

Energy and Financial Crisis



Energy, Finance and Crisis

- ❖ Key drivers over time
- ❖ Energy and expansion
- ❖ Finance and contraction
- ❖ Deflationary depression
- ❖ Depression and energy

Energy Subsidy and Financial Bubbles

- ❖ Energy subsidy drives economic activity.
- ❖ Larger energy subsidies can fuel financial bubbles.
- ❖ The fossil fuels era led to largest bubble in history.
- ❖ Once created, bubbles have their own dynamics.
- ❖ Finance becomes the primary driver to the downside.



Ponzi Dynamics

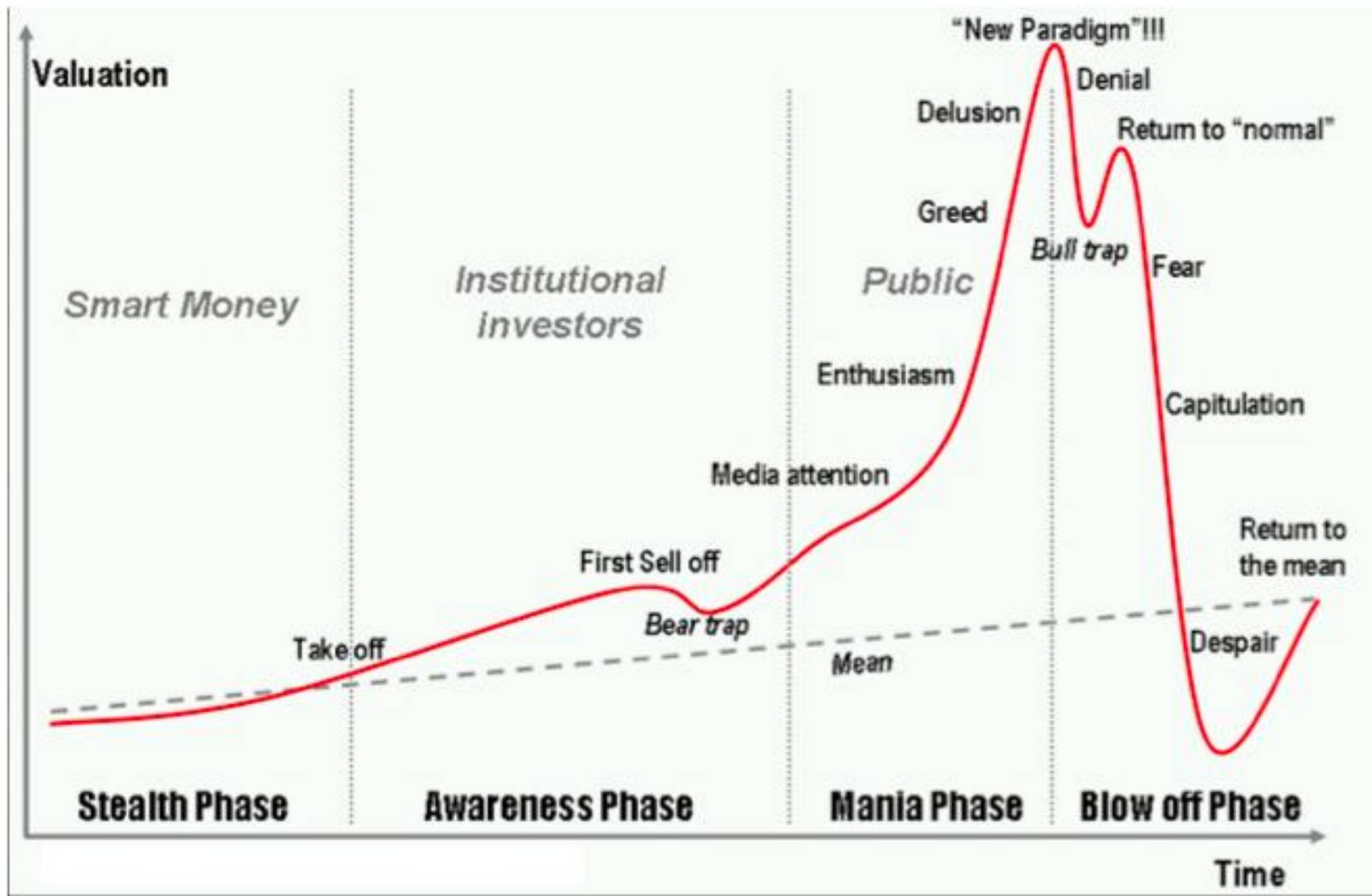


- ❖ Bubbles are based on Ponzi dynamics and are **self-limiting**
- ❖ Ponzi schemes create virtual wealth through speculation
- ❖ Speculation continues until the biggest sucker has been fleeced
- ❖ Only early entrants make money
- ❖ Latecomers are empty bag holders

Markets and Human Herding Behaviour

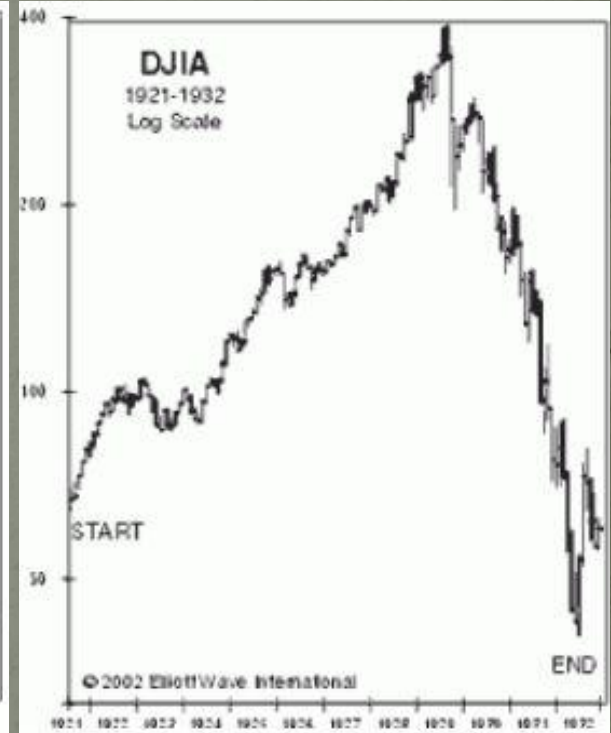
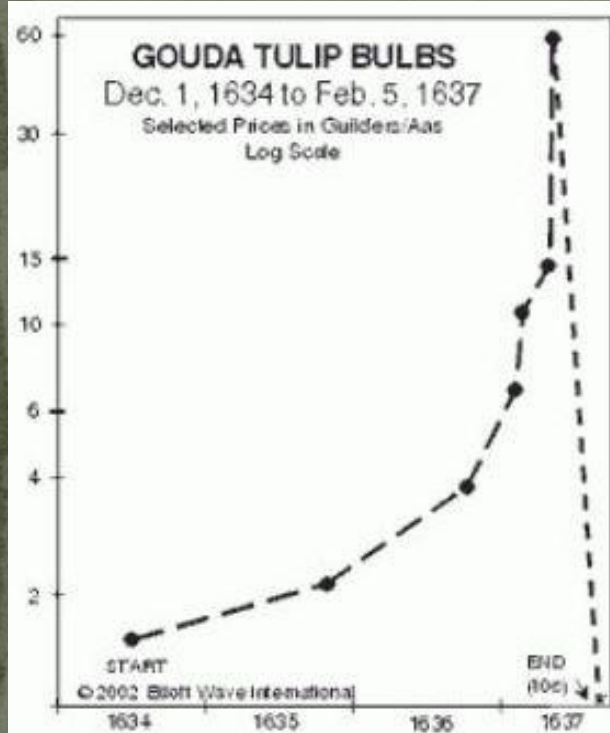
- ❖ Markets NOT rational or 'efficient'
- ❖ Driven by perception not reality
- ❖ Prices do not reflect fundamentals
- ❖ Most have no real information
- ❖ Momentum chasing
- ❖ Hope and greed drive expansions
- ❖ Fear drives contraction (powerfully!)
- ❖ Financial contagion = the spread of fear
- ❖ Positive feedback rules in both directions
- ❖ Reality bites in the end





Source: Dr Jean-Paul Rodrigue, Department of Economics and Geography, Hofstra University

Historical Market Manias



World Crude Oil Price - US Dollars Per Barrel

US dollars



Source: Reuters EcoWh

Inflation and Deflation

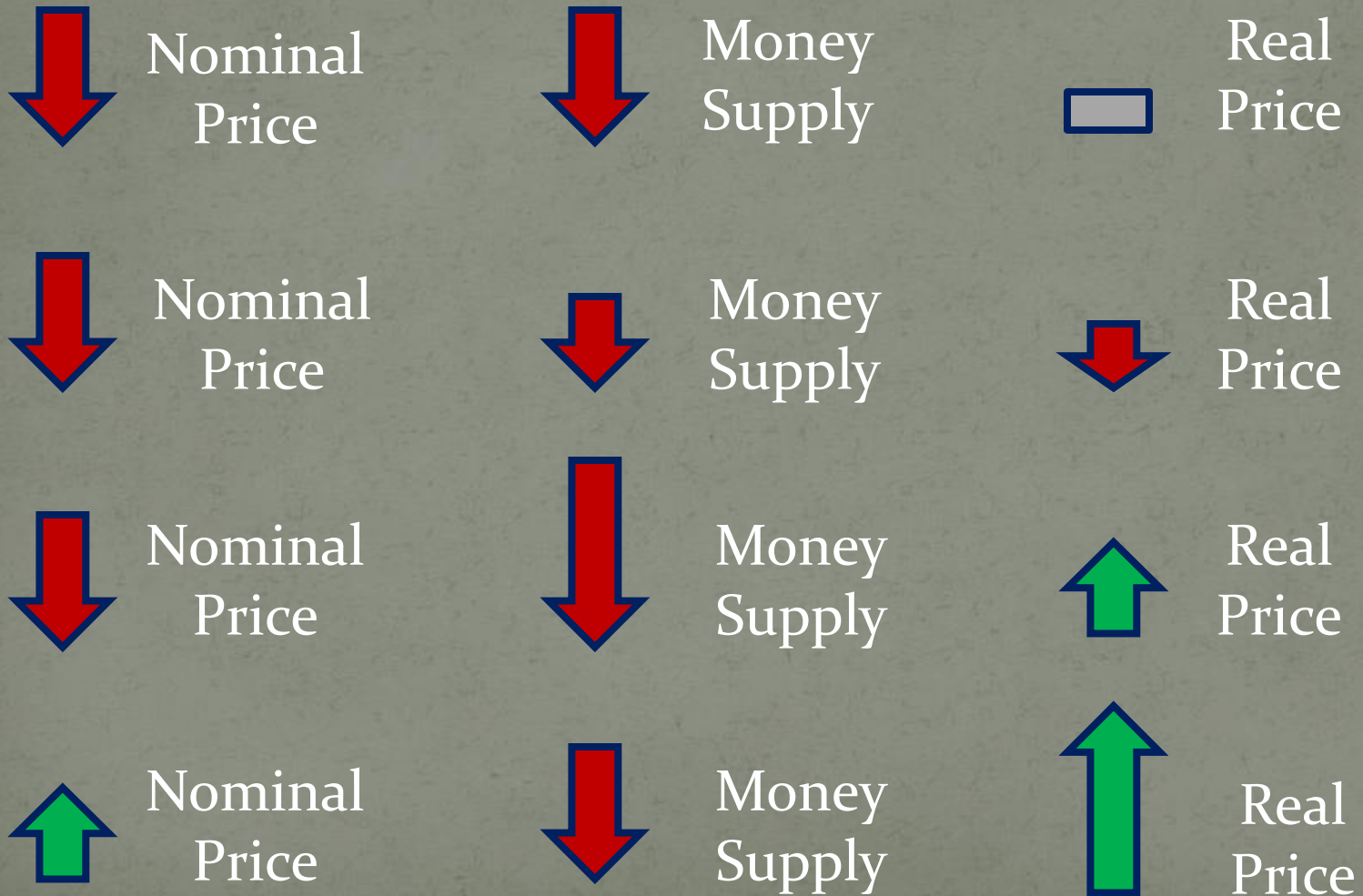
- ❖ Inflation and deflation are NOT measures of rising and falling prices.
- ❖ Inflation is an increase in the supply of money and credit relative to available goods and services, and deflation is the opposite.
- ❖ Rising or falling prices are lagging indicators of changes in the money supply, among other factors.
- ❖ Prices adjusted for changes in the money supply are prices in real terms.
- ❖ Changes in real prices show changes in affordability.

Credit Expansion and Implosion

- ❖ Currency inflation cuts real wealth pie into smaller pieces
- ❖ Credit expansion creates excess claims to underlying real wealth
- ❖ Mainstream economics disregards the crucial role of credit (virtual wealth)
- ❖ Credit over 95% of effective money supply
- ❖ Extinguishing of excess claims is **deflation!**



Nominal Terms Versus Real Terms - Deflation



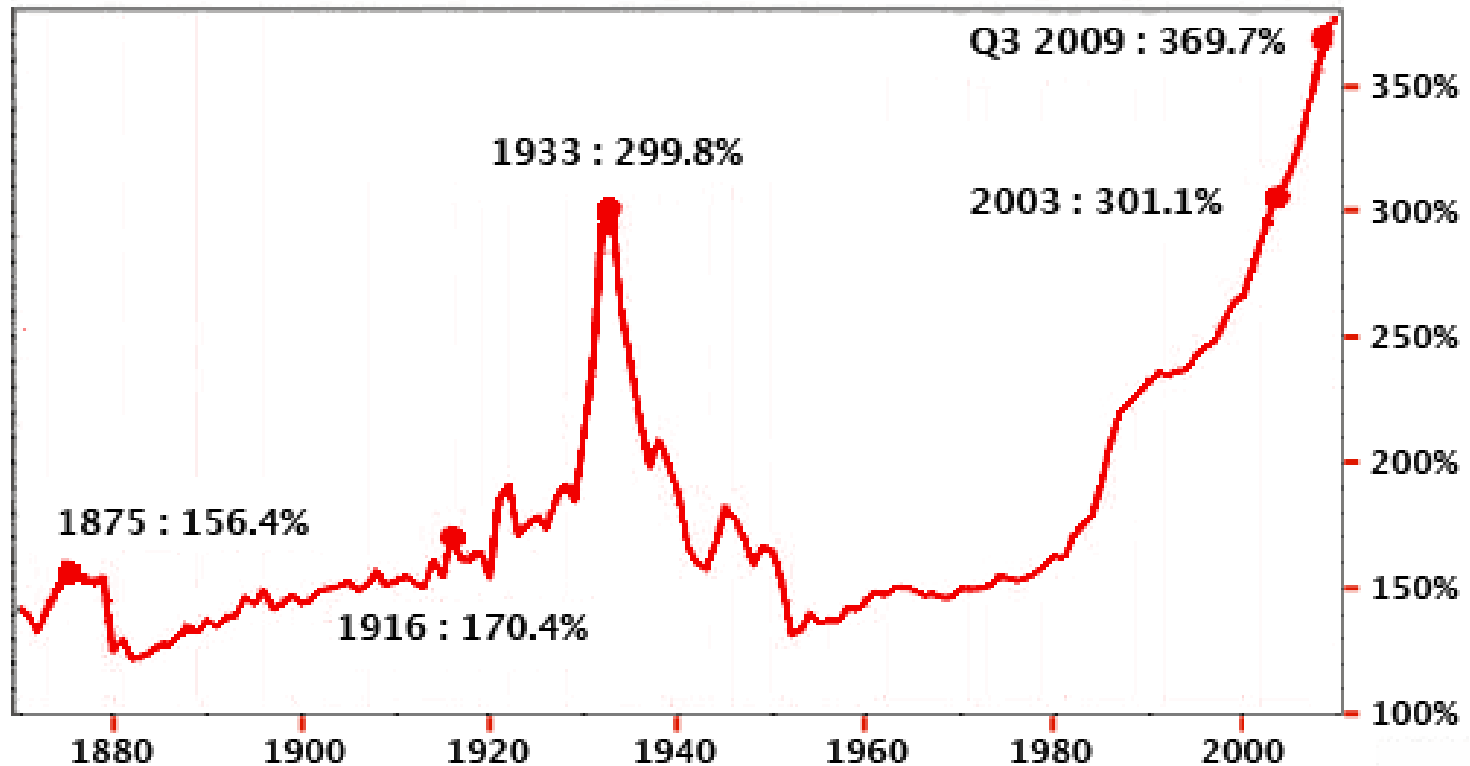
The Effects of Deflation

- ❖ Credit disappears
- ❖ Unemployment rises
- ❖ Aggregate demand falls
- ❖ Prices fall
- ❖ Purchasing power falls faster than price
- ❖ Affordability decreases!
- ❖ A much larger percentage of a much smaller money supply chases essentials
- ❖ As everything becomes less affordable, the essentials become the least affordable of all



A Huge Debt Trap

Total US debt as a percentage of GDP



Through Q3 2009. Sources: BEA, Federal Reserve, Census Bureau, Historical Statistics of the United States Colonial Times to 1970

The Great Credit Contraction

"The system does not collapse but evaporate."

Trace Mayer, J.D.

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CreditContradiction.com



Exter's pyramid updated and adapted. All amounts estimated approximations.

Extend-and-Pretend

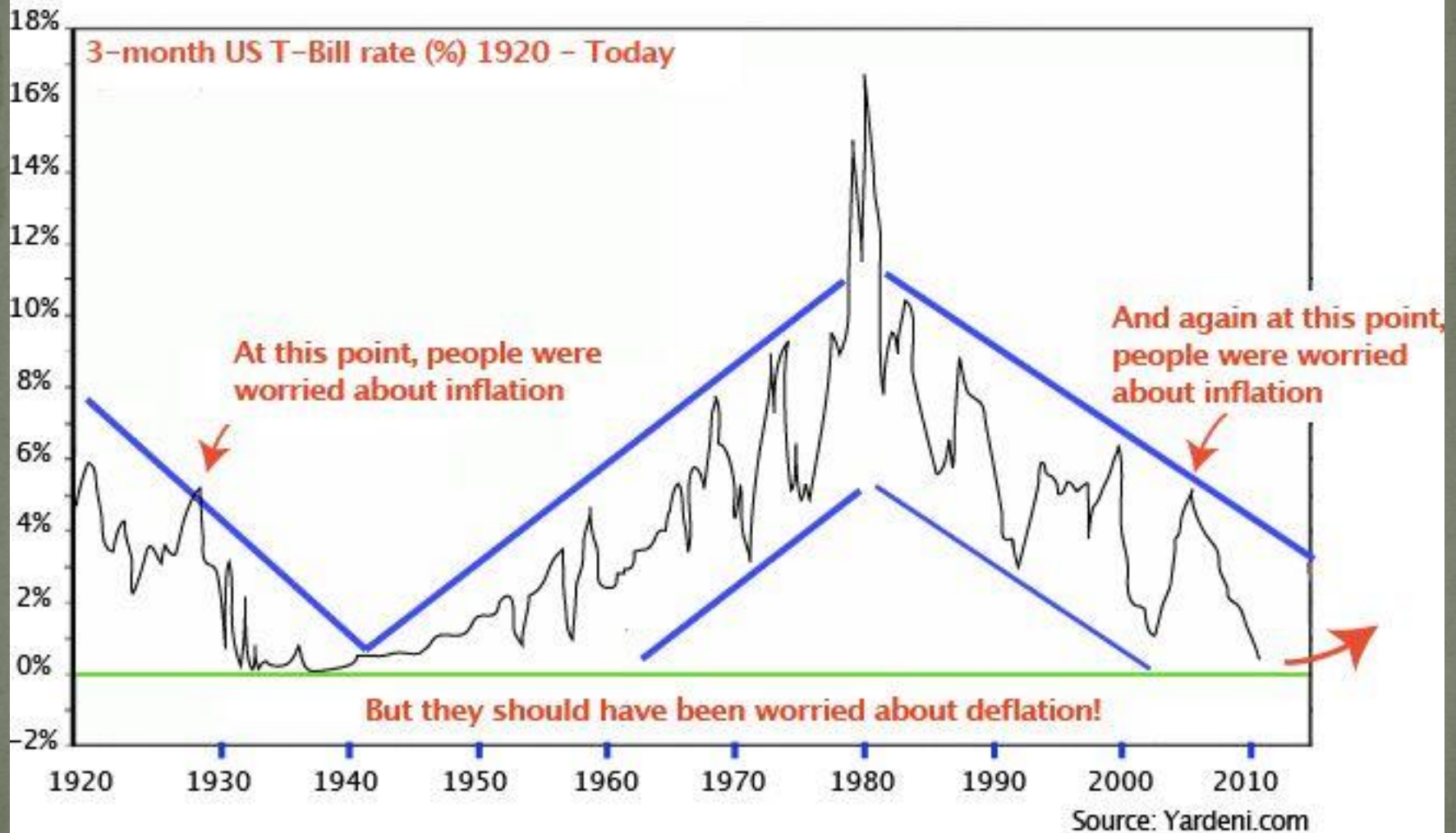
- ❖ Gap between what sellers will accept and buyers will offer
- ❖ Government attempted to help bridge the gap in order to restore confidence (and liquidity)
- ❖ Price discovery (mark to market) is coming
- ❖ Whole assets classes will be revalued much lower
- ❖ Excess (virtual) value will disappear
- ❖ This is **deflation!**



Interest Rates and the Liquidity Trap

- ❖ The nominal interest rate minus **inflation** gives the real interest rate.
- ❖ Inflation: $5\% - 3\% = 2\%$ $2\% - 3\% = -1\%$
- ❖ Deflation: $5\% - (-5\%) = 10\%$ $2\% - (-5\%) = 7\%$
- ❖ When the money supply is contracting (ie inflation is negative), the real interest rate will be high even if the nominal rate is very low.
- ❖ Even **0%** is not low enough for borrowing and lending to be attractive.
- ❖ This is called the liquidity trap.

Interest Rate Cycles



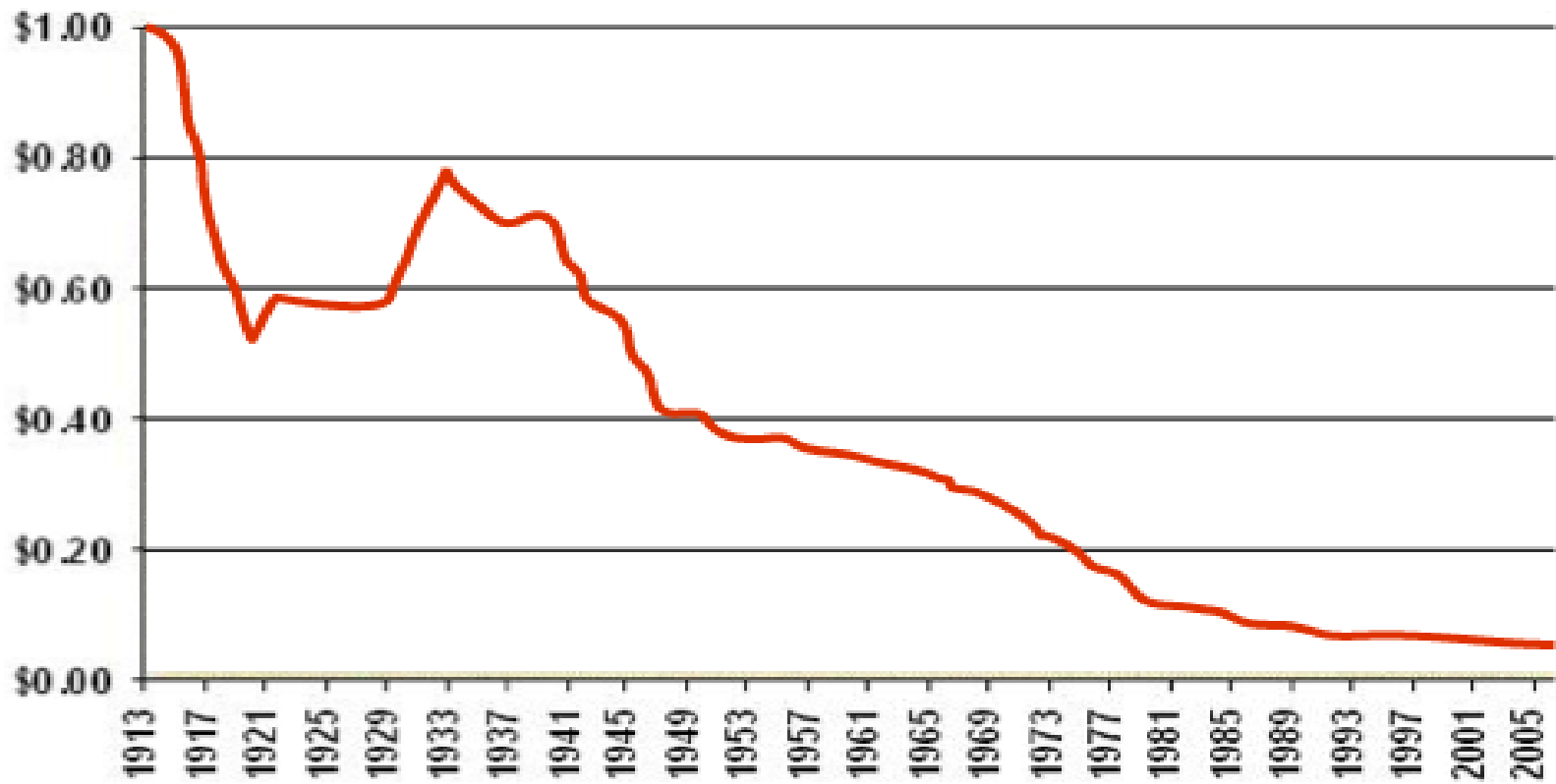
The Importance of Liquidity



- ❖ As asset prices and consumer prices fall, the value of cash rises.
- ❖ Capital preserved as liquidity will go a long way.
- ❖ A fall in the velocity of money aggravates the contraction of the money supply.
- ❖ An economy trying to function with too little liquidity can seize up.

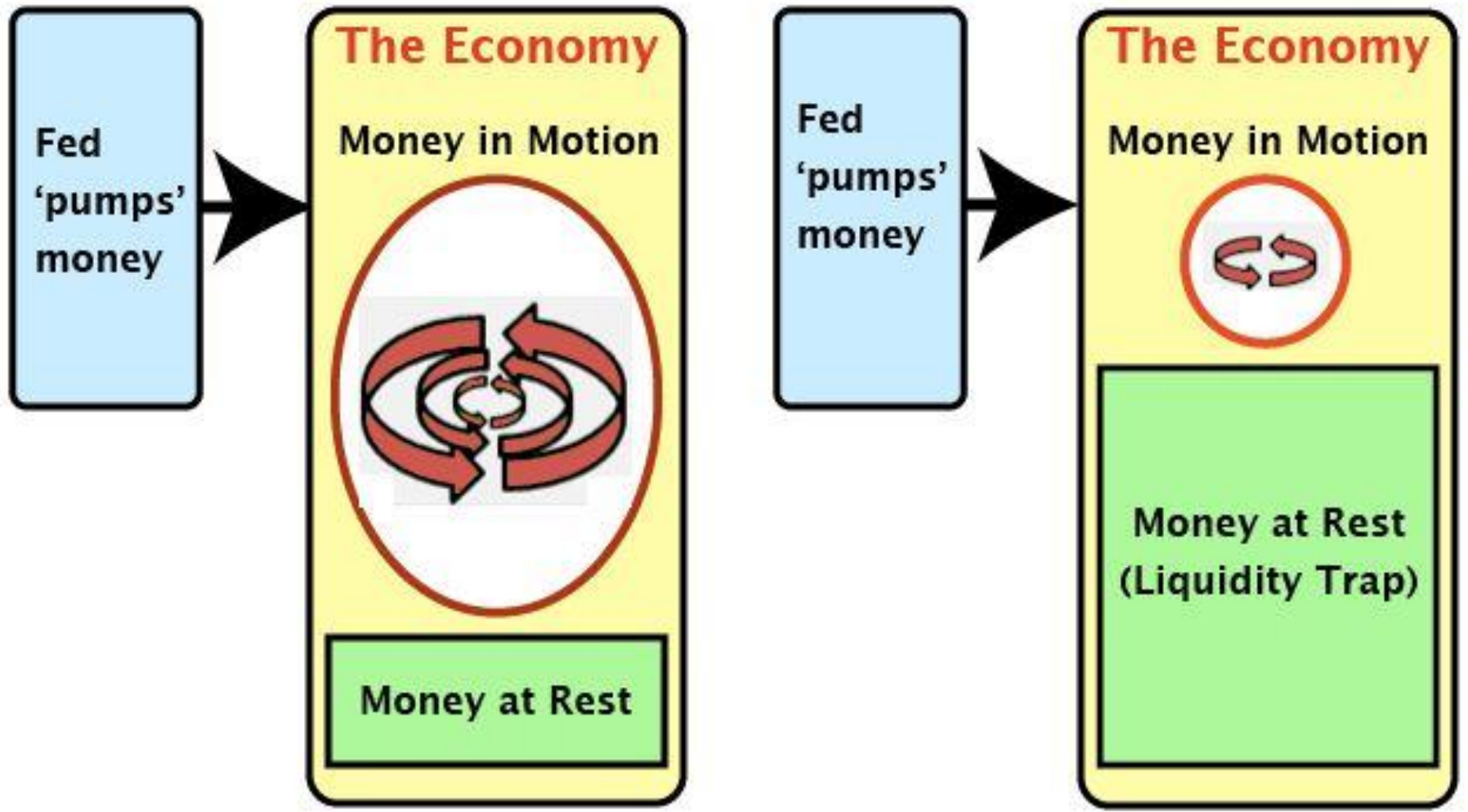
Dollar Purchasing Power

Purchasing power of \$1 Federal Reserve Note (in 1913 dollars)



Source: US Bureau of Labor Statistics

The Velocity of Money



Print Your Way Out?



- ❖ QE is not 'printing' and is not inflationary
- ❖ QE does not stimulate the real economy
- ❖ Interest rates are set by the bond market as a risk premium, not by central authorities
- ❖ Printing of actual currency would be swiftly punished
- ❖ High interest rates would precipitate a wave of debt default (deflation)
- ❖ Unless the power of the international debt financing model is broken, the bond market will retain the power to prevent debt-junkie economies from printing
- ❖ Printing is years away, deflation is now!

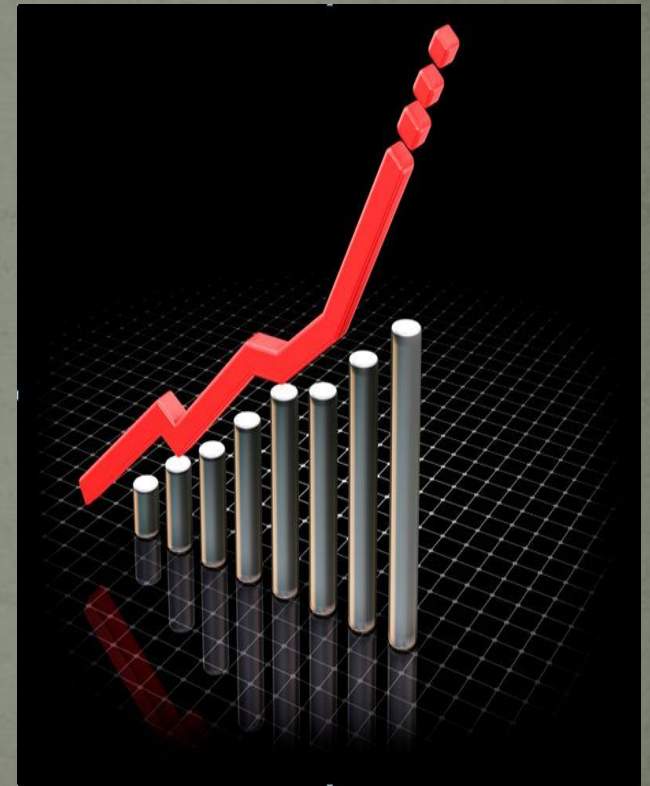
Energy Demand Collapse....

- ❖ First, speculation goes into reverse
 - ❖ Commodities top on fear of shortages
 - ❖ Reversals are typically sharp
 - ❖ Prices fall quickly
- ❖ Then, energy demand falls
 - ❖ Lack of purchasing power undermines price support
 - ❖ Prices fall further
 - ❖ Temporary over-supply
 - ❖ Potential over production



....Sets Up a Supply Collapse

- ❖ Factors leading to supply collapse
 - ❖ Reduced investment on high risk
 - ❖ Private capital gets out
 - ❖ Potential asset confiscations
 - ❖ Lack of funds for maintenance
 - ❖ Potential for shipping disruption
 - ❖ Above-ground factors
- ❖ Consequences
 - ❖ Price volatility
 - ❖ Shortages cause major price spike
 - ❖ Resource grab
 - ❖ More above-ground factors



Conclusions

- ❖ We are on the verge of a very serious deflationary financial crisis.
- ❖ We are headed for a second Great Depression.
- ❖ Finance will be the key driver to the downside for a number of years.
- ❖ Financial crisis initially alleviates energy problems, at the cost of aggravating them in the longer term.

<http://theautomaticearth.blogspot.com>

