because all three of the traditional shock absorbers were gone, that extra demand could not be cushioned."*

Dramatic increases in crude oil prices since 2004 are an unmistakable signal from energy markets that oil supplies and increasing demand are on a collision course; they in disequilibrium. Price charts don't lie.



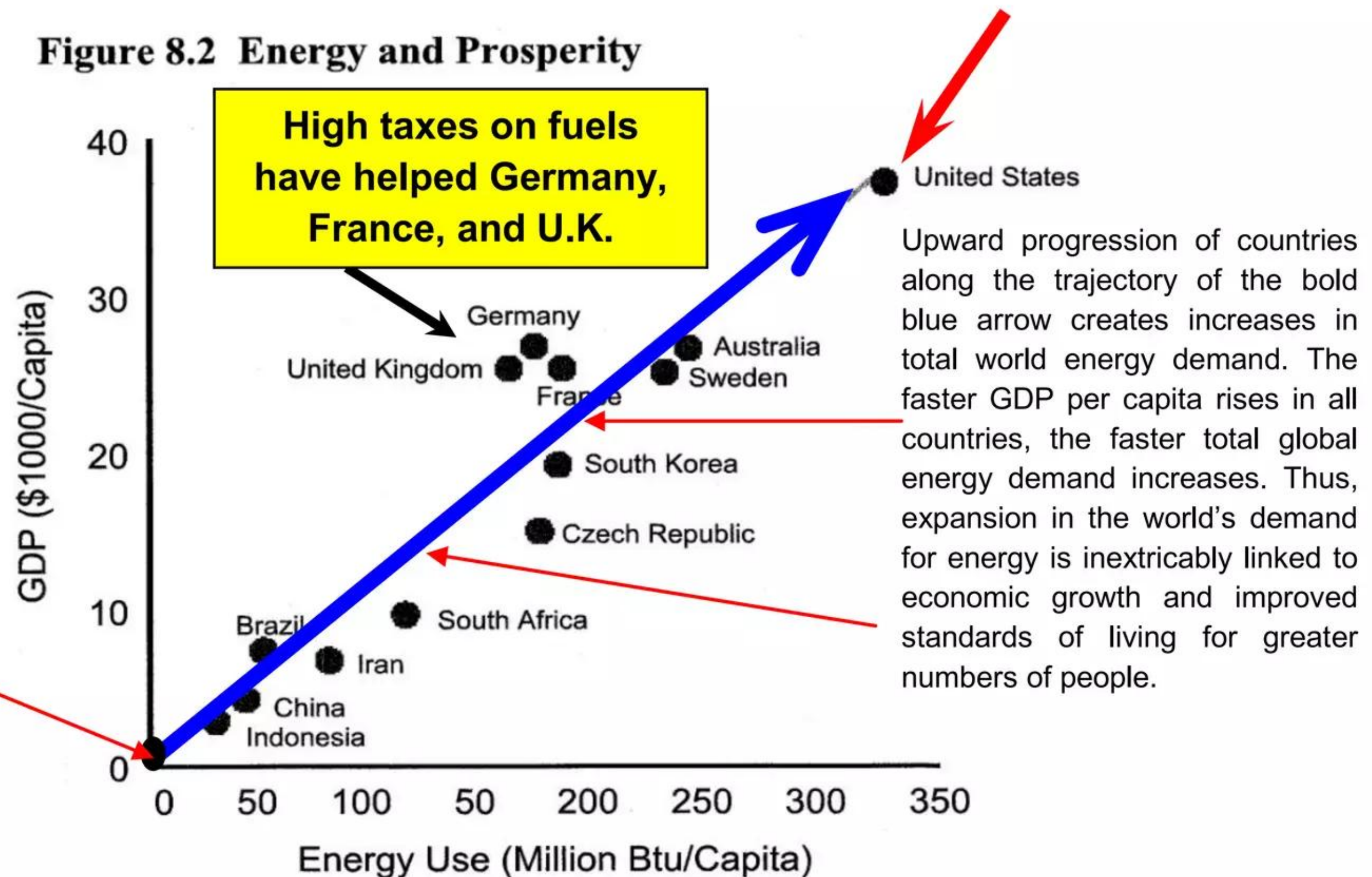
## Price of energy and relationship to GDP economic growth in the present era

Global energy use – overall demand for energy is currently very strong and appears likely to increase substantially in the future – one of the root causes of energy's Gordian knot

Figure 8.2 Energy and Prosperity

**Note:** in 2008 India (not shown in Huber-Mills' chart) had an estimated GDP (\$1000/Capita) of 1.327 and Energy Use (Million Btu/Capita) of 12.6, placing it squarely near the origin of the bold arrow in the lowermost corner of the left quadrant.

Also note that India and China now account for 40% of the world's population.



Source: CIA, World Factbook; BP p.l.c.

The more energy a nation uses, the richer it gets. Powered machines boost productivity, which boosts wealth.

©2005 Huber, Mills, *The Bottomless Well*, Basic Books, & www.digitalpowergroup.com

**Please note carefully:** roughly speaking, the above chart implies that if India and China are to reach the same energy use per capita as Western Europe by the year 2048, their combined demand for energy must increase by ~14% per year for the next 40 years. If energy's Gordian knot is not somehow cut, such demand increases will be unsustainable; that is, the price of energy must increase to unprecedented levels that go high enough to ration very strong global demand.

**"Energy, broadly defined, has become the most important geostrategic and geoeconomic challenge of our time."**

Thomas Friedman, *New York Times*, April 28, 2006



In a recent paper, academics confirmed same relationship shown in previous chart

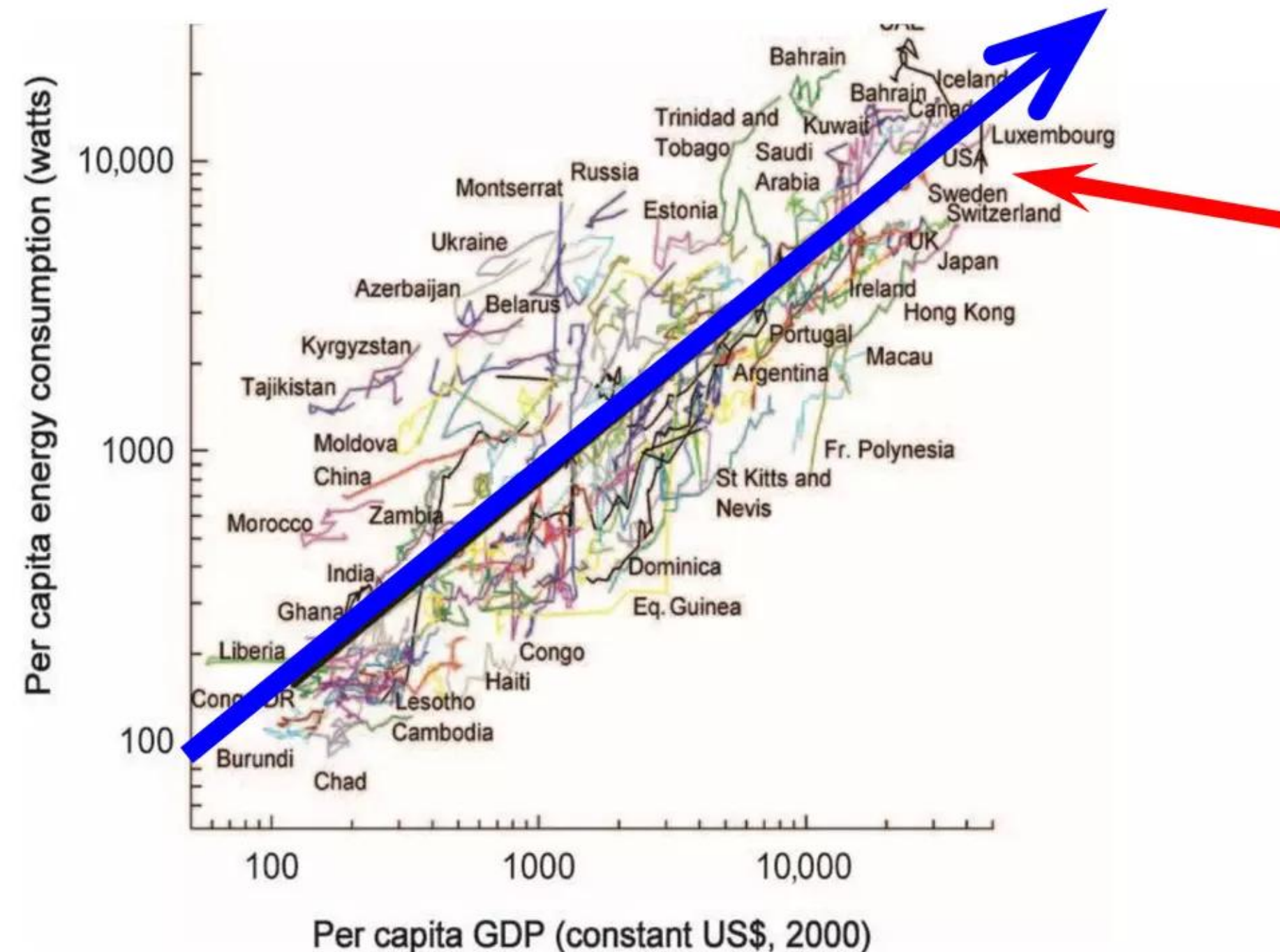
***“Energetic Limits to Economic Growth”***

J. Brown et al.

*BioScience* 61 pp. 19 - 26 (January 2011)

Source URL = <http://www.aibs.org/bioscience-press-releases/resources/Davidson.pdf>

**Fig. 1, pp. 20, Brown et al., “*The relationship between per capita energy use and per capita gross domestic product (GDP; in US dollars), plotted on logarithmic axes, from 1980 to 2003.*”**

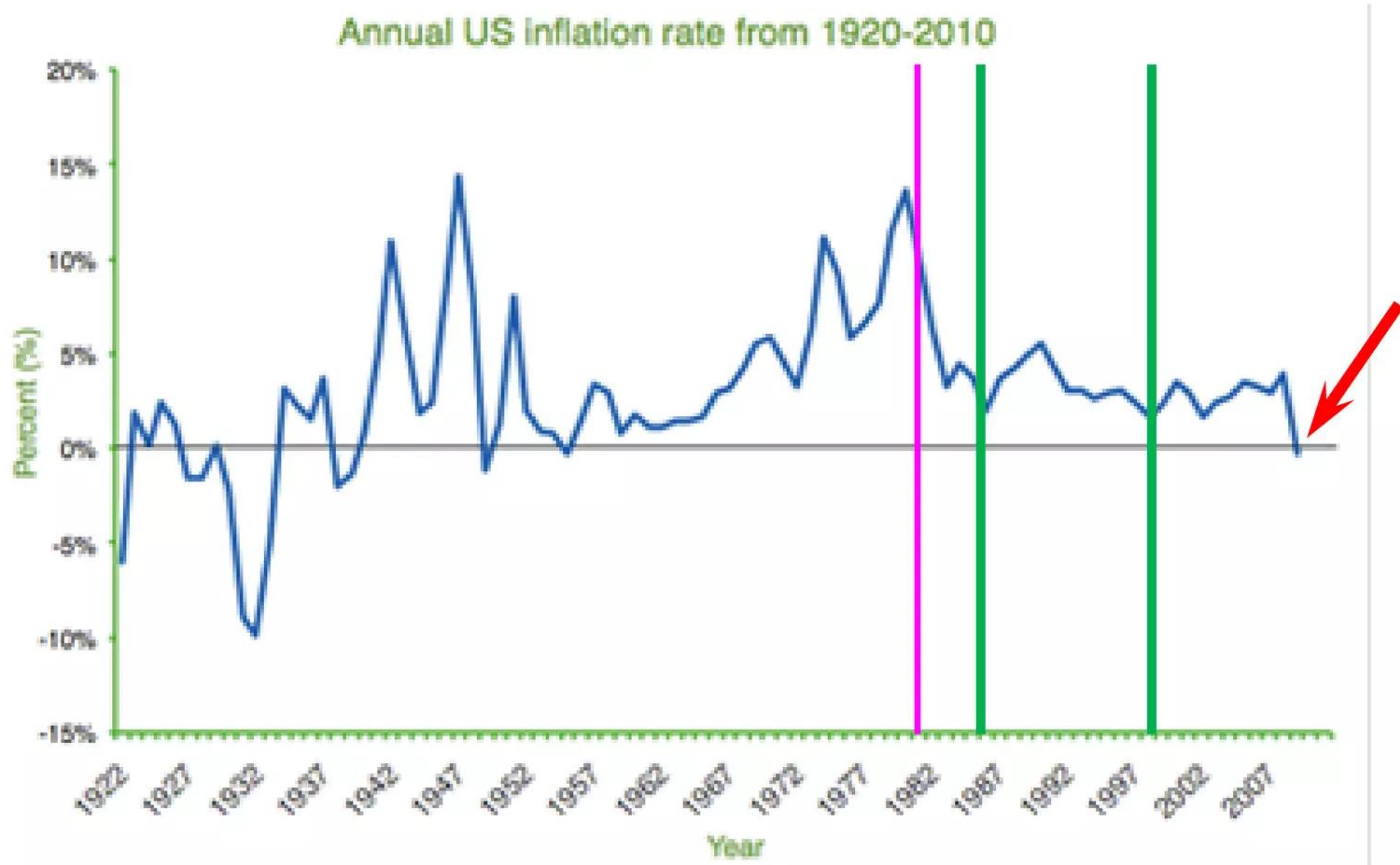


In interesting subsection on pp. 22, “*Increased energy supply*,” Brown et al. make an intriguing remark about what might happen in event of a huge breakthrough in low-cost nuclear energy technology; they mention ‘hot’ fusion, no doubt because they were unaware of the possibility of LENRs; quoting: “The sources of energy that may be used to support future economic growth include finite stocks of fossil fuels as well as nuclear, renewable, and other proposed but unproven technologies. Fossil fuels currently provide 85% of humankind’s energy needs, but they are effectively fixed stores that are being depleted rapidly. Conventional nuclear energy currently supplies only about 6% of global energy; fuel supplies are also finite, and future developments are plagued by concerns about safety, waste storage, and disposal. A breakthrough in nuclear fusion, which has remained elusive for the last 50 years, could potentially generate enormous quantities of energy, but would likely produce large and unpredictable socioeconomic and environmental consequences. Solar, hydro, wind, and tidal renewable energy sources are abundant, but environmental impacts and the time, resources, and expenses required to capture their energy limit their potential. Biofuels may be renewable, but ecological constraints and environmental impacts constrain their contribution. More generally, most efforts to develop new sources of energy face economic problems of diminishing returns on energy and monetary investment ...”

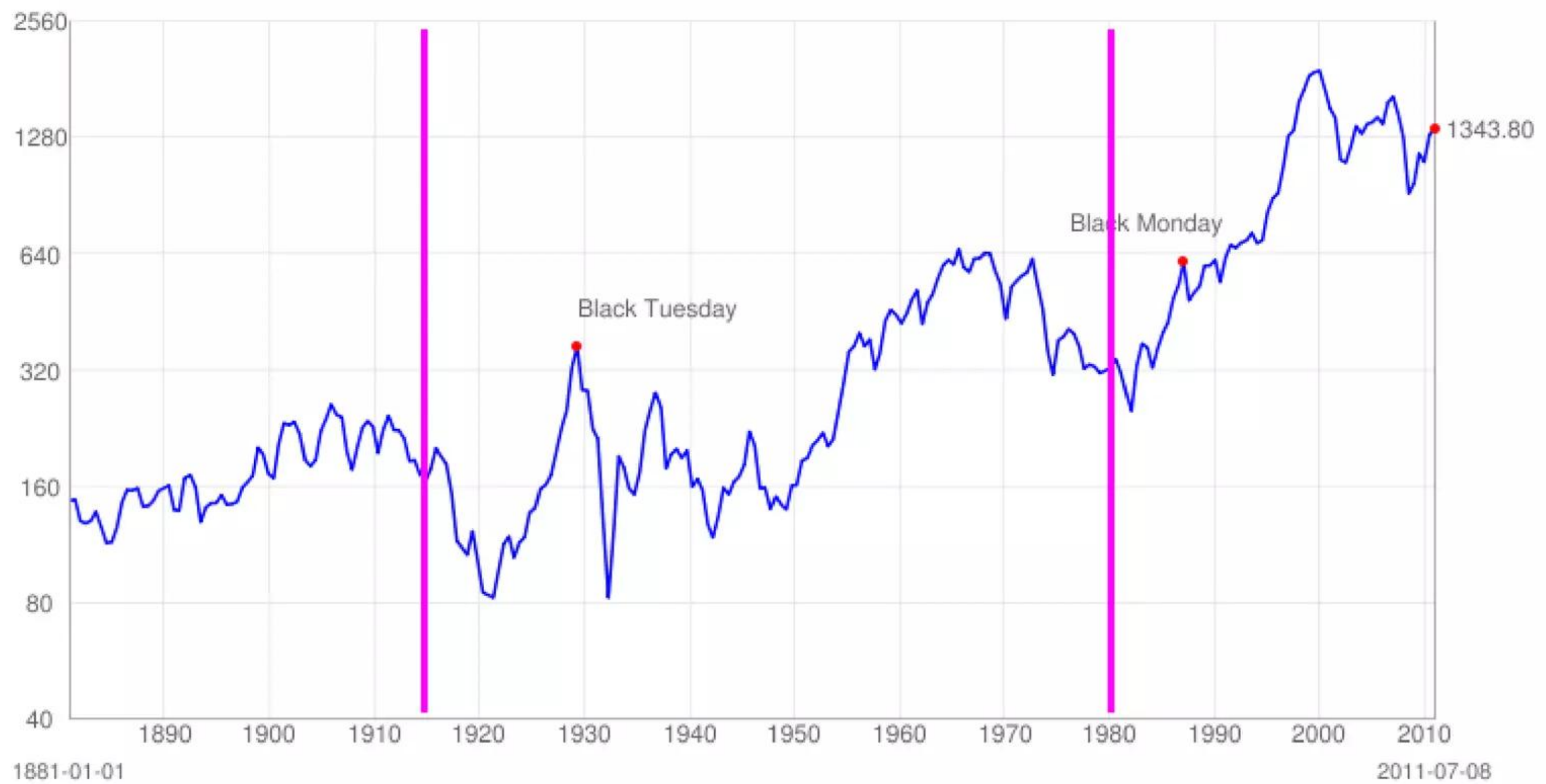
**As we said in the 1999 *Barron’s* story, high prices of a commodity or service stimulate both capital investment and technological innovation; quoting from Lattice’s 2010 *White Paper*:** “Similar to the early days of semiconductors, microprocessors, and PCs, a rare confluence of macroeconomic, geopolitical, and technological forces are creating a unique formative environment that will spawn an unprecedented array of business opportunities within the energy sector. Today, energy prices that have been persistently high since 2004 are beginning to focus vast global entrepreneurial forces that will accelerate the development of a wide range of new energy technologies.”

**My comment: for the balance of the 21<sup>st</sup> century, reducing the effective price and increasing the availability of readily usable forms of energy, while at the same time reducing emissions of CO<sub>2</sub> into the atmosphere, are the keys to sustainable economic growth and widespread global improvement in the standard of living.**





### S&P 500 index from 1880 to 2010





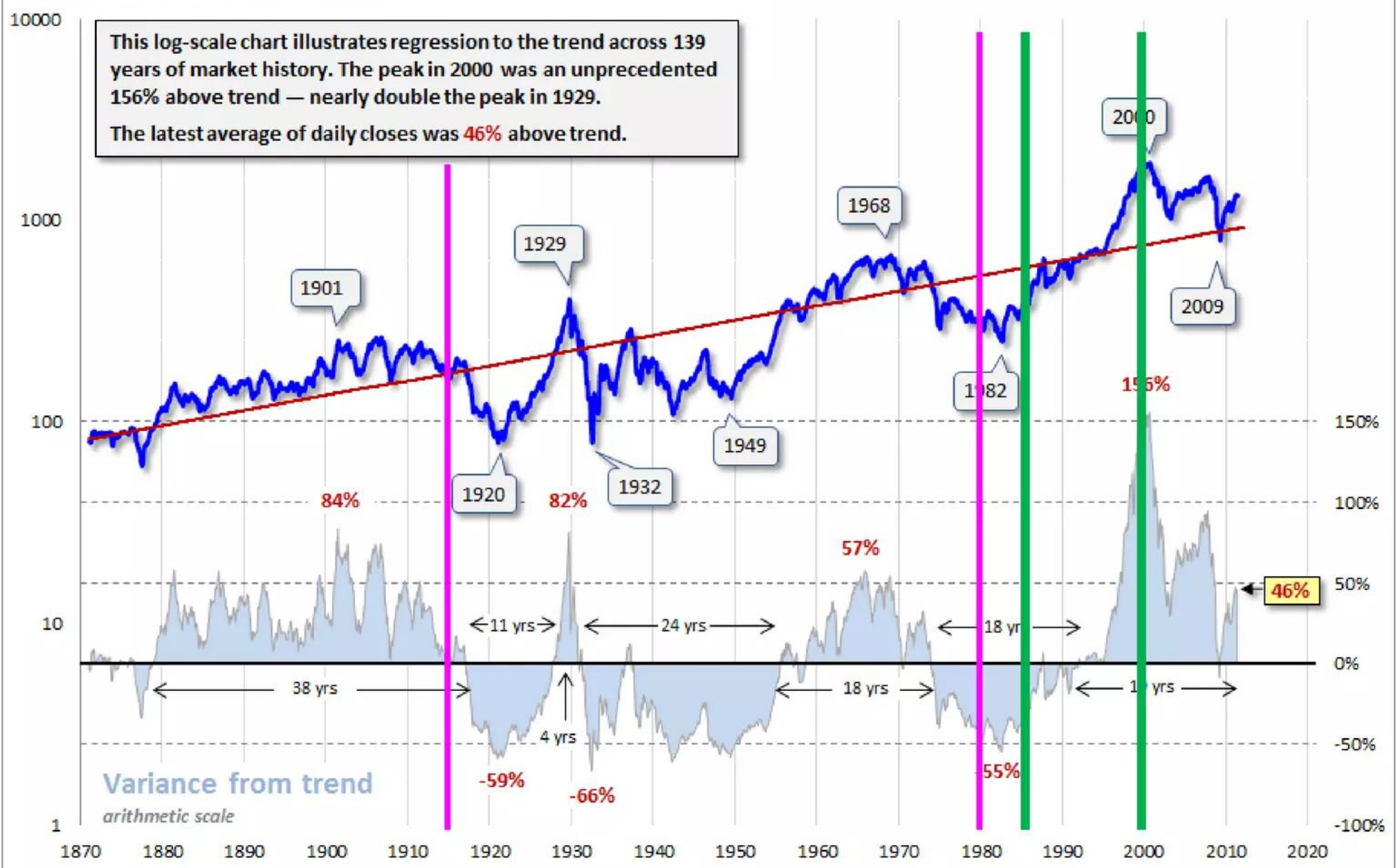
## S&P Composite Index: Regression to Trend

dshort.com

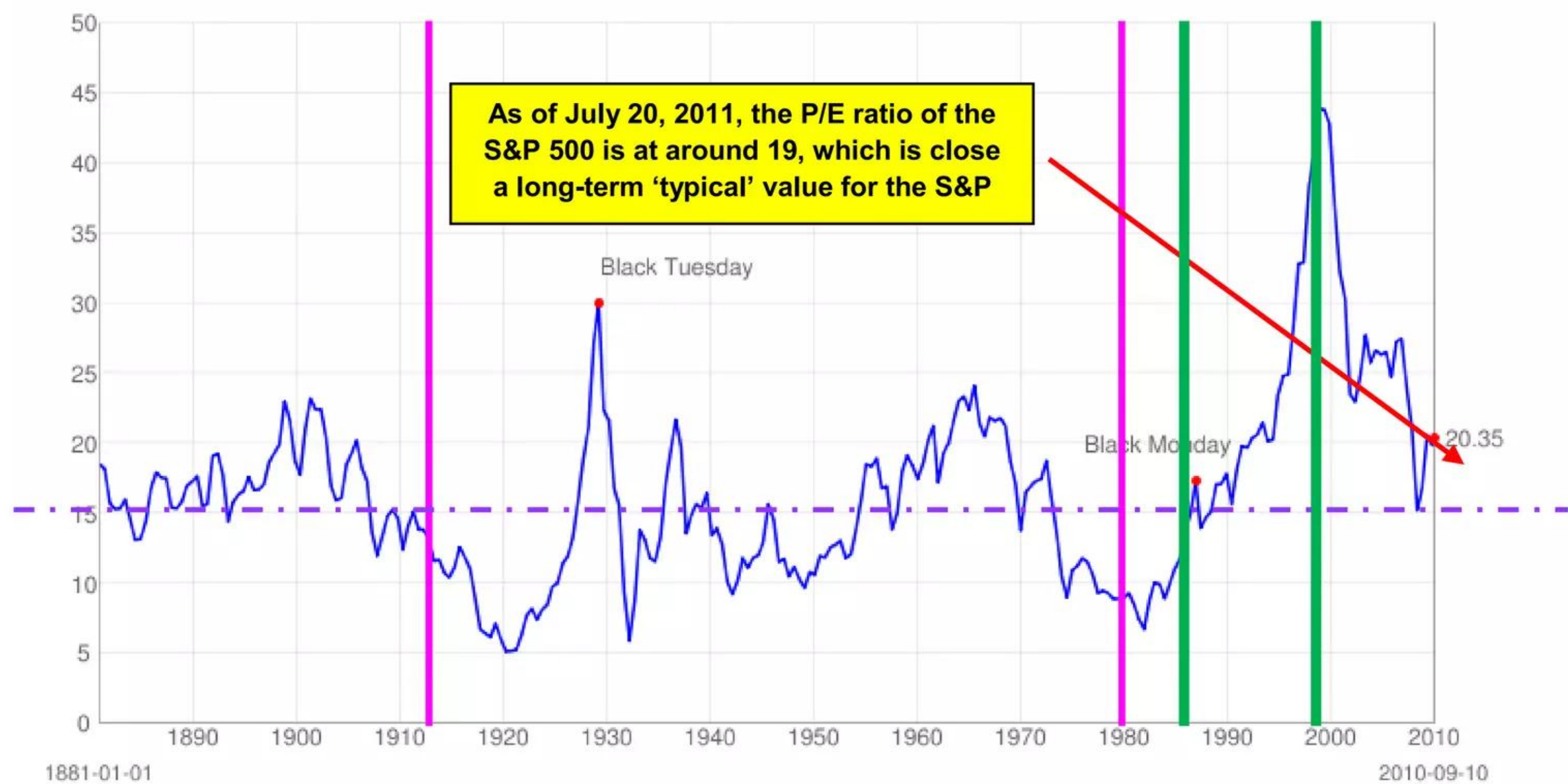
June 2011

**Real (inflation-adjusted) Price since 1871 with Regression**

Variance measured below



## P/E ratio of S&P 500: 1880 to 2010





Regarding the present investment climate: gold and crude oil are relatively expensive compared to other alternative types of investments; long- and short-term interest rates are relatively low by historical standards (thus, being long 30-year U.S. Treasury bonds has limited upside potential, barring a global depression); real estate values have returned to more normal levels and are presently very illiquid in the U.S. and elsewhere; current inflation rates are relatively low in the U.S. (-0.4% in 2009; +1.6% in 2010), Europe, and Japan; while stock price levels have corrected from interim highs in real terms (while not unusually low, stock P/E values are presently not unusually high either --- actually, somewhat 'average'). Thus, the long-term secular uptrend in stock prices is, amazingly, STILL INTACT. Although stock markets could easily go sideways in a choppy up-down pattern for another 3 – 5 years as the current global economic mess slowly sorts itself out, the most likely outcome in my opinion, again barring some sort of an economic depression, is a resumption of the long-term secular bull market in equities as we move further into the future.

In conclusion: if one had to make a 10 – 20 year buy-and-hold portfolio decision today, the asset class most likely to outperform all others over that time horizon would be the US and selected foreign stock markets.

August 11, 2011