

1) Globalization

What is it ? Is it Good or Bad ?

2) A Theory Regarding Debt and the Stock Market Profits and Value

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**The Humanist Community of Silicon Valley
Sunday Forum April 22th 2012**

1) Globalization

What is it ? Is it Good or Bad ?

SCOPE

Question - Globalization of What ?

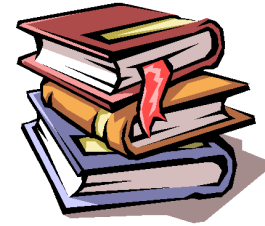
Answer – Human Civilization

DIFFERENTIATING THE SCOPE

What are the elements of Human Civilization ?

The Elements of Human Civilization

1. Records of our Human Minds
(Information we share)



1. Our Human Bodies
(including our actual Minds)



3. Food and Drinks
(and other living things)



4. Material Products and Structures



What is the Nature of Globalization ?

1. **Rate of Change** - The Speed with which we move and reform the elements of civilization



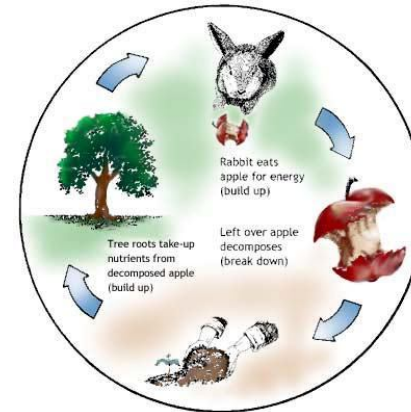
2. **Size of Change** - The Quantity of these elements we move and reform



What are the criteria for Judgment ?

1. Material Balance

- a) Reuse
- b) Repair
- c) Recycle
- d) Refuse
- e) Stay Local



2. Energy Efficiency

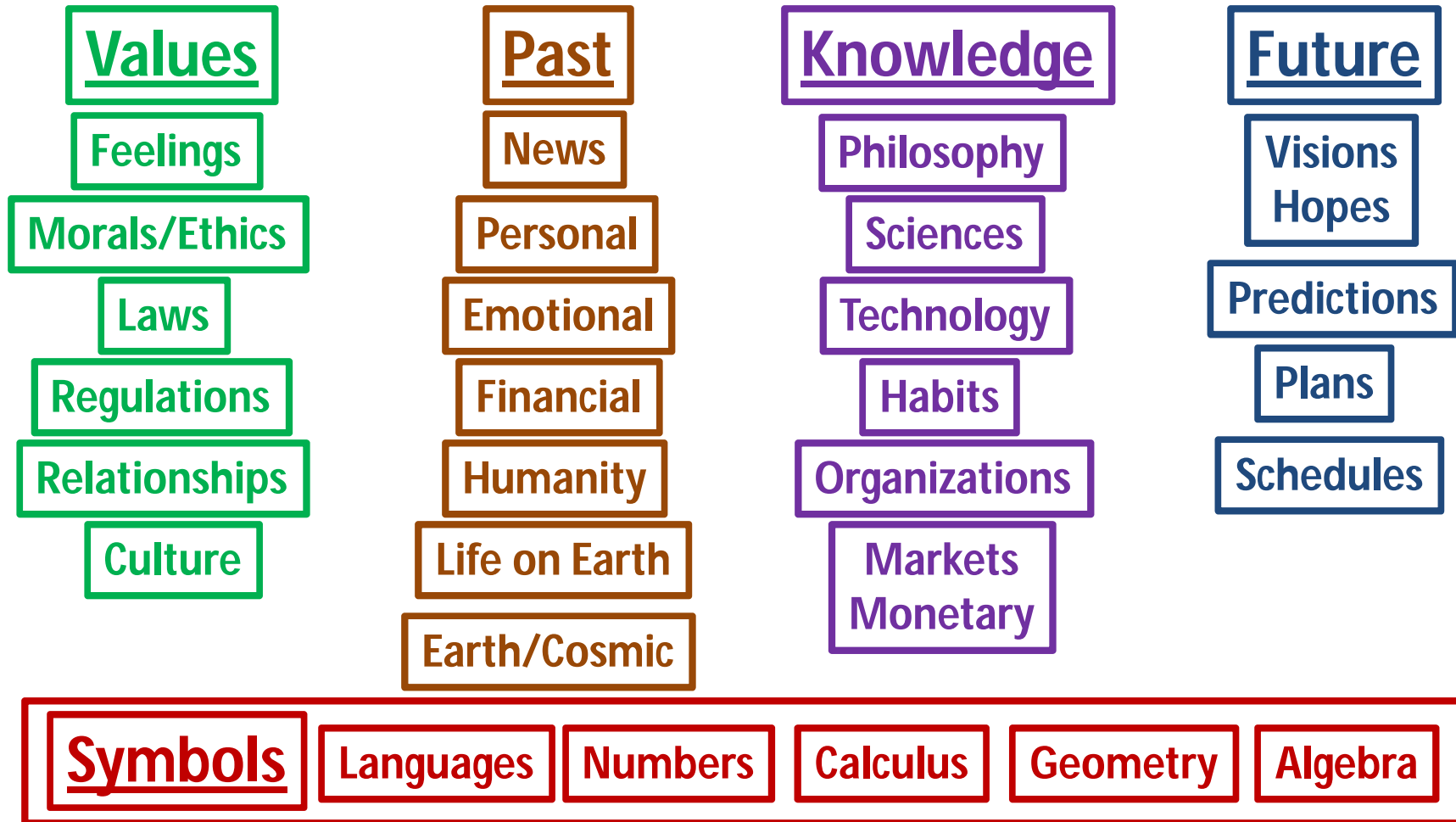
- a) Human Work Capacity = 60GW
- b) Energy Industry Capacity = 15TW
- c) Leverage = 250X



Globalization of Civilization - Review

- **Elements of Civilization**
 - **Information, Human Beings, Food, Products**
- **Nature of Globalization**
 - **Elements rate of change (speed, quantity)**
- **Criteria of Judging Globalization**
 - **Material Balance, Energy Efficiency**

Civilization Element 1 – Information (Sharing/storing our Minds)

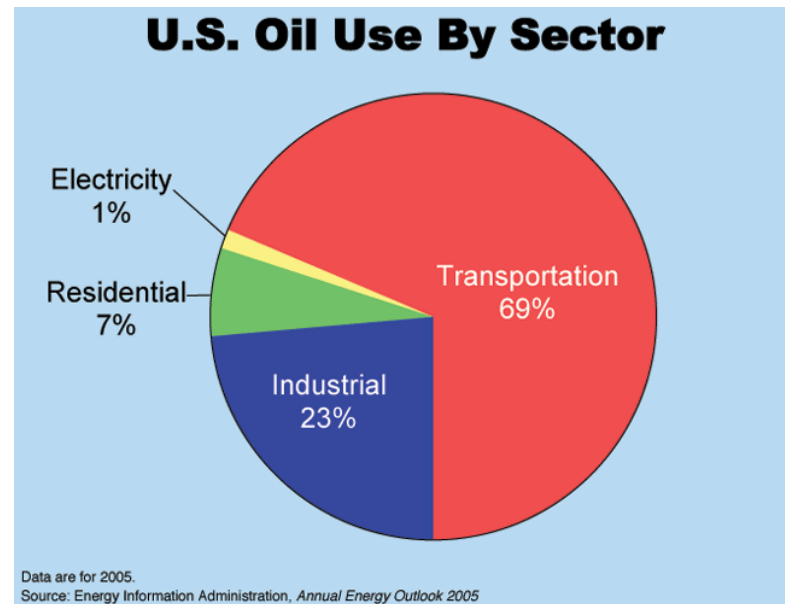


All Stored in IT "Cloud" and/or Transferred across the Planet at Light Speed

Civilization Element 2 – Human Beings (Transportation)

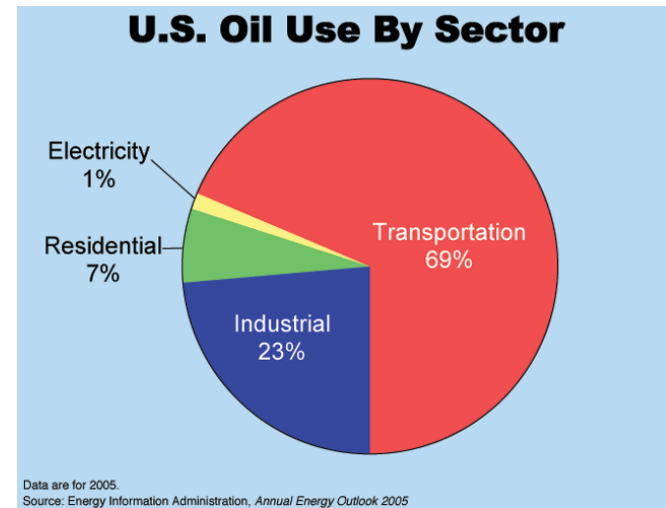
- **Benefits**
 - Historical and Cultural Understanding
 - Friendship and Trust
 - Genetic Diversity

- **Costs**
 - Energy
 - Materials



Civilization Element 3 – Food + Drink (Farming)

- **Benefits**
 - Diversity of taste
 - Seasonally Independent
- **Costs**
 - Disease Transfer
 - Exotic Species Invasions
 - Energy Usage
 - Material Displacement



Civilization Element 4 – Products (Industrial Manufacturing)

- **Benefits**

- Choice of products
- Open Competition

Fossil fuels, Minerals and Ores

1900 – 1.7B x 5T = 8.5B Tonnes

2000 – 6B x 9T = 54B Tonnes

2050 – 9B x 12T = 111B Tonnes

- **Costs**

- Energy Usage
- Material Displacement
- Ore Quality
- Waste

Carbon Accounting

300 GTons Carbon Burnt since 1750

1.2Tons per Human per Year currently

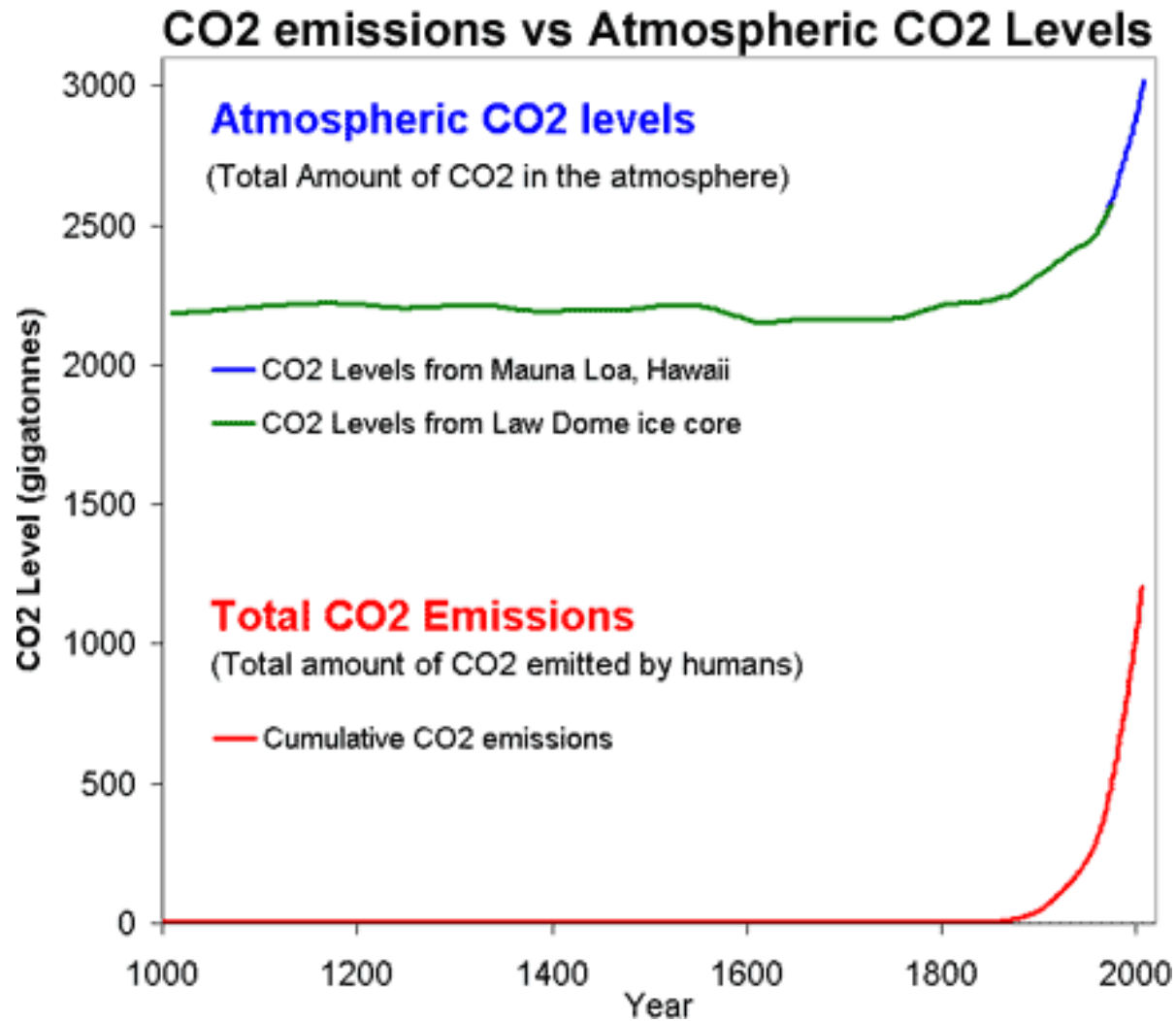
1100 GTons CO2 Added to Atmosphere

800 GTons CO2 remains in the atmosphere

Total in Atmosphere today 3000 GTons

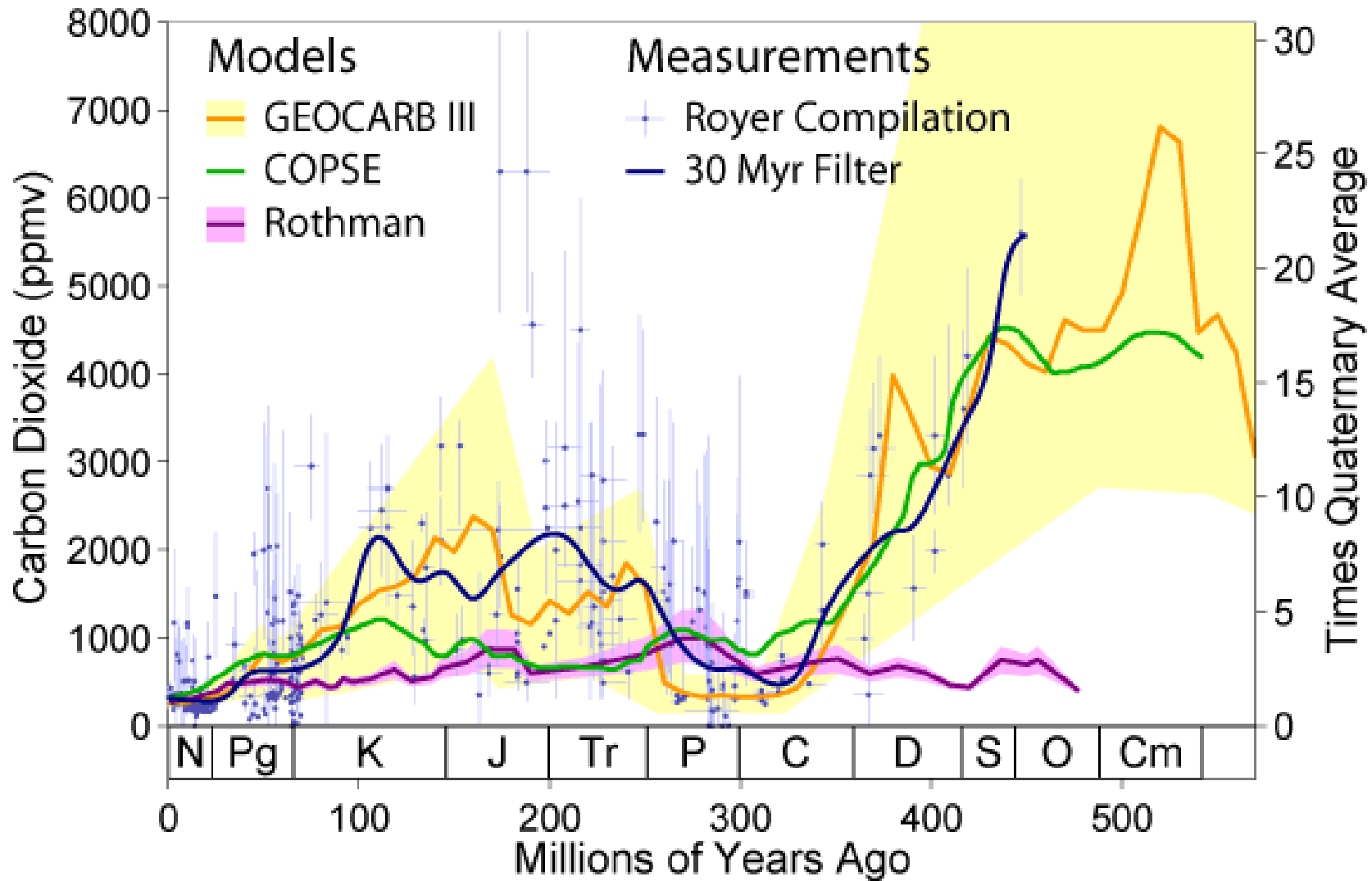
300 GTons Oil/Gas and 5000GTons Coal Left

Carbon Burning and CO2 Additions



Carbon Burning and CO2 Additions

Phanerozoic Carbon Dioxide



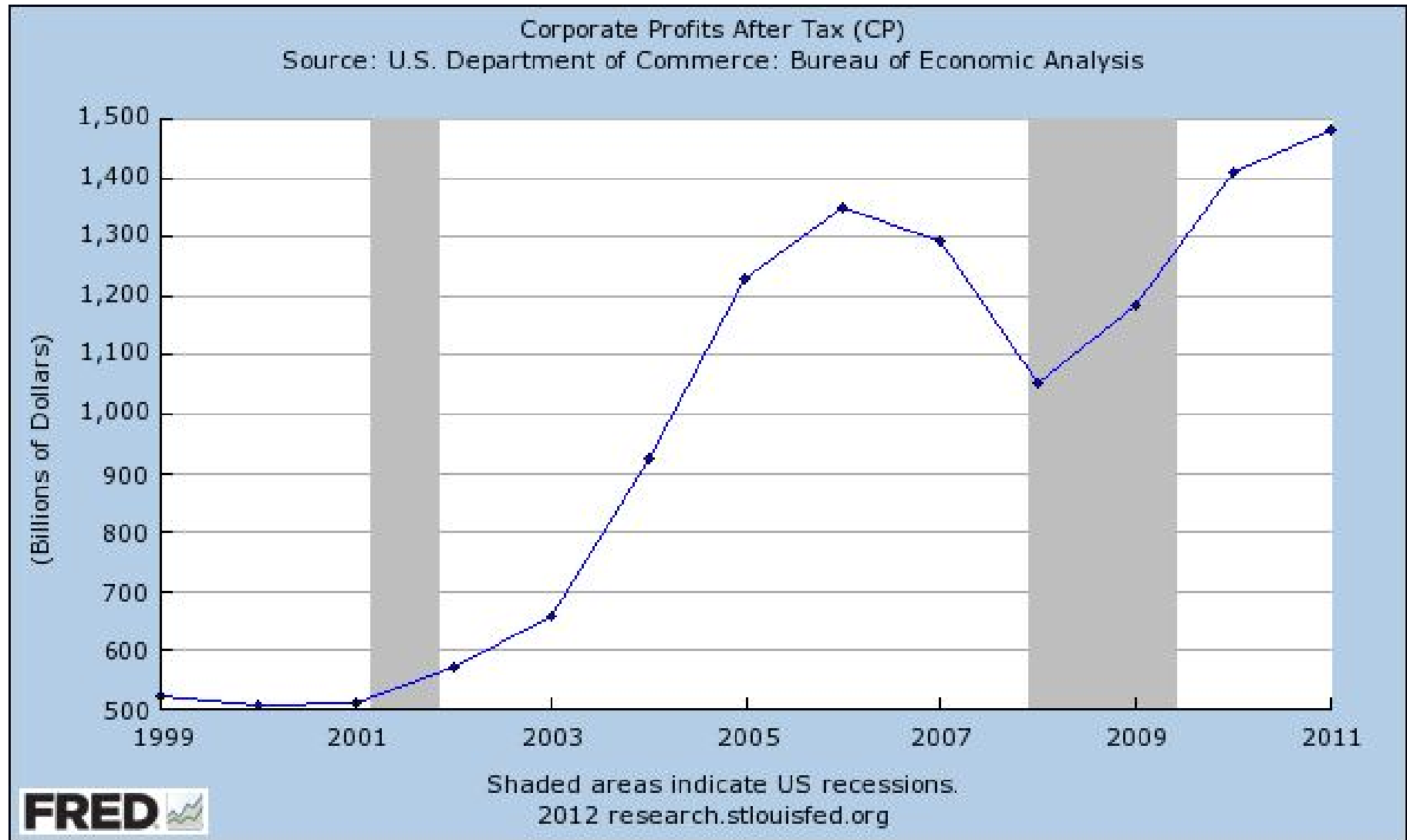
Globalization of Civilization - Summary

- **The 4 elements of civilization (Information, Human Beings, Produce and Products) are changing faster and in larger quantities than ever before, consuming enormous amounts of energy and displacing huge amounts of materials**
- **We must restore material balance and become much more energy Efficient**
 - **Information – Good**
 - **Human Beings – Good but Reduce How Many of us and How Much we travel**
 - **Produce – Maintain Diversity, but localize and reduce**
 - **Products – Maintain Choice, but localize and reduce**

A Theory Regarding Debt and the Stock Market Value

Corp Profits After Tax 1999 to 2011

(2011 = \$20T Stock Market value - \$1.5T x P/E [13])



Source – Federal Reserve Bank of St Louis Economic Research - <http://research.stlouisfed.org/>

A Balanced Economy

Business Owners



Government



**Make Profits/
Invest in Wealth**



**Pay taxes/
Receive Services**



**Earn Salary/
Buy Goods + Services**

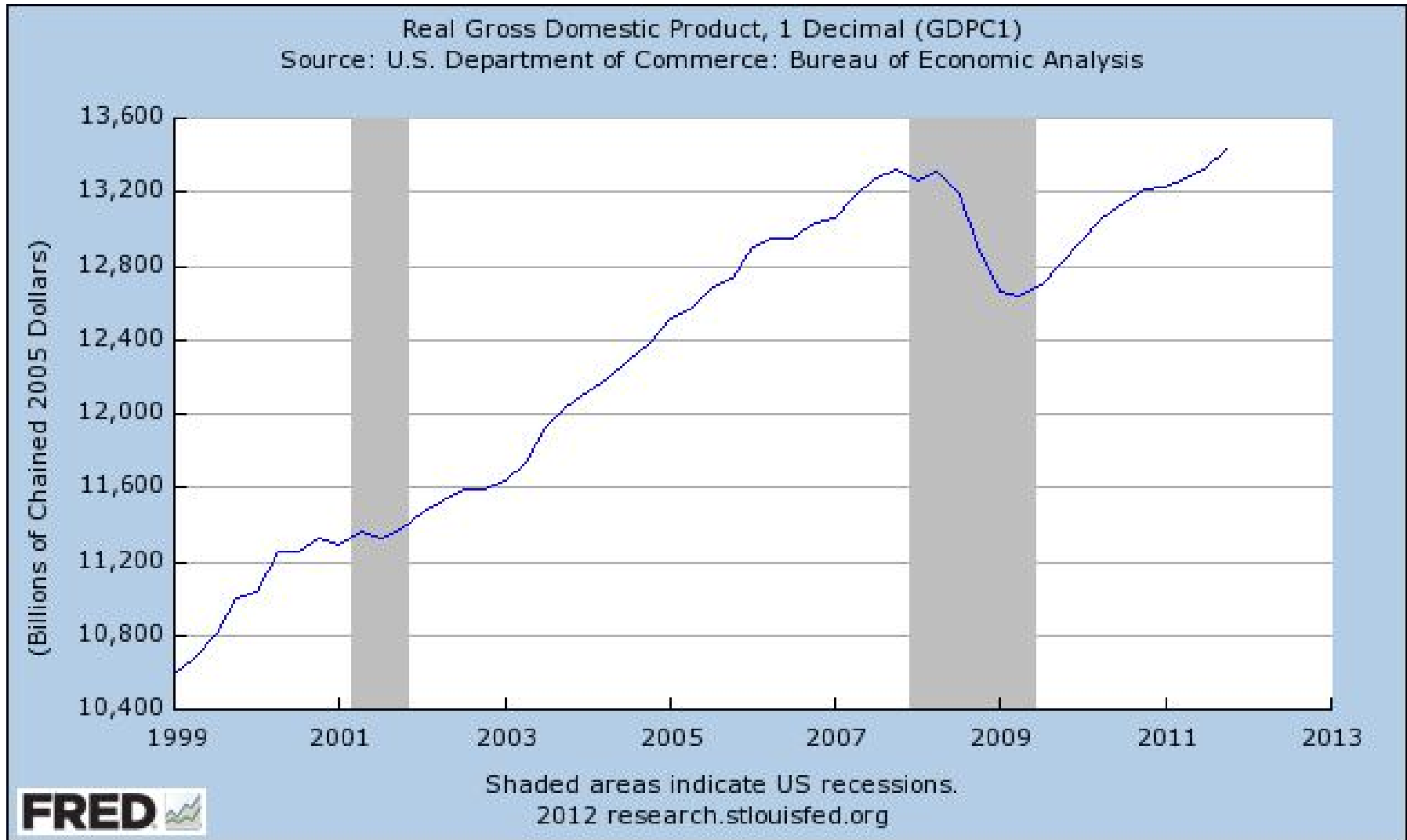


Businesses

Consumers

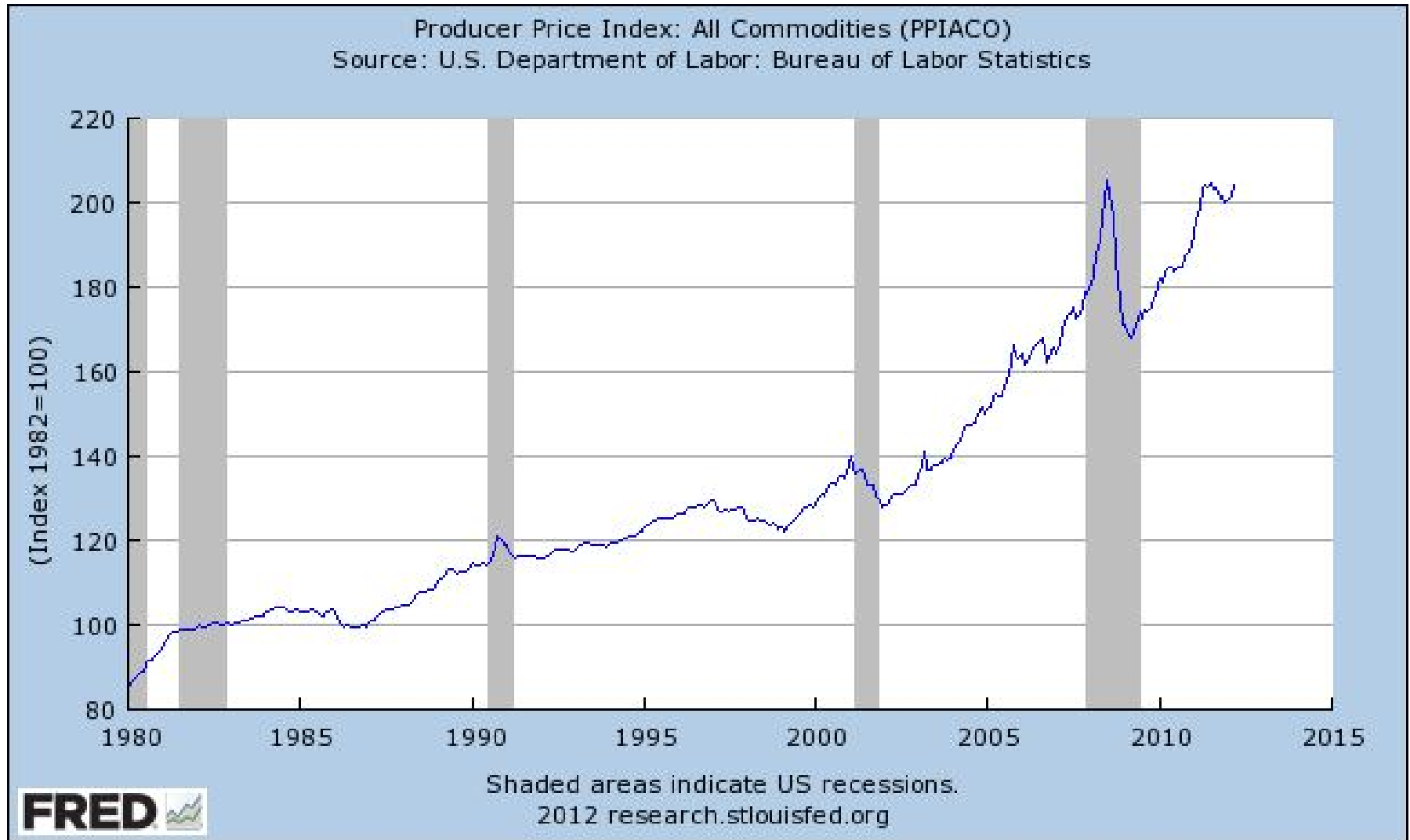
**Market Value =
Profit x P/E Ratio**

Real GDP 1999 to 2012



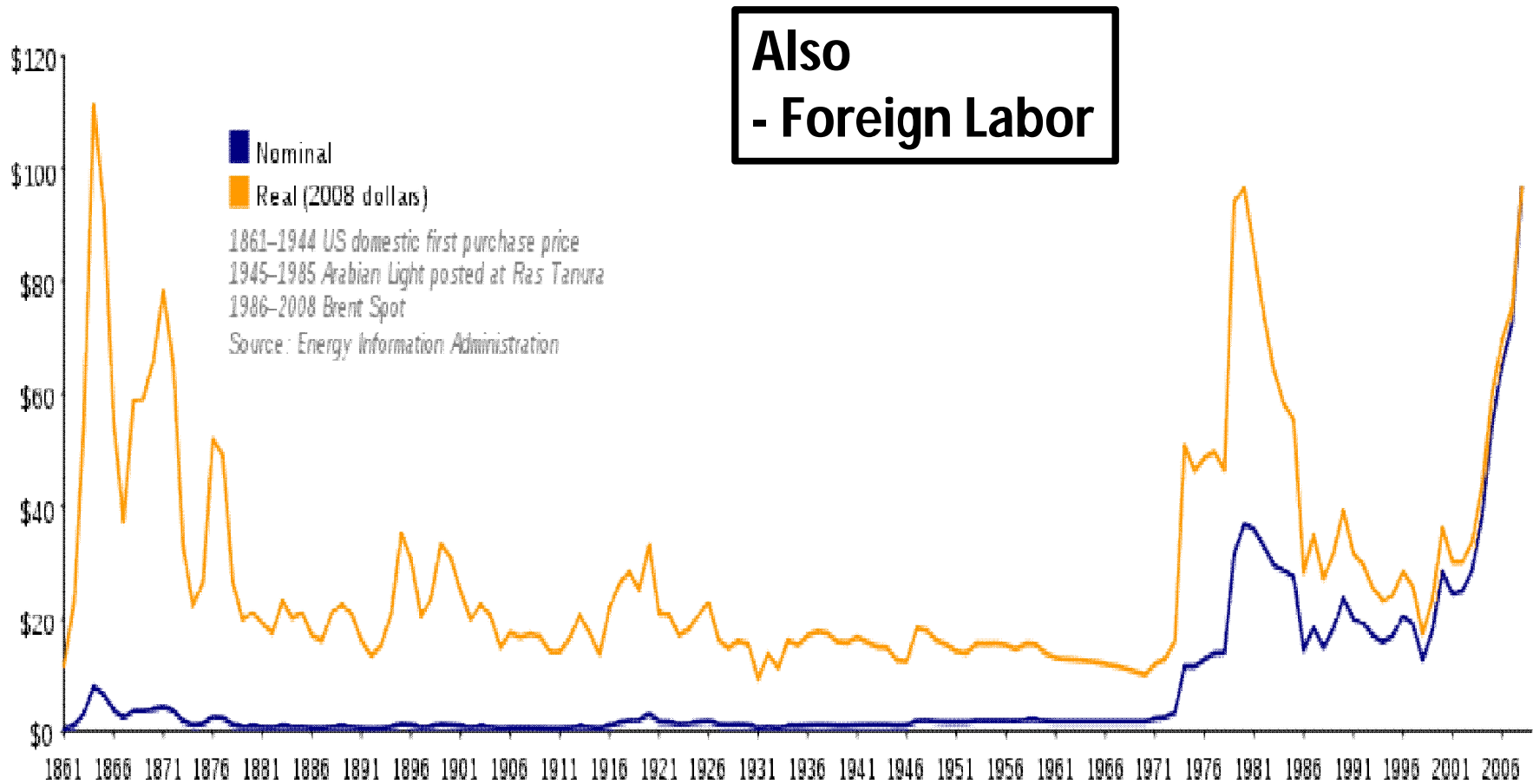
Source – Federal Reserve Bank of St Louis Economic Research - <http://research.stlouisfed.org/>

All Commodities Index 1980 to 2012



Energy Costs Increasing (Oil)

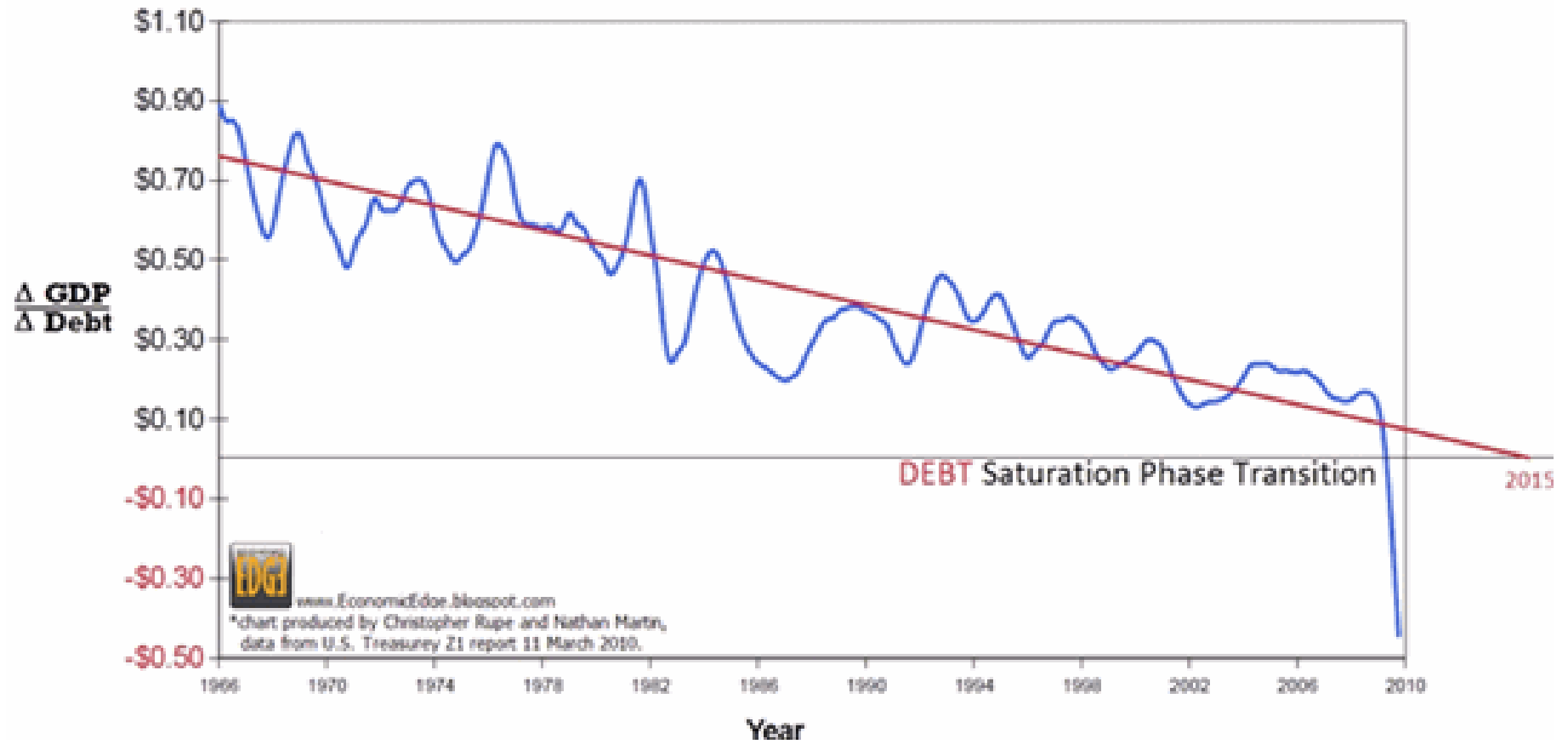
(Barrel Crude Oil Nominal and Real)



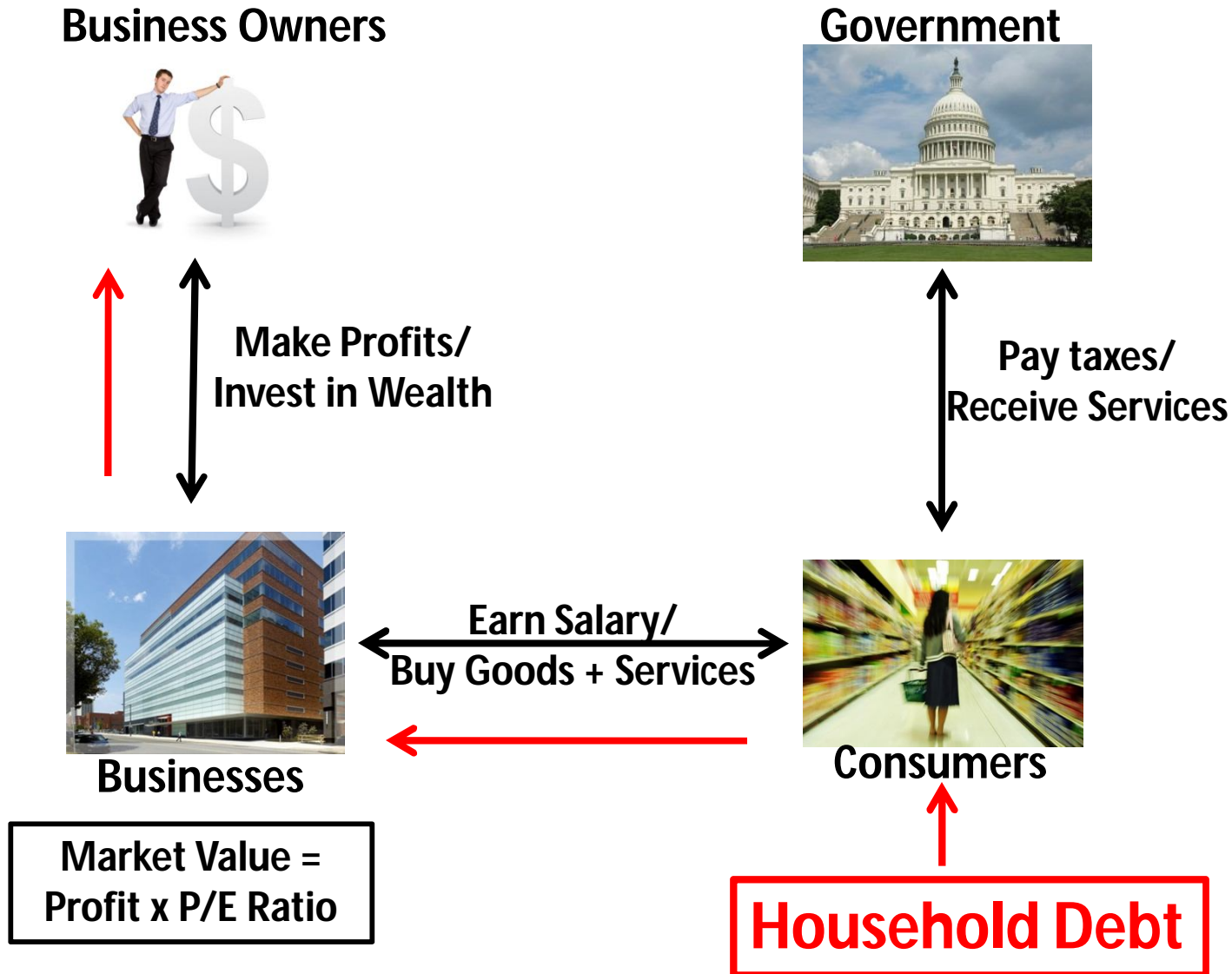
Growth in GDP Versus Growth in Debt (Marginal Productivity of Debt)

Diminishing Marginal Productivity of Debt in the US Economy (in Dollars)

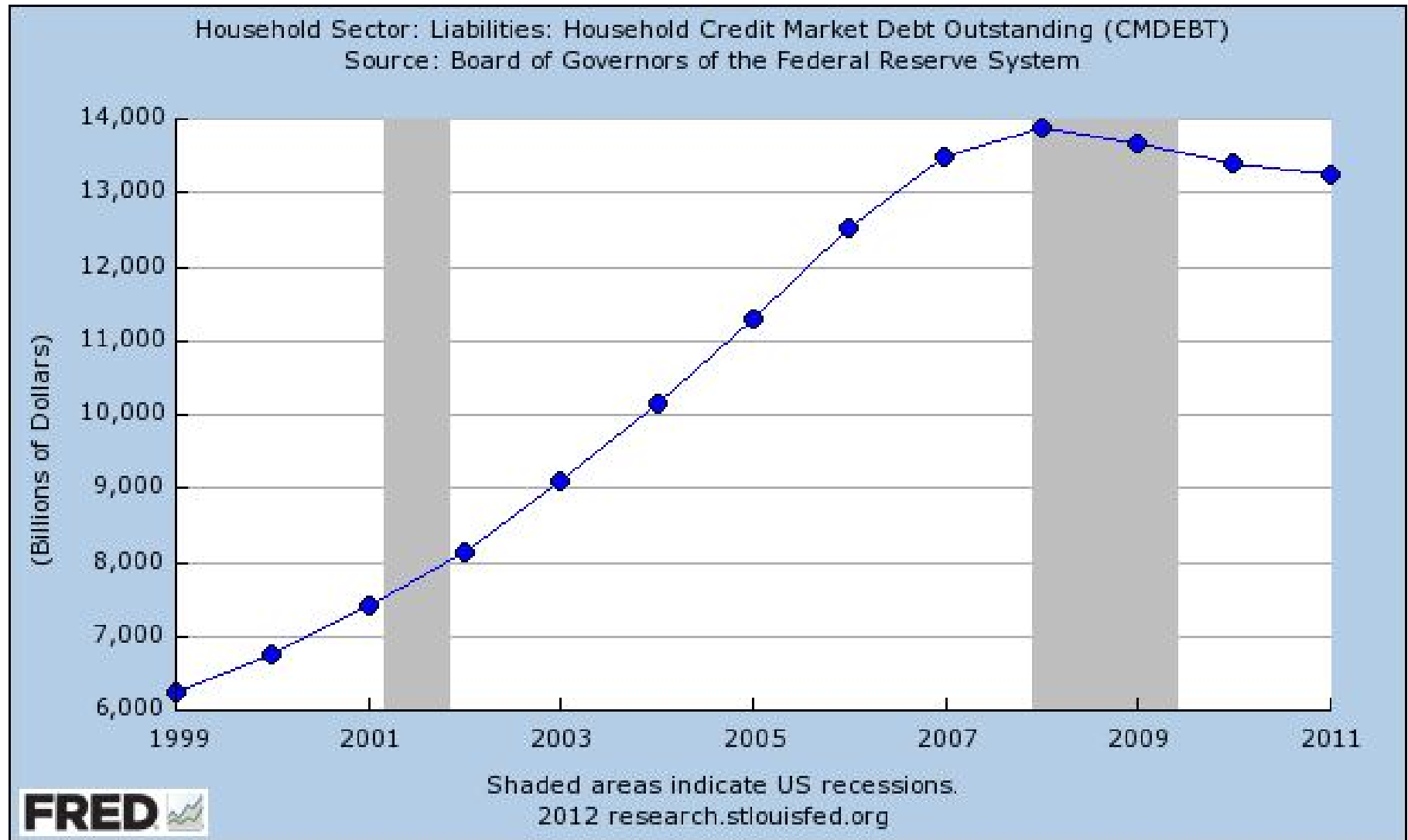
[Diminishing+Productivity+of+DEBT+(2).jpg]



Business Profits Fuelled By Household Debt

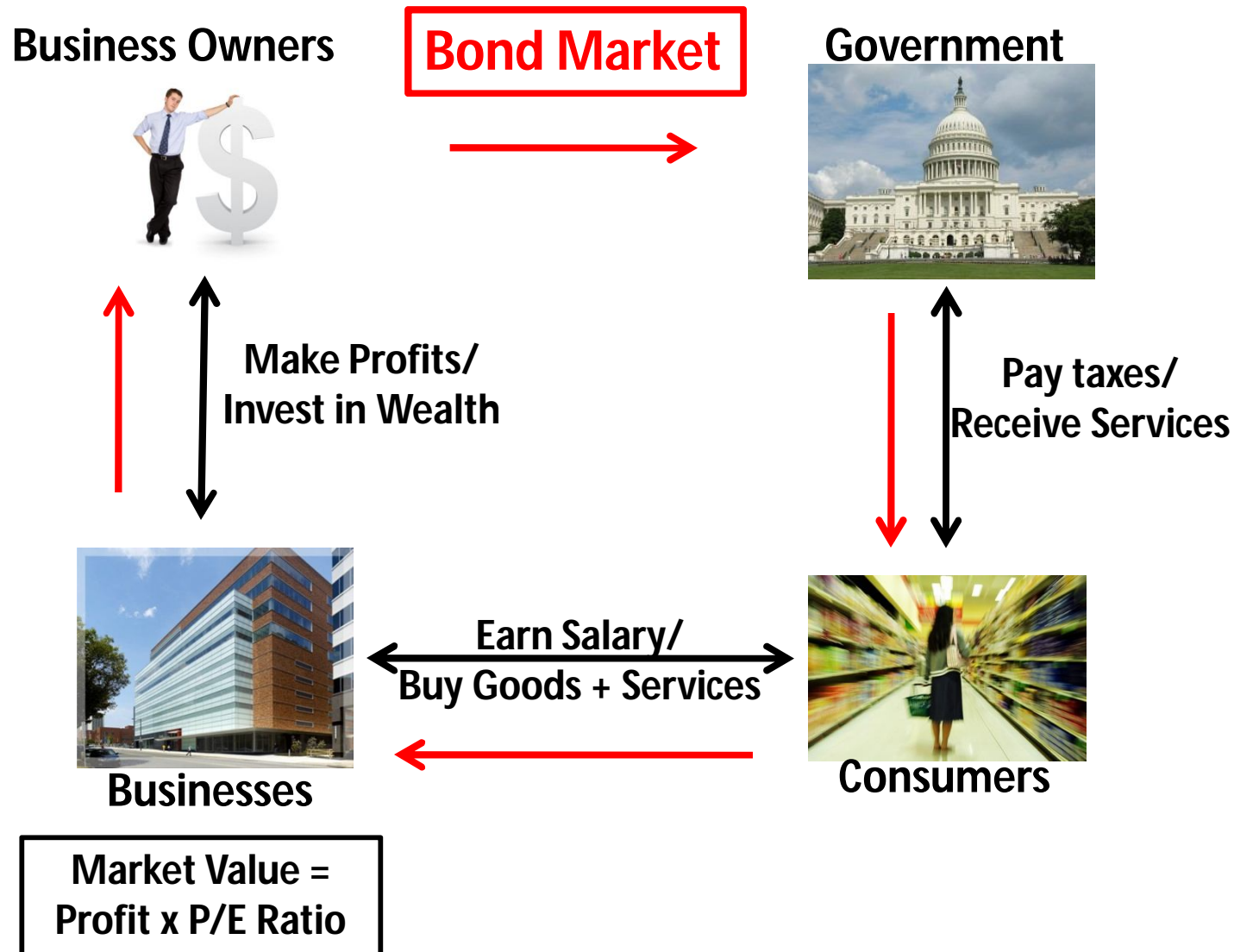


Household Sector Debt 1999 to 2011



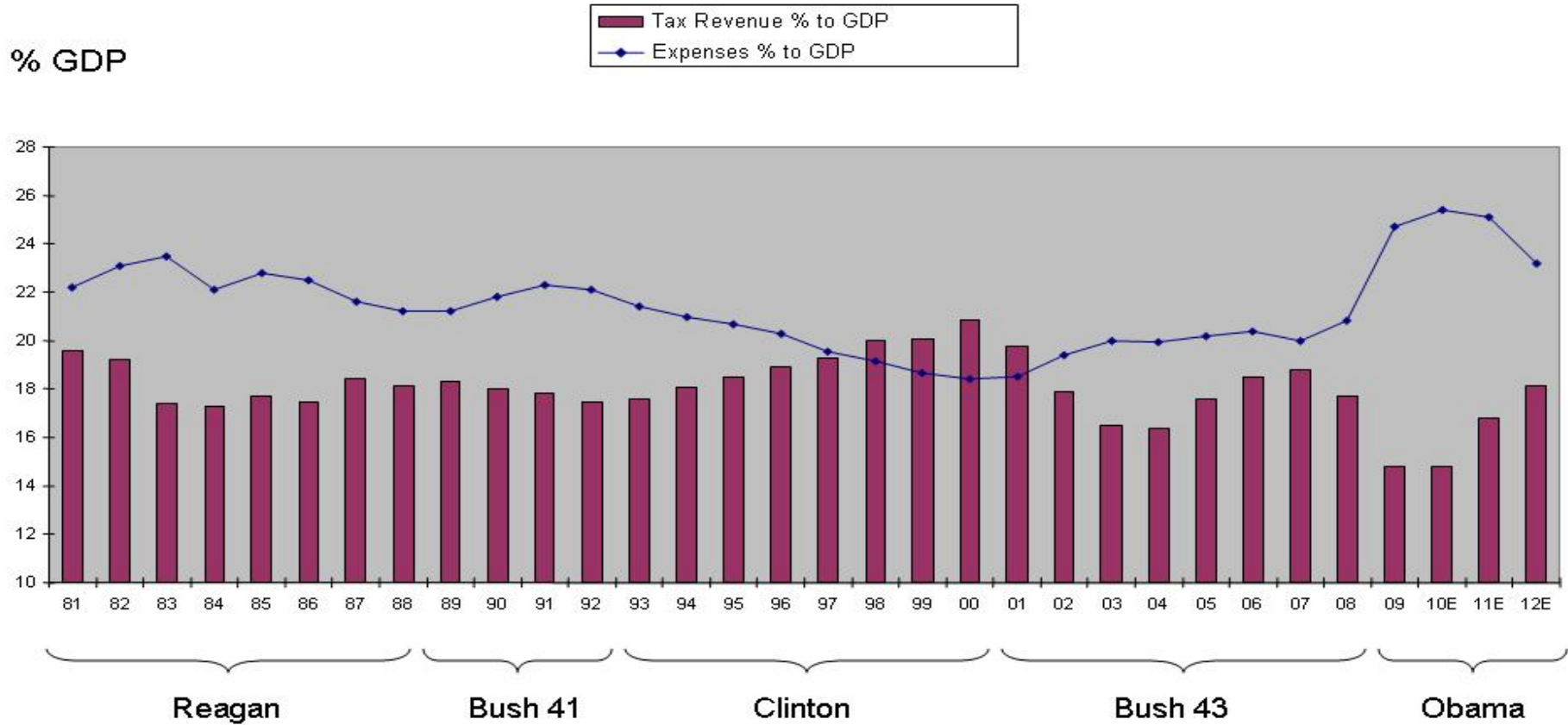
Source – Federal Reserve Bank of St Louis Economic Research - <http://research.stlouisfed.org/>

Business Profits Fuelled By Government Debt



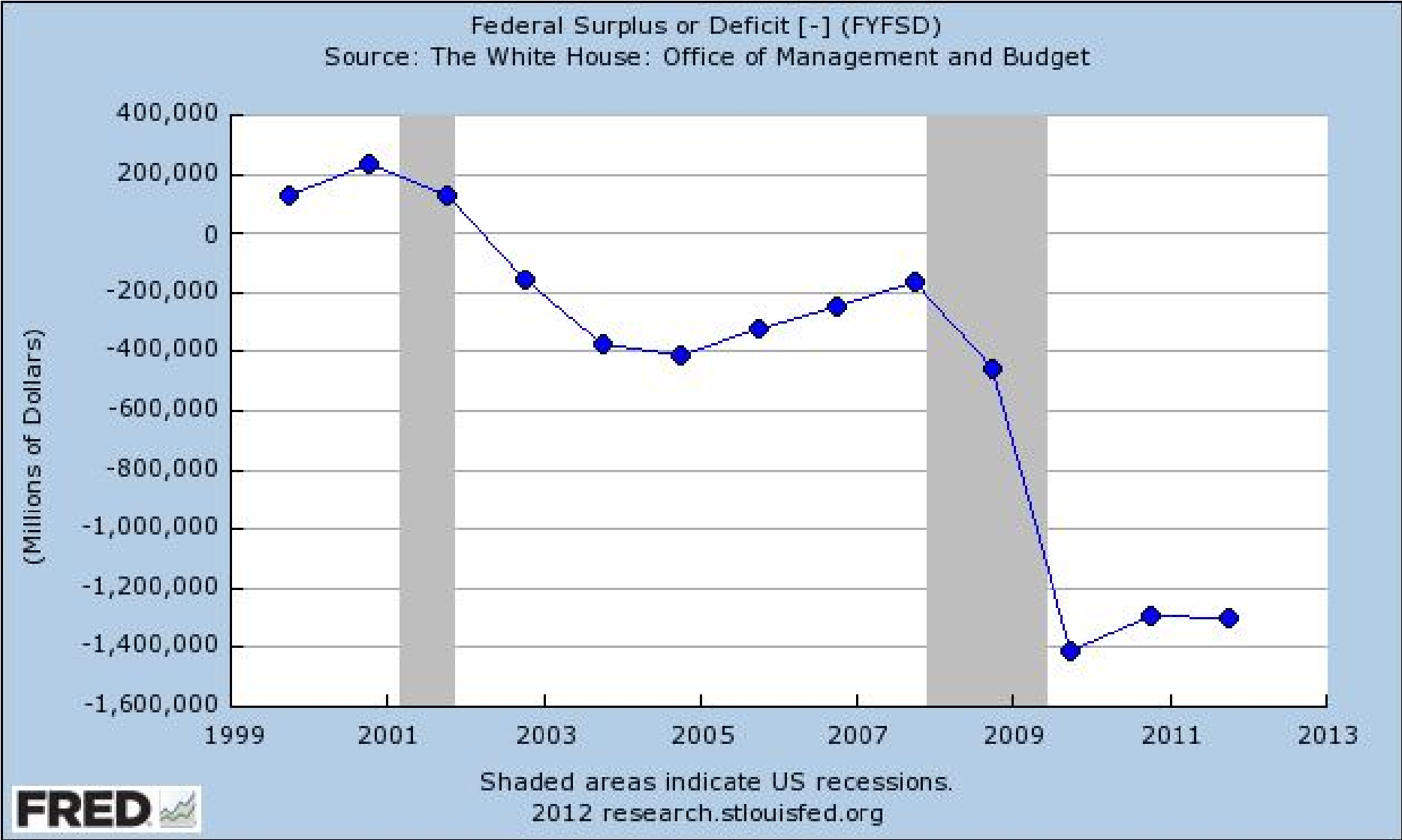
Government Revenue and Expenses Since 1981

Federal Tax Revenue & Expenses as % to GDP (FY 1981 – 2012)



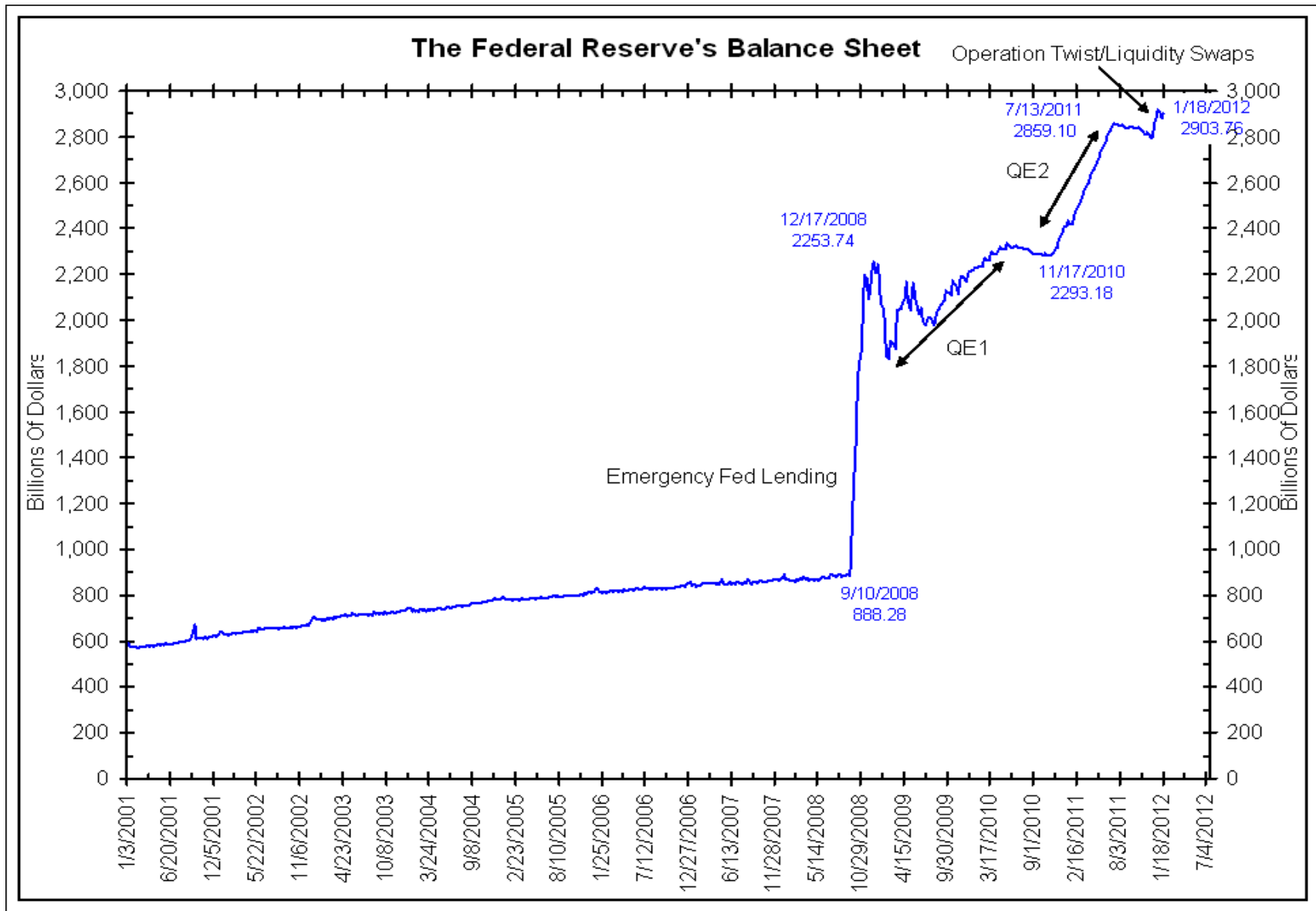
Averages	
Expenses:	22.4
Revenue:	18.2
<hr/>	
	21.9
	17.9
	19.9
	17.9
	24.6
	16.1

Government Annual Borrowing Since 1999



Source – Federal Reserve Bank of St Louis Economic Research - <http://research.stlouisfed.org/>

Quantitative Easing I and II – Supporting Bond Market

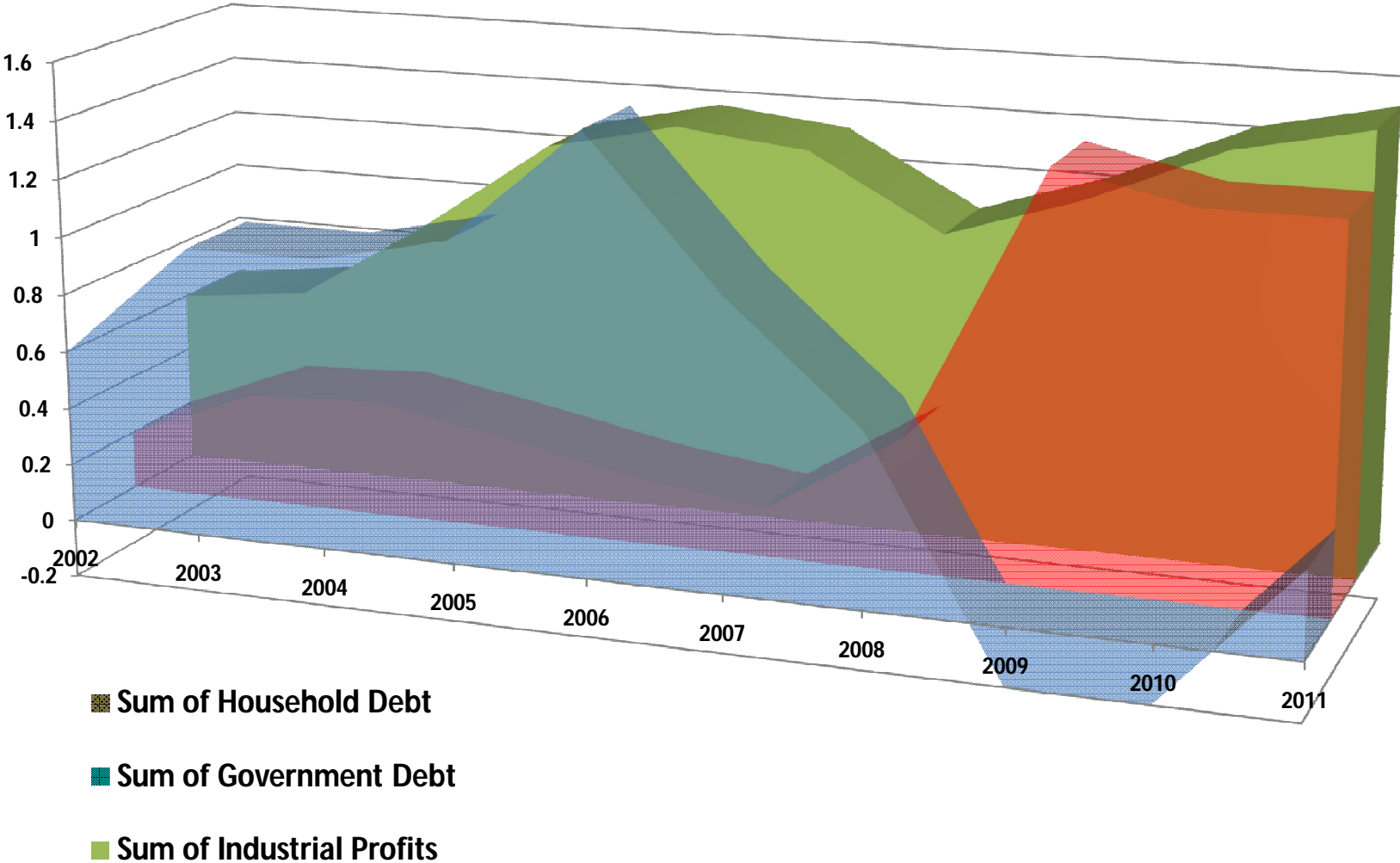


Gov and Household Debt Versus Corp Profits After Tax 2002-2011 (In trillions \$)

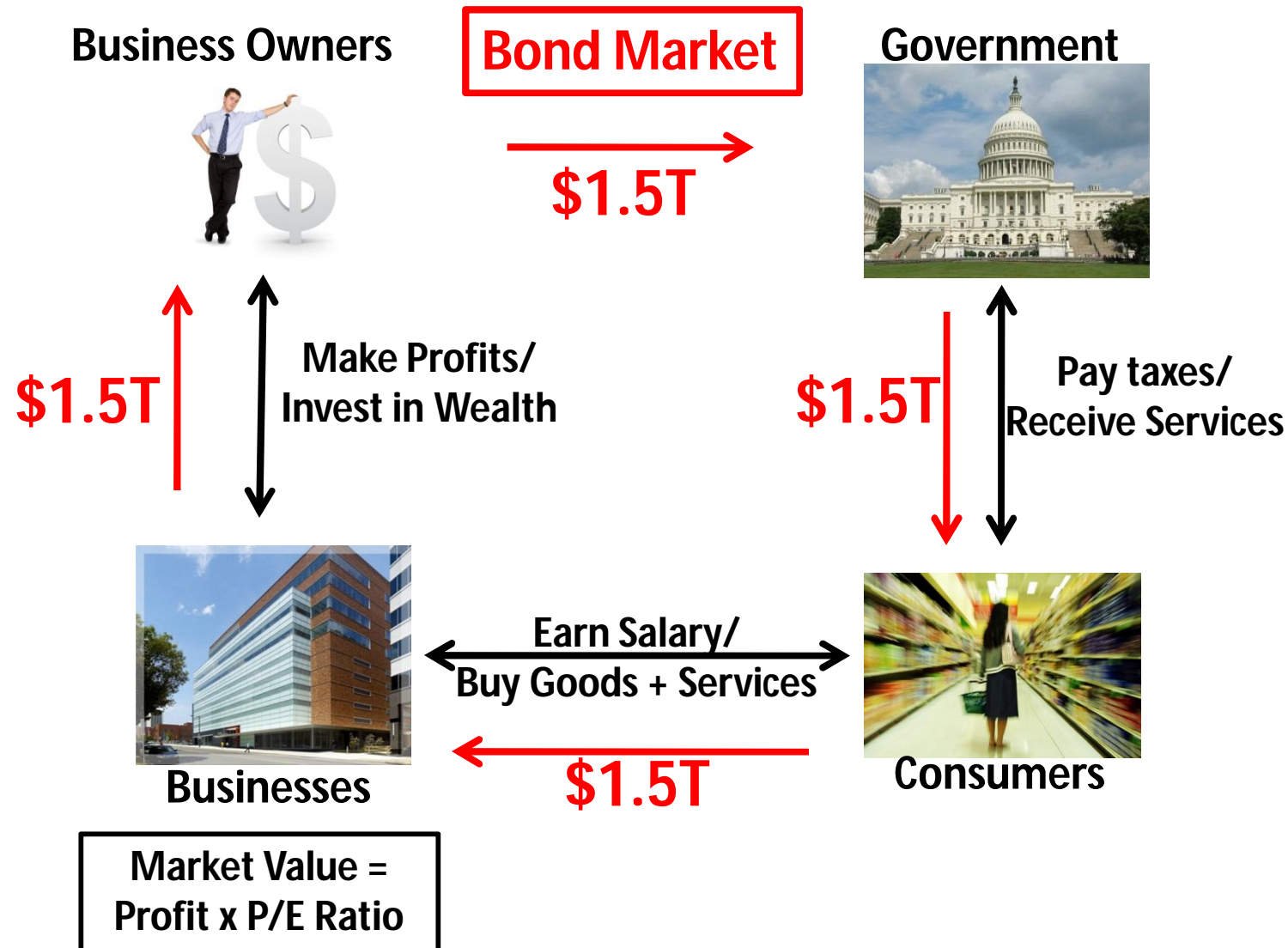
Year	Household Debt	Government Debt	Industrial Profits	HH plus Giv Debt
2002	0.6	0.2	0.6	0.8
2003	1	0.38	0.65	1.38
2004	1	0.4	0.93	1.4
2005	1.1	0.32	1.25	1.42
2006	1.5	0.23	1.35	1.73
2007	1	0.17	1.3	1.17
2008	0.6	0.46	1.05	1.06
2009	-0.2	1.4	1.2	1.4
2010	-0.2	1.3	1.4	1.3
2011	0.3	1.3	1.5	1.6

Source Corporate Profits http://ycharts.com/indicators/corporate_profits/historical_data

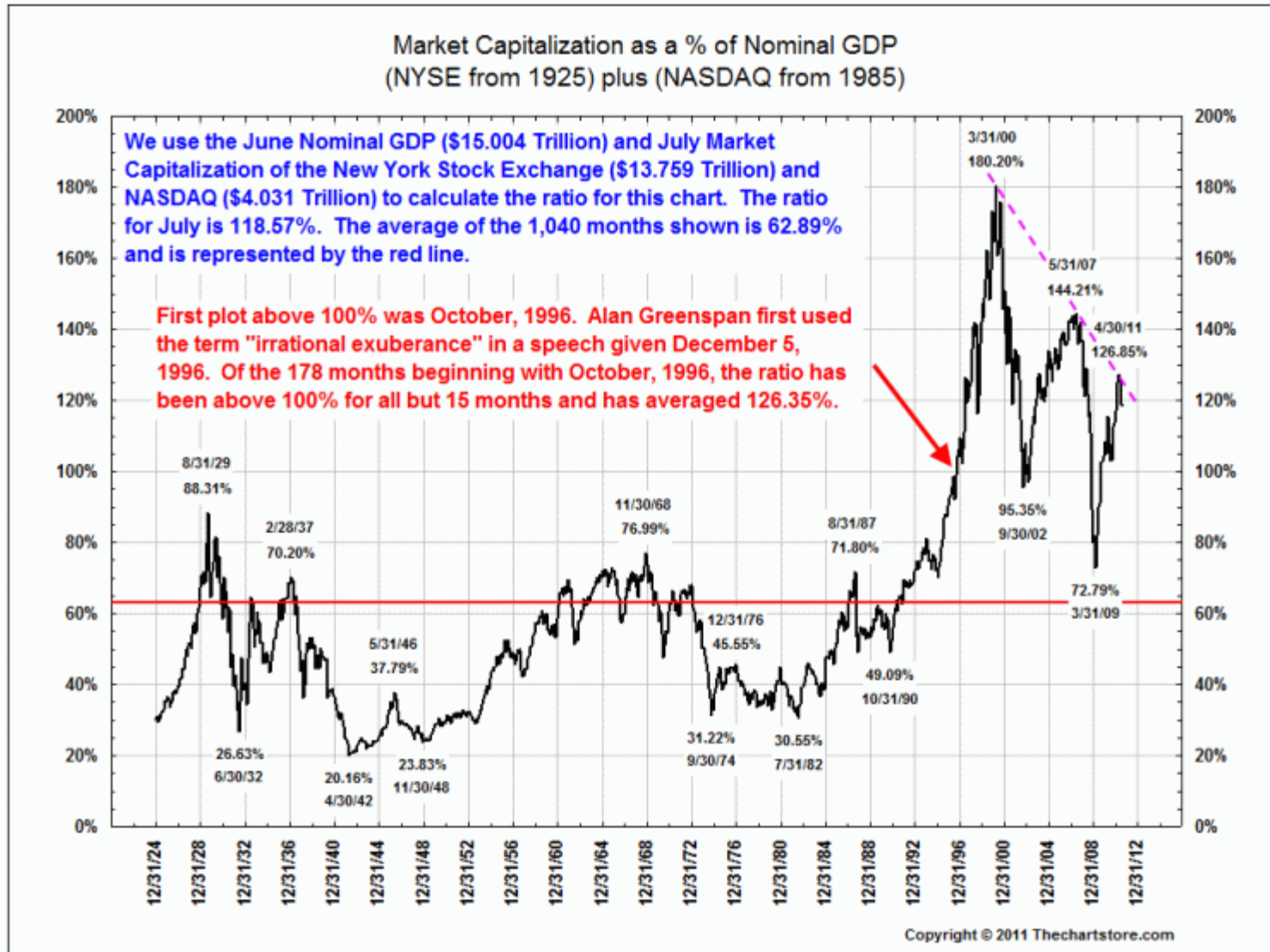
Gov and Household Debt Versus Corp Profits After Tax



Business Profits Fuelled By Government Debt

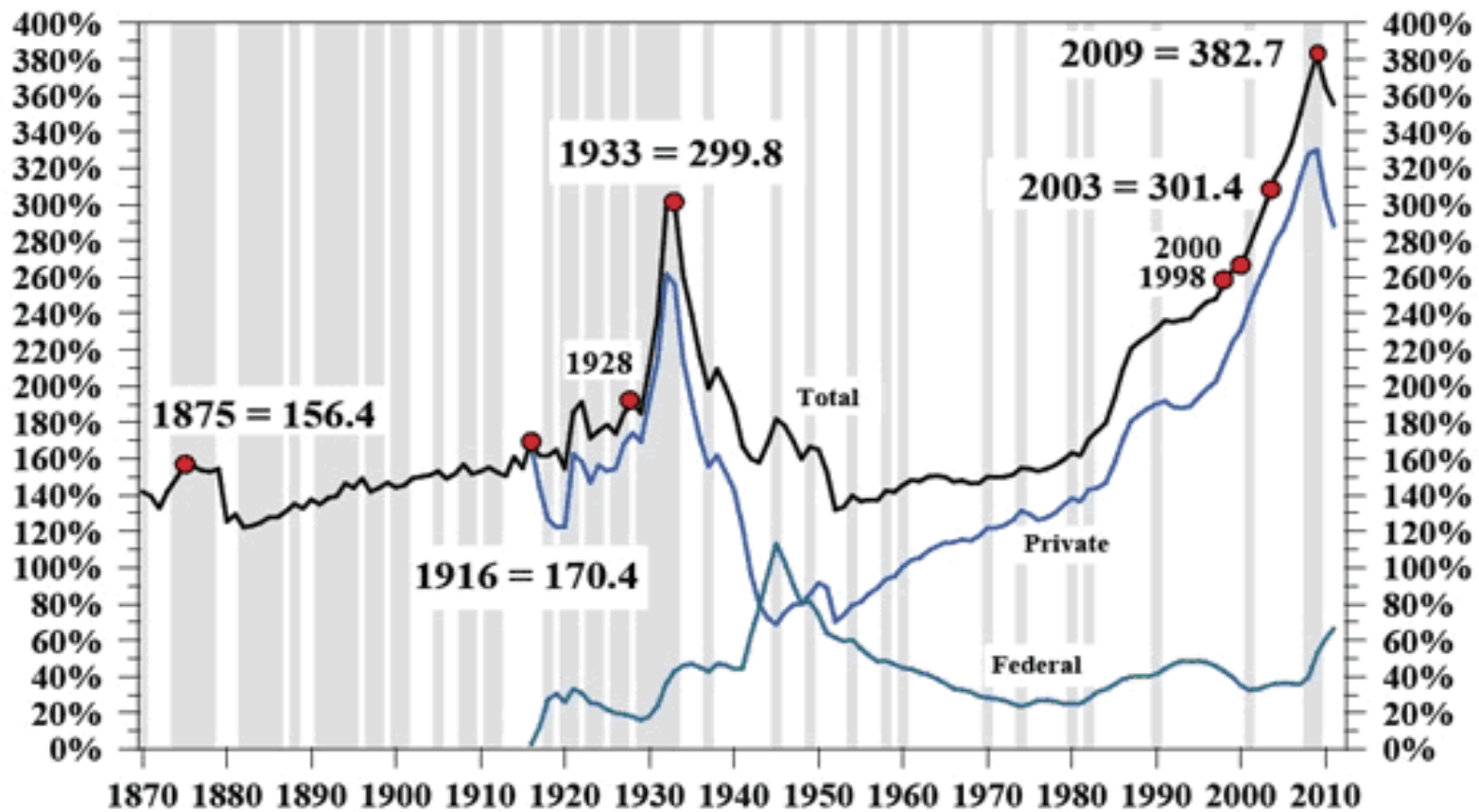


Stock Market Capitalization 1924-2011



US Credit/Debt Market (at Present \$54T)

U.S. Debt as a % of GDP *annual*



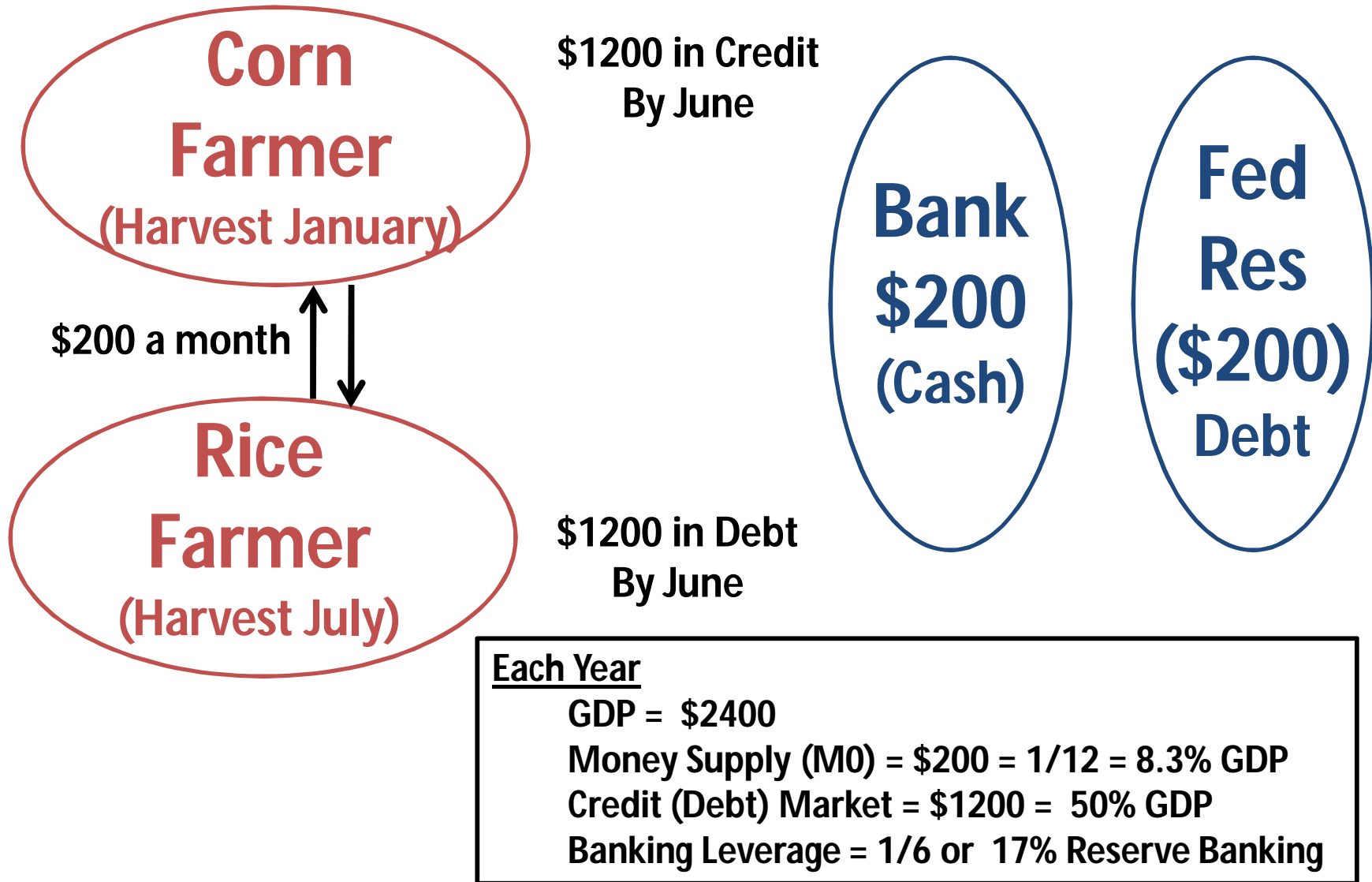
Sources: Bureau of Economic Analysis, Federal Reserve, Census Bureau: Historical Statistics of the United States Colonial Times to 1970. Through Q3 2011. Last plot Q3 2011.

Debt, Stock Market Profits and Stock Market Value

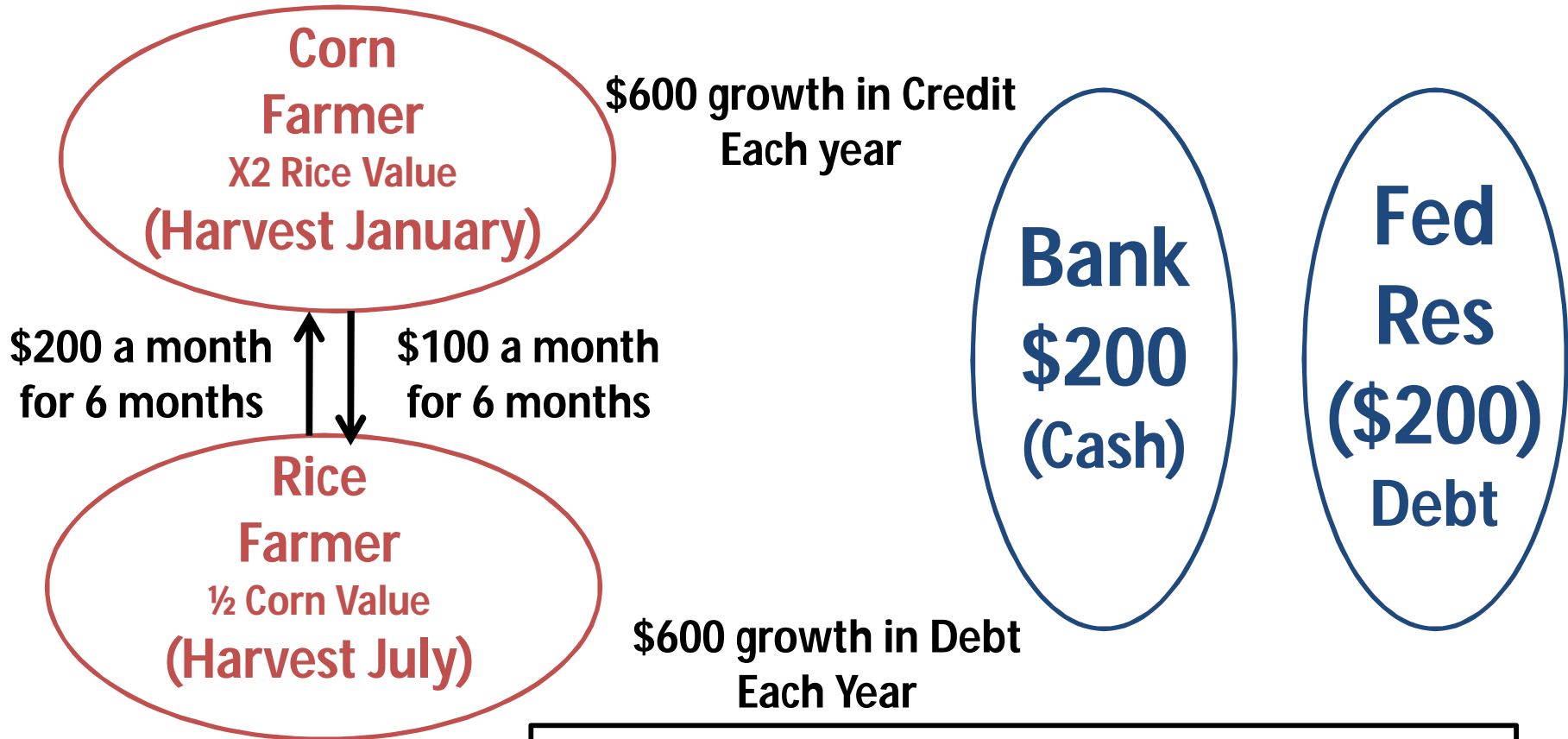
- **Could we be in a 30-40 Year Money Bubble**
- **If so, How and When will it end ?**

The Nature of the US Monetary System

A Balanced Fiat Monetary System



An Unbalanced Monetary System



After 10 years

GDP per Annum = \$1800

Money Supply (M0) = \$200 = $1/9$ = 11% GDP

Credit (Debt) Market = \$6000 = 333% GDP

Banking Leverage = $1/30$ or 3.3% Reserve Banking

Monetary System – Important Takeaways

1. It's a Net Sum Zero System

Total DEBT (Loans) = Total CREDIT (Money)

2. In a Balanced/Sustainable System

DEBT is proportional to GDP (Goods and services)

GDP grows with People and/or efficiency