

11. Inflation, Interest Rates, Deficits and You

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Joe Arata teaches courses, provides information and conducts research on commodity futures, options on futures and off exchange derivatives.

Currently he is working on an analysis of futures market price valuation and market information. Analyzing profit due to underlying asset price changes as opposed to profit due to option mispricing. Decompose option mispricing into volatility and formula error.

Abstract/Summary

In this discussion, we will look at a possible explanation why the rapid increase in the US Government spending and the money supply has not yet resulted in a corresponding increase in inflation. We will talk about the US public debt, deficits, inflation, interest rate policy, trade balance and the current account.

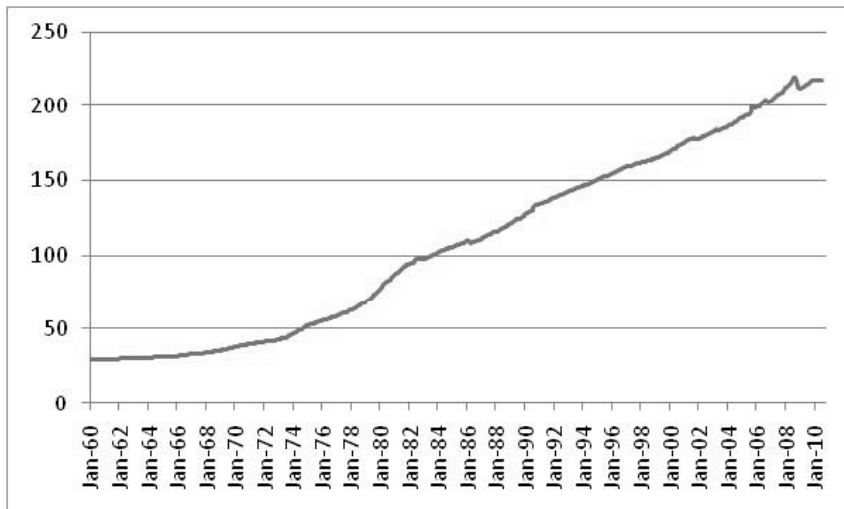
Inflation, Interest Rates, Deficits and You

Risk and Profit Conference
Kansas State University

Presented by
Joseph O. Arata Ph.D.

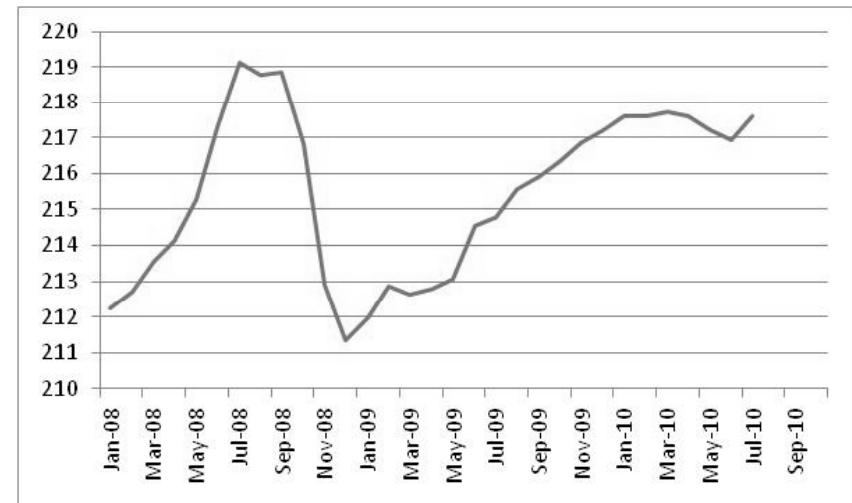


Consumer Price Index



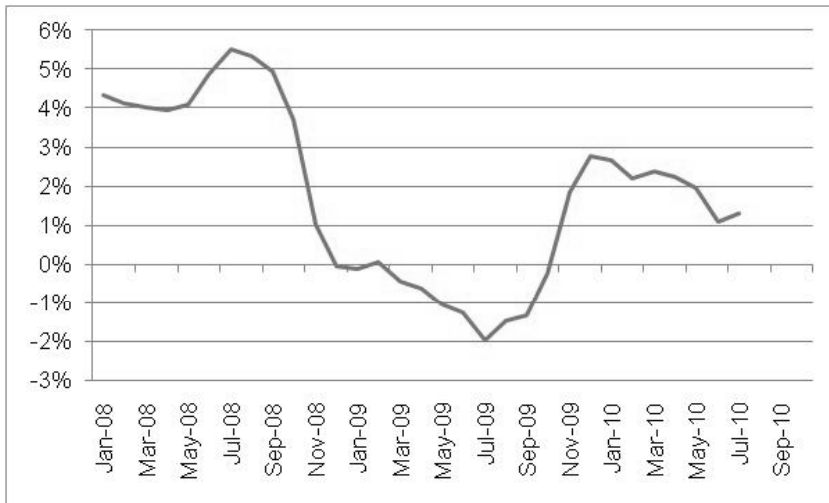
1982-84 = 100

Inflation



July 2010 = 217.596

CPI Year to Year



July 2010 +1.3%

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The Bad - Inflation

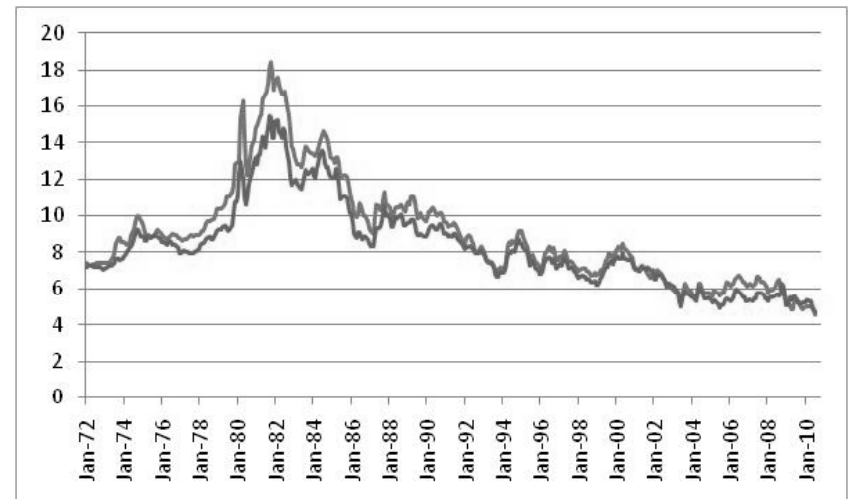
- **Consumer Price Index For All Urban Consumers: All Items**
- **Index 1982-84 = 100.000**
- **July 2010 = 217.597**
- **Twenty seven years 117.597**
- **Annual rate 3.1**
- **Now 1.3**

CPI Category Weighting

- **Housing 42.4%**
- **Transportation 17.4**
- **Food 15.1**
- **Entertainment 5.6**
- **Medical Care 6.2**
- **Education 3.0**
- **Communication 3.1**
- **Apparel and Upkeep 3.8**
- **Other 3.5**

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AAA & Mortgage Rates



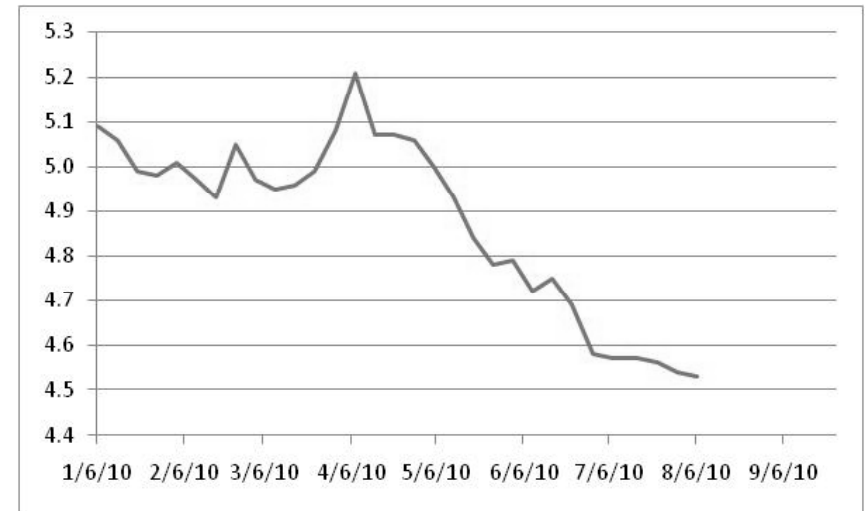
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AAA & Mortgage Rates



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Mortgage Rates



30-Year Conventional 4.54%

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Quantity Theory of Money

Quantity Theory of Money

Equation of Exchange:

$$M * V = P * Q$$

M = the money stock

V = the velocity of circulation

Q = economic output

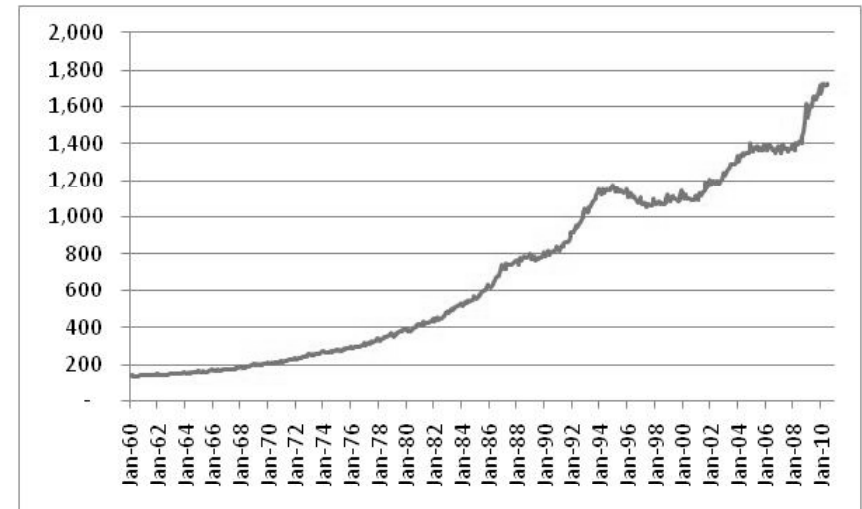
P = average price level

Equation of Exchange

$$M * V = P * Q$$

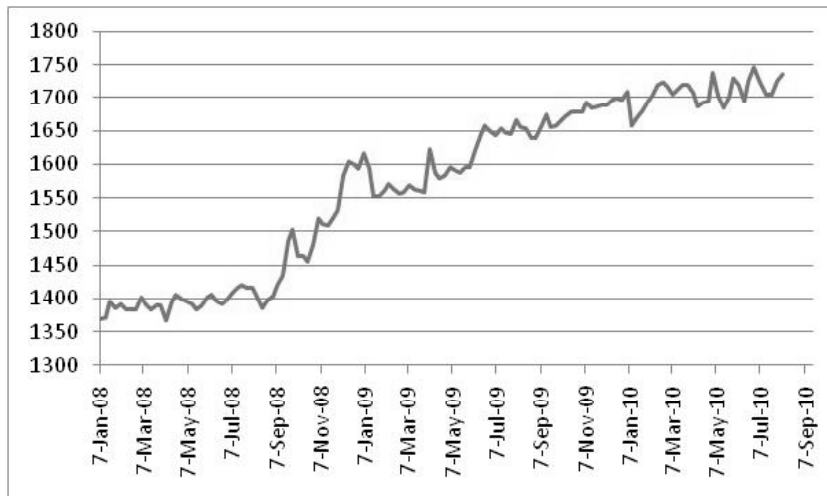
- M** = the money stock
- V** = the velocity of circulation
- Q** = economic output
- P** = average price level
- PQ** = nominal GDP

M1- Money Stock billions



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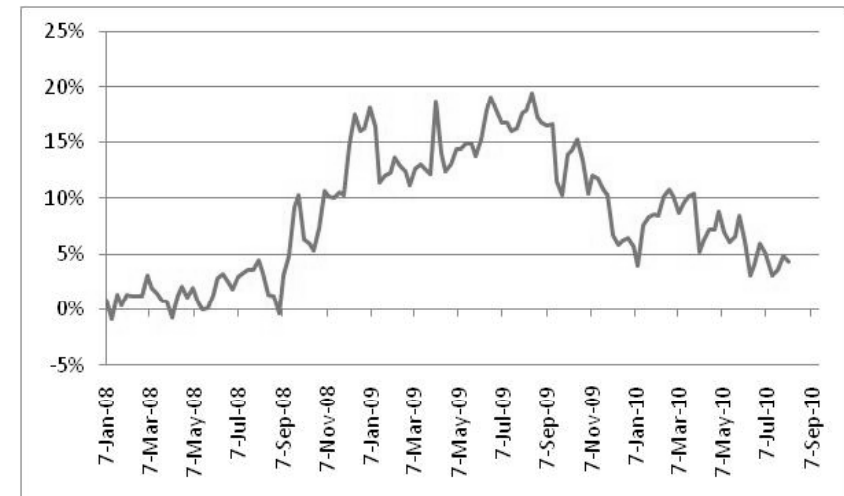
M1- Money Stock billions



August 2, 2010 = 1,736,900,000,000

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M1 – Year to Year



From October 2008 up 25%

$$MV = PQ$$

2010

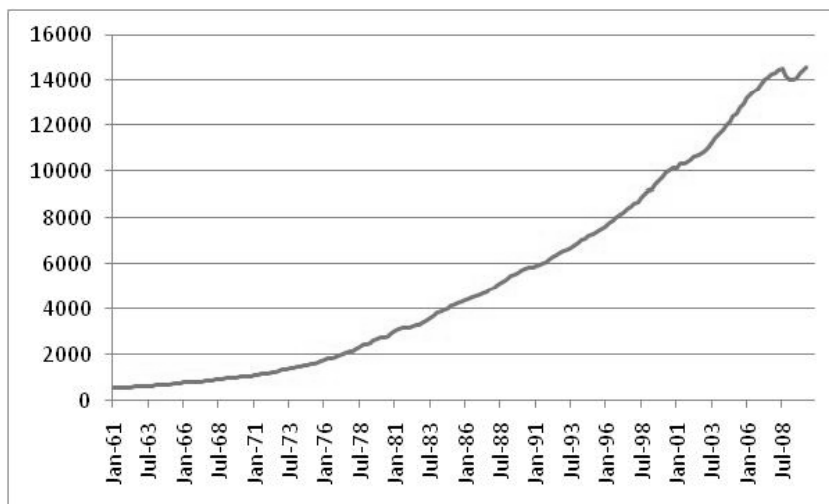
- M1 = \$1,740 billion
- PQ
- V

$$MV = PQ$$

2010

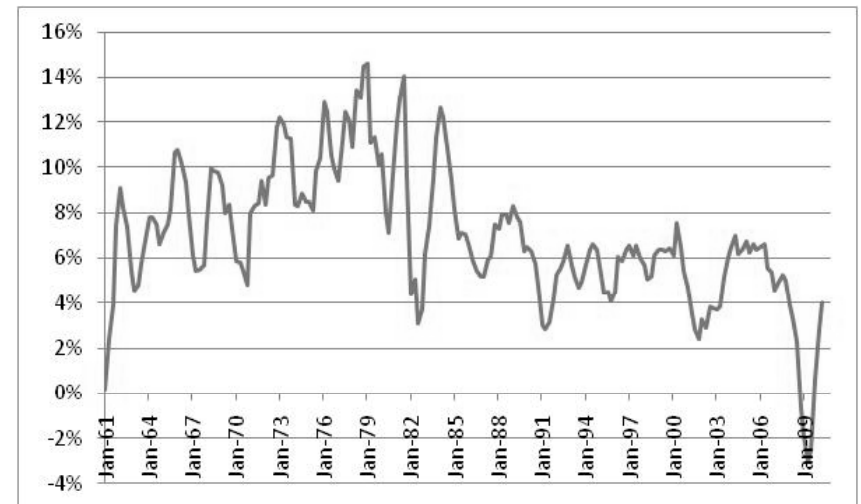
- M1 = \$1,740 billion
- PQ (GDP) = \$14,598 billion
- V

Nominal GDP billions



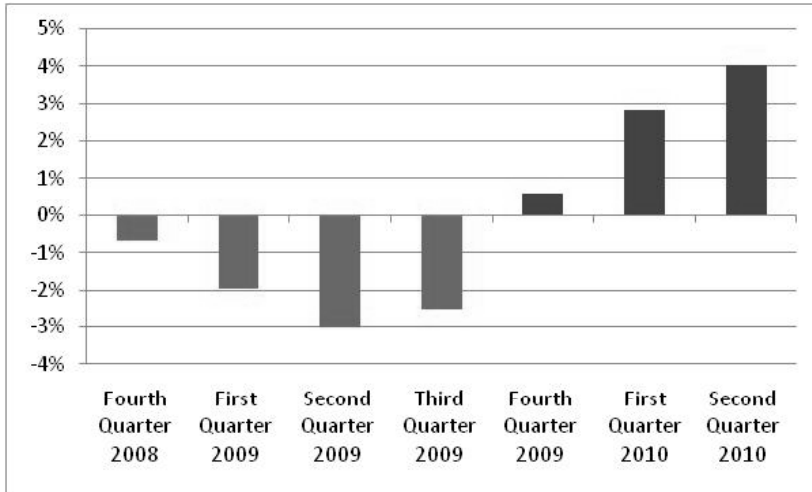
2nd 2010 Quarter = 14,597,700,000

Nominal GDP – PQ: Year to Year



2ND Quarter 4%

Nominal GDP – PQ: Year to Year



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Equation of Exchange

$$M * \bar{V} = P * Q$$

V = velocity of circulation is generally stable

Equation of Exchange

$$M * \bar{V} = P * \bar{Q}$$

V = velocity of circulation is generally stable
Q = GDP – is stable

Equation of Exchange

$$M \uparrow * \bar{V} = P * \bar{Q}$$

V = velocity of circulation generally stable
Q = GDP – is stable
M = up 25%
P = has to increase

The American Recovery and Reinvestment Act of 2009

- GDP \$14,597,700,000,000
- Amount \$787,000,000,000

- % of GDP 5.4%

“The” Stimulus Package

Category		Portion	Sum
(T) Tax Relief for Ind's	\$246B	31.2	31.2
(S) Transport and Infra.	\$98B	12.4	43.6
(T) Aid to States & Local Gov't	\$95B	12.1	55.7
(T) Aid to Those Effected by Rec.	\$62B	7.8	63.5
(S) Aid to States & Local Gov't	\$58B	7.4	70.9
(S) Education	\$48B	6.1	77.0
(S) Energy	\$41B	5.2	82.2
(S) Aid to Those Effected by Rec.	\$37B	4.7	86.9
(S) Health Care	\$20B	2.5	89.4
(T) Renew Energy Tax Credits	\$20B	2.5	91.9
Total			\$787B

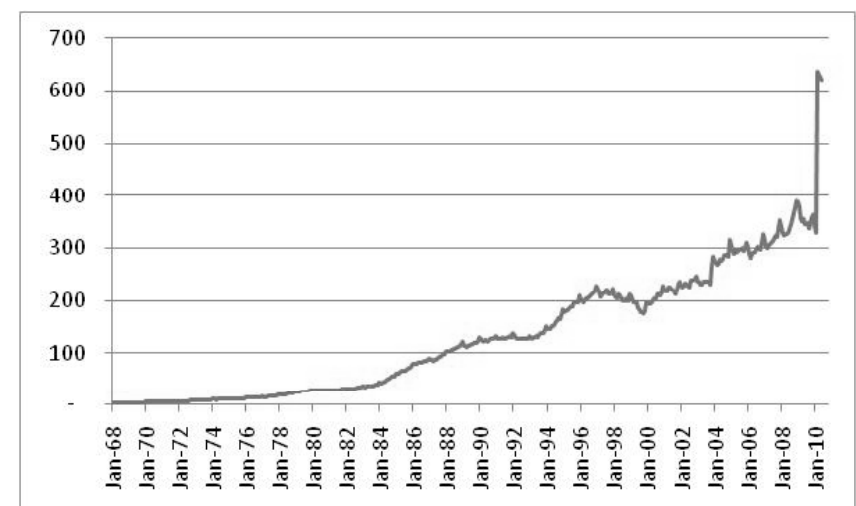
Category (S=Spending, T=Taxation)

Equation of Exchange

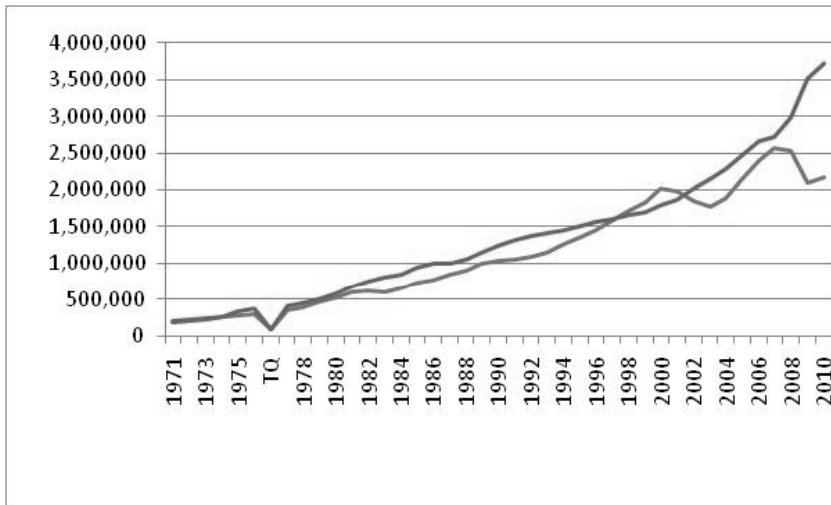
$$M \uparrow * \bar{V} = P * \bar{Q}$$

- V** = velocity of circulation
generally stable
- Q** = GDP – is stable
- M** = up 25%
- P** = has to increase

Consumer Credit Billions

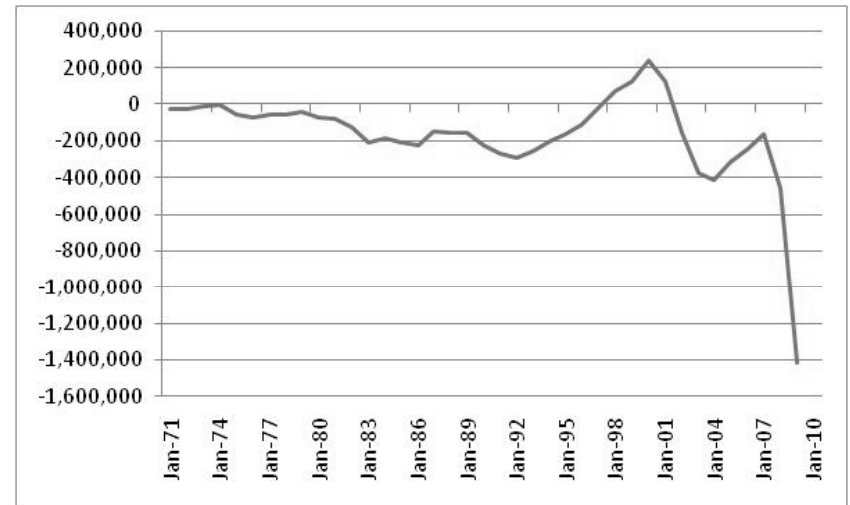


Outlays – Receipts millions



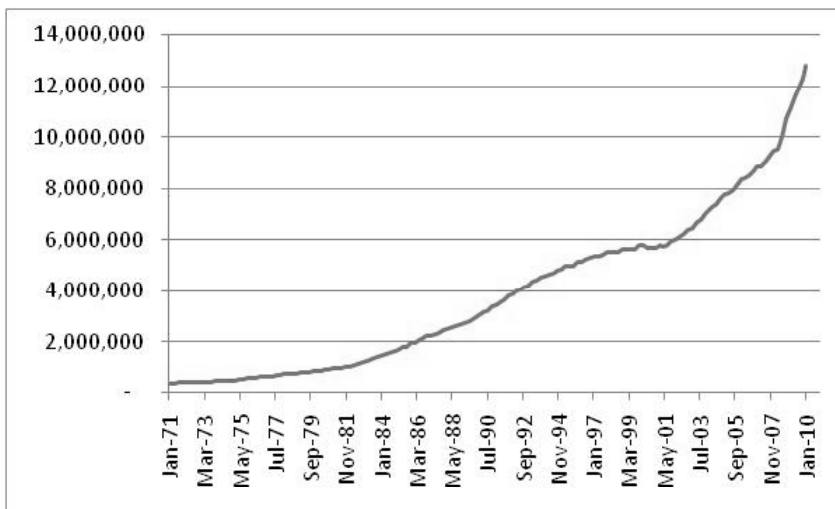
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Deficit millions



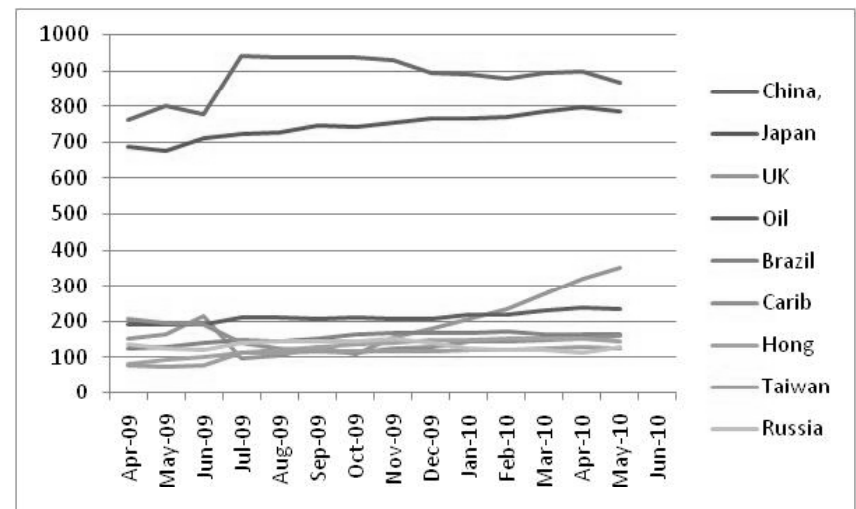
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US Debt millions



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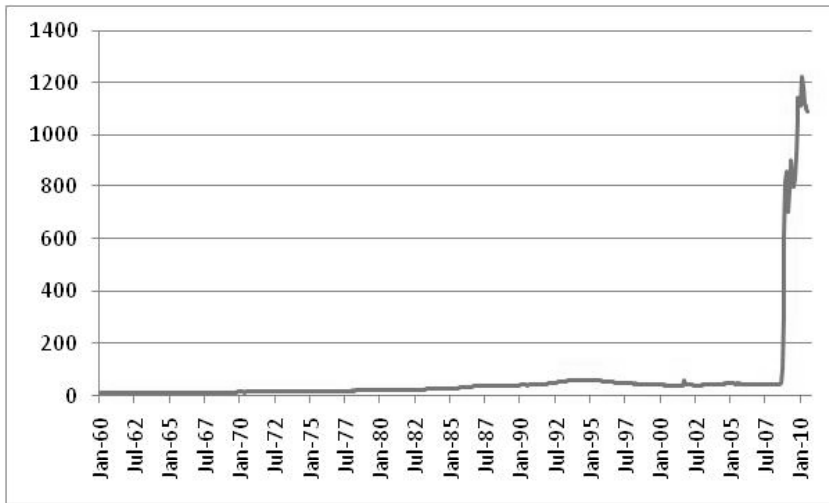
US Treasury Holders billions



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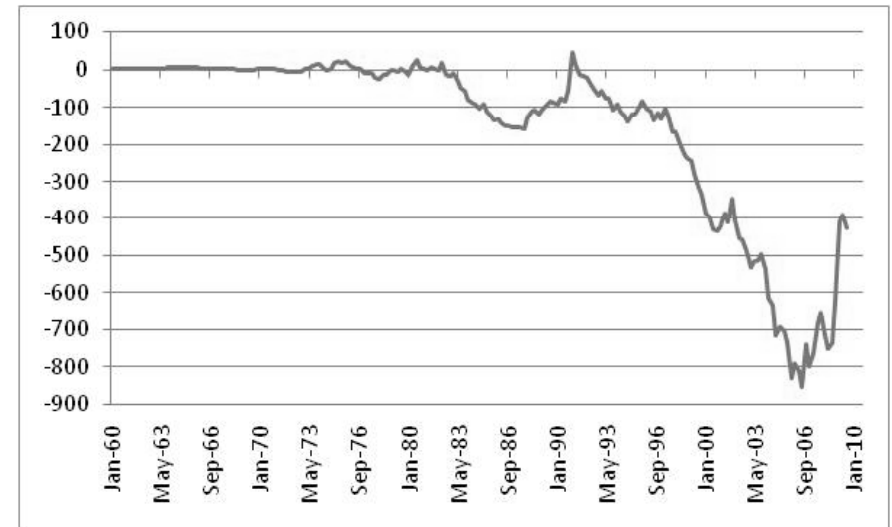
Federal Reserve Bank Reserves

Billions



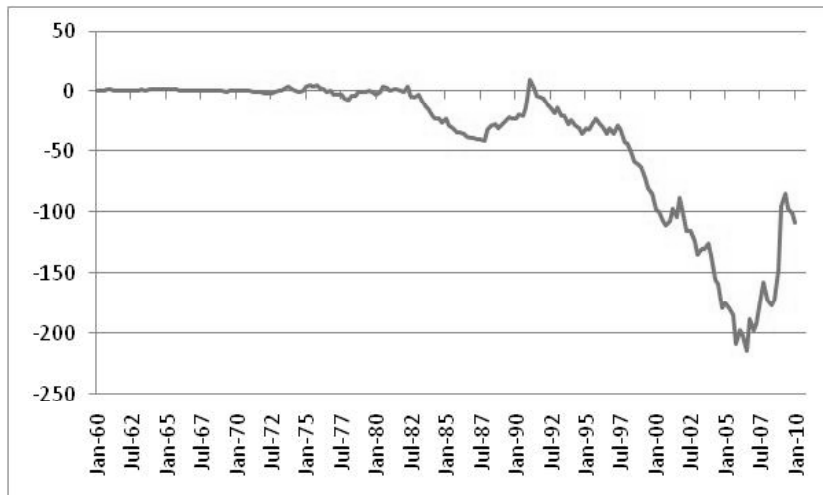
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U.S. Current Account



-\$445,000,000,000

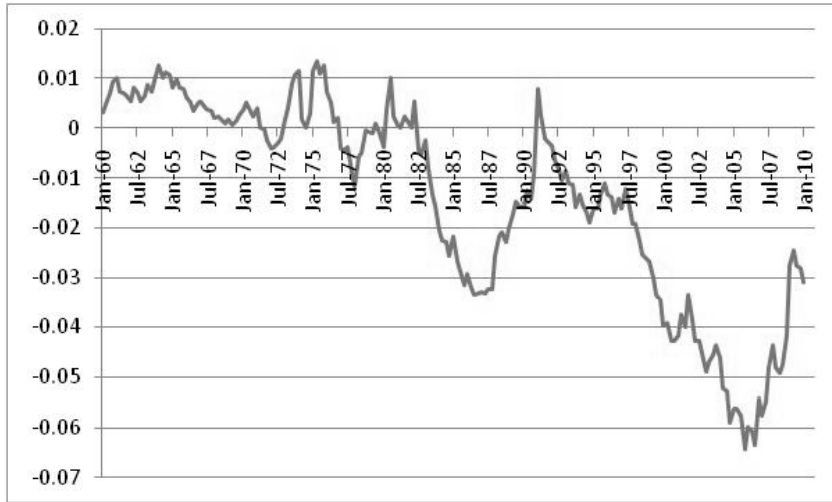
Current Account Balance



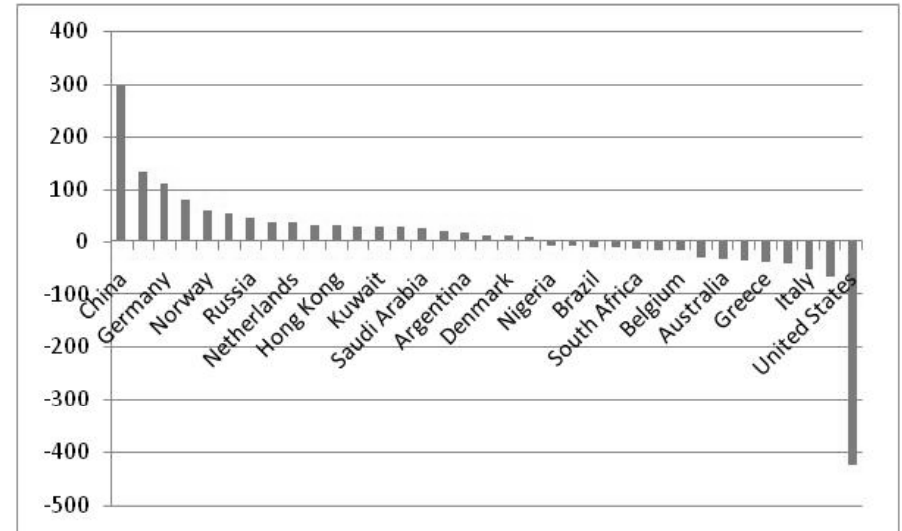
-\$109,008,000,000

“The Americans get the toys, the Chinese get the Treasuries and we get Screwed” – ECB Chief
Jean-Claude Trichet

Current Account / GDP



World Current Account

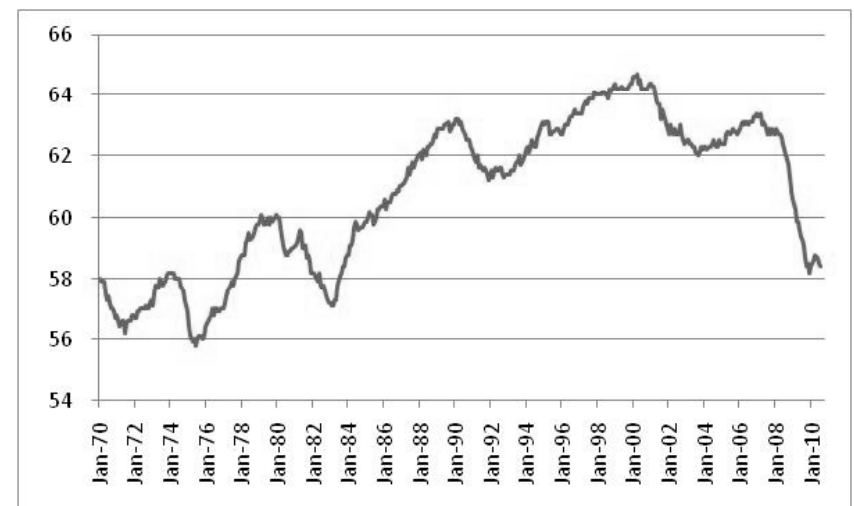


2009 = \$425,500,000,000

S&P 500



Employment/Population



July 2010 = 58.4%

Employment % & S&P 500



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Employment & S&P 500

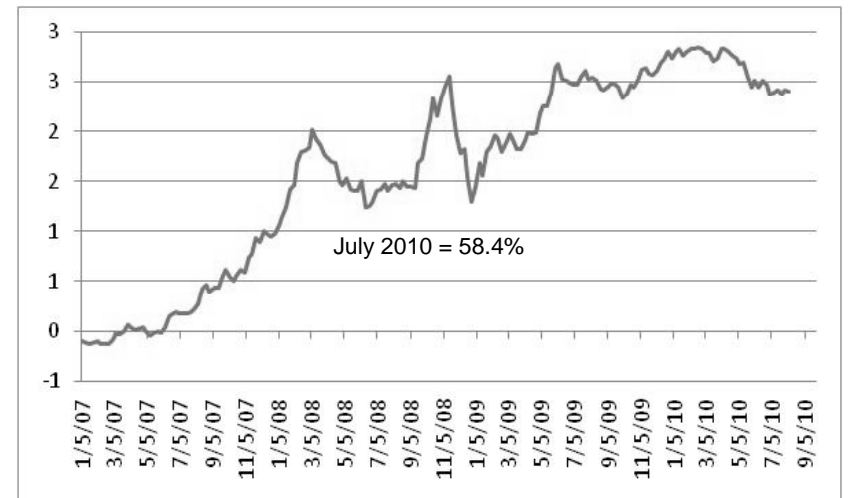


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<u>S&P</u>		<u>Em/Pop</u>
■ Jul 82	+ 9 mo	Apr 83
■ Oct 90	+14 mo	Dec 91
■ Sep 02	+12 mo	Sep 03
■ Feb 09	+10 mo	Dec 09

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2/10 T Note Ten Yield Curve



August 6, 2010 = 2.42%

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