Economics
In The Age Of Paper Money

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April 11, 2013

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Economics In The Age Of Paper Money

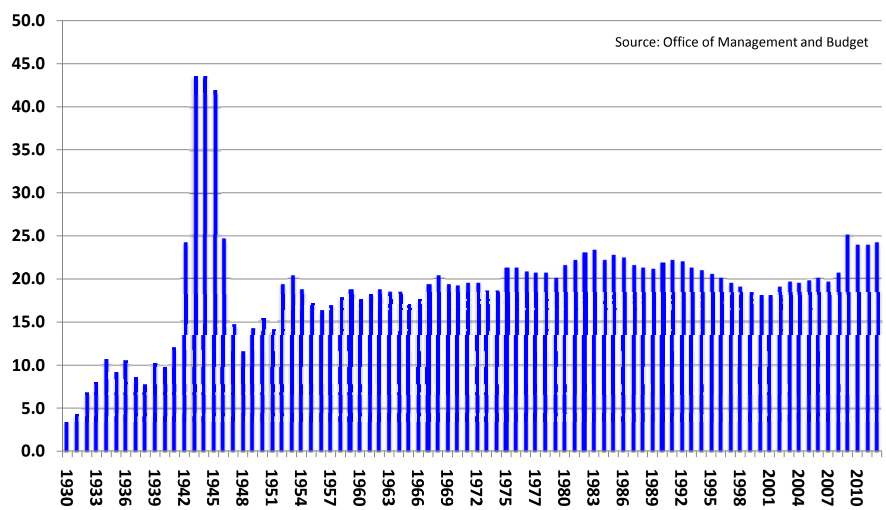
- The Economy Does Not Work The Way It Used To.
- How the US Economy works now.
- How the Global Economy works now.
- Where will we be in two years?
- The extraordinary Dangers and <u>Possibilities</u> that exist within this new 21st Century economic system.

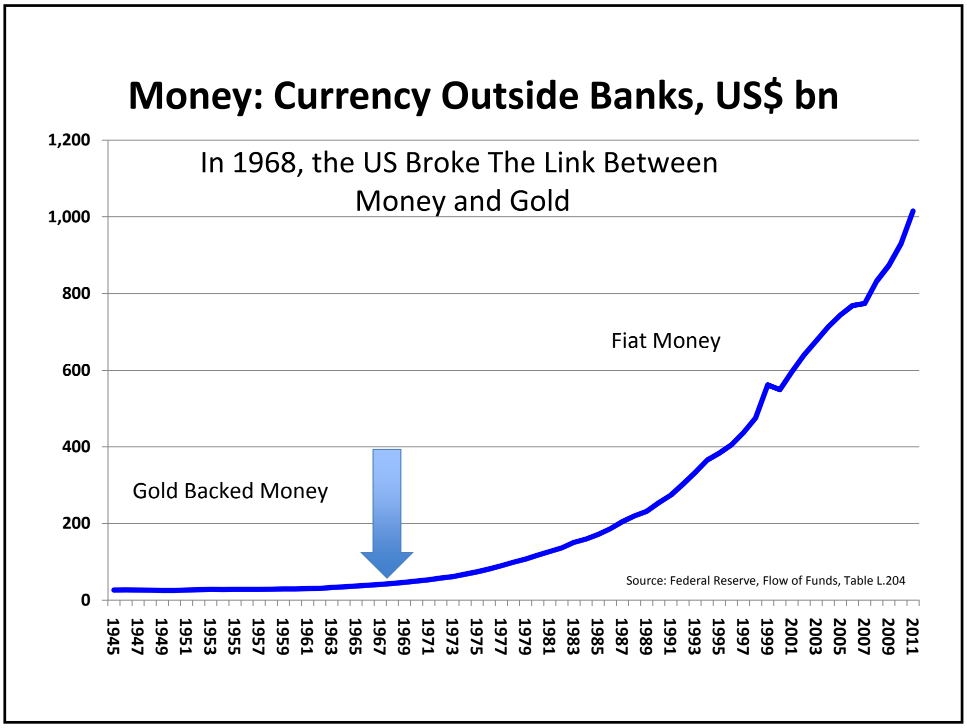
The US Economy
Does Not Work The Way It Did

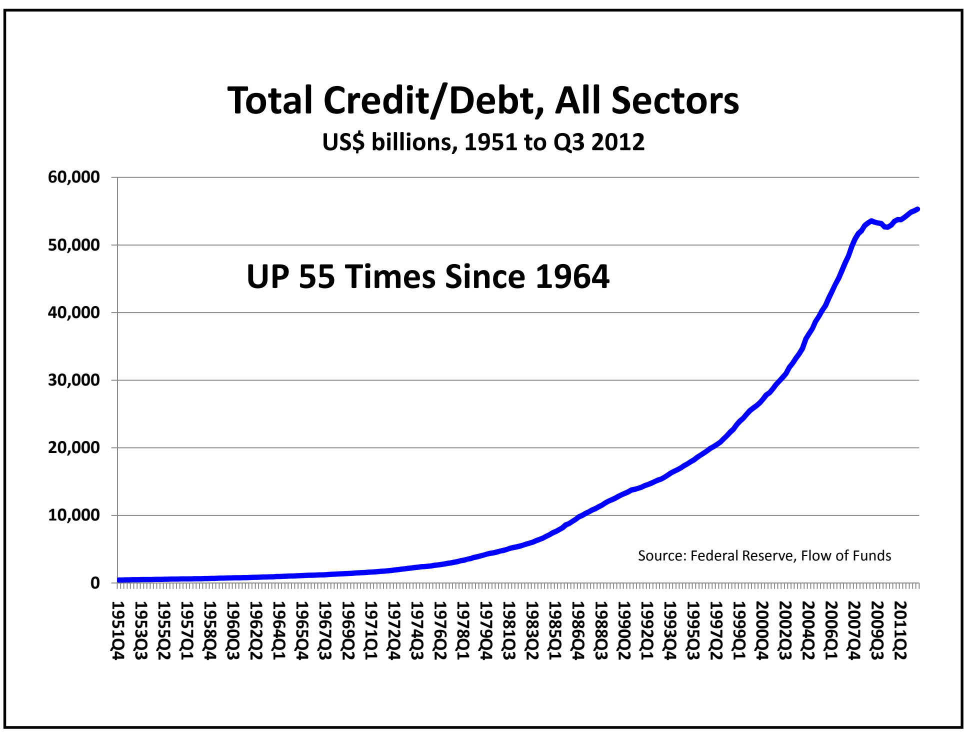
- The Government Spends 24% of GDP
- The Fed Creates The Money
- Credit Growth Drives Economic Growth

Government Outlays, as a % of GDP

1930 to 2012 est.

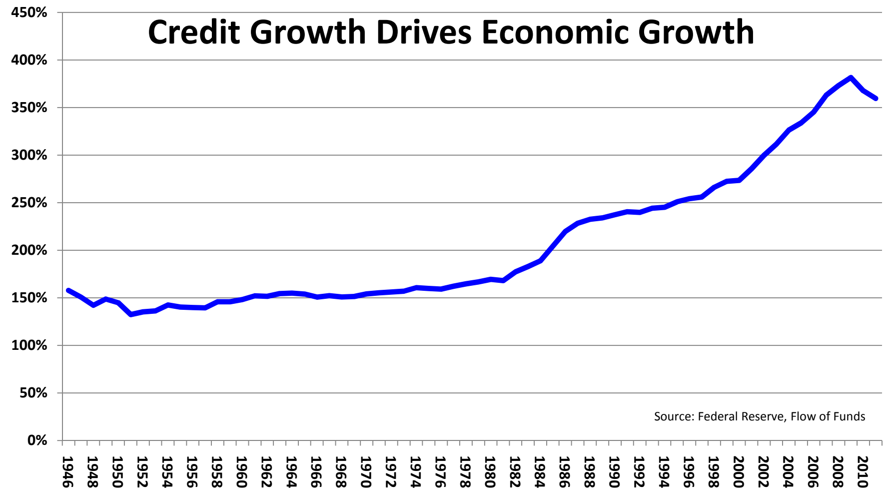



Money: Currency Outside Banks, US$ bn
In 1968, the US Broke The Link Between
Money and Gold
Fiat Money
Gold Backed Money
Source: Federal Reserve, Flow of Funds, Table L.204
1,200
1,000
800
600
400
200
0
1945 1947 1949 1951 1953 1955 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011


Total Credit/Debt, All Sectors
US$ billions, 1951 to Q3 2012
UP 55 Times Since 1964
Source: Federal Reserve, Flow of Funds
60,000
50,000
40,000
30,000
20,000
10,000
0
1951Q4 1953Q3 1955Q2 1957Q1 1958Q4 1960Q3 1962Q2 1964Q1 1965Q4 1967Q3 1969Q2 1971Q1 1972Q4 1974Q3 1976Q2 1978Q1 1979Q4 1981Q3 1983Q2 1985Q1 1986Q4 1988Q3 1990Q2 1992Q1 1993Q4 1995Q3 1997Q2 1999Q1 2000Q4 2002Q3 2004Q2 2006Q1 2007Q4 2009Q3 2011Q2

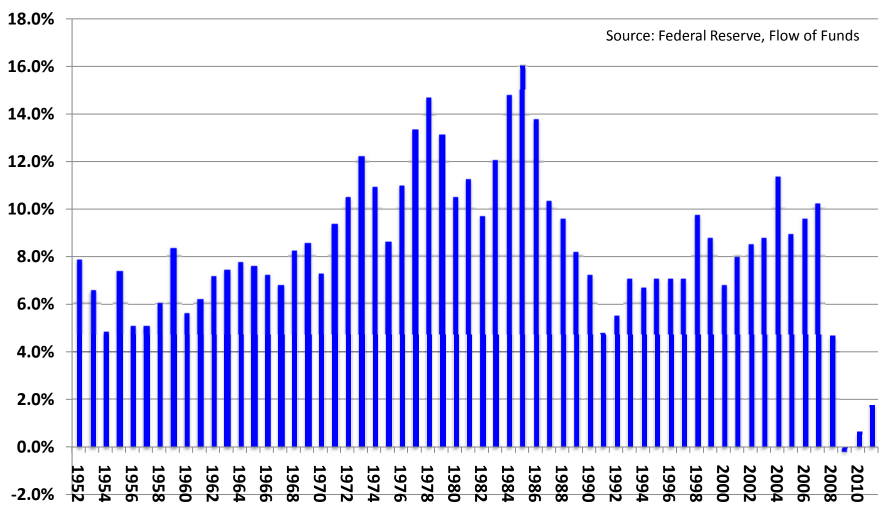
Total Credit to GDP

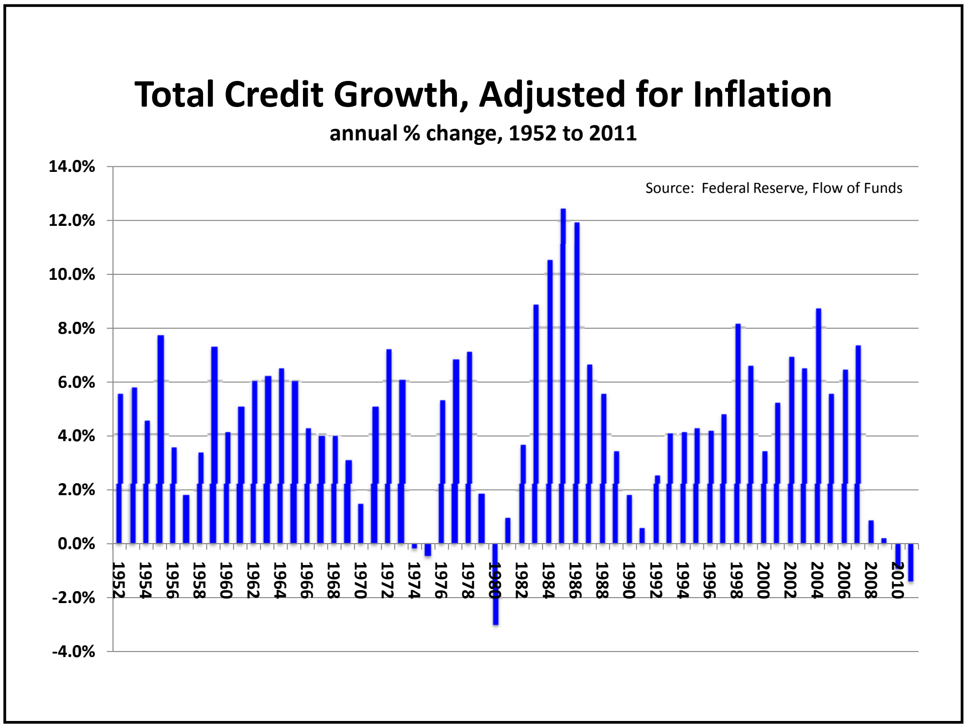
%, 1946 to 2011

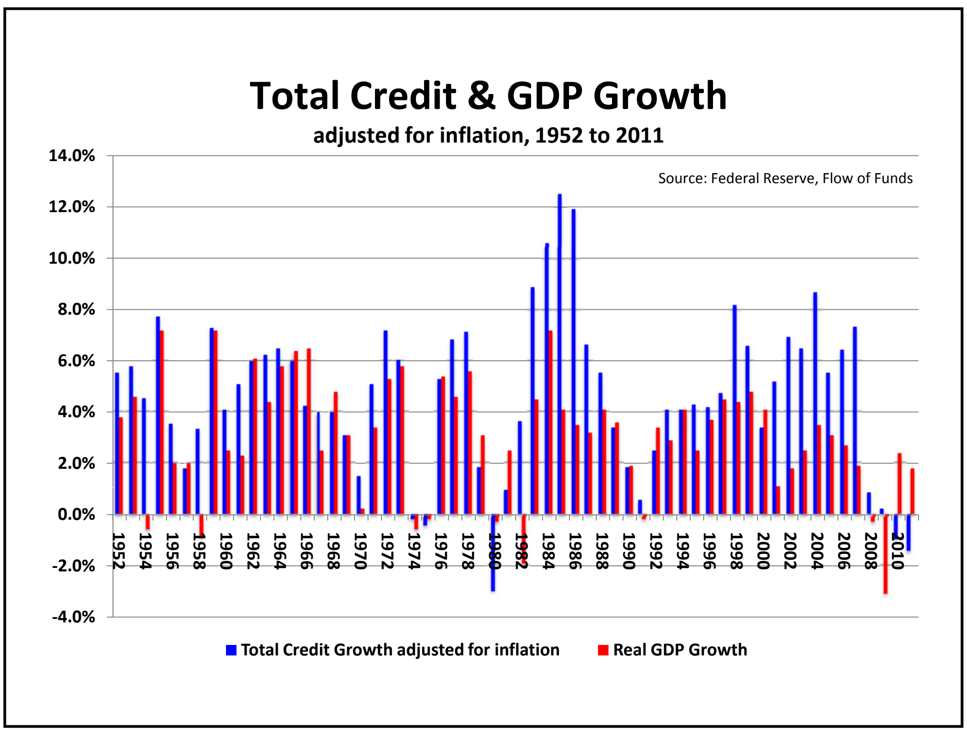


Total Credit Growth

annual % change, not adjusted for inflation, 1952 to 2011




Total Credit Growth, Adjusted for Inflation
annual % change, 1952 to 2011
Source: Federal Reserve, Flow of Funds
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010

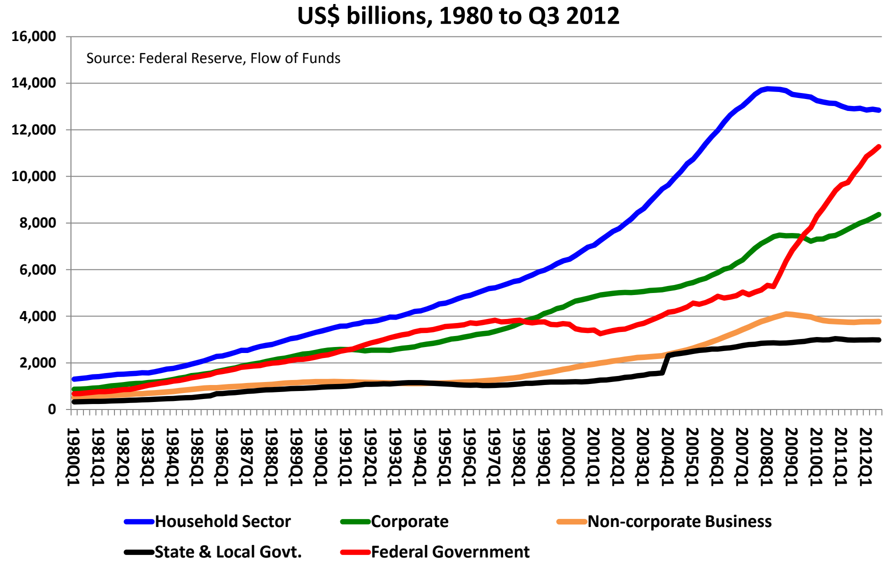

Total Credit & GDP Growth
adjusted for inflation, 1952 to 2011
Source: Federal Reserve, Flow of Funds
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
Total Credit Growth adjusted for inflation
Real GDP Growth

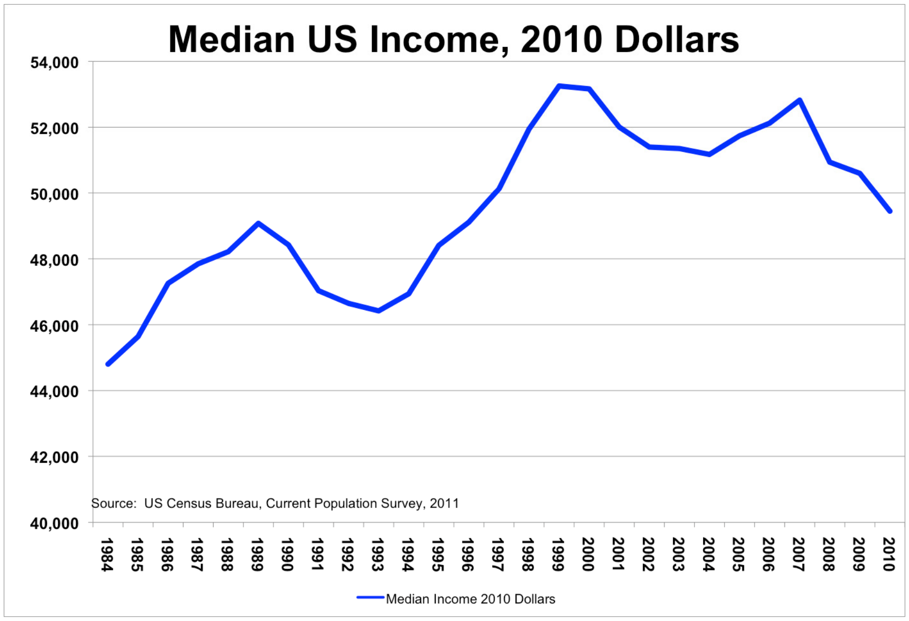
When Credit Doesn't Grow?

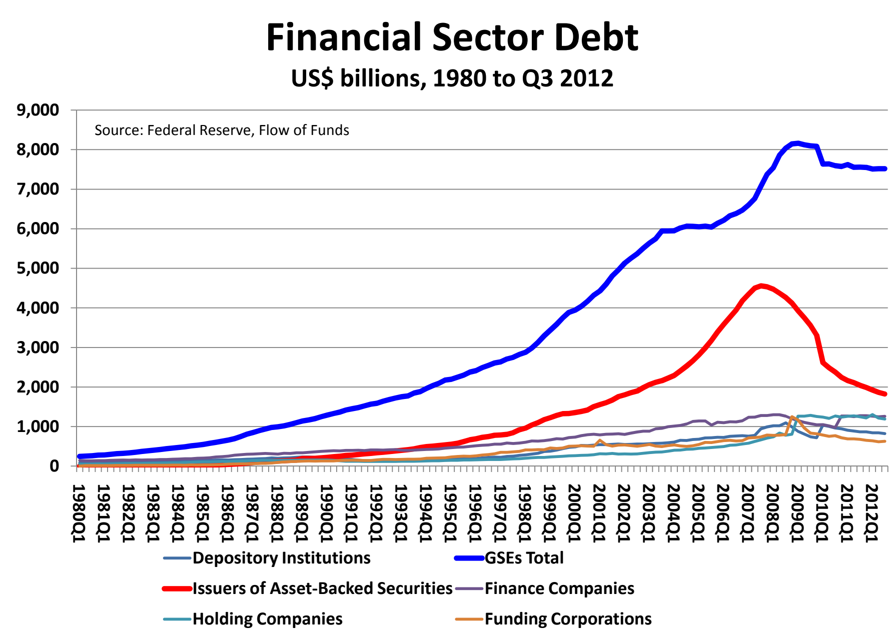
- Between 1952 and 2007 there were only 9 years when total credit grew by less than 2% adjusted for inflation.
- There was a Recession every time, either during the year of weak credit growth or the year after.
- Then credit growth rebound and so did economic growth.
- How will credit grow this time?

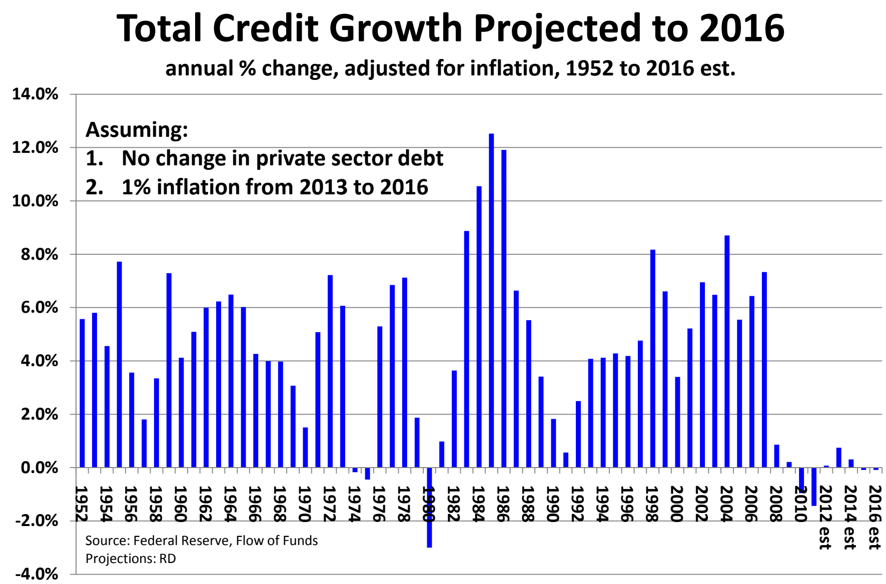
Non-Financial Sector Debt

US$ billions, 1980 to Q3 2012




Median US Income, 2010 Dollars
54,000
52,000
50,000
48,000
46,000
44,000
42,000
40,000
Source: US Census Bureau, Current Population Survey, 2011
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
Median Income 2010 Dollars


Financial Sector Debt
US$ billions, 1980 to Q3 2012
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Source: Federal Reserve, Flow of Funds
1980Q1 1981Q1 1982Q1 1983Q1 1984Q1 1985Q1 1986Q1 1987Q1 1988Q1 1989Q1 1990Q1 1991Q1 1992Q1 1993Q1 1994Q1 1995Q1 1996Q1 1997Q1 1998Q1 1999Q1 2000Q1 2001Q1 2002Q1 2003Q1 2004Q1 2005Q1 2006Q1 2007Q1 2008Q1 2009Q1 2010Q1 2011Q1 2012Q1
Depository Institutions
GSEs Total
Issuers of Asset-Backed Securities
Finance Companies
Holding Companies
Funding Corporations



The Austrian economists believed that economic cycles are driven by credit expansion; and that economic booms end in depressions when the credit ceases to expand.

They were right.

The Quantity Theory of Money

$MV = PT$

- M = the quantity of Money
- V = the velocity of Money
- P = the price level
- T = the volume of trade

- PT = GDP

MONEY became irrelevant.

<u>CREDIT</u> is what matters now.

The Quantity Theory of Credit

CV = PT

- C = the quantity of Credit
- V = the velocity of Credit
- P = the price level
- T = the volume of trade

- PT = GDP

Capitalism vs. Creditism

- Under Capitalism, the economic growth dynamic was driven by Investment and Savings.
- Under Creditism, it is driven by Credit Creation and Consumption.
- Creditism has created unprecedented prosperity around the world, but…
- It's on the verge of collapse because the private sector cannot bear any more debt.

Then & Now

THE GREAT DEPRESSION

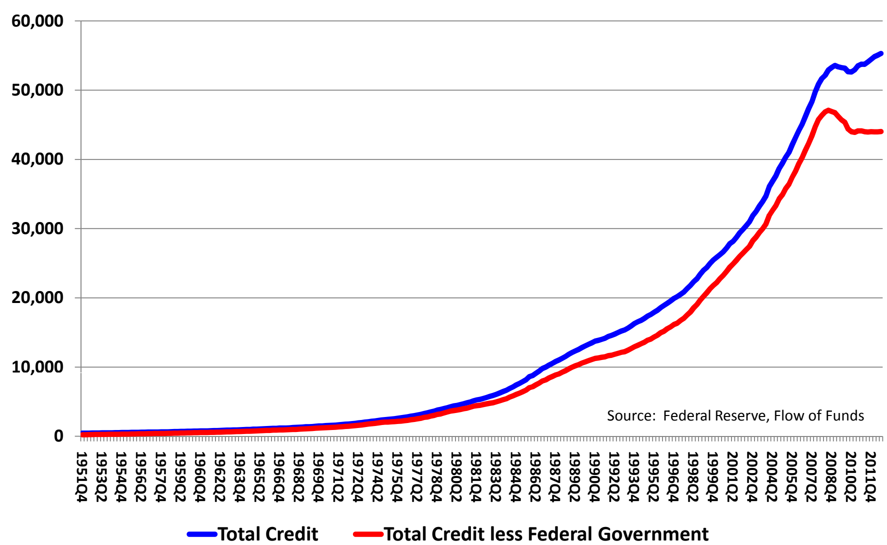
- Gold Standard Breaks Down (1914).
- Credit Boom: The Roaring Twenties
- Boom Leads to Bust When The Credit Can't Be Repaid.
- Banking Collapse.
- International Trade Collapses.

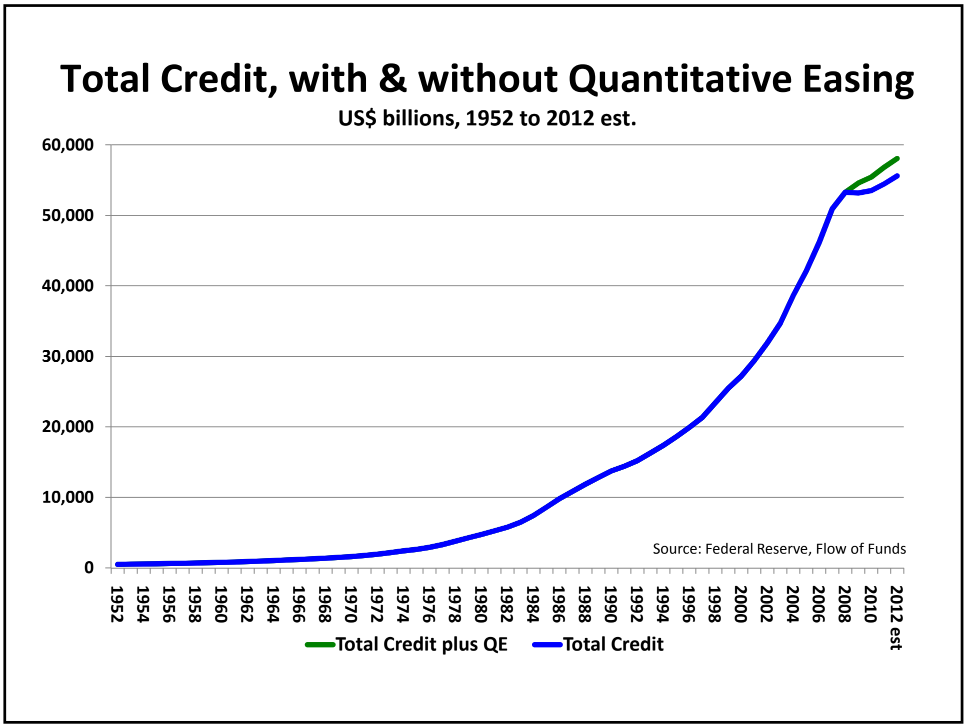
THE NEW DEPRESSION

- Bretton Woods Breaks Down (1971).
- Credit Boom: Global Economic Bubble.
- Boom Leads to Bust When The Credit Can't Be Repaid.
- Banking Collapse.
- International Trade Collapses.

Total Credit, with & without Government Debt

US$ billions, 1951 to Q3 2012





The Policy Response Is Designed To Prevent Total Credit From Contracting

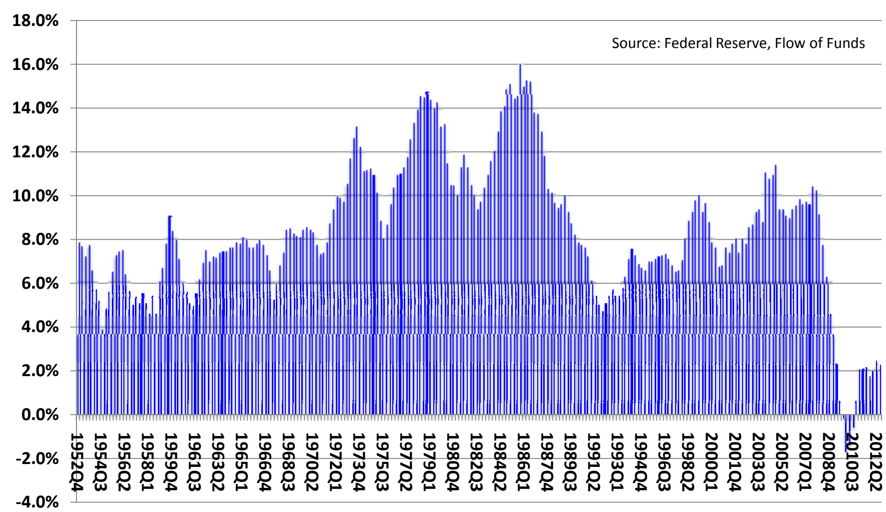
- Because if credit contracts significantly, there will be a Depression.
- Milton Friedman taught Ben Bernanke that the Fed could have prevented the Great Depression if the Fed had prevented the Money Supply from contraction.
- Credit is the new Money.
- That belief is driving Fed policy!

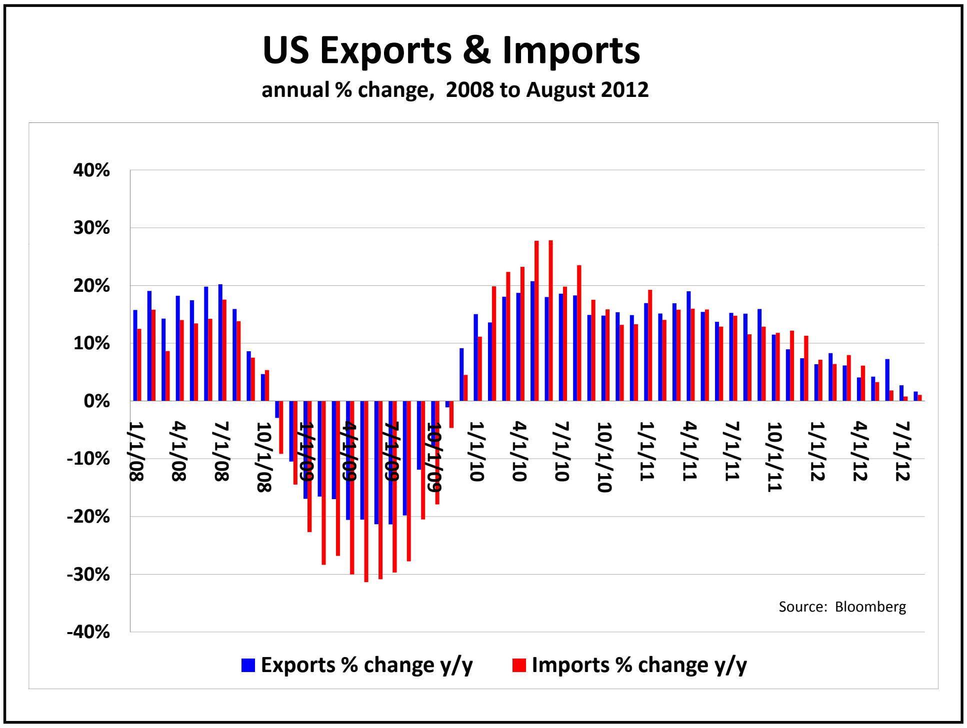
It Won't Be Easy To Make Credit Expand Enough To Drive Economic Growth

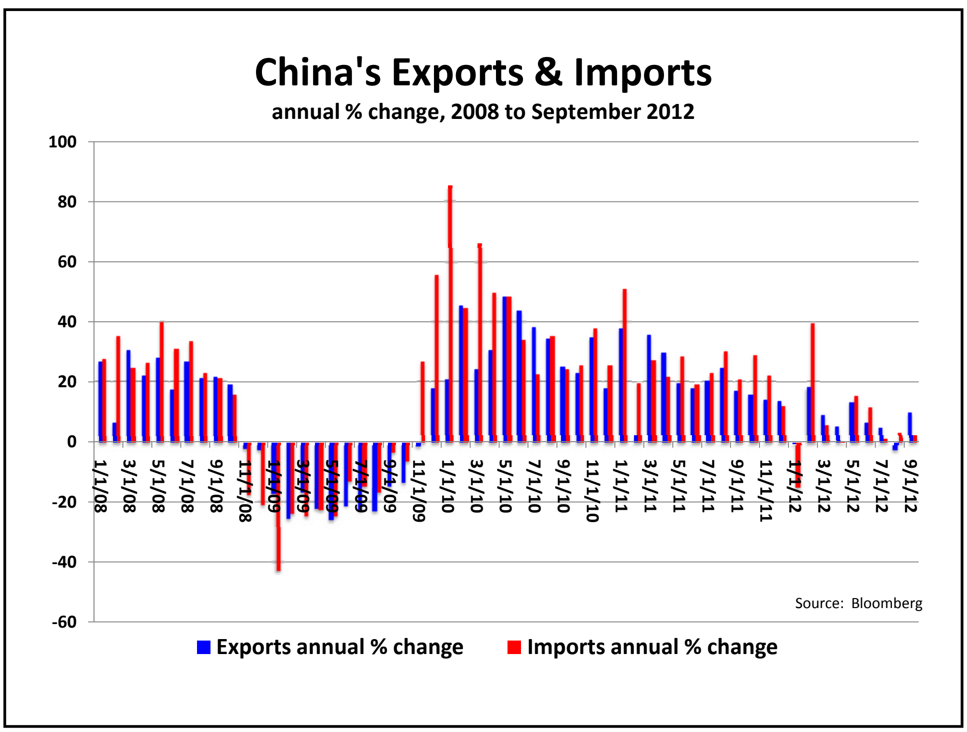
- Total Credit now amounts to $55 trillion.
- Assuming a more realistic CPI rate of 2%, I estimate that Credit must expand by:
  - $2.2 trillion (by 4%) to avoid recession.
  - $3.3 trillion (by 6%) to achieve 2% economic growth.
- Government debt will expand by less than $900 billion in 2013.
- Which sector will borrow enough more to make the economy grow?

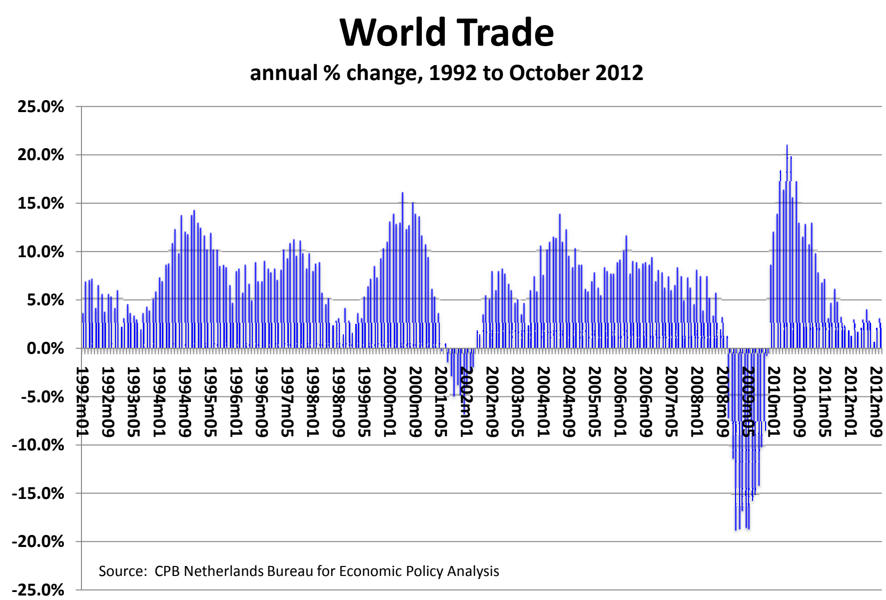
Total Credit, annual % change

By quarter, 1952 to Q3 2012, not adjusted for inflation



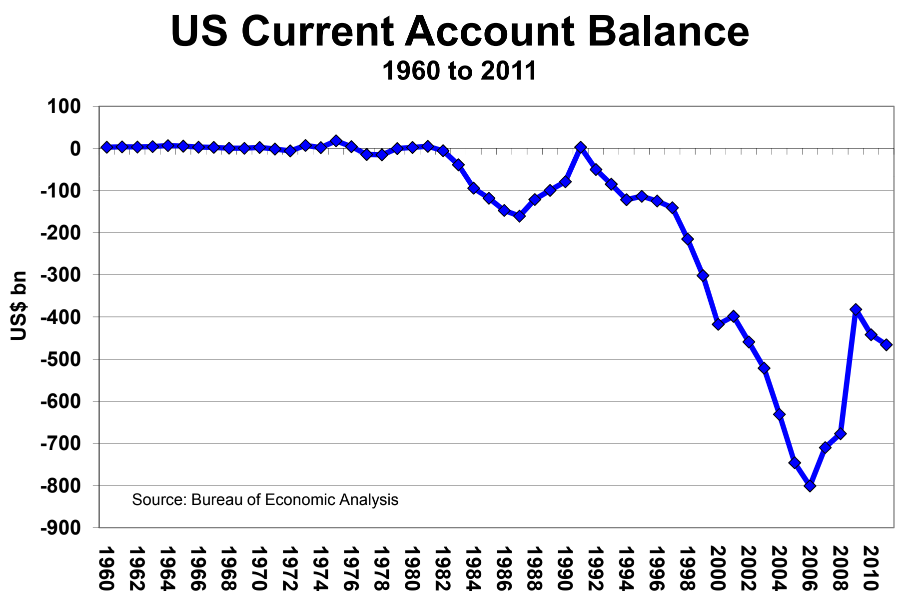

US Exports & Imports
annual % change, 2008 to August 2012
40%
30%
20%
10%
0%
-10%
-20%
-30%
-40%
1/1/08
4/1/08
7/1/08
10/1/08
1/1/09
4/1/09
7/1/09
10/1/09
1/1/10
4/1/10
7/1/10
10/1/10
1/1/11
4/1/11
7/1/11
10/1/11
1/1/12
4/1/12
7/1/12
Source: Bloomberg
Exports % change y/y
Imports % change y/y


China's Exports & Imports
annual % change, 2008 to September 2012
100
80
60
40
20
0
-20
-40
-60
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
3/1/11
5/1/11
7/1/11
9/1/11
11/1/11
1/1/12
3/1/12
5/1/12
7/1/12
9/1/12
Source: Bloomberg
Exports annual % change
Imports annual % change



The Global Economy Works Differently Now Too

- Trade no longer balances.
- The rest of the world is printing even more (much more) money than the United States.
- And, still, there is no inflation (at the CPI level).

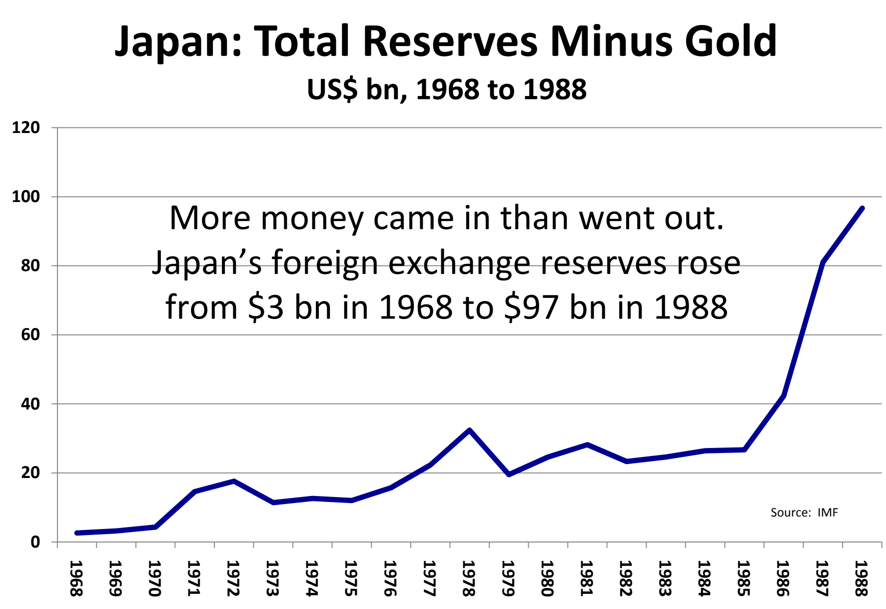


International Trade Used To Balance

- Trade between nations balanced under the Gold Standard.
- The Gold Standard had an automatic adjustment mechanism that ensured that trade between nations balanced.
- Understanding how that mechanism worked is the key to understanding the global imbalances that have destabilized the world.

Gold's automatic adjustment mechanism explained

- Consider trade between England and France in the 19th Century.
- Surplus countries experienced inflation.
- Deficit countries experienced deflation.
- Trade returned to balance as a result.
- It doesn't work that way anymore.

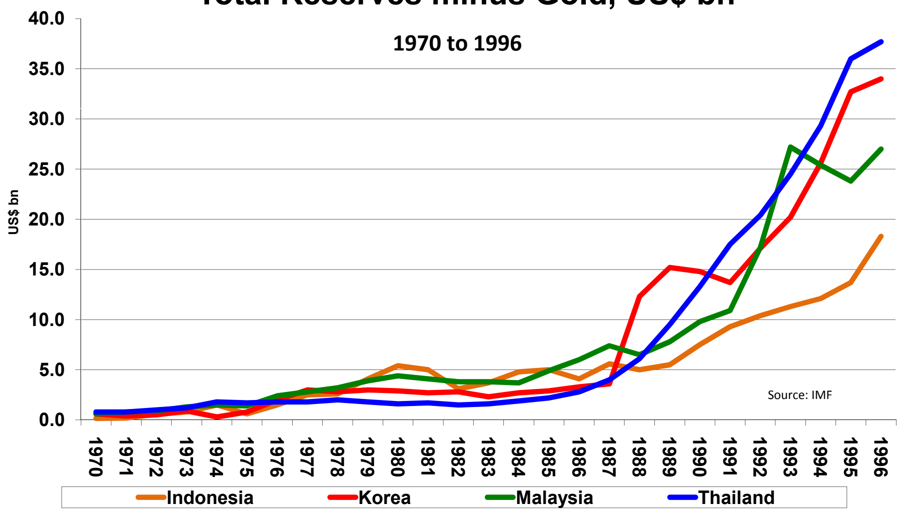


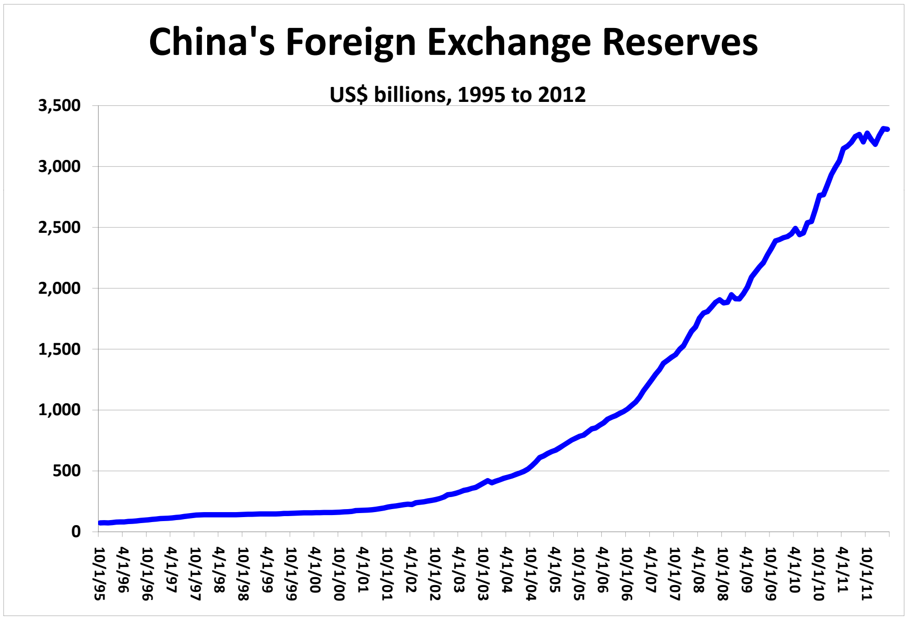
After Japan….

- Next came the Asia Crisis in the 1990s
- Thailand, Korea, Indonesia and Malaysia were blown into bubbles.
- Their Foreign Exchange Reserves ballooned when more money came into those economies than went out.
- The foreign money created the Boom.
- Every Boom busts!

The Asia Crisis Countries

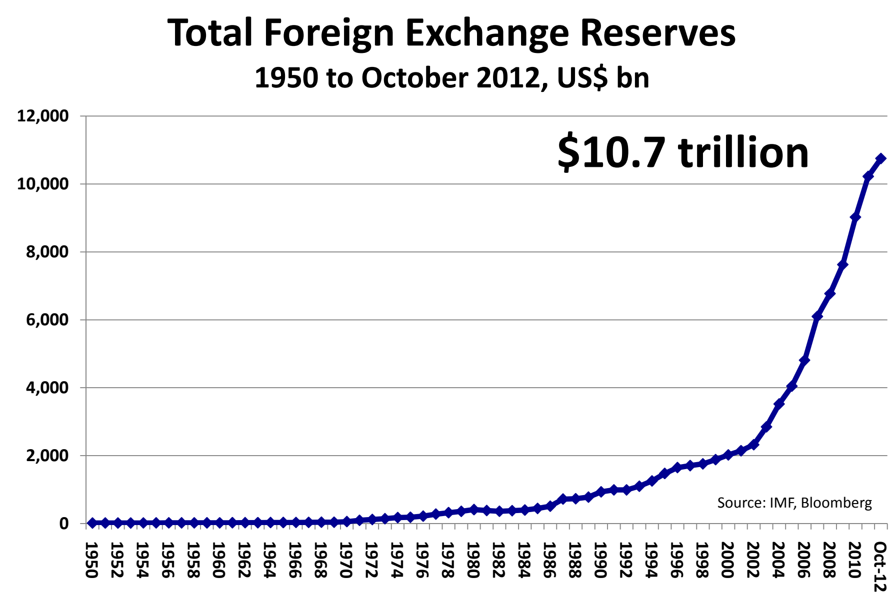
Total Reserves minus Gold, US$ bn





Germany

- A variation on the theme.
- Unlike Japan and China, Germany did not allow its trade surplus money to enter its domestic economy.
- Instead, Germany lent the money to Ireland, Greece, Portugal and Spain and blew them into economic bubbles instead.
- Now, Germany can't get its money back.

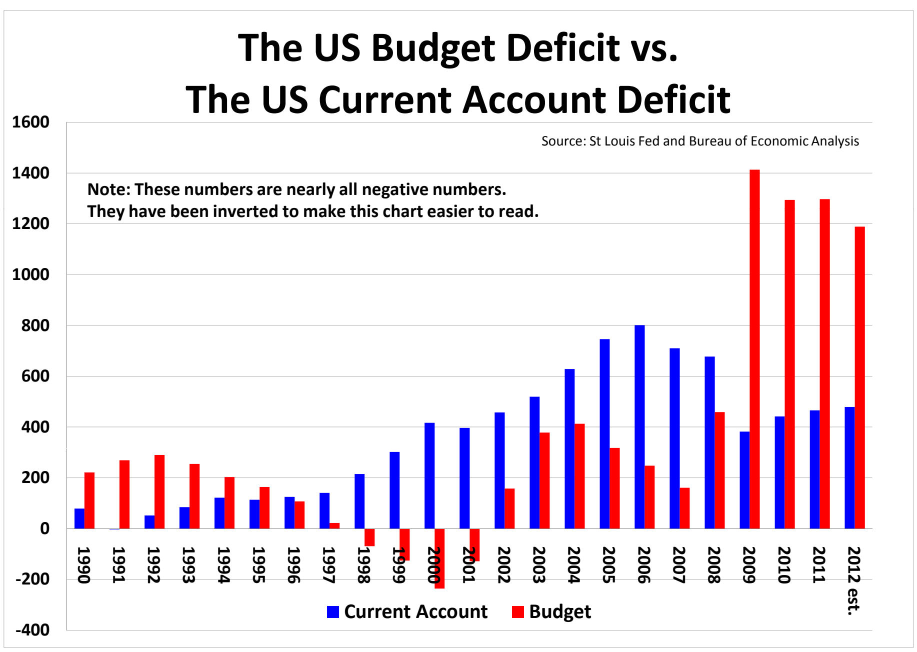


2012 Foreign Exchange Reserves, US$ bn

• China	$3,200	• Brazil	$377
• Japan	$1,200	• S. Korea	$322
• Saudi Arabia	$600	• Hong Kong	$300
• Russia	$468	• India	$260
• Switzerland	$417	• Singapore	$250
• Taiwan	$400	• Mexico	$160

Money Creation by Foreign Central Banks Impacts US Asset Prices!

- Other Countries accumulate Foreign Exchange Reserves to depress the value of their currency.
- Most of the reserves they accumulate are Dollars (approximately 75%).
- They invest their dollar reserves in US dollar-denominated assets.
- They prefer US government bonds.
- From 1996 to 2008, there were not enough new government bonds, so they bought other assets, too.
- That added fuel to the US economic bubble.



And Still No Inflation. Why?

- **Globalization** is has caused a collapse in the marginal cost of labor: from $200 per day to less than $10 per day!
- Too much easy credit has caused immense excess capacity across most industries; and that puts downward pressure on prices.
- As a result, there is no inflation at the CPI level.

Record Low Interest Rates

- Globalization has caused a collapse in the marginal cost of labor and, therefore, disinflation.
- When big bubbles Pop, interest rates fall.
- Bubble profits move to government bonds.
- Corporate cash flow moves to government bonds each year.
- As a result, the interest rates on government bonds in the US, UK, Germany and Japan are at historic lows – **despite large budget deficits**.
- No more “Crowding Out”.

The Future

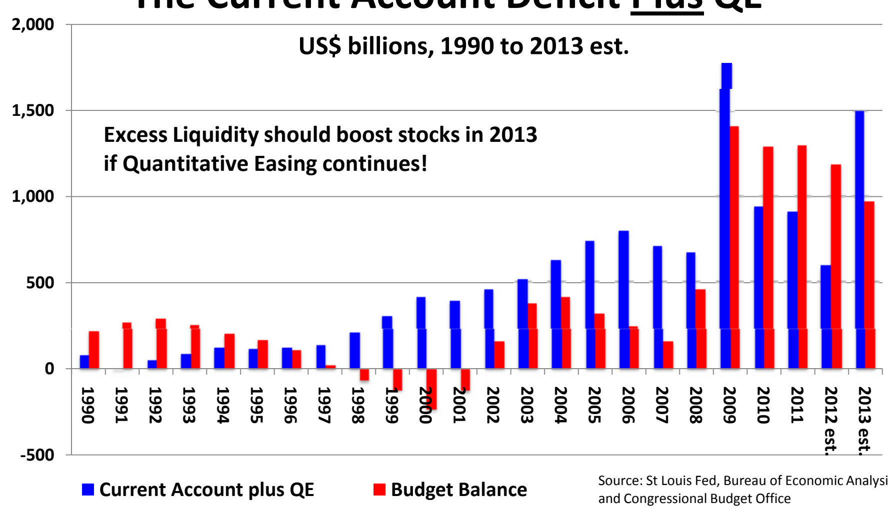
Think Of The Global Economy As A Big Rubber Raft

- The Global Economy is like a big rubber raft, but one inflated with Credit instead of air.
- The raft is defective and the credit is leaking out through numerous holes as it is destroyed by defaults, so the raft's natural tendency is to sink.
- Why Defective? Global debt has expanded to such an extent that **the Income of the world's population is insufficient** to service it.
- Without more government borrowing, spending and printing, the Raft Will Sink!

Looking Ahead Two Years:
The United States

- 2013: The Economy Down, but Stocks Up.
- January's Fiscal Cliff Deal will reduce the government budget deficit, so the US economy will weaken further.
- The Stock Market will benefit from excess liquidity.
- 2014: Politics is likely to prevent new fiscal stimulus.
- Therefore, QE 3 will have to continue.
- Private sector credit growth will remain flat. Therefore, Total Credit Growth will remain inadequate to drive US or global economic growth.
- So, the Global Raft will begin to sink again.

The Budget Deficit vs.
The Current Account Deficit Plus QE



Source: St Louis Fed, Bureau of Economic Analysis and Congressional Budget Office

Looking Ahead Two Years: **Europe**

- The Economy will remain depressed.
- Bailouts will continue.
- Banks will be propped up.
- The Euro will survive.
- Politics will become nastier.

Looking Ahead Two Years: **China**

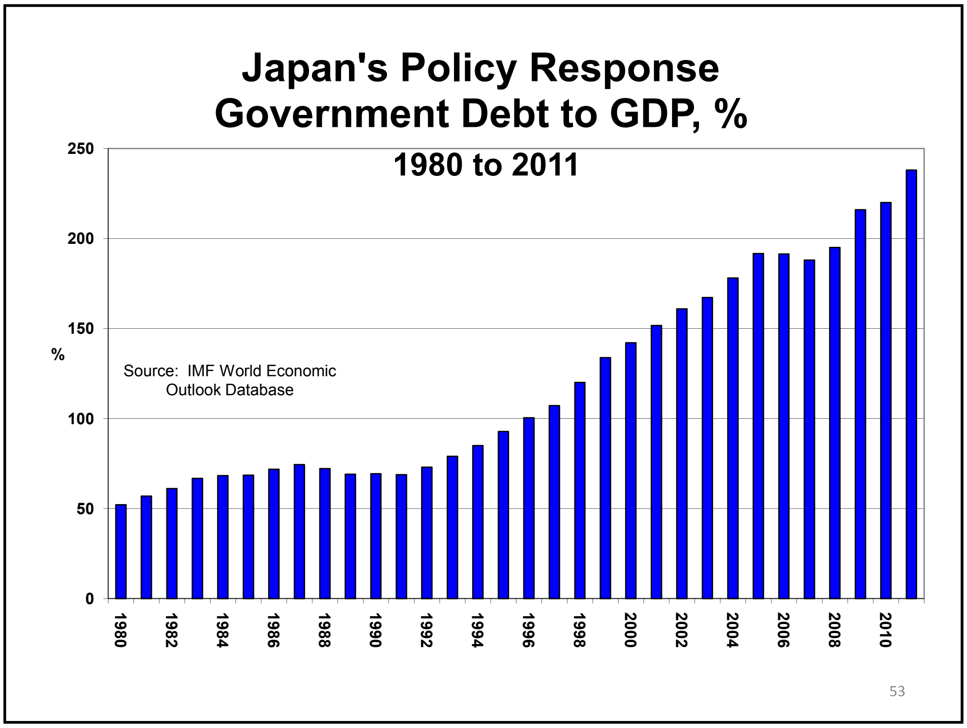
- China's export-driven economy will be hit by very weak growth in global trade.
- More government stimulus will be applied.
- Rising levels of government debt will prevent collapse – as it has done in Japan (for 22 years).
- The economy will continue to slow toward 5% annual growth, and then slow even more.
- There will be political stability.

Looking Ahead Two Years: Japan

- The Abe Boom.
- Large budget deficits will stimulate the economy.
- The BOJ will print more money and weaken the Yen. (The Yen has already weakened.)
- Exports will benefit.
- Interest rates will remain low.
- The stock market will rise.

Our New Economic System Presents Dangers & Opportunities

- The 21st Century global economy is driven by credit.
- The private sector can't bear any more debt.
- If credit contracts significantly, there will be a new great depression with horrific geopolitical consequences.
- Government borrowing, spending and printing is now preventing that outcome.



Three Ways Forward

1. Cut government spending sharply now and immediately collapse into a New Depression.
2. Continue spending Government money as we do now (on consumption & war) and collapse into a New Depression in 10 years or so.
3. Continue Government spending, but change the way we spend it. Spend on Investment instead of Consumption. **Invest our way out of the crisis and prosper!**

Imagine The Possibilities

- US Government debt is approximately 100% of GDP. Both debt and GDP are close to $16 trillion.
- The Government could borrow and invest **$24 trillion more** before its debt hit 250% of GDP.
- Over the next 10 years, if the economy grew by 4% a year, GDP would grow to $23.7 trillion. That would mean the government could borrow and invest $43 trillion more before its debt hit 250% of GDP.
- Investment on that scale would generate **wealth and prosperity beyond imagination!**

Unprecedented Opportunities

The combination of Fiat Money and Globalization has created **a unique moment in history** where our government can spend trillions of dollars without creating inflation. These circumstances present unprecedented opportunities.

The financing to restore US economic supremacy, develop cheap renewable energy and to eradicate innumerable diseases is available to us now. We only lack the imagination to deploy it.

If we fail to borrow and invest this nearly free money, not only will we fail to seize these opportunities, we may be forced to relive the 1930s and 1940s as a debt-deflation depression spiral take hold.

Conclusions

- The credit-fuelled economic paradigm that has driven the global economy for four decades is now breaking down.
- The global economy is on government life support.
- If total credit begins to contract significantly, a debt-deflation death spiral will begin.
- Democracy makes austerity impossible.
- A transformative investment program is extremely unlikely.
- Therefore, we will continue to prop up the economy with wasteful government spending as Japan has done.
- This should stave off disaster for a decade or so.

In This Age of Paper Money Investors Must:

1. **Monitor Credit Growth** and government policies that affect credit growth. Any development that slows credit growth will harm the economy.
2. **Monitor Liquidity**, i.e. the balance between the demand for and the supply of paper money. If the US budget deficit (demand) is less than the size of QE and the US Current Account deficit combined (supply), liquidity conditions will be favorable and asset prices will tend to rise.