



evaluate  
shape  
think

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10<sup>TH</sup> ANNUAL YEAR AHEAD



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# Crashes, Terrorists, and Sharks Oh, My!

*Why investors fear the wrong things, and to do about it*

**Barry Ritholtz**

Chairman & CIO, Ritholtz Wealth Management

**HollisWealth<sup>®</sup>**

## Today's Discussion

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What we fear – and why

How this hurts your investments

How to recognize these errors *and avoid them*

# How your Brain Interferes With Your Investing

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## Behavioral Economics

1. Herding, Groupthink
2. Optimism Bias
3. Confirmation Bias
4. Expert Opinions
5. Recency Effect
6. Endowment Effect
7. Hindsight Bias

## Neuro-Finance

1. Anticipation vs. Rewards
2. Selective Perception/Retention
3. Words vs Images
4. Pattern Recognition
5. Data vs Narrative
6. Cognitive Dissonance
7. Species of Dopamine Addicts

## Risk Aversion

1. Misunderstanding risk
2. What you fear
3. Black Swans
4. What will kill you
5. Biggest financial fears
6. What hurts portfolios



## A Brief Introduction to Understanding Risk

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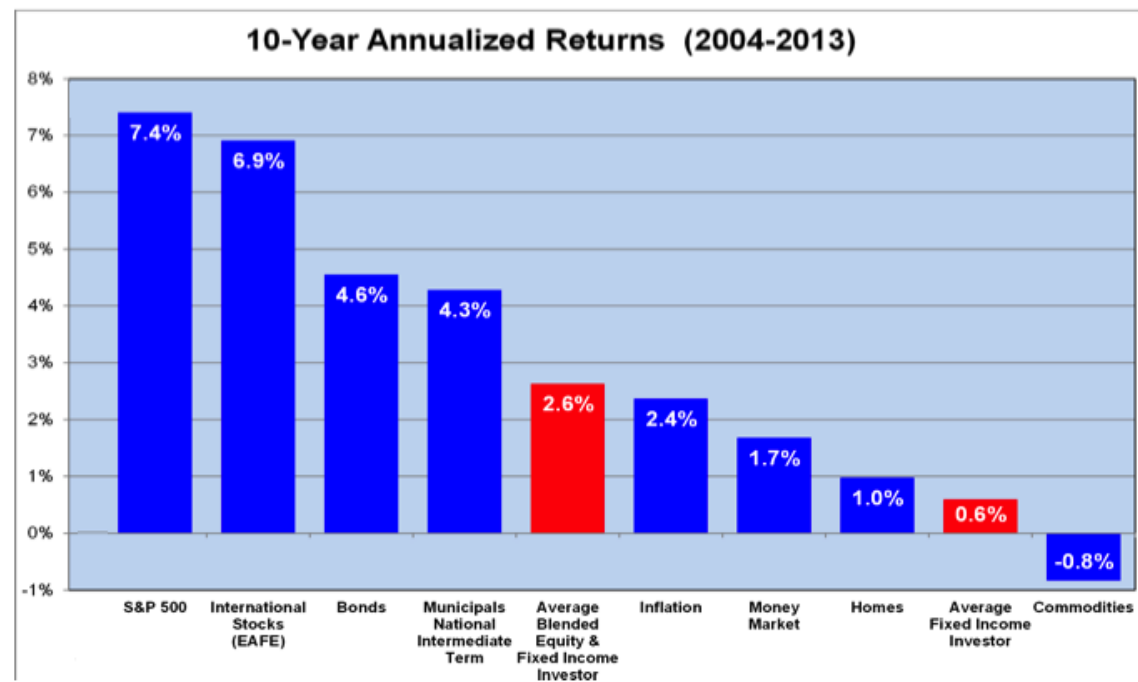
We're all going to die. Here's how.



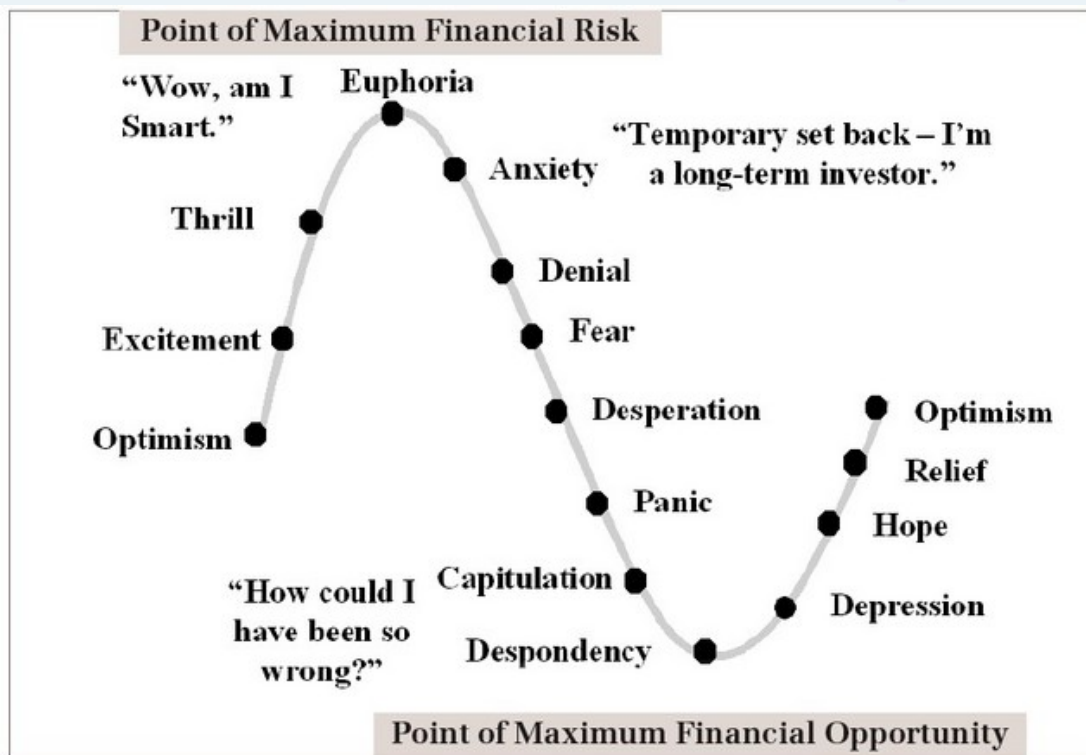
**Shark**: A perfectly evolved killing machine, immortalized in Spielberg's 1975 film, "Jaws."

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# Investor Performance (10 Years)



# Sentiment Cycle



## The Truth



10 People a year are killed by sharks worldwide

Other large predators:

Lions? (100)

Elephants (100)

Hippos (500)

Crocodiles (1,000)

Snakes (50,000)

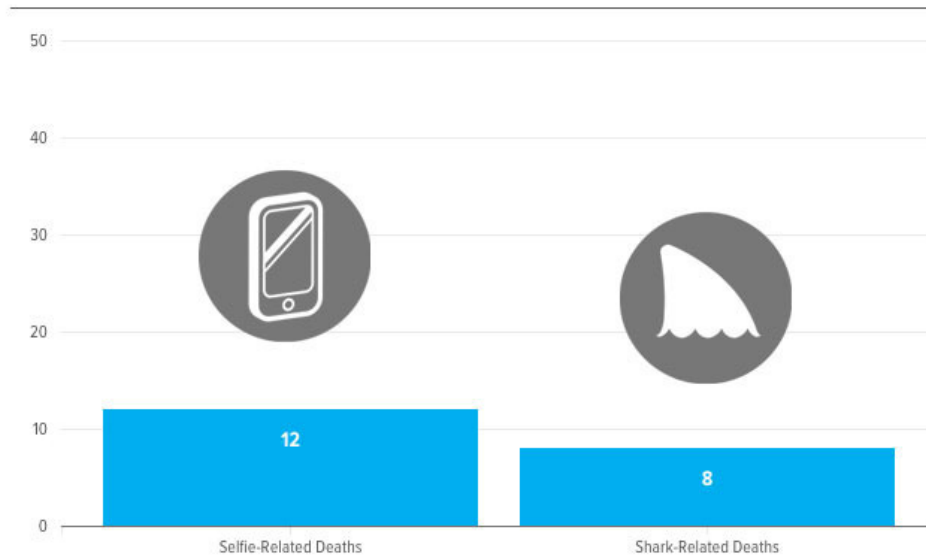
Dogs (25,000) almost all due to rabies.

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# More Dangerous than Sharks: *Selfies* !

## Sharks vs. selfies

So far in 2015, more people around the world have died as a result of selfie mishaps than have died from shark attacks.



Source: [news24.com](http://news24.com), [aljazeera.com](http://aljazeera.com), [timesofindia.com](http://timesofindia.com), [independent.co.uk](http://independent.co.uk), [theguardian.com](http://theguardian.com), [rt.com](http://rt.com), [mirror.co.uk](http://mirror.co.uk), [huffingtonpost.com](http://huffingtonpost.com)  
Credit: Donte Neal/Mashable

Mashable

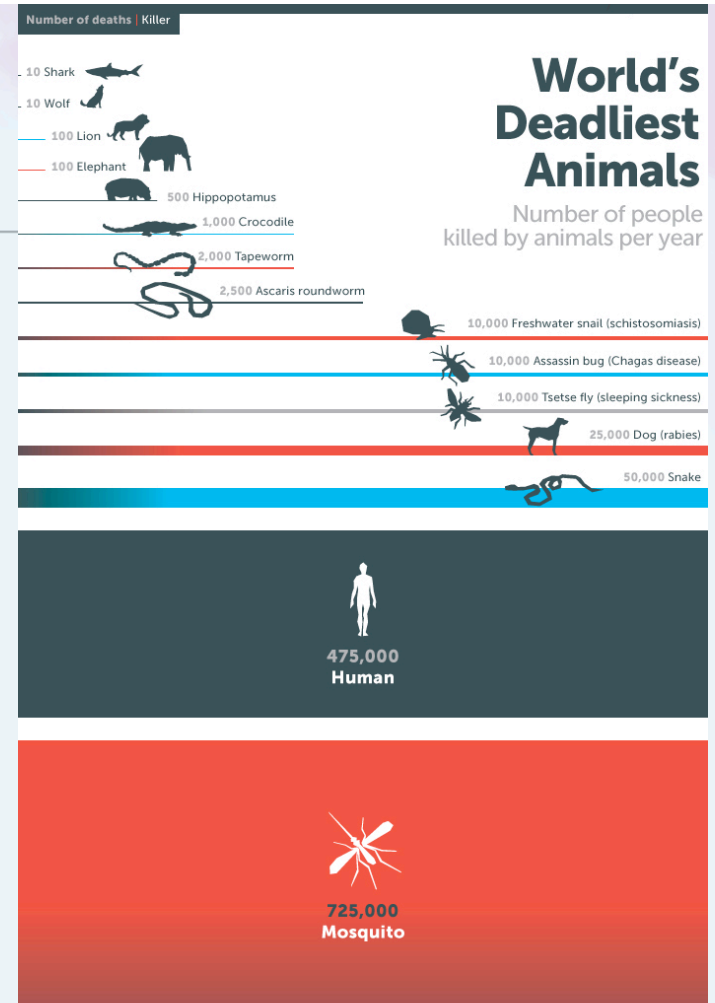
1. An American woman fell to her death while taking a selfie with her boyfriend on a cliff in South Africa.
2. Two Russian men were killed while taking a selfie with a hand grenade.
3. Three Indian students were killed by an oncoming train while taking selfies on train tracks.
4. A Romanian teenager was electrocuted when she was taking a selfie on top of a train and touched a high-voltage wire.
5. A Russian teen was also electrocuted after touching live wires while taking a selfie near railway tracks.
6. A Russian woman shot herself in the head while trying to take a selfie with a gun.
7. A woman in Moscow City died falling from a bridge, where she was trying to take a selfie.
8. A teenager in Houston, Texas, fatally shot himself while taking a selfie with a gun.
9. A Japanese tourist died falling down the stairs while taking a selfie at the Taj Mahal.

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# The Deadliest Animal in the World



Mosquitoes are the deadliest creature on earth;  
(Man only comes in second)

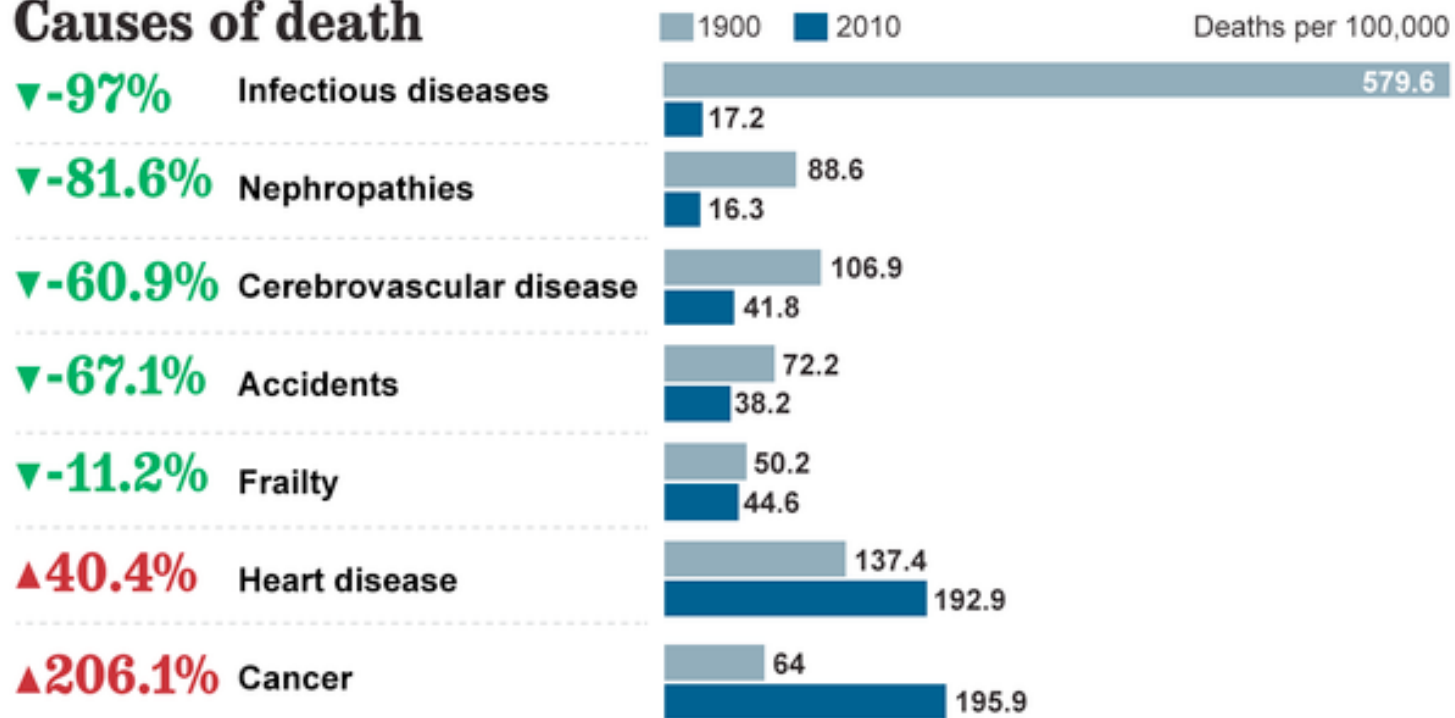


SOURCES: WHO; crocodile-attack.info; Kasturiratne et al. (doi.org/10.1371/journal.pmed.0050218); FAO (webcitation.org/6OgpS8SV0); Linnell et al. (webcitation.org/6ORL7DBU0); Packer et al. (doi.org/10.1038/2456927a); Alessandro De Maddalena. All calculations have wide error margins.



# What Killed Americans in 1900 vs. 2010

## Causes of death



Source: New England Journal of Medicine, Randy Olson, L.A. Times reporting

Kyle Kim / @latimesgraphics

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## Risk of Terrorism

2010: U.S. noncombatant  
fatalities from terrorism  
worldwide = 25

2011: Terror deaths = 8

People who die after being  
struck by lightning = 29



# Your Actual Risk

You are ...

35,079 times more likely to die of heart disease

33,842 times more likely to die of cancer

... than a terror attack.

**Table B. Deaths and death rates for 2011 and age-adjusted death rates and percentage changes in age-adjusted rates from 2010 to 2011 for the 15 leading causes of death in 2011: United States, final 2010 and preliminary 2011**

[Data are based on a continuous file of records received from the states. Rates are per 100,000 population; age-adjusted rates per 100,000 U.S. standard population based on the year 2000 standard; see Technical Notes. For explanation of asterisks (\*) preceding cause-of-death codes, see Technical Notes. Figures for 2011 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Rank <sup>1</sup>	Cause of death (based on the <i>International Classification of Diseases, Tenth Revision, 2008 Edition, 2009</i> )	Number	Death rate	Age-adjusted death rate		
				2011	2010	Percent change
...	All causes	2,512,873	806.5	740.6	747.0	-0.9
1	Diseases of heart . . . . . (I00-I09,I11,I13,I20-I51)	596,339	191.4	173.7	179.1	-3.0
2	Malignant neoplasms . . . . . (C00-C97)	575,313	184.6	168.6	172.8	-2.4
3	Chronic lower respiratory diseases . . . . . (J40-J47)	143,382	46.0	42.7	42.2	1.2
4	Cerebrovascular diseases . . . . . (I60-I69)	128,931	41.4	37.9	39.1	-3.1
5	Accidents (unintentional injuries) . . . . . (V01-X59,Y85-Y86) <sup>2,3</sup>	122,777	39.4	38.0	38.0	0.0
6	Alzheimer's disease . . . . . (G30)	84,691	27.2	24.6	25.1	-2.0
7	Diabetes mellitus . . . . . (E10-E14)	73,282	23.5	21.5	20.8	3.4
8	Influenza and pneumonia . . . . . (J09-J18) <sup>4</sup>	53,667	17.2	15.7	15.1	4.0
9	Nephritis, nephrotic syndrome and nephrosis . . . . . (N00-N07,N17-N19,N25-N27) <sup>5</sup>	45,731	14.7	13.4	15.3	-12.4
10	Intentional self-harm (suicide) . . . . . (*U03,X60-X84,Y87.0) <sup>2</sup>	38,285	12.3	12.0	12.1	-0.8
11	Septicemia . . . . . (A40-A41)	35,539	11.4	10.5	10.6	-0.9
12	Chronic liver disease and cirrhosis . . . . . (K70,K73-K74)	33,539	10.8	9.7	9.4	3.2
13	Essential hypertension and hypertensive renal disease . . . . . (I10,I12,I15)	27,477	8.8	8.0	8.0	0.0
14	Parkinson's disease . . . . . (G20-G21) <sup>6</sup>	23,107	7.4	7.0	6.8	2.9
15	Pneumonitis due to solids and liquids . . . . . (J69)	18,090	5.8	5.3	5.1	3.9
...	All other causes . . . . . (residual)	512,723	164.6	...	...	...

# What are YOU afraid of?

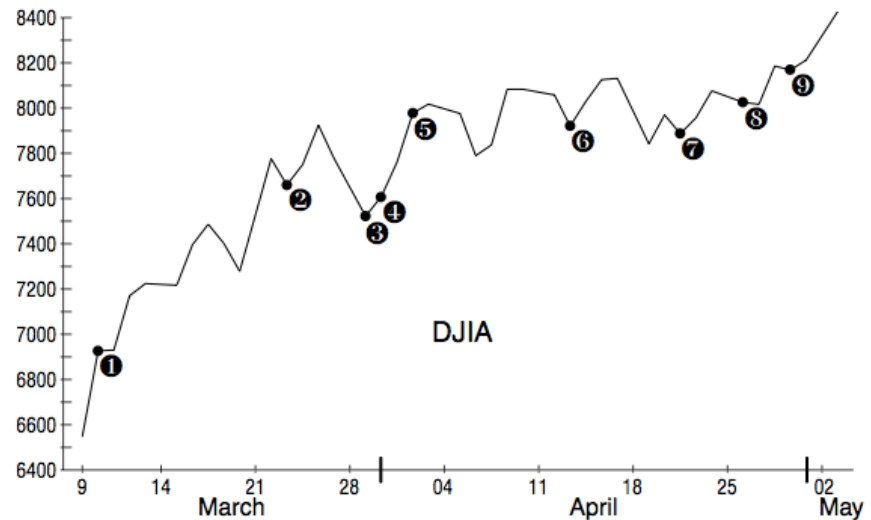
Market Crashes

Hyper-Inflation

Collapse of the Dollar

Looking foolish...

- 1 45 percent of world's wealth destroyed: Blackstone CEO  
*Reuters - 3/10/09*
- 2 The Dow's Jump: Just Another Bear-Market Rally?  
*U.S. News & World Report - 3/24/09*
- 3 Now the Long Run Looks Riskier, Too  
*The New York Times - 3/29/09*
- 4 U.S. Home Prices Take Record Plunge  
*CBS News - 3/31/09*
- 5 FOX News Poll: Worst Is Yet to Come on Economy  
*FOX News - 4/2/09*
- 6 Bankruptcies soaring with 'no end in sight'  
*Associated Press - 4/14/09*
- 7 Global recession worst since Depression, IMF says  
*Associated Press - 4/22/09*
- 8 Swine Flu, the Last Thing Economy Needs Right Now  
*Wall Street Journal - 4/27/09*
- 9 Chrysler files for bankruptcy  
*Reuters - 4/30/09*



# 1987 Crash is Imminent!

Marc Faber:

2014 crash will be worse than 1987's

-CNBC, 4/10/2014

## STOCKS PLUNGE 508 POINTS, A DROP OF 22.6%; 604 MILLION VOLUME NEARLY DOUBLES RECORD

**U.S. Ships Shell Iran Installation In Gulf Reprisal**  
**Offshore Target Termed a Base for Gunboats**

By STEVEN V. ROBERTS  
Special to The New York Times

WASHINGTON, Oct. 19 — United States naval forces struck back at Iran today for attacks on American registered vessels and other Persian Gulf shipping by shelling two connected offshore platforms that American officials said were a base for Iranian gunboats.

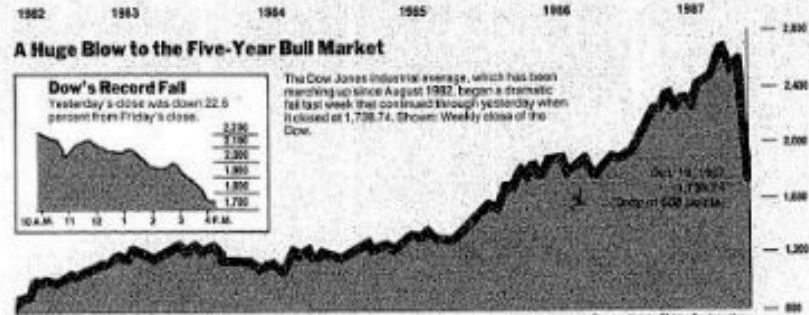
A few hours later, a naval commando detachment boarded a third platform five miles away and destroyed radar and communications equipment, Pentagon officials said.

No American casualties were reported in the attacks, which occurred 128 miles east of Bahrain at about 2 P.M. (7 A.M. Eastern daylight time).

**A 30-Minute Warning**

American officials said the attacking force took pains to avoid killing Iranian, giving the crew on the first two platforms a 30-minute warning before four destroyers, stationed about three miles away, began the shelling.

At the United Nations, an Iranian delegate said "several innocent people" had been killed in the attack, but the statement could not be confirmed.



**WORLDWIDE IMPACT**

**Frenzied Trading Raises Fears of Recession — Tape 2 Hours Late**

By LAWRENCE J. DE MARIA

Stock market prices plunged in a turbulent wave of selling yesterday, giving Wall Street its worst day in history and raising fears of a recession.

The Dow Jones industrial average, considered a benchmark of the nation's health, plummeted a record 508 points, to 1,738.74, based on preliminary calculations. That 22.6 percent decline was the worst since World War I and far greater than the 13.81 percent drop on Oct. 29, 1929, that along with the next day's 11.7 percent decline preceded the Great Depression.

Since hitting a record 1,732.43 on Aug. 26, the Dow has fallen almost 1,000 points, or 34 percent, putting the blue-chip indicator 157.8 points below the level on which it started the year. With Friday's plunge of 508.20 points, the Dow has fallen more than 30 percent in the last two sessions.

**Unprecedented Trading**

Yesterday's frenzied trading on the nation's stock exchanges lifted volume to a record of 1.6 billion. On the New York Stock Exchange, an estimated 404.3 million shares changed hands, almost double the previous record of 315.5 mil-

**Does 1987 Equal 1929?**

By ERIC GELMAN

As stock prices soared this year, a chorus of pessimists warned that 1987 was looking more like 1929, when a stock market crash helped to usher in the Great Depression. Yesterday, after a plunge reminiscent of the worst days of 1929, one pressing question was whether the aftermath would be as devastating to individuals and the nation.

To be sure, there are some unsettling similarities between the current era and the pre-Depression years. Like the Roaring Twenties, the 1980's have seen an unrelenting boom Wall Street. Now as then, individual and corporate debt are high, and asset prices of the economy are extremely weak. Trade imbalances are strayed, with protectionist sentiment growing.

The quick answer, many economists say, is no. The huge losses on Wall



## Catastrophizing Markets

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Faber on Hyperinflation: “Not A Matter Of If But When” –Business Insider, 9/23/2010

'The Bear Market Is Starting' Marc Faber –CNBC, August 3, 2011

Faber: The Dollar's Value In The Future Will Be Zero –Business Insider, 4/18/ 2011

Marc Faber: We Could Experience A 1987-Style Crash This Year –Business Insider, 5/10/2012

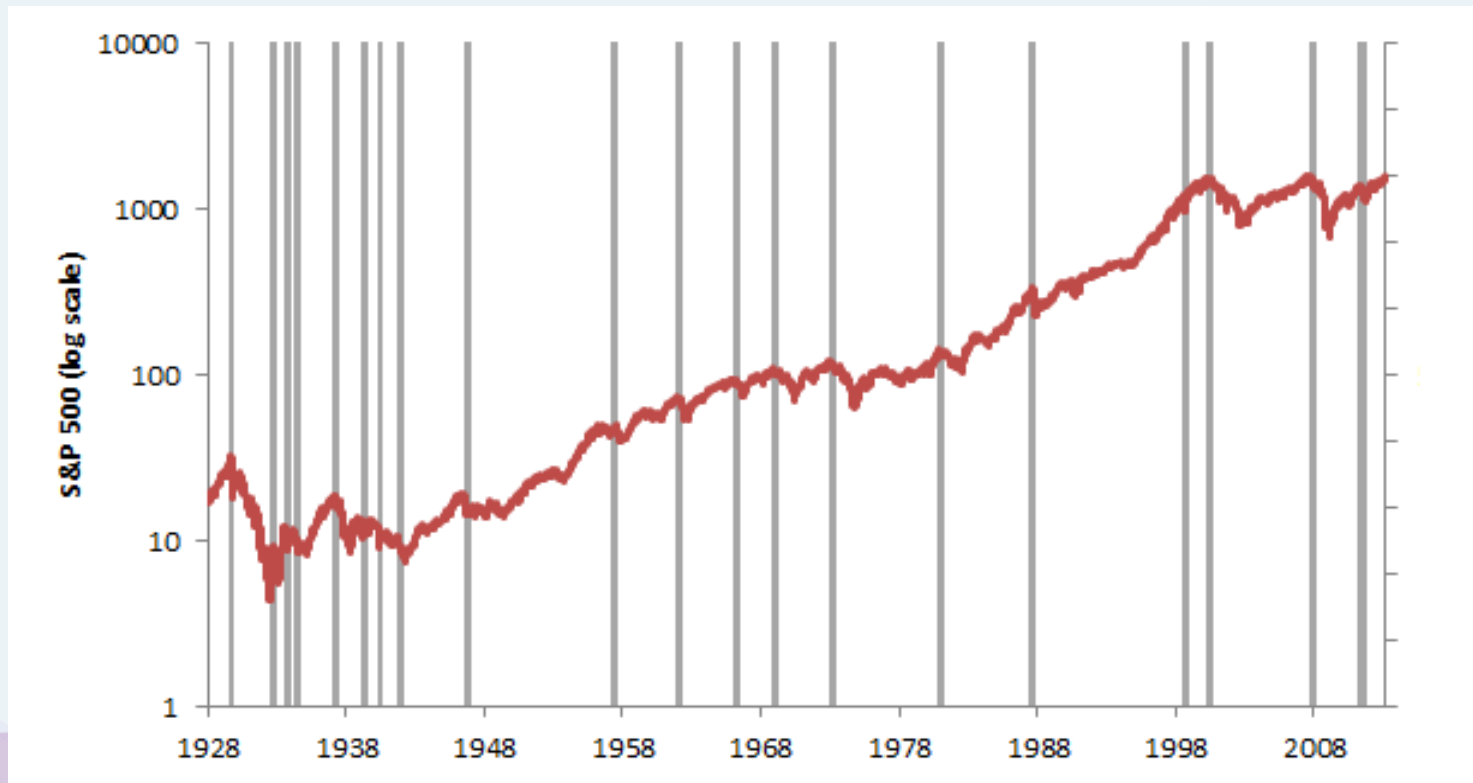
Marc Faber: Look out! A 1987-style crash is coming. –CNBC, August 8, 2013

2014 crash will be worse than 1987's: Marc Faber –CNBC, April 10, 2014

Dr. Doom calls bubble, adding to gloomy calls –CNBC, Nov 2, 2015

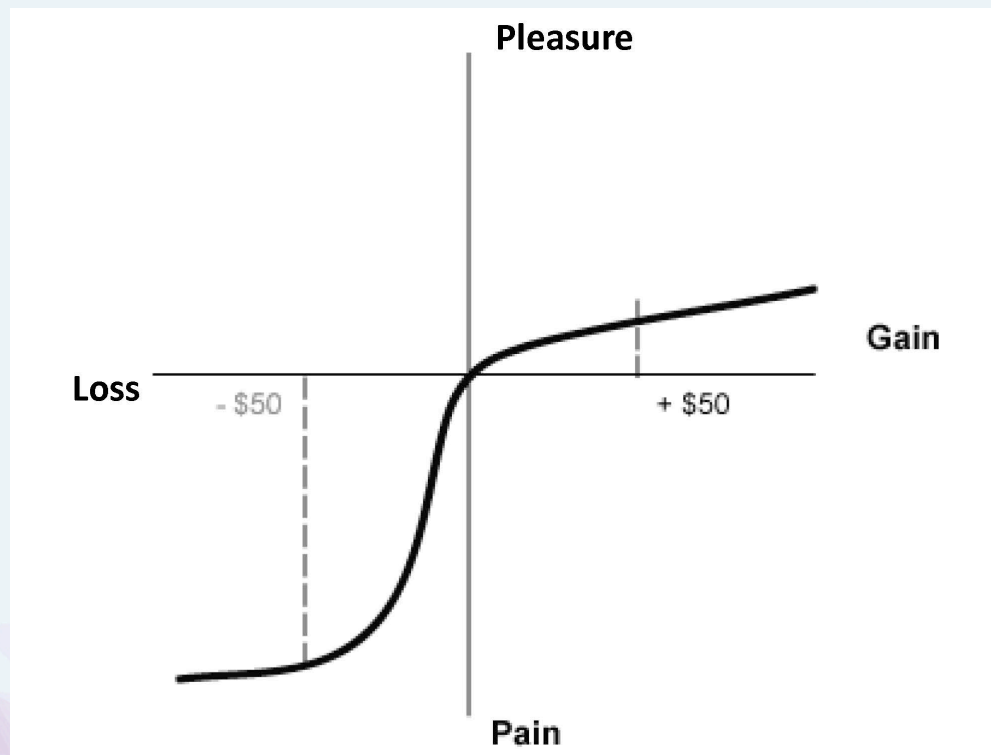


## S&P 500 Declines of 20% or More



## Pleasure Vs. Pain

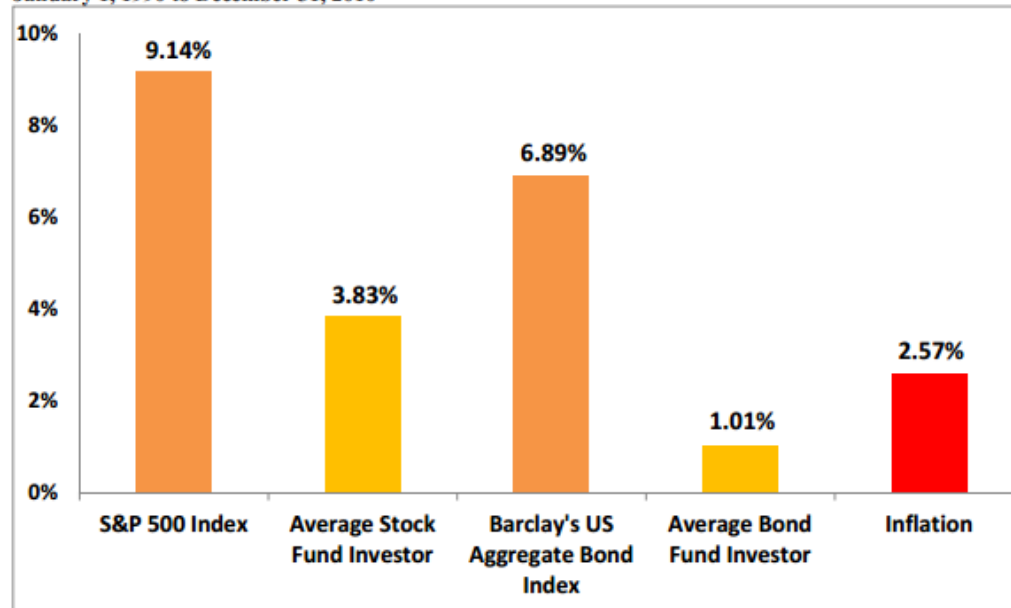
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# Investor Performance (20 Years)

## Average Investors vs. Markets

January 1, 1990 to December 31, 2010



Source: "Quantitative Analysis of Investor Behaviour, 2011" DALBAR, Inc.



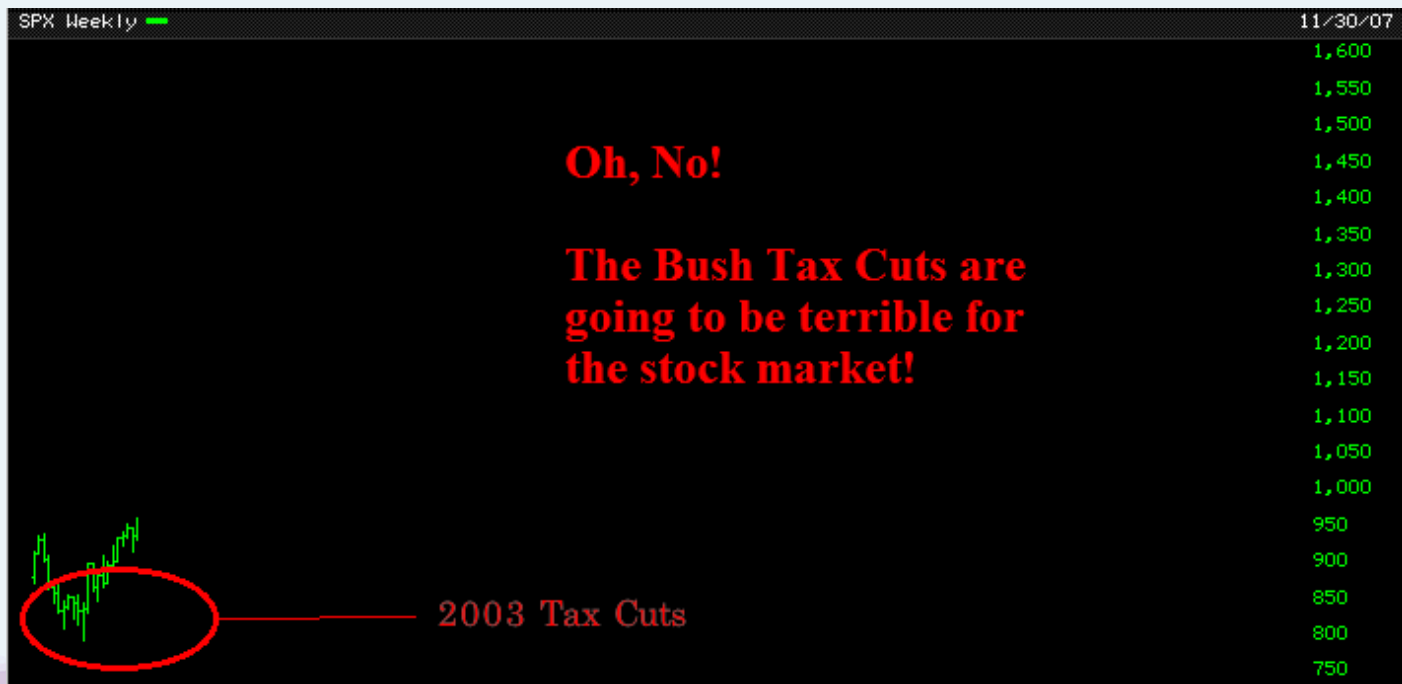
## Why Investors Lose Money

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1. Lack of Discipline
2. Excess Trading
3. High Turnover = High Taxes
4. Unnecessary Trading Costs/Fees
5. Lack of Diversification
6. Over Confidence
7. Deviating from Strategy (“style drift”)
8. Relying on Forecasts or Predictions
9. Listening to Pundits
10. Emotional Decision making

## 2003: Politics and Asset Management Don't Mix !

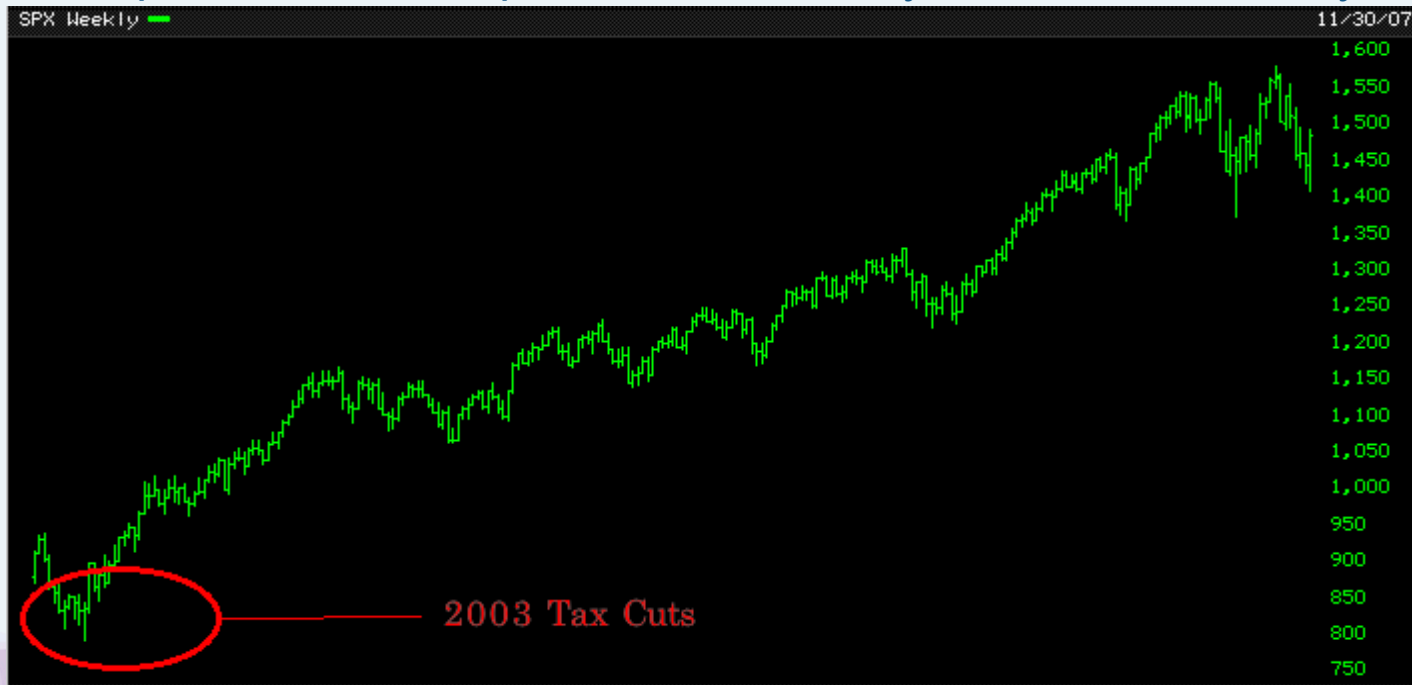
These are poorly-designed tax cuts: Stay Out of the Markets!



## 2003: Politics and Asset Management Don't Mix

2003 Tax Cuts > \$1 Trillion

How did that political trade – up over 90% over 4 years – work out for you . . . ?



## 2009: Political Investing

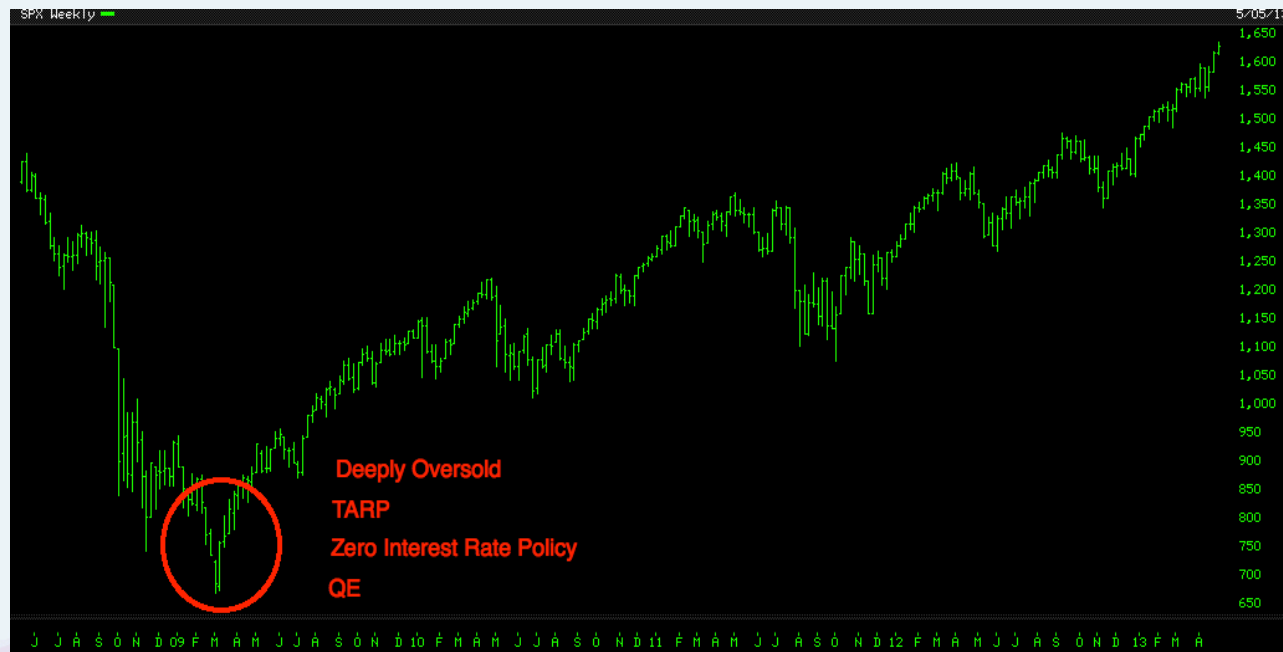
Obama is a socialist! Stay Out of Markets!



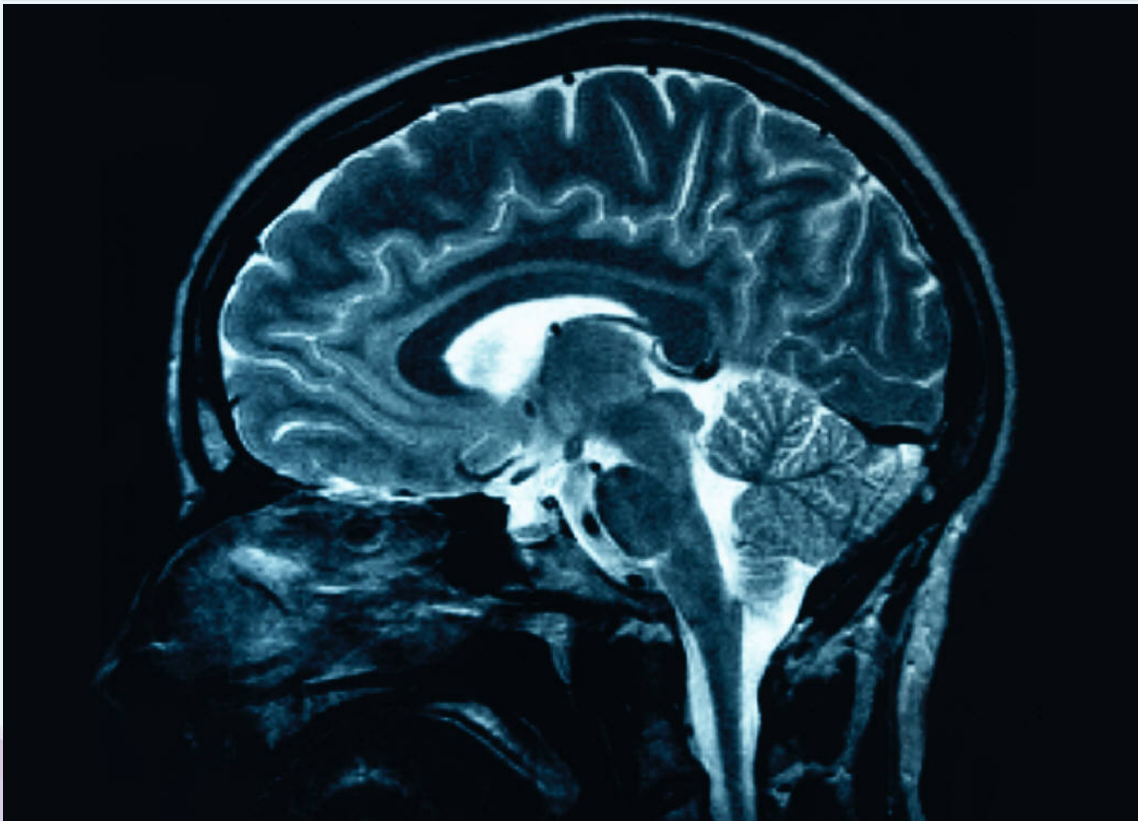
## 2009: Politics and Asset Management Don't Mix

FASB 157, ZIRP, QE +VERY Oversold Markets

Political traders missed a generational rally – Up 250% over 72 months



## This Is Your Brain



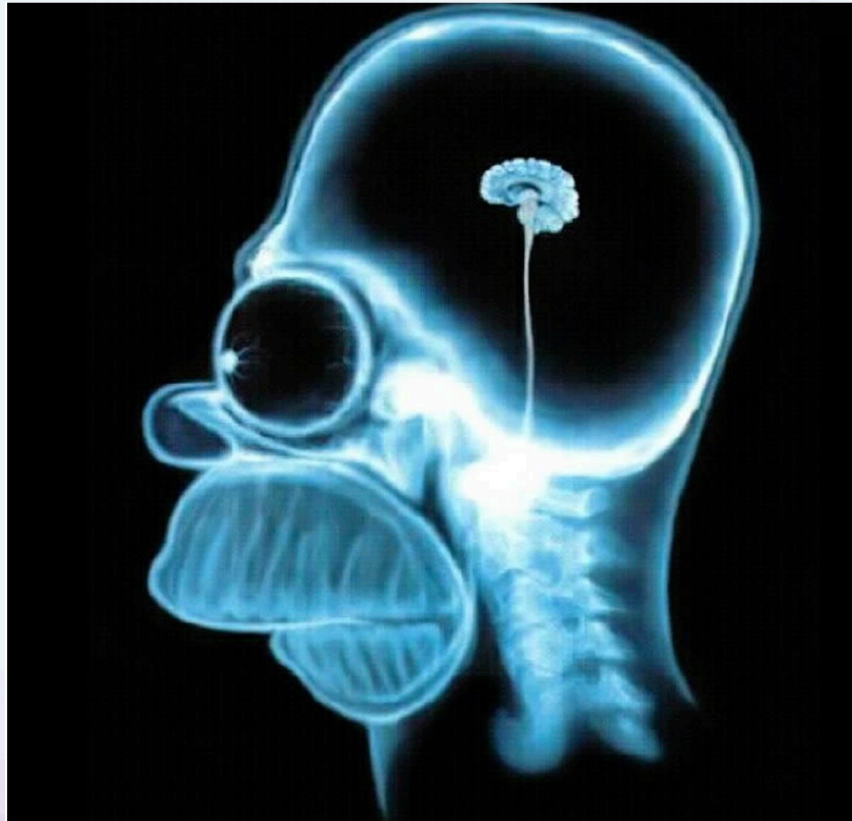
Your brain weighs 3 pounds, and is 100,000 years old. It is a “*dynamic, opportunistic, self-organizing system of systems.*” MRIs have revealed to Neurologists what our brains looks like when making decisions. We can observe it 1) in real time; 2) under actual conditions, and 3) in reaction to financial risk/reward stimuli.

Once we begin trading stocks, however, our brains begin to undergo subtle physical change that we can actually see in the MRIs of Traders . . .

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## This Is Your Brain On Stocks

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## The War Between You and Your Brain

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Now I understand these cognitive issues,  
what can I do about them?





## How Investors Can Avoid Losing Money

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1. Be Disciplined
2. Don't Trade -- Rebalance!
3. Keep Tax Costs Low
4. Watch Costs/Fees
5. Be Diversified
6. Be Humble
7. Stay with you Strategy (avoid "style drift")
8. Don't Make or Rely on Forecasts
9. Ignore the Pundits
10. Make Rational, Logical Decisions

## We Have Met The Enemy, and He Is Us

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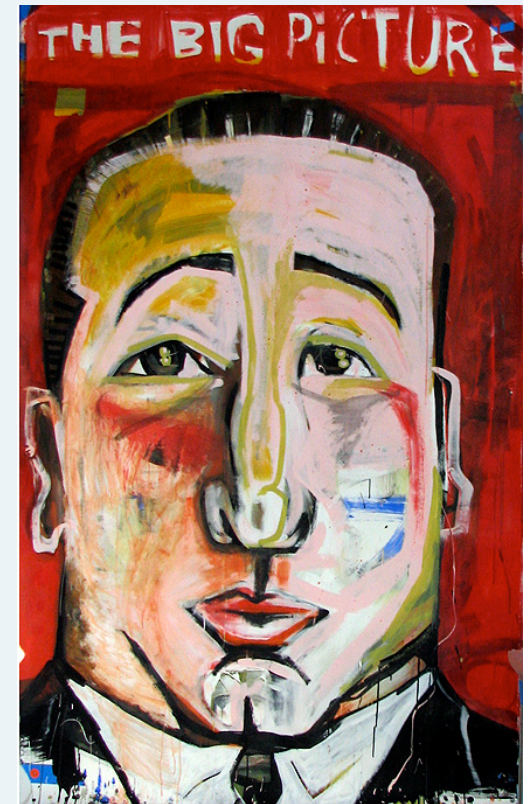
Walt Kelly, Pogo, 1971



## Barry L. Ritholtz

*My favorite books on these subjects can be found at*  
<http://www.ritholtz.com/blog/behavioral-books>

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