

## Steve Keen's DebtWatch No 27 October 2008 The Failure of Central Banks

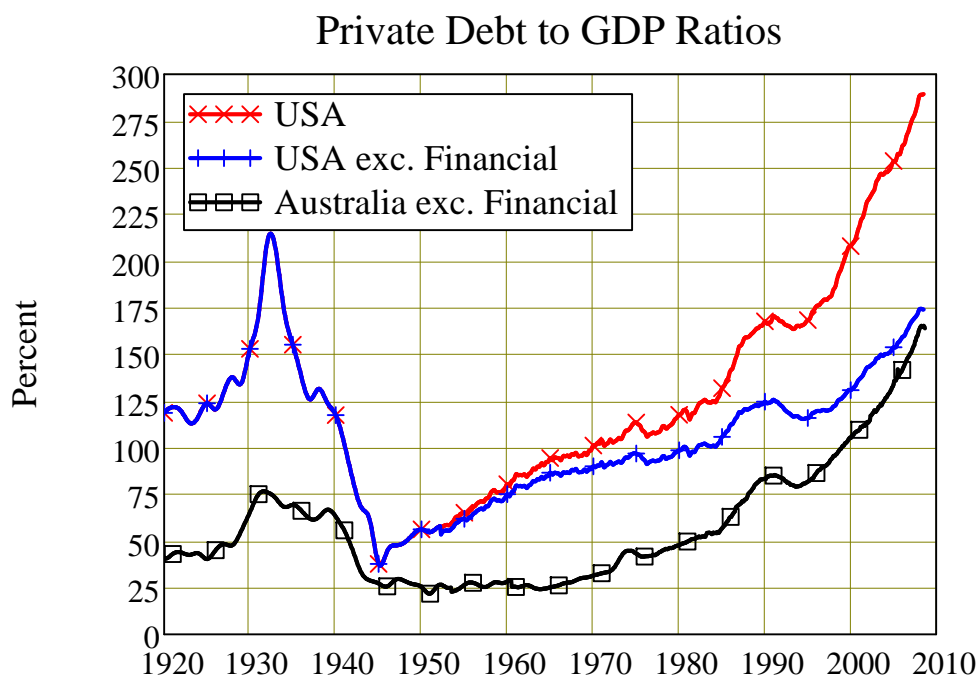
Just two years ago, Central Banks appeared triumphant. Inflation, the scourge of the 1970s and 80s, appeared dead, the financial crisis of the Tech Wreck had been contained, economies worldwide were booming, and stock markets and house prices were spiralling ever upwards.

Then along came the Subprime Crisis, and we received a rude reminder of why Central Banks were created in the first place: to ensure that the world would never again experience a Great Depression.

We are not in a Great Depression--not yet anyway--but a key pre-condition for one has developed right under the noses of Central Banks: excessive private debt. In fact, debt levels today are twice as high as in 1929, which is why this financial crisis is causing far more carnage than 1929 did.

At the time of the Stock Market Crash of October 1929, the US's debt ratio was 150%; today it is 290%. Australia's ratio was 64%; today, it is 165%. The regulators who were supposed to keep us from the jaws of The Beast have instead led us closer towards its belly.

### Figure One



This was not, of course, a conscious decision. It has happened because Central Banks are run by economists, and the dominant "Neoclassical" faction within economics ignored the real lessons of the Great Depression.

The false lesson that Neoclassical economics preaches is that the market economy is fundamentally stable, and the Great Depression was caused by the monetary authorities tightening credit in the aftermath to the Stock Market Crash, rather than loosening it.

The real lesson of the 1930s is that a credit-driven market economy is fundamentally unstable,

and a Great Depression occurs when debt-financed speculation results in excessive private debt at the same time as inflation is low.

Central Banks, under the misguidance of conventional economic theory, ignored the role of private debt in the economic system. They instead reinterpreted their charters--which emphasised full employment--as a mandate to keep inflation low.

As the RBA put it in its most recent Annual Report, its "duty ... to ensure ... the stability of the currency... the maintenance of full employment ... and the economic prosperity and welfare of the people of Australia... *has found concrete expression in the form of a medium-term inflation target. Monetary policy aims to keep the rate of consumer price inflation at 2–3 per cent, on average, over the cycle.*" (Annual Report 2008, page 5).

With its Neoclassical eyes fixated on the rate of inflation, it ignored the expansion of private debt--as did its equivalents at Central Banks around the world, as did government Treasuries, and as did international economic agencies. This is why the sudden collapse of the world economic order took economists by surprise. They were looking at their mathematical models, which ignore private debt (and indeed money!), rather than at the real world, where debt is king.

Nowhere was this more obvious than with the OECD--the organisation whose imprimatur the Australian Treasury seeks. The following are the unabridged opening two paragraphs from the Editorial to the *OECD Economic Outlook* from May of 2007 (with the really funny bits in bold):

*In its Economic Outlook last Autumn, the OECD took the view that the US slowdown was not heralding a period of worldwide economic weakness, unlike, for instance, in 2001. Rather, a "smooth" rebalancing was to be expected, with Europe taking over the baton from the United States in driving OECD growth.*

*"Recent developments have broadly confirmed this prognosis. Indeed, **the current economic situation is in many ways better than what we have experienced in years.** Against that background, we have stuck to the rebalancing scenario. **Our central forecast remains indeed quite benign:** a soft landing in the United States, a strong and sustained recovery in Europe, a solid trajectory in Japan and buoyant activity in China and India. In line with recent trends, sustained growth in OECD economies would be underpinned by strong job creation and falling unemployment."*

Yeah, right. Just three months later, the financial crisis began.

It should by now be painfully obvious that conventional economics cannot be relied upon to explain where we are, how we got here, where we might end up, and what might work to avoid the worst consequences. To understand it, we have to go back to the economist who got it right, but was ignored by the economics profession: Irving Fisher.

### ***The Debt-Deflation Theory of Great Depressions***

Fisher had been an academic cheerleader for the financial bubble of the Roaring Twenties--his main claim to fame one can find on the Internet is that he uttered the fateful prediction that "Stock prices have reached what looks like a permanently high plateau" the week before the Stock Market Crash of 1929.

Four years on, chastened and effectively bankrupted, he reflected that a Great Depression ensued when too much debt was accompanied by falling prices. He christened the phenomenon a "debt-deflation".

A key aspect of Fisher's reasoning was that, though economists of his time modelled the economy as if it were permanently in equilibrium, the real economy would always be in disequilibrium. As he put it, even if the economy did tend towards equilibrium:

*"new disturbances are, humanly speaking, sure to occur, so that, in actual fact, any variable is almost always above or below the ideal equilibrium"*

He also argued that the forces that gave rise to a Depression were innately disequilibrium in nature. The two key factors that caused a Depression, he argued, were excessive debt and falling prices. Though other factors might lead to a crisis (such as overconfidence or excessive speculation), debt and deflation were the two key forces that turned a garden-variety downturn into a Depression. As he very poignantly put it (since he himself was a victim):

*"over-investment and over-speculation are often important; but they would have far less serious results were they not conducted with borrowed money. That is, over-indebtedness may lend importance to over-investment or to over-speculation. The same is true as to over-confidence. I fancy that over-confidence seldom does any great harm except when, as, and if, it beguiles its victims into debt."*

Fisher then laid out the sequence of events that follows when a financial crisis ensues in the context of excessive debt and low inflation:

*"(1) Debt liquidation leads to distress selling and to*

*(2) Contraction of deposit currency, as bank loans are paid off, and to a slowing down of velocity of circulation. This contraction of deposits and of their velocity, precipitated by distress selling, causes*

*(3) A fall in the level of prices, in other words, a swelling of the dollar. Assuming, as above stated, that this fall of prices is not interfered with by reflation or otherwise, there must be*

*(4) A still greater fall in the net worths of business, precipitating bankruptcies and*

*(5) A like fall in profits, which in a "capitalistic," that is, a private-profit society, leads the concerns which are running at a loss to make*

*(6) A reduction in output, in trade and in employment of labor. These losses, bankruptcies, and unemployment, lead to*

*(7) Pessimism and loss of confidence, which in turn lead to*

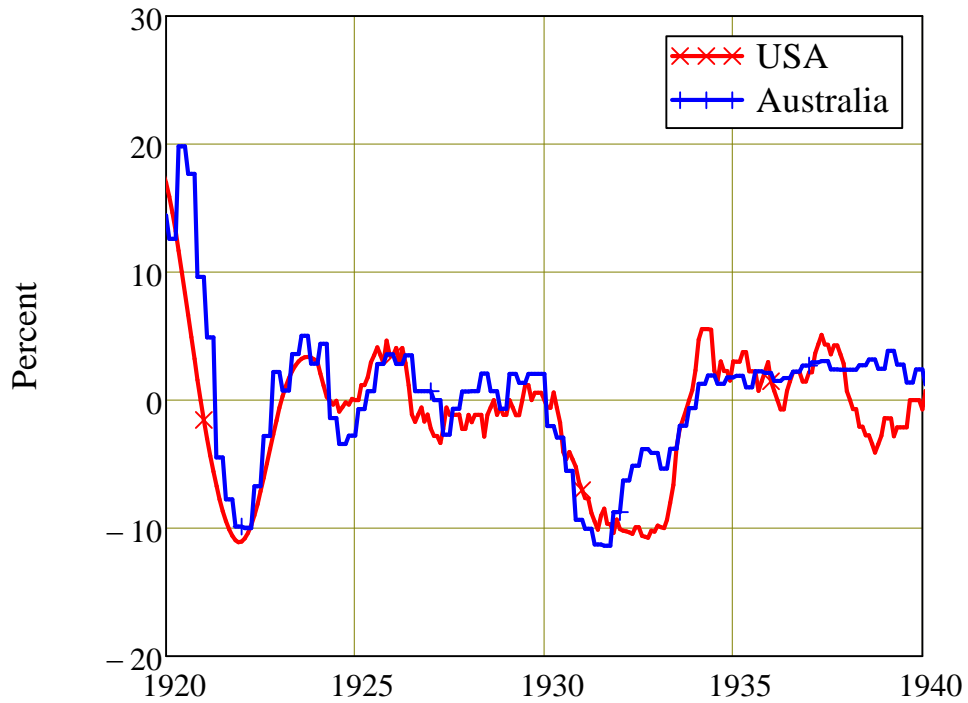
*(8) Hoarding and slowing down still more the velocity of circulation. The above eight changes cause*

*(9) Complicated disturbances in the rates of interest, in particular, a fall in the nominal, or money, rates and a rise in the real, or commodity, rates of interest."*

After the Crash of 1929, when business debt was dominant, many firms found themselves with debt repayment commitments that they couldn't meet out of cash flow. They undertook "distress selling" to try to raise the money they needed—and because everyone dropped their prices, prices fell across the board. Even firms that managed to pay their debts down in nominal terms found that their revenues fell even more than their debt, leading to "Fisher's Paradox" that:

*"the more debtors pay, the more they owe. The more the economic boat tips, the more it tends to tip. It is not tending to right itself, but is capsizing."*

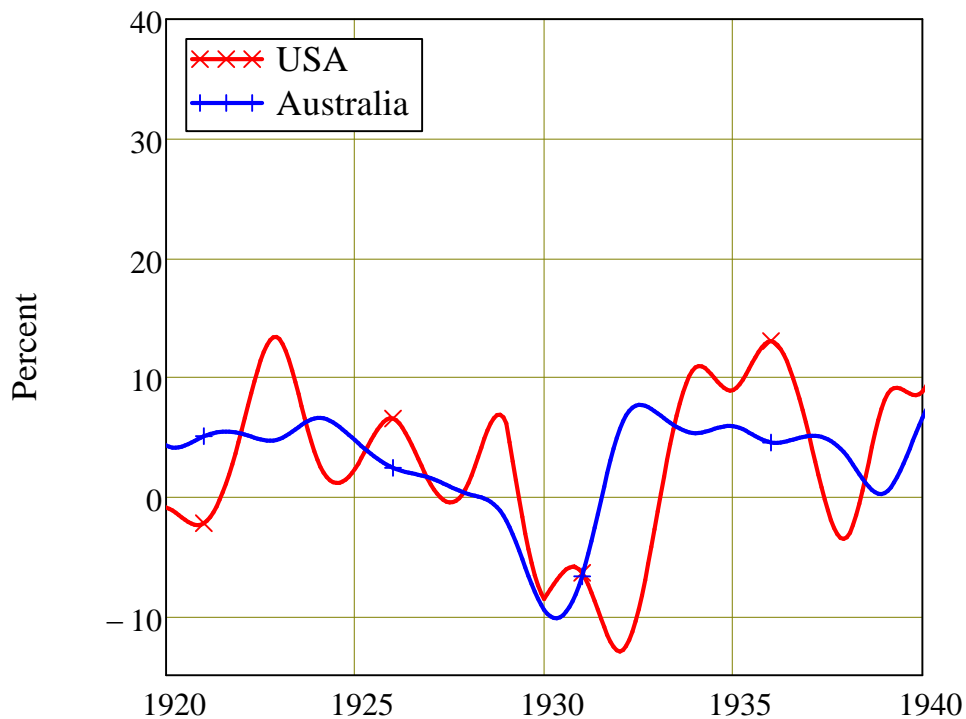
That phenomenon is strikingly obvious in the historical data, which shows the rate of inflation falling from trivial levels (of between 0.5% and 1% p.a.) to **minus** 10% p.a. between 1931 and 1933.

**Figure Two****Inflation Rates**

Economic growth also came to a shuddering halt as the ensuing credit crunch cut spending levels, and as cash-strapped businesses sacked their workforce. That decline is also evident in the data, with the rate of real economic growth falling from 6% before the crash to minus 8% after it--and as low as minus 13% in 1932.

**Figure Three**

## Real Rate of Economic Growth

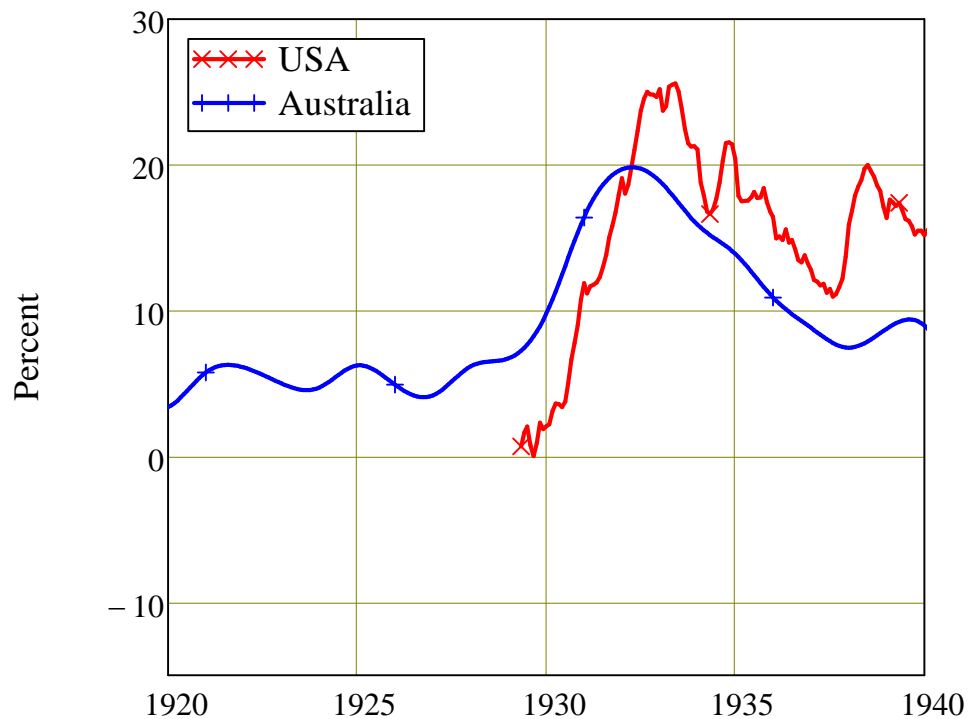


The decline in both output and prices meant that the debt to GDP ratio continued to rise after the Stock Market Crash of 1929--even though credit was tight, and anyone who was in debt was trying to reduce it. Notice on Figure One that debt ratios continued to rise until 1932--from 150% to 215% of GDP in America, and from 64% to 77% of GDP in Australia.

The effect of this decline on employment was so severe that it has remained etched into humanity's psyche. When the Stock Market began its collapse, the level of unemployment in America, as recorded by the National Bureau of Economic Research, was 0.04%--*one 25<sup>th</sup> of one percent*. Three years later, it reached 25%. Australia's unemployment rate blew out too, from a higher initial level of 9% to a peak of 20% in 1932. The world had suddenly moved from *The Great Gatsby* to *They Shoot Horses, Don't They?*

**Figure Four**

## Unemployment Rate



This calamity, which economic theory said could not happen, both discredited conventional economic thought, and gave credence to the then unfashionable views of John Maynard Keynes (Fisher, with his reputation in tatters after his false assurances that nothing was amiss in 1929, was largely ignored--even though Fisher's explanation of how Depressions occur was superior to Keynes's). When the world emerged from the World War that followed the Great Depression, so-called Keynesian Economics dominated the profession, and the once supreme Neoclassicals were ignored.

However, one of the most prophetic observations that Keynes ever made concerned the likelihood that his new ideas would fail to be truly accepted by the economics profession. In the Preface to his *General Theory of Employment, Money and Wages*, Keynes observed that:

*"The ideas which are here expressed so laboriously are extremely simple and should be obvious. The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds."*

So it proved to be. Though calling themselves "Keynesian", most academic economists continued to cling to the preceding "Neoclassical" ideas (especially in the area of microeconomics, which Keynes did not address). As the experience and the memory of the Great Depression receded, academic economics produced a hybrid of Keynes's macroeconomic ideas grafted on top of Neoclassical microeconomics that they called "the Keynesian-Neoclassical Synthesis".

Unfortunately, the ideas were incompatible--and over time, wherever there was a conflict, academic economics rejected the Keynesian graft, rather than the underlying Neoclassical microeconomics. After fifty years of this, Keynes's ideas were completely ejected from the economic mainstream, the Neoclassical belief that the economy is self-correcting became dominant once more, and economists trained in this belief came to dominate Treasuries and Central Banks around the world. They ignored levels of private debt, championed deregulation of finance, and virtually encouraged asset price speculation.

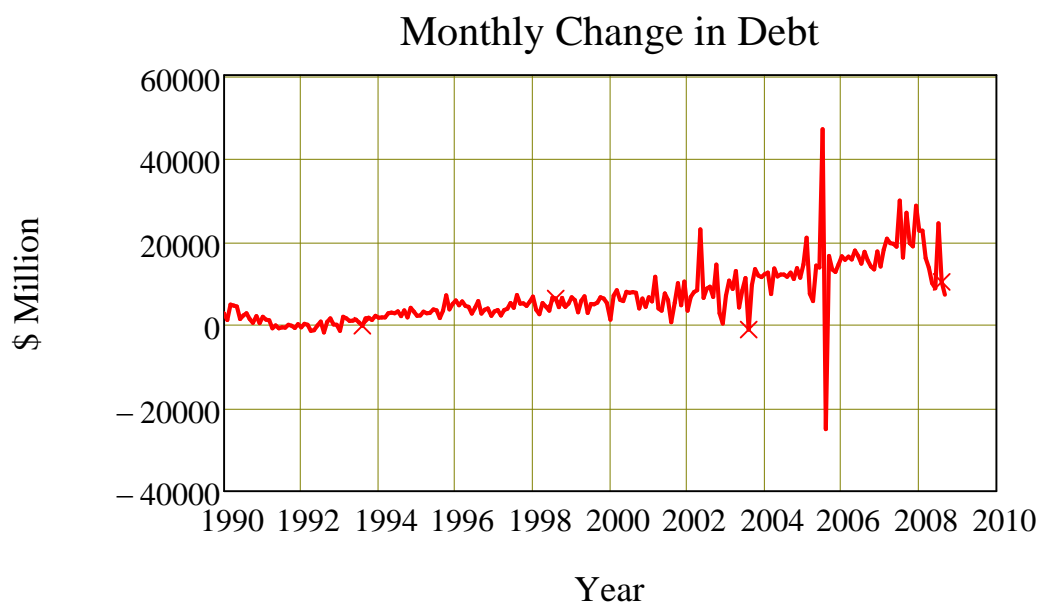
Now we have twice as much debt as caused the Great Depression, and inflation so low that, were it not for unprecedented factors (the rise of China, global warming and peak oil), deflation would almost be a certainty.

Having thus unlearnt the real lessons of the Great Depression, the economics profession may yet make us relive it.

### **END OF COMMENTARY** **Comments on the Data**

It appears that Australia's debt to GDP ratio has peaked at 165% of GDP. It could still turn up once again if deflation takes hold, but for the meantime, this seems to be the top of the bubble.

Now as debt levels start to fall--firstly relatively to GDP and then, ultimately, in absolute terms as well--the macroeconomic effect of the bubble's bursting be felt.

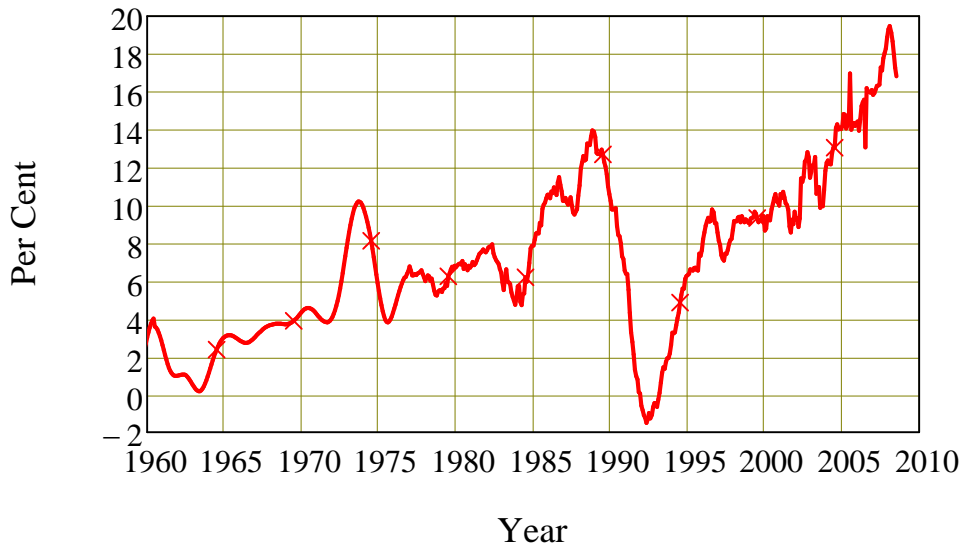


This is because aggregate demand is the sum of income plus change in debt. For the last decade, the latter factor has been adding to demand--and aggregate supply, asset prices, and our import bill have adjusted upwards to suit. But as the change in debt drops and ultimately turns negative, it will subtract from demand--and supply (read employment), asset prices and imports will follow it down.

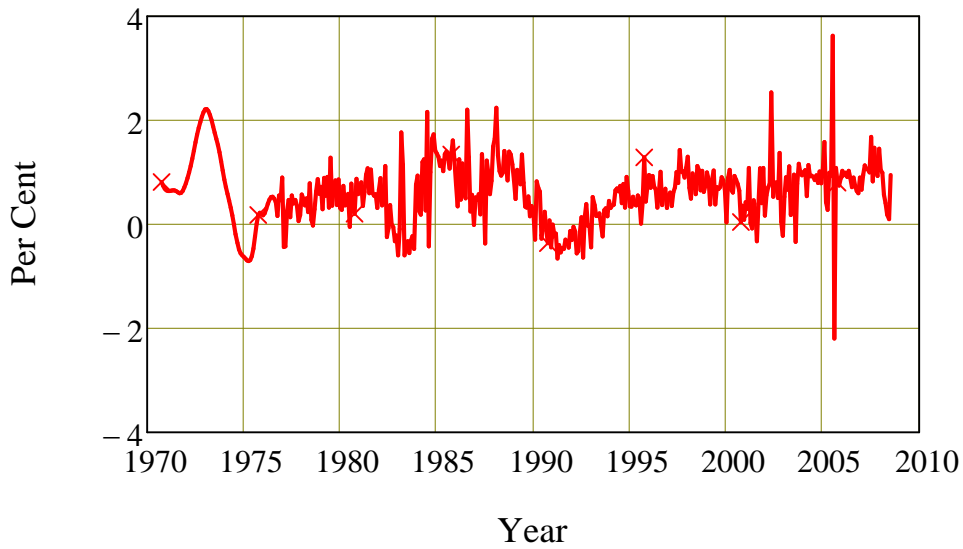
If Australians decided to reduce their debt to income ratio by 10% each year--to get back to the 25% level that applied back in the 1960s (before this long-term speculative bubble took off)--it would take roughly 15 years to get there.



### Contribution of Change in Debt to Demand



### CPI Deflated Monthly Change in Debt

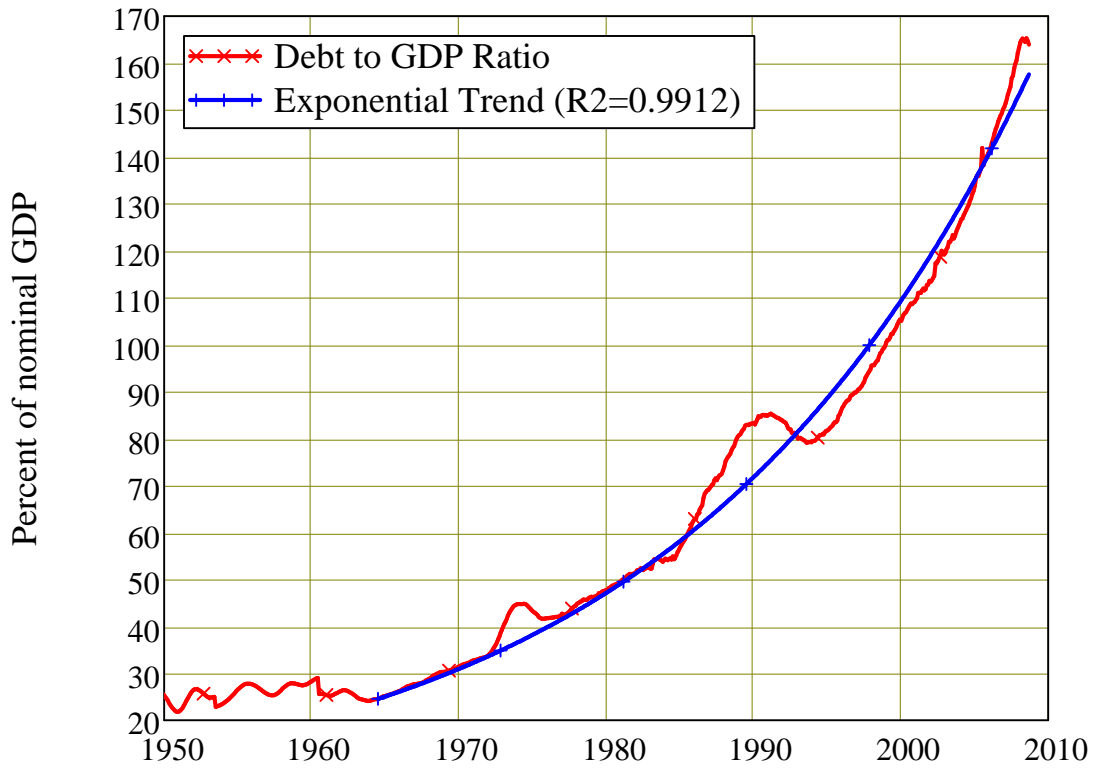


**END OF COMMENTARY**

### Chart One



### The Debt Bubble



### Chart Two

Long Term

### Debt to GDP: The Long Term View

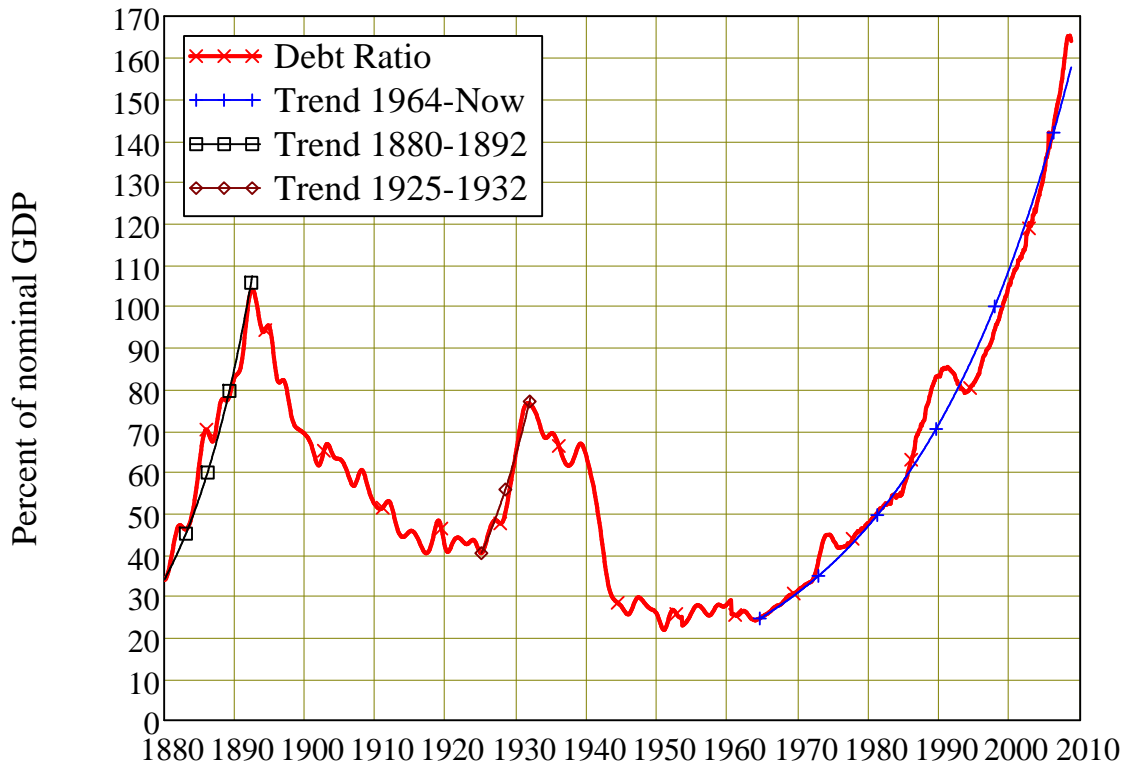


Table One: Aggregated Debt Summary

**Table One**

	0	1	2
0	"Summary"	"Total Private Debt"	"Nominal GDP"
1	"Date (levels)"	2008.67	2008.5
2	"Levels (\$m)"	1882679	1128551
3	"Change Month \$m"	7256	9546.08
4	"Change Month %"	0.39	0.85
5	"Change Year \$m"	202526	84447
6	"Change Year %"	12.05	8.09
7	"Since 1990"	8.86	5.49
8	"Since 1980"	12.01	7.88
9	"Since 1964"	13.46	9.35
10	"Date (% GDP)"	2008.67	"N/A"
11	"As % of GDP"	163.97	100
12	"Change Month"	-0.47	"N/A"
13	"Change Year"	3.17	"N/A"
14	"Since 1990"	3.08	"N/A"
15	"Since 1980"	4.15	"N/A"
16	"Since 1964"	4.19	"N/A"

Table Two: Disaggregated Debt Summary

**Table Two**

	0	1	2	3
0	"Detail"	"Business"	"Mortgage"	"Personal"
1	"Levels (\$m)"	758351	973416	152320
2	"Change Mth \$m"	8229	4357	-1115
3	"Change Mth %"	1.1	0.45	-0.73
4	"Change Yr \$m"	111712	86823.24	3720
5	"Change Yr %"	17.28	9.79	2.5
$D_2 =$ 6	"Since 1990"	5.42	14.84	5.76
7	"Since 1980"	10.69	13.99	10.44
8	"Since 1976"	11.2	14.26	11.19
9	"As % of GDP"	65.95	84.65	13.25
10	"Change month"	0.13	-0.51	-1.68
11	"Change year"	7.82	0.94	-5.76
12	"Since 1990"	-0.49	9.32	-0.19
13	"Since 1980"	3.03	6.05	2.63
14	"Since 1976"	3.11	5.84	3

**Debt to Income Ratios**

▣ Debt to GDP (D02 & G12)

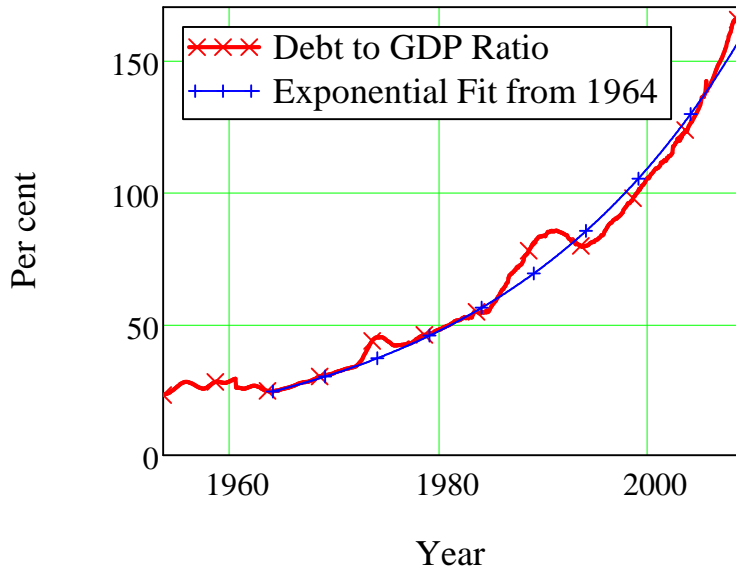
**Figure 1**



▣ Debt to GDP Regression

**Figure 2**

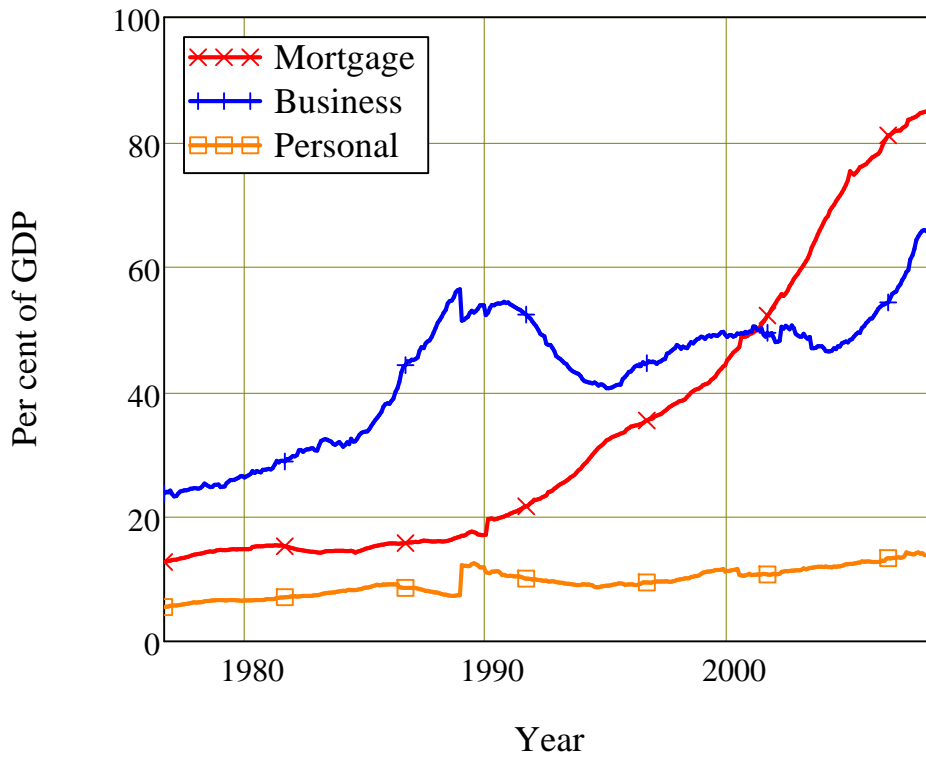
### Australian Private Debt to GDP



▣ Debt Components to GDP

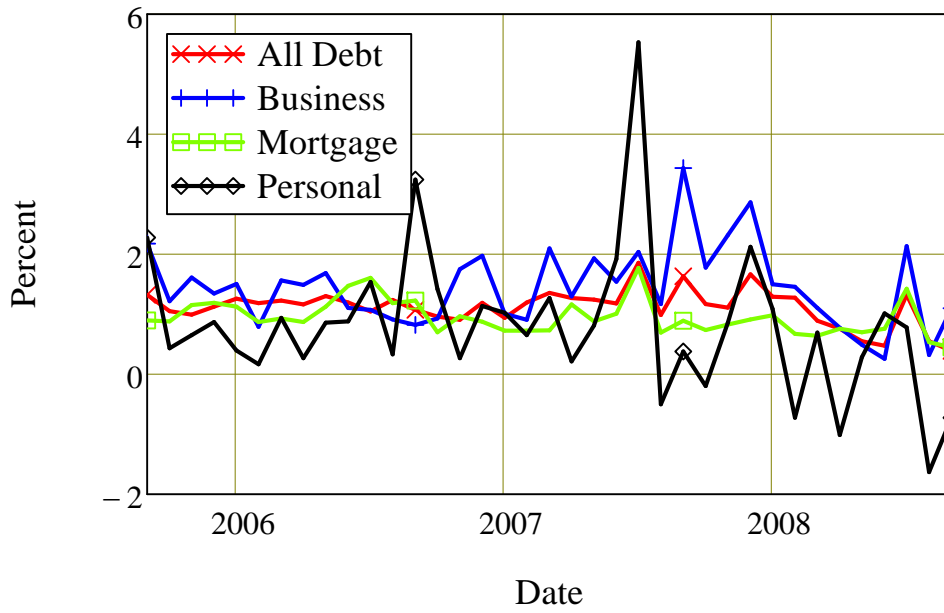
**Figure 3**

### Components of Australian Debt



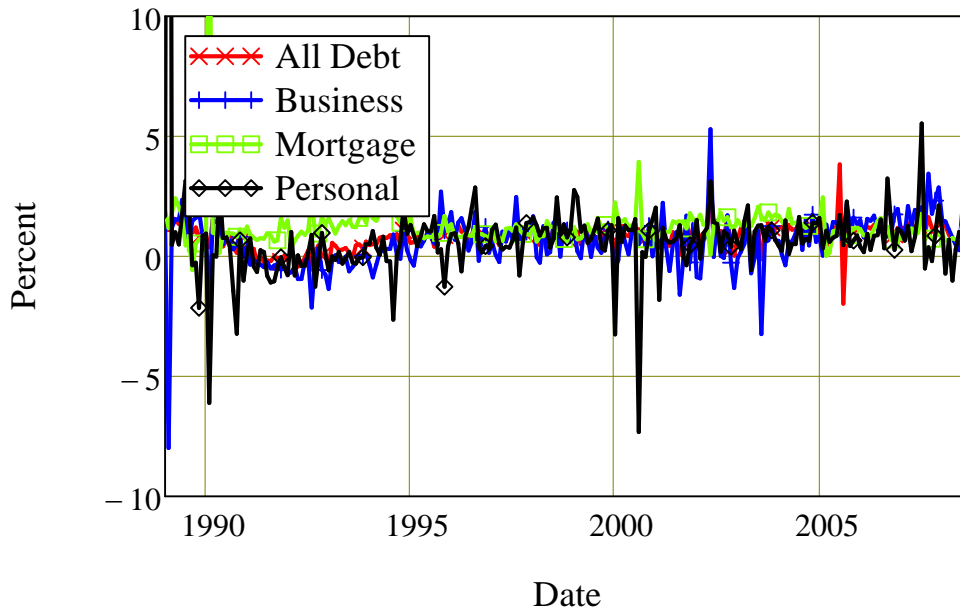
▣ Monthly Growth Rates

### Debt Monthly Growth Rates--Last 3 Years



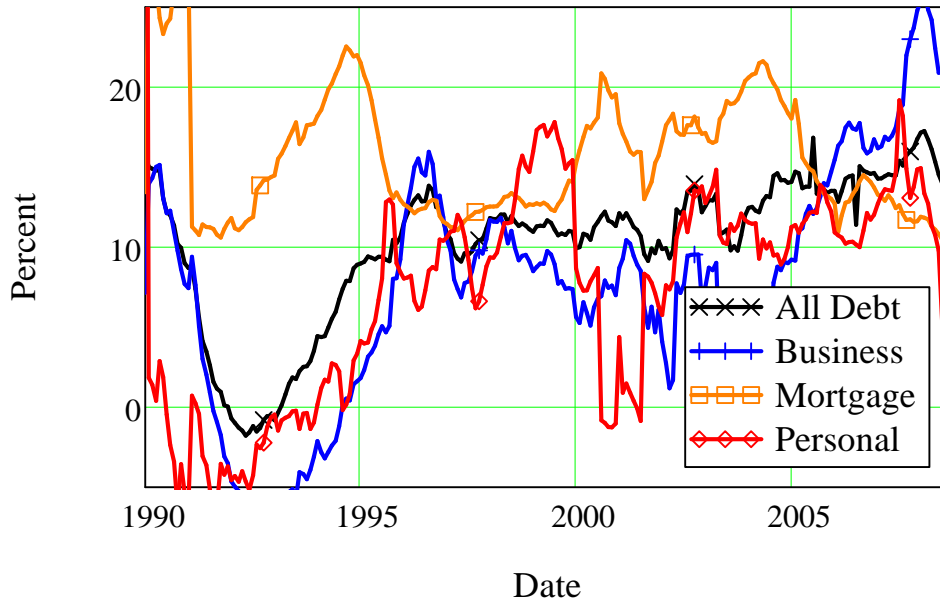
▶ Monthly Growth Rates

### Debt Monthly Growth Rates



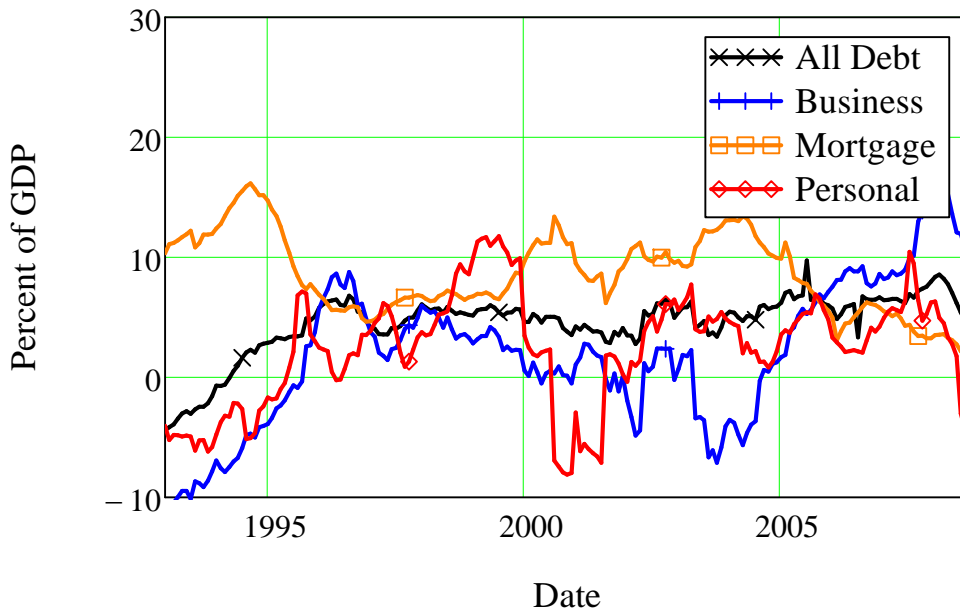
▶ Yearly Growth Rates

### Debt Yearly Growth Rates



▢ Ratios Yearly Growth Rates

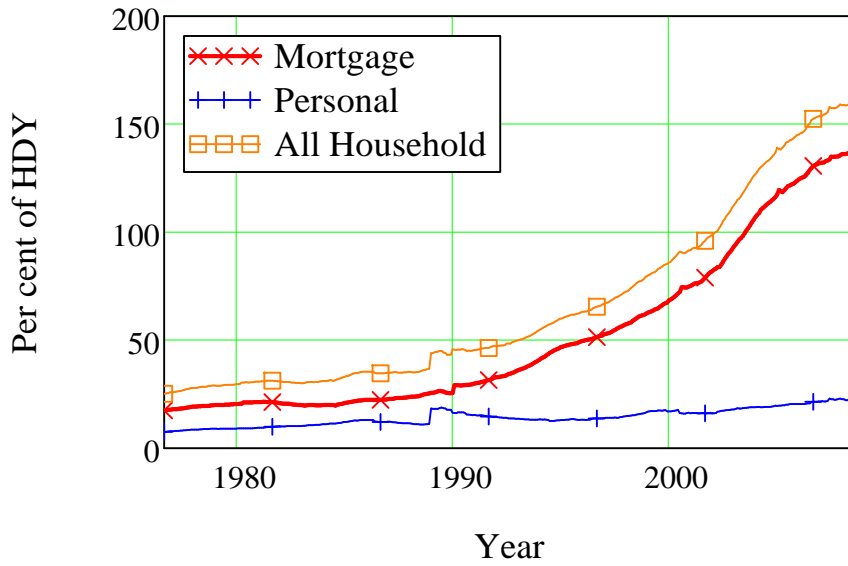
### Debt Ratios Yearly Growth Rates



▢ Debt to Household Disposable Income

**Figure 4**

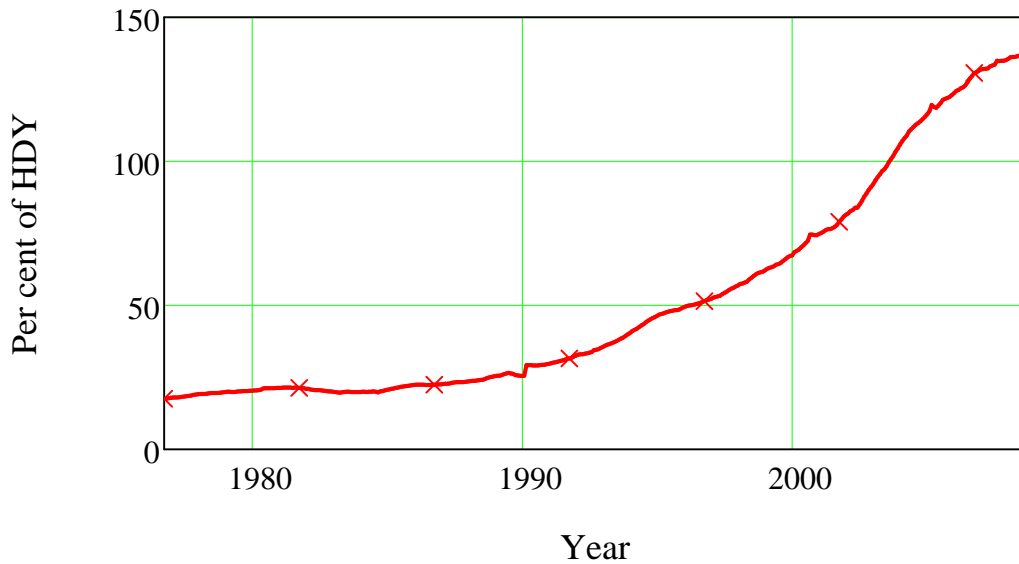
### Household Debt to Disposable Income



▢ Mortgage Debt to Household Disposable Income

**Figure 5**

### Mortgage Debt to Household Disposable Income

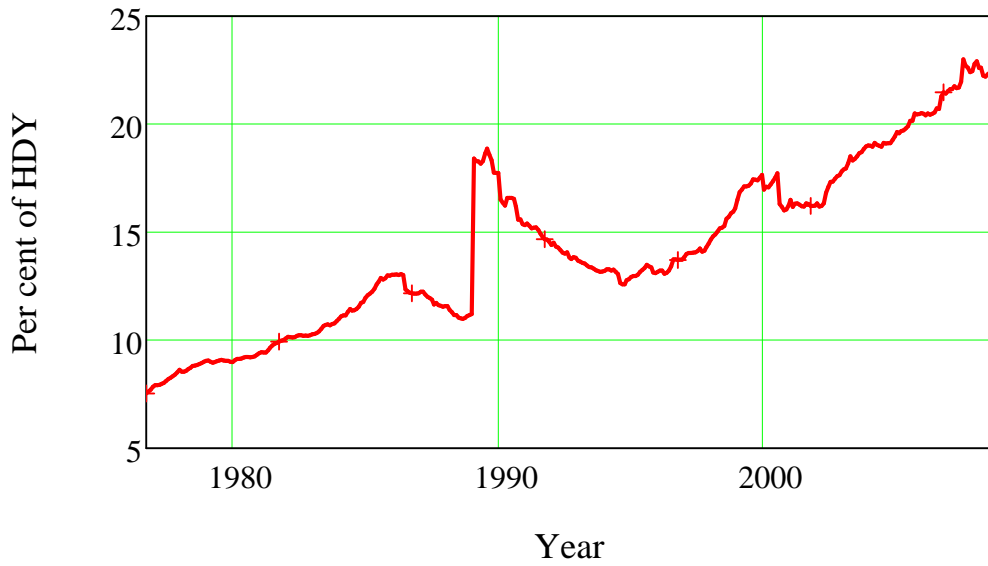


▢ Debt to Household Disposable Income

(the big jump in personal and fall in business debt in 1989 was due to a change in bank classifications of debt types that caused a proportion of business debt to be reclassified as personal).

**Figure 6**

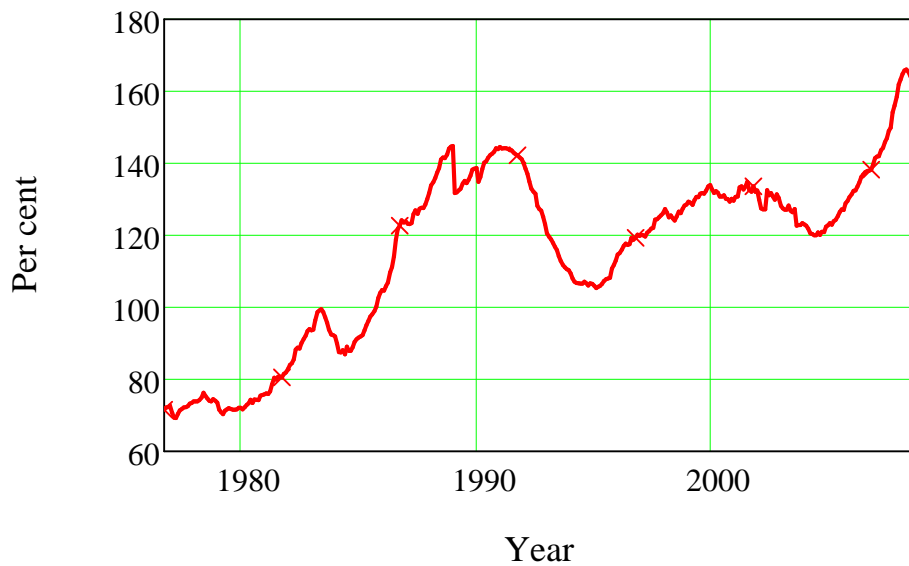
### Personal Debt to Household Disposable Income



▢ Business Debt to GOS

**Figure 7**

### Business Debt to Gross Operating Surplus

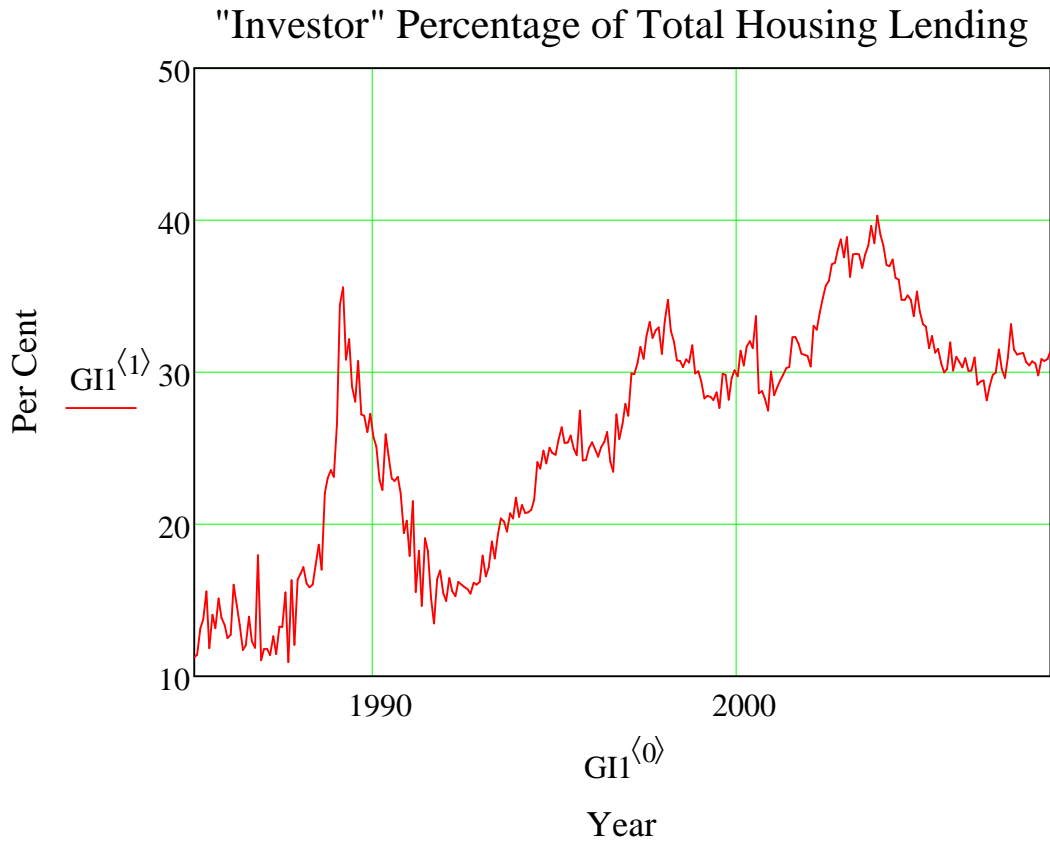


### Housing Finance Analysis

▢ Investment Percent Total Housing Lending

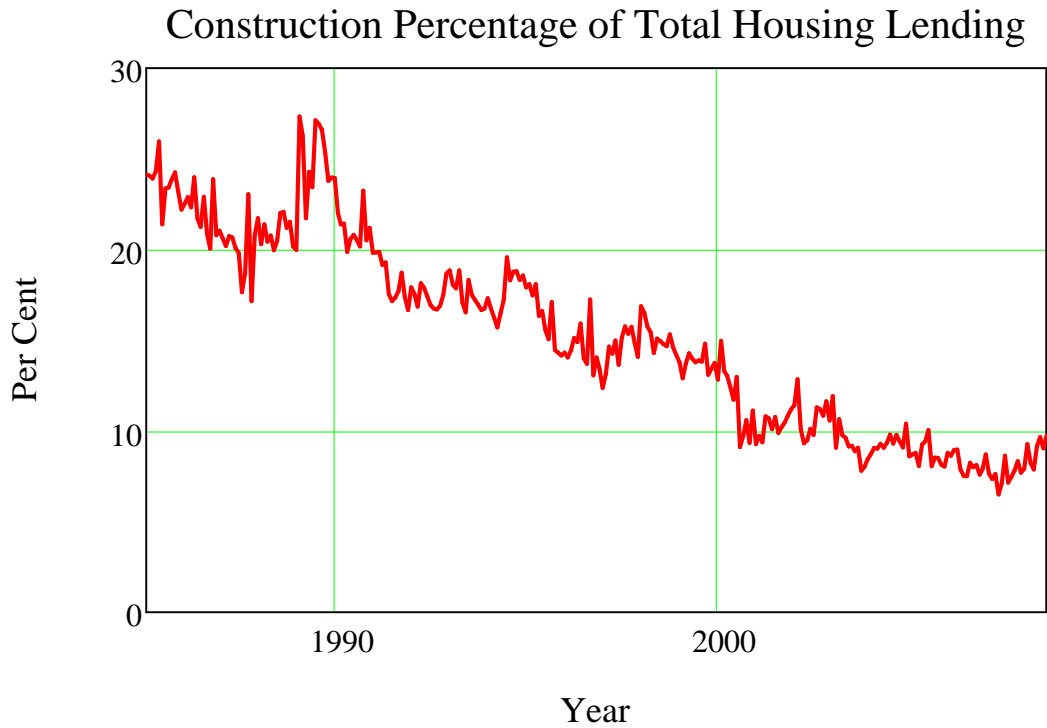
**Figure 8**





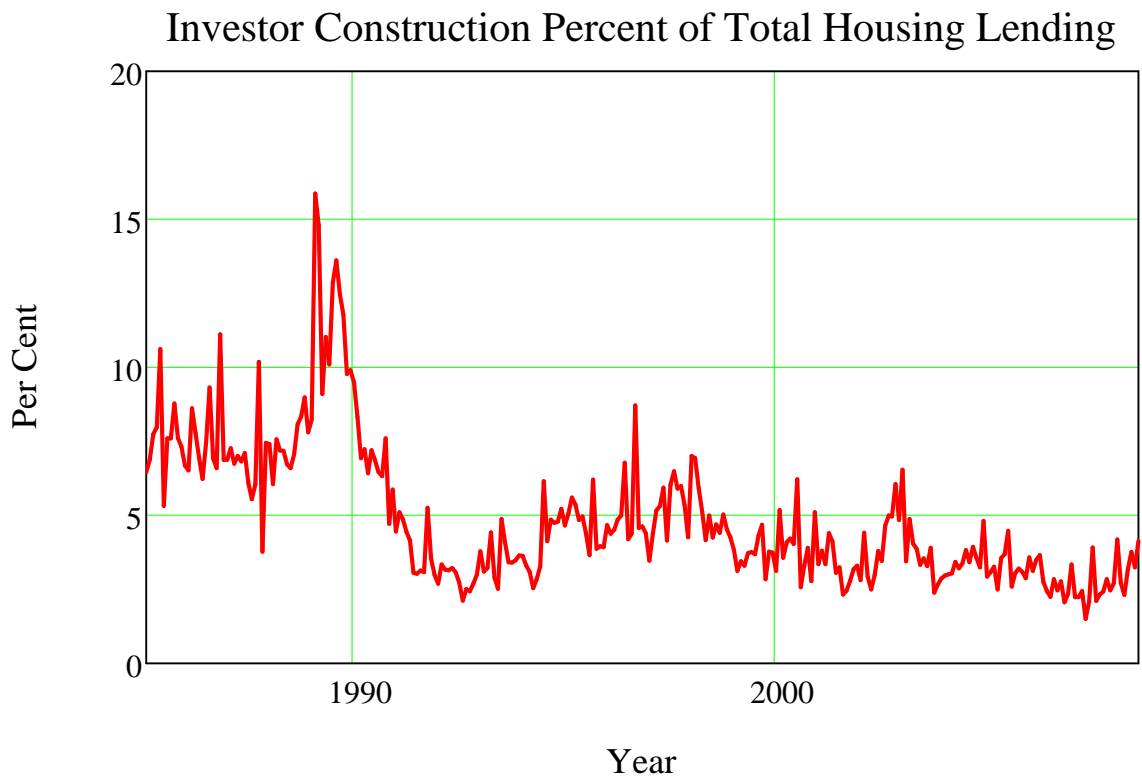
▣ Construction Percent Total Housing Lending

**Figure 9**



▢ Investment Construction Percent Total Housing Lending

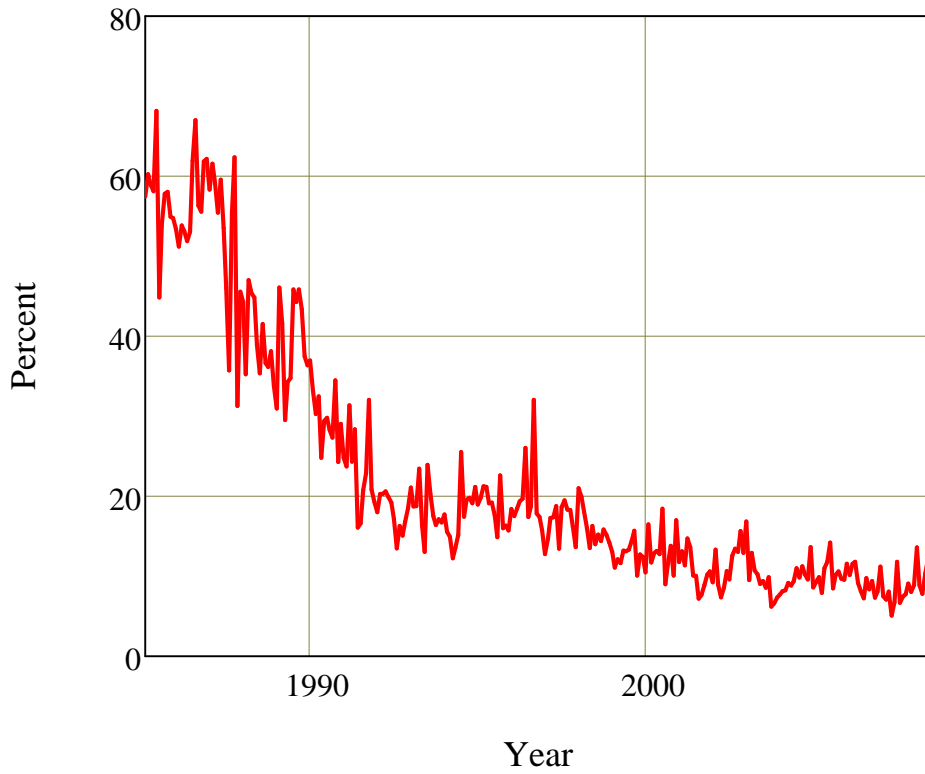
**Figure 10**



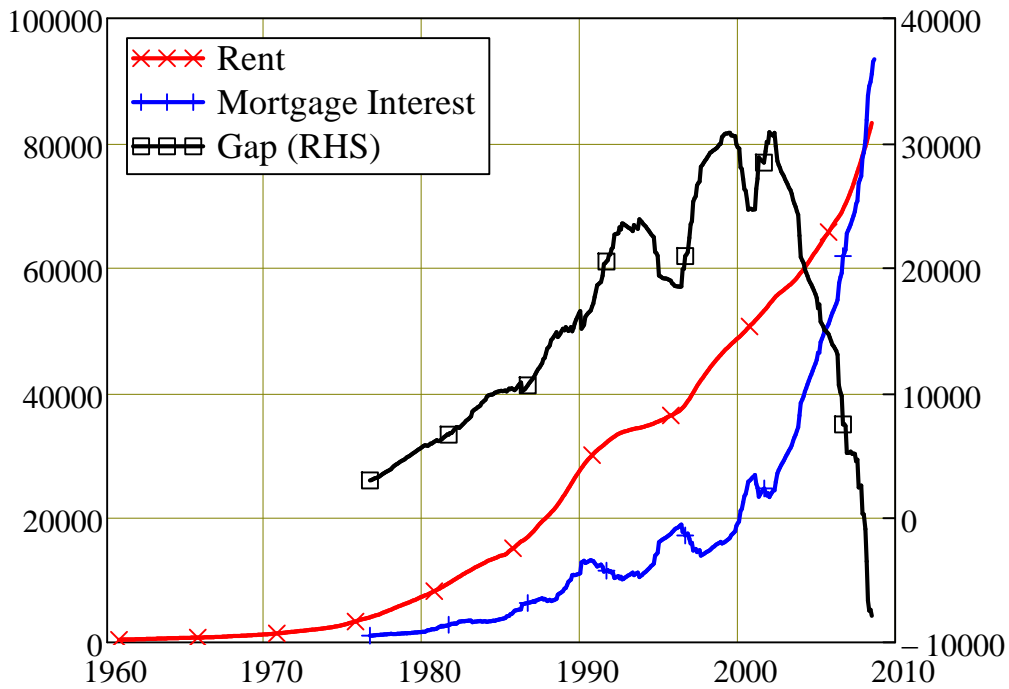
▢ Construction Percent of Investor Lending

**Figure 11**

### Construction Percent of Investor Lending



### Imputed Rent vs Mortgage Interest

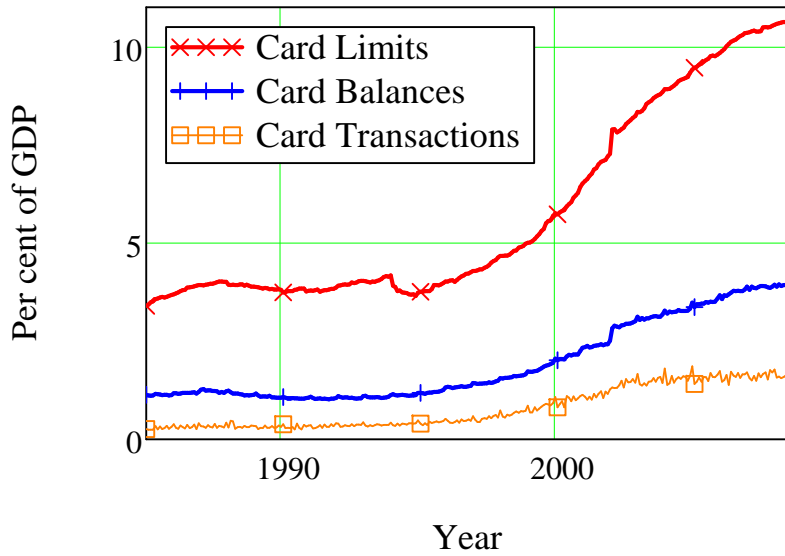


### Personal Finance Analysis

#### Figure 12

▶ Credit Card Data

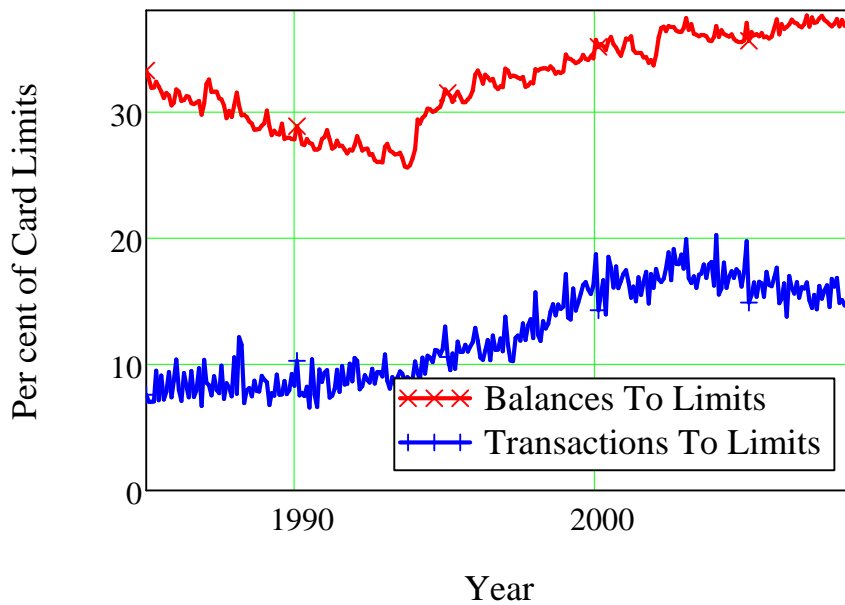
#### Credit Cards To GDP



#### Figure 13

▶ Credit Card Data

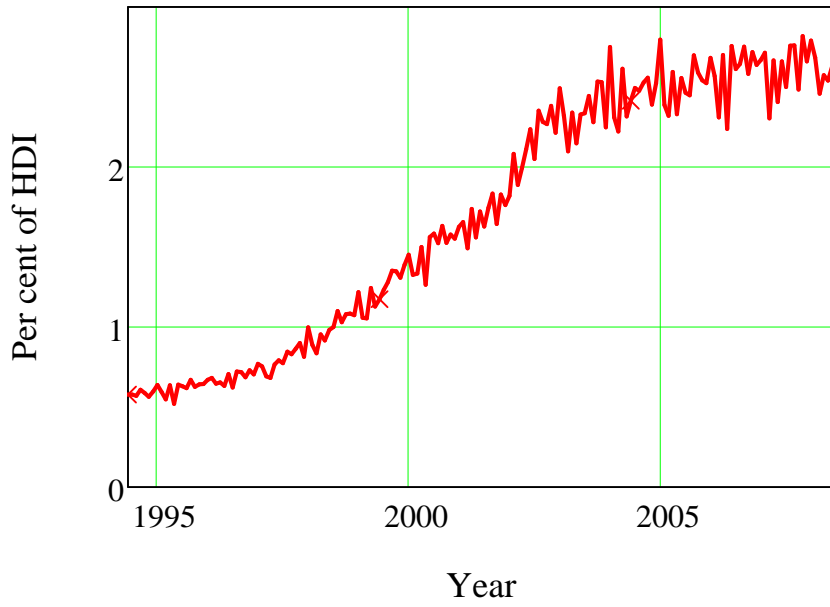
#### Credit Cards Usage



#### Figure 14

▶ Credit Card Repayments

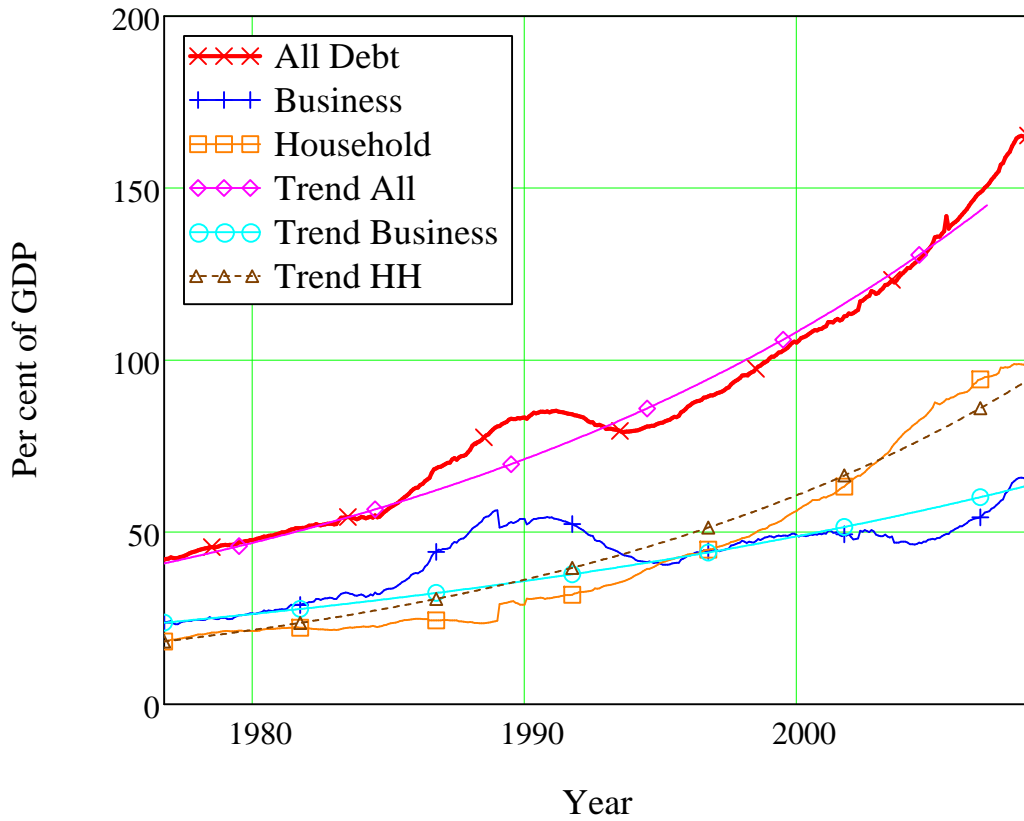
### Credit Card Repayments



▢ Debt components to Income

**Figure 14**

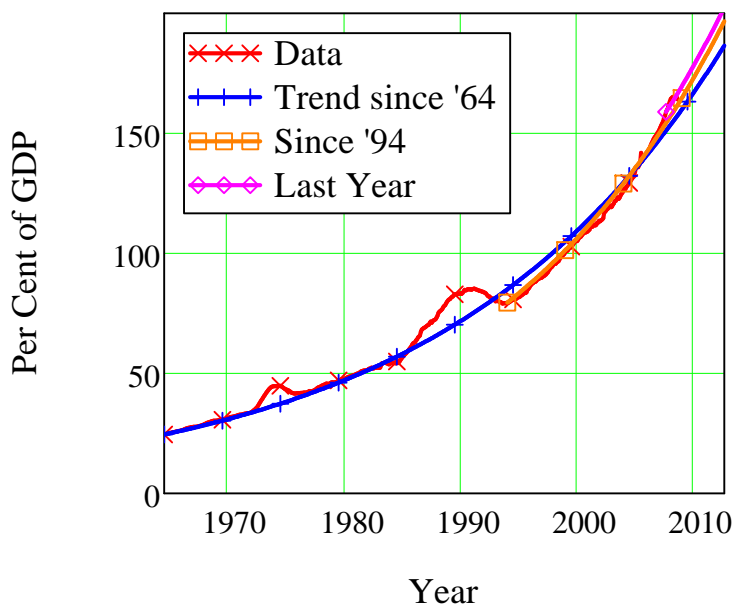
### Trends in Private Debt



▢ Debt to GDP Trends

**Figure 15**

### Debt to GDP Ratio and Trends



▢ Debt to GDP Exponential Growth Correlation Ratios

These tables show the approximate exponential rate of growth of debt from various starting dates, and the correlation coefficient between this exponential approximation and the data. The correlation is staggeringly high, especially for a data series which, from an equilibrium point of view, should have no trend, or at worst should move in the opposite direction to changes in the official rate of interest--thus keeping the debt repayment burden constant.

**Table Three: Exponential Growth Rates & Correlations since 1964 & 1977**

	0	1	2	3	4	5
Corr77 =	"Debt ratios"	"All"	"All"	"Business"	"Household"	"Mortgage"
	"Start Date"	"mid-1964"	1977	1977	1977	1977
	"Growth rate"	4.18	4.06	3.1	5.09	5.84
	"Correlation"	99.12	98.44	73.35	98.12	98.44

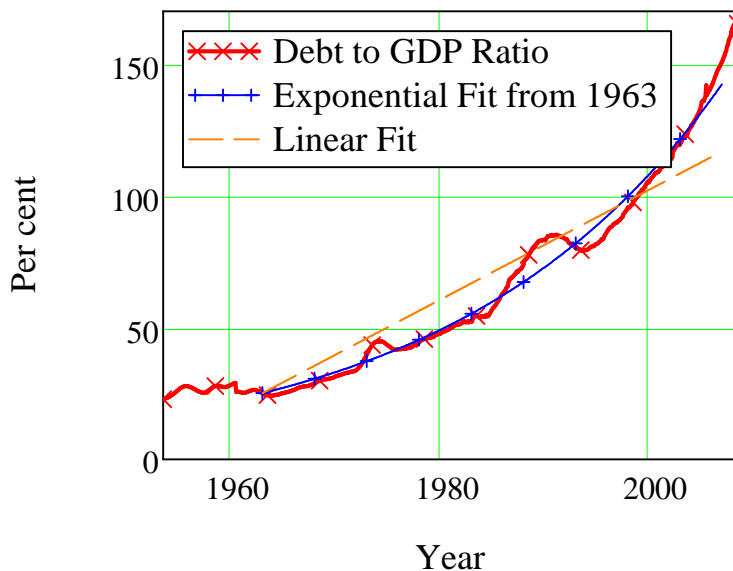
**Table Four: Exponential Growth Rates & Correlations since 1990**

	0	1	2	3	4
Corr90 =	"Debt ratios"	"All"	"Business"	"Household"	"Mortgage"
	"Start Date"	1990	1990	1990	1990
	"Growth rate"	2.81	-0.97	6.99	9.6
	"Correlation"	96.46	-16.99	99.7	99.75

▢ Debt to GDP Linear vs Exponential Regressions

**Figure 16**

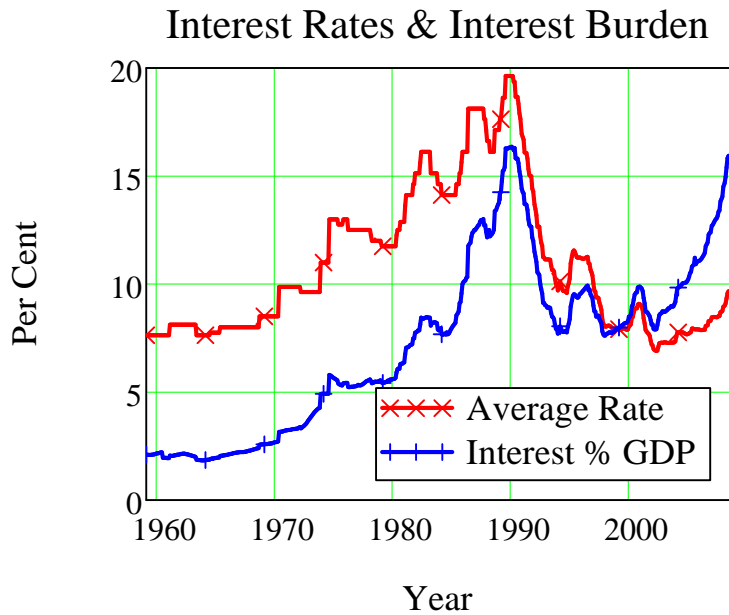
**Australian Private Debt to GDP**



**Debt Servicing Burden**

▶ Interest Rates & Payments

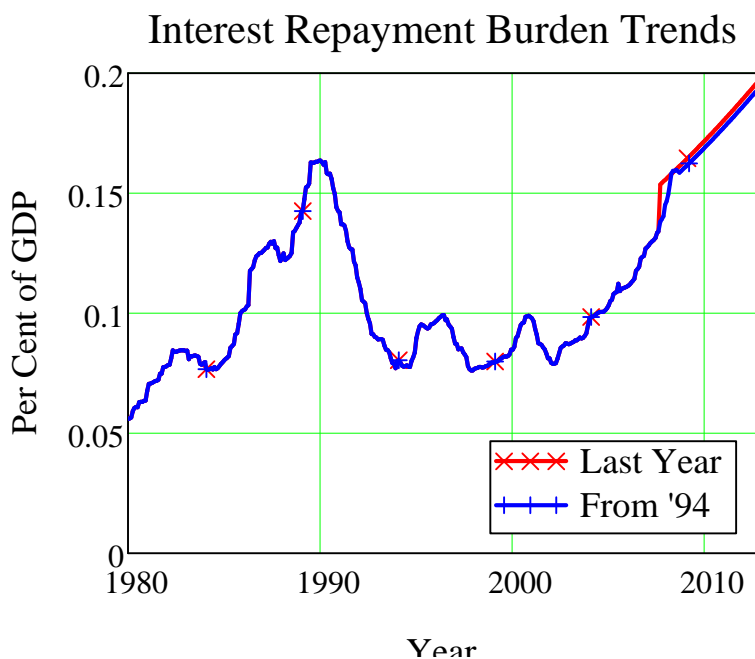
**Figure 17**



▶ Interest Payment Trends

If trends in debt growth continue, then even without any increases in official interest rates, the interest repayment burden on the economy will exceed that of 1990 sometime between September 2008 and September 2009.

**Figure 18**

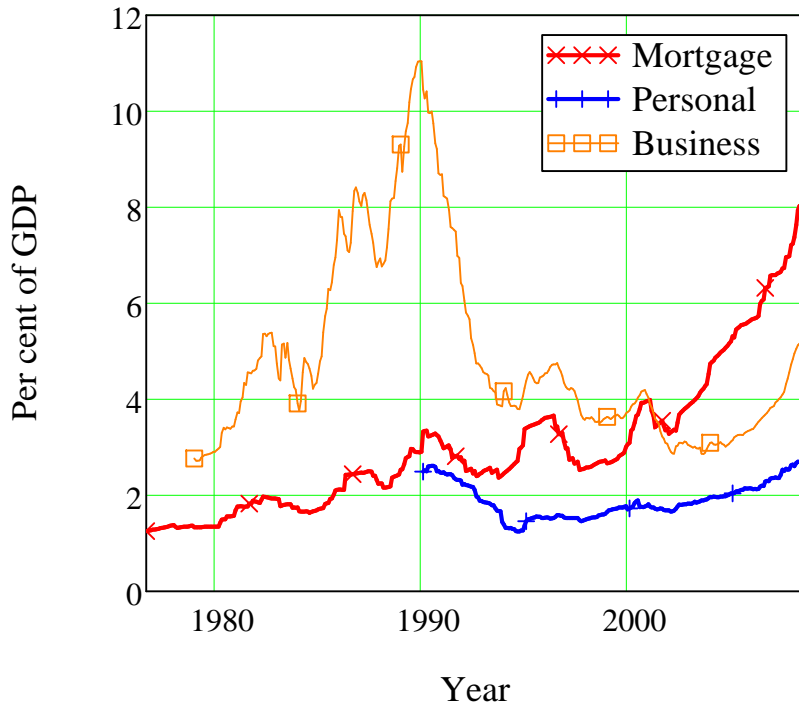


▶ Debt Servicing by Loan Type



**Figure 19**

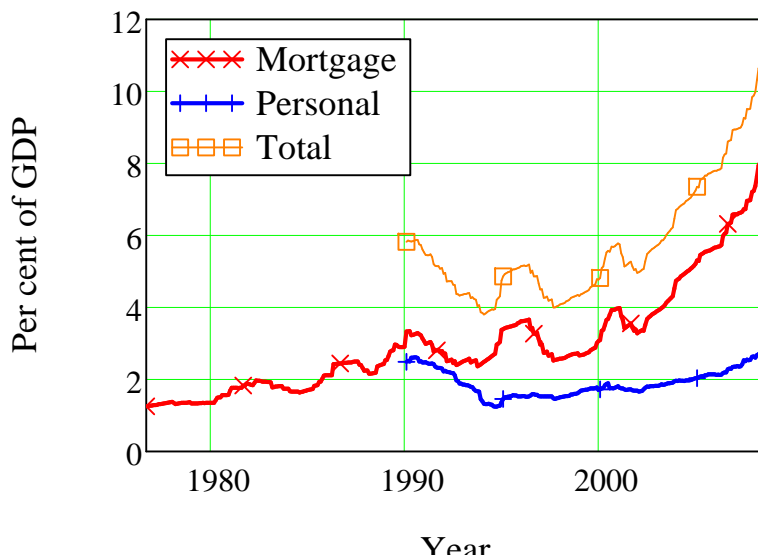
**Debt Servicing Burden**



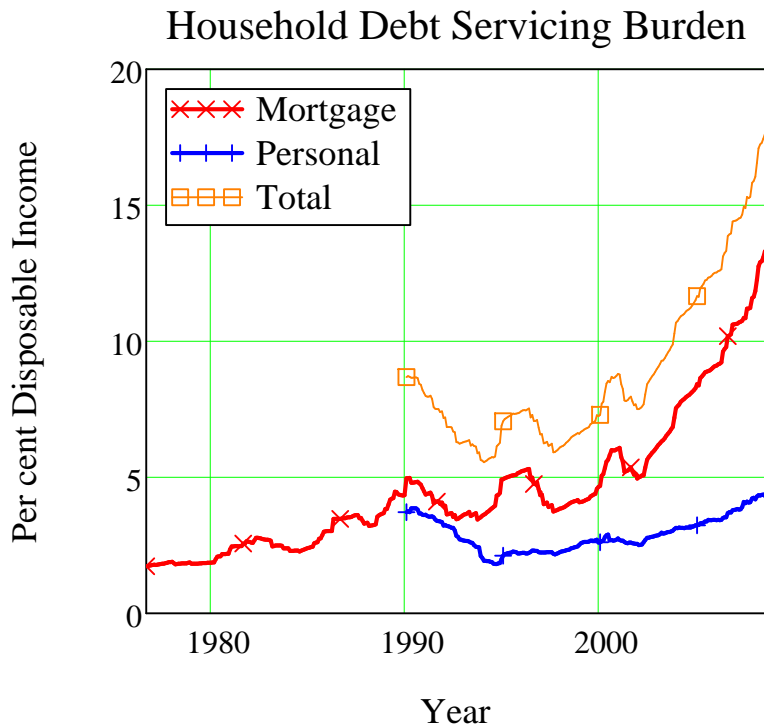
▶ Household Debt Servicing

**Figure 20**

**Household Debt Servicing Burden**



▶

**Figure 21**

It's obvious why high interest rates prior to 1990 brought the economy to a standstill when one sees the following graph: the interest servicing charge on business loans peaked at almost 30 per cent of Gross Operating Surplus. Even though business debt has recently started to rise as a proportion of GDP, the debt servicing burden remains in the range that applied in the early 1980s.

**Figure 22**



The debt repayment burden is affected by both the rate of interest, and the level of debt. This chart shows the percentage of GDP that is required to pay the interest on outstanding debt, as a function of average interest rates (the vertical axis) and the debt to GDP ratio (horizontal axis). We are approaching the pain threshold that applied back in 1990, when debt servicing consumed 16.7% of GDP. The dramatic rise in household debt in the last thirteen years has almost negated the impact of falling average interest rates.



**Figure 23**

### Interest Payment Burden

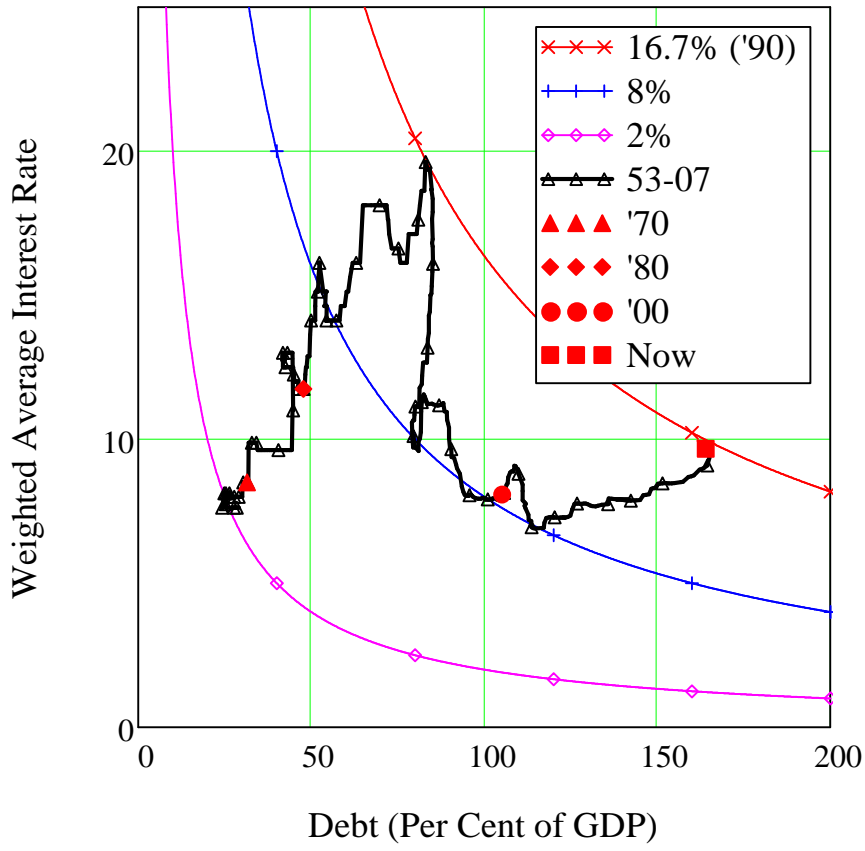
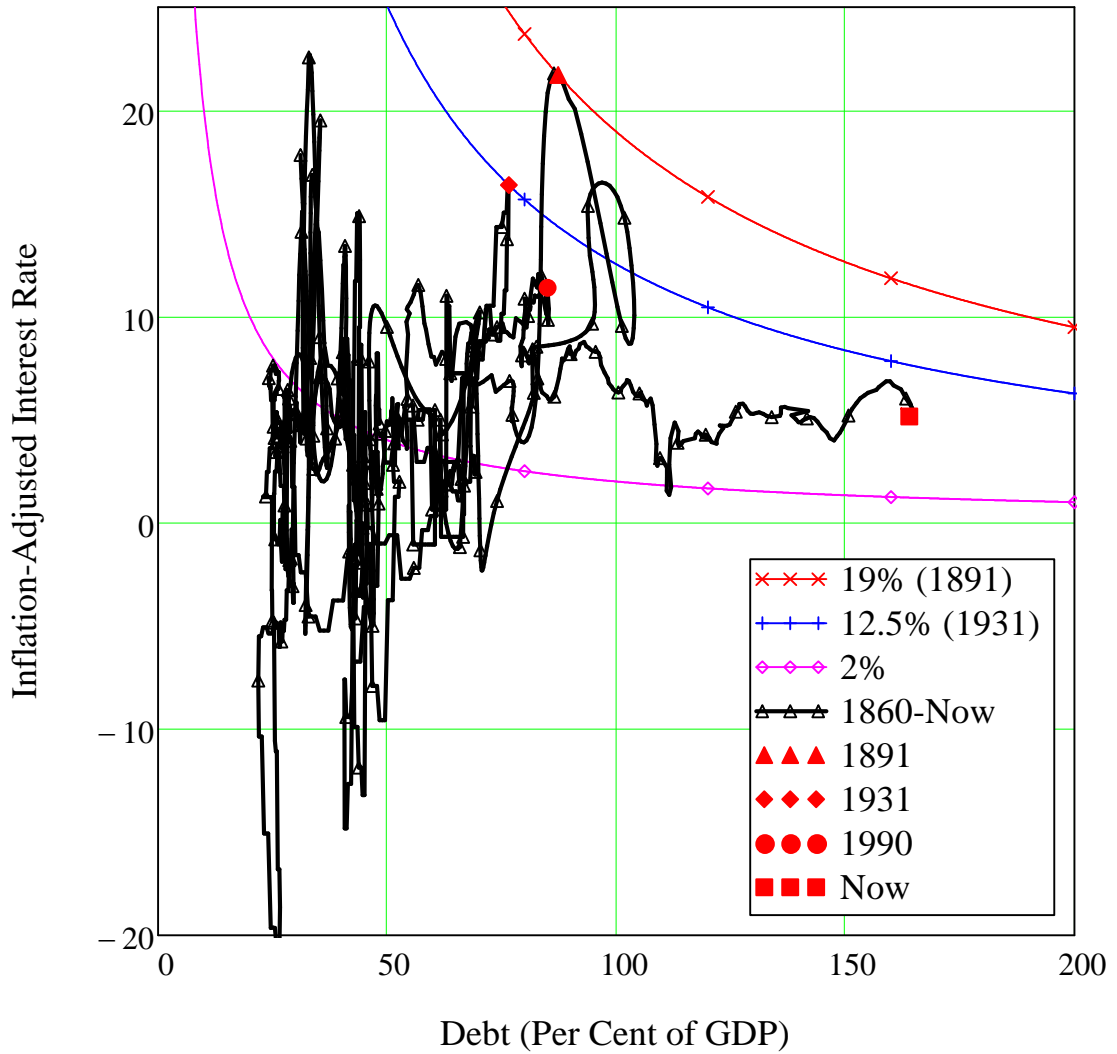
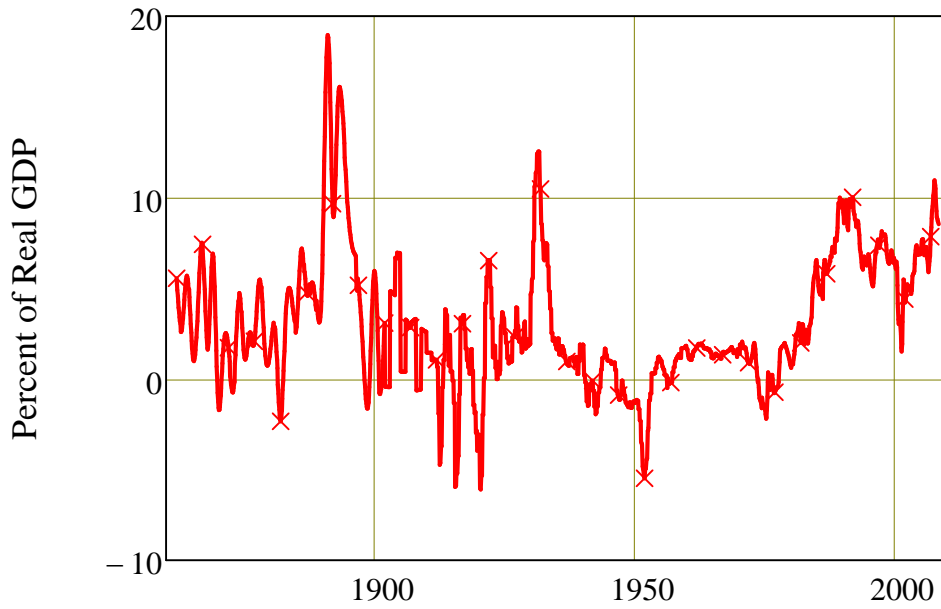


Figure 23

### Inflation-Adjusted Interest Payment Burden



### Inflation-Adjusted Interest Payment Burden

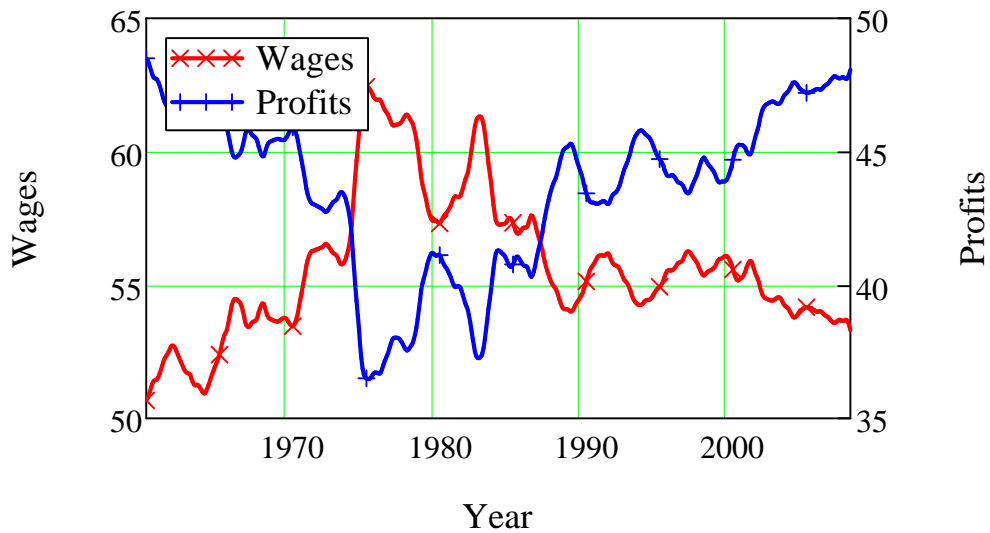


### Income Shares



Figure 24

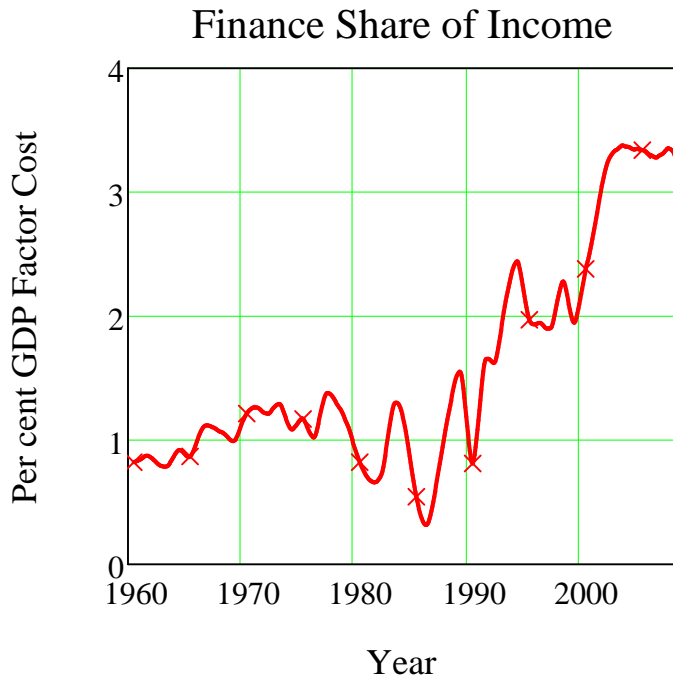
### Income Shares (% GDP at Factor Cost)



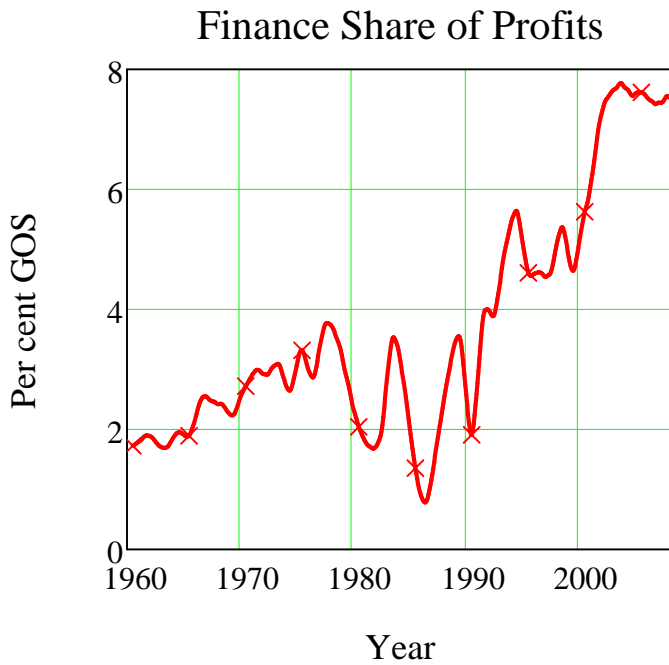
In the "it's an ill wind that blows no good" category falls the impact of rising debt levels on the share of income going to finance capital. Having shown no trend at all between 1960 and 1990, it has suddenly blown out in the last seventeen years, to almost four times the previous average level.

Somehow I doubt that this is a good thing for the rest of the economy. It is instead a very potent indicator of the extent to which financial commitments are a burden upon the productive sectors of the economy.

**Figure 25**



**Figure 26**

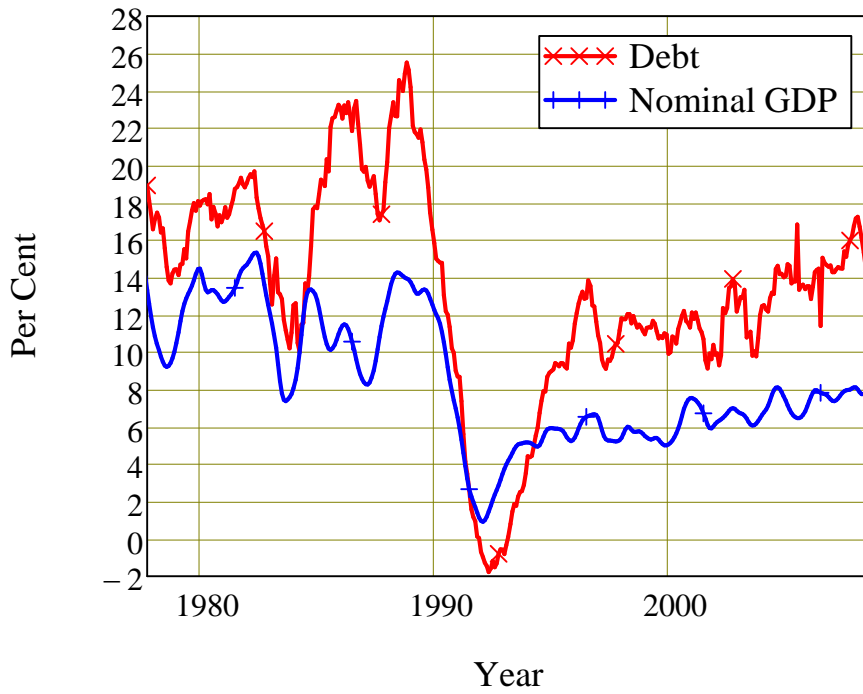


***Debt contribution to Effective Demand***

**Figure 27**

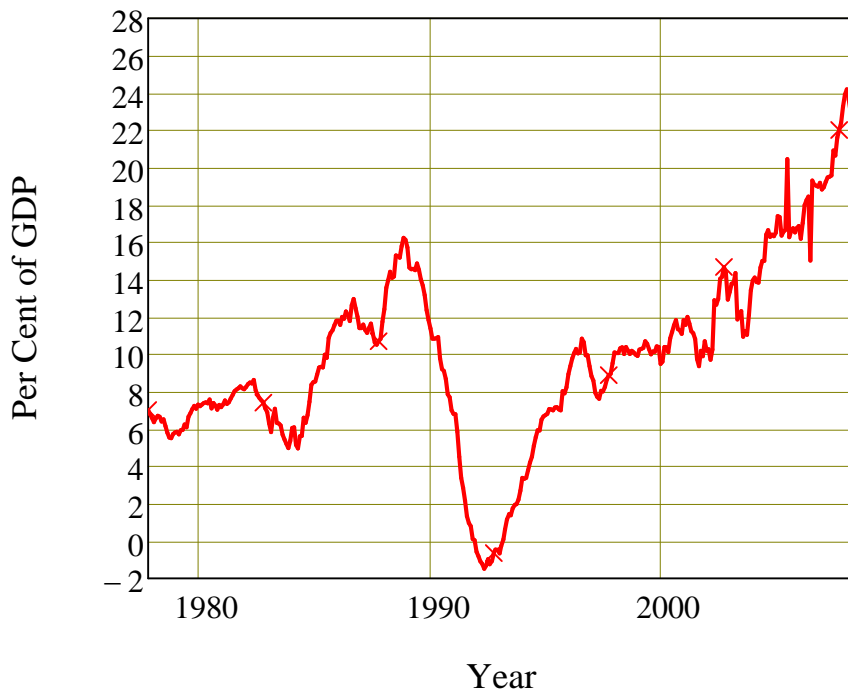


### Growth of Debt & GDP



**Figure 28**

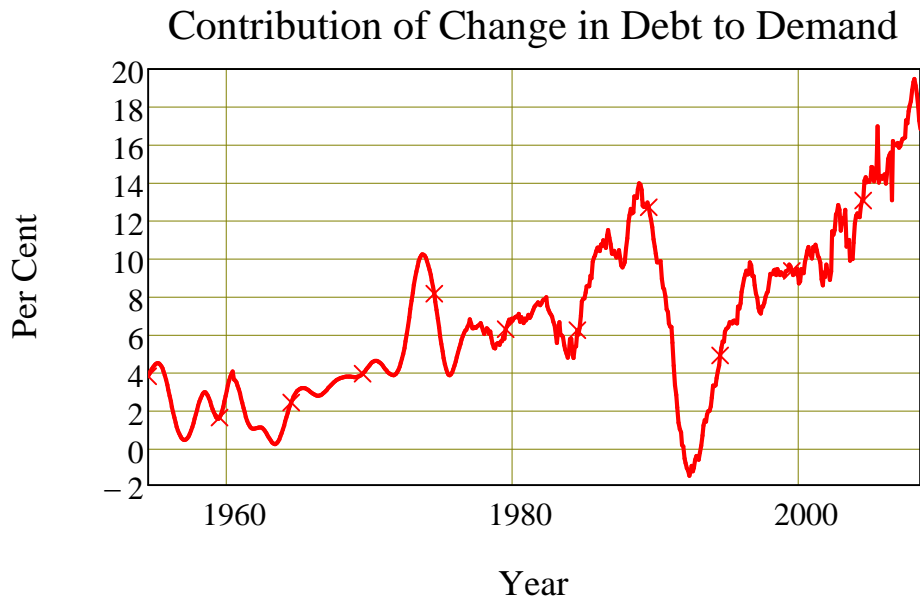
### Annual Change in Debt







**Figure 29**



$$GE4_{01} := \text{ToPercent}\left(\text{Divide}\left(\text{ChangePeriod}(\text{CreditAll}, 12), \text{GDPNomAll}\right)\right)$$

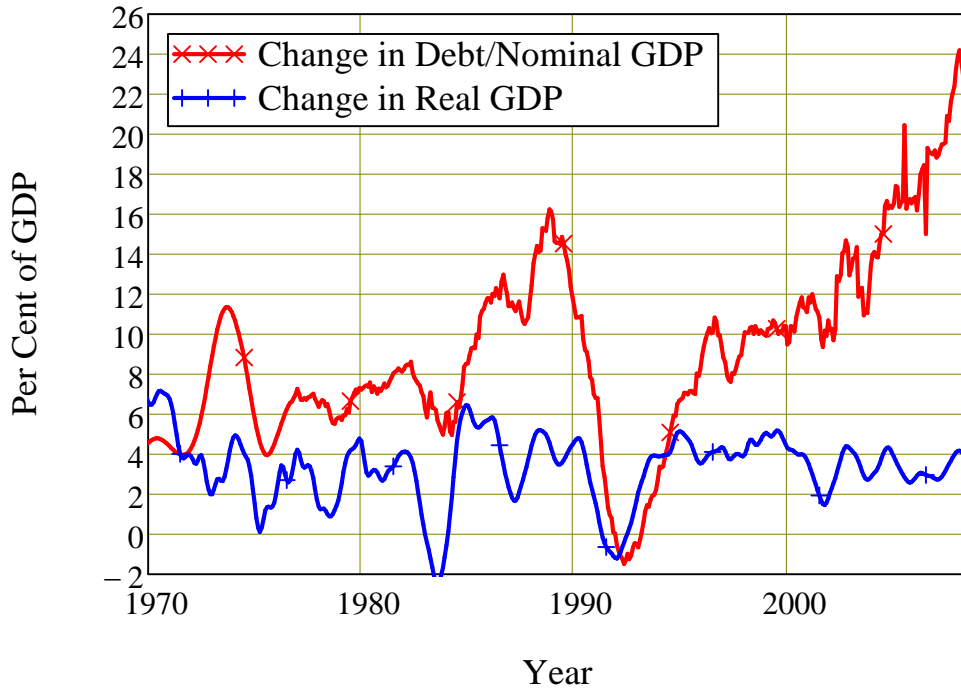
$$GE4_{02} := \text{ToPercent}\left(\text{ChangePCPeriod}(\text{GDPReal}, 12)\right)$$

$$GE4_{\text{Start}} := 1970$$

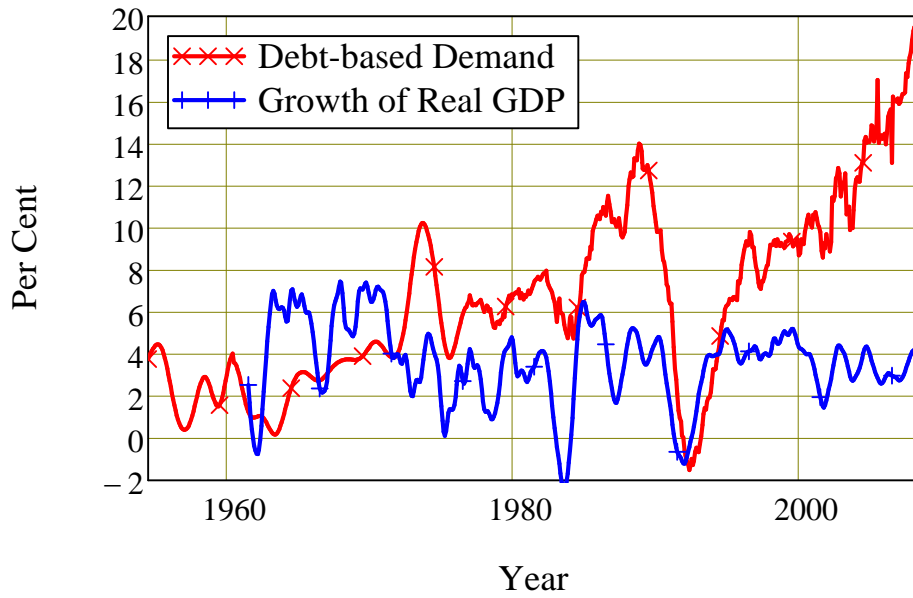
$$GE4_{\text{End}} := \text{LastDate}(GE4_{01})$$

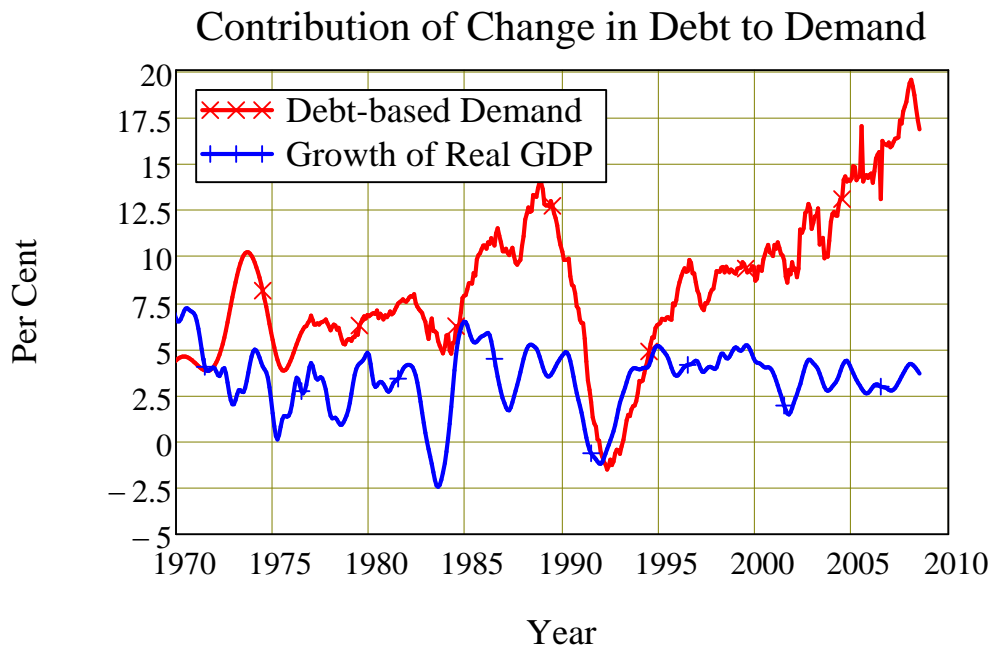

**Figure 30**

### Change in Debt & Real GDP



### Contribution of Change in Debt to Demand





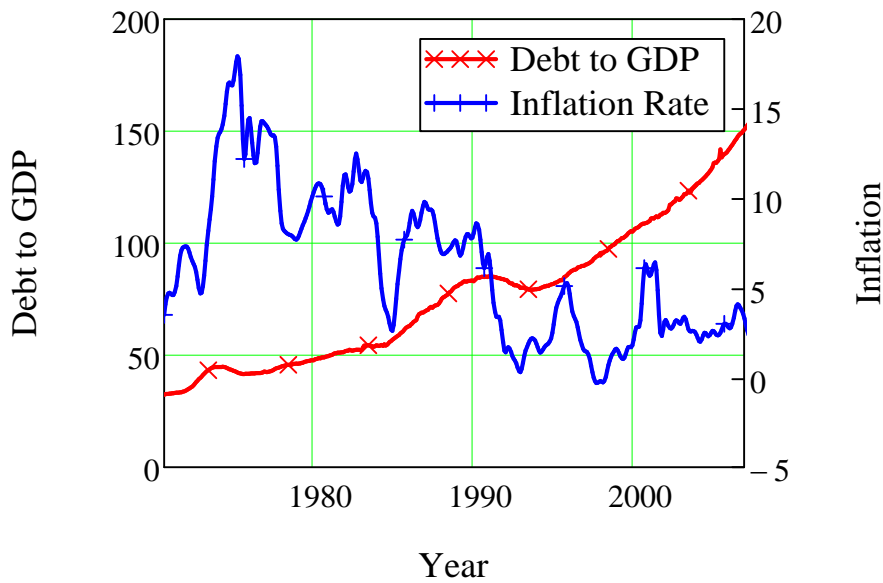
Ignore for a moment the labels on the next graph, and simply imagine that they were indicators on some medical or industrial gauge. Which series would imply an out of control process to you--the red one or the blue one?

Of course, with the bias economists have developed about inflation--and the related blind eye towards debt levels--they ignore the red line, see only the blue line, and worry that this has recently moved up somewhat (even though, over the longer term, it has clearly fallen substantially).

**Figure 31**



### Inflation vs Debt



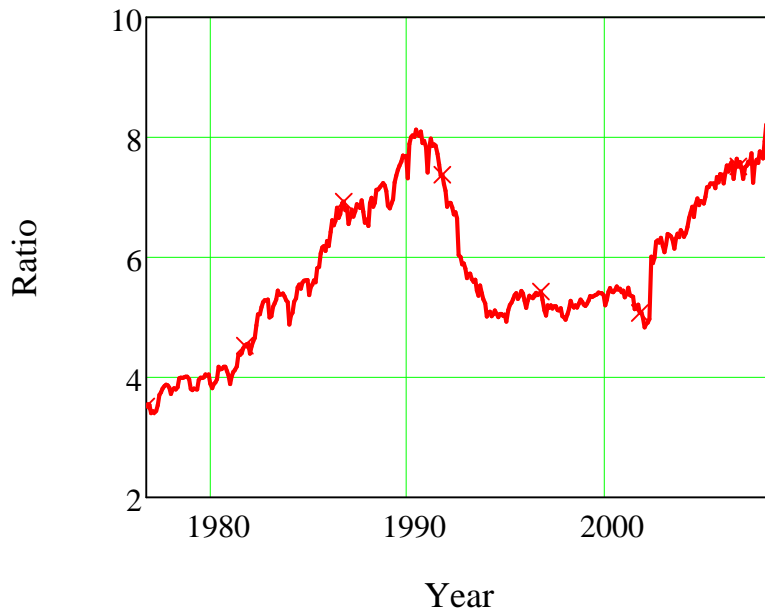
### Monetary Aggregates

(The M1 series was affected by a substantial reclassification of assets in early 2002. I expect that the apparent downward trend in the debt to M1 ratio across 2001 can be ignored as a statistical anomaly, later corrected by the reclassification)

**Figure 32**

▢ Debt to Money

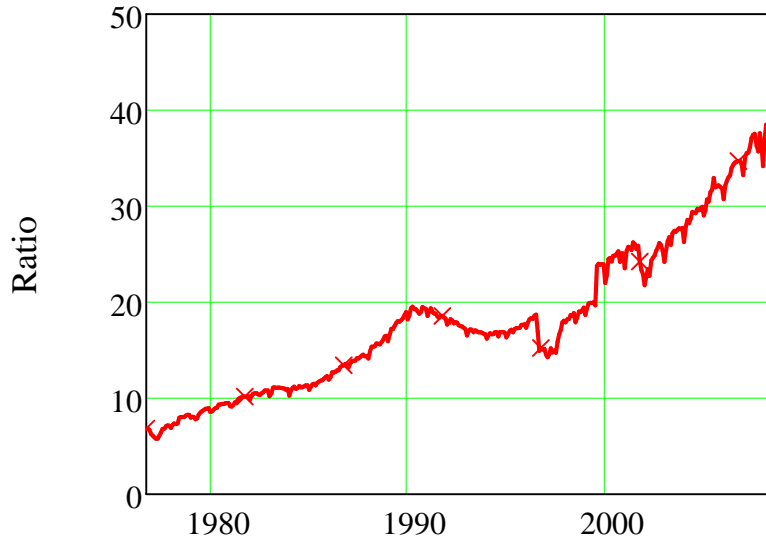
### Ratio of Debt to M1



**Figure 33**

▢ Debt to Money

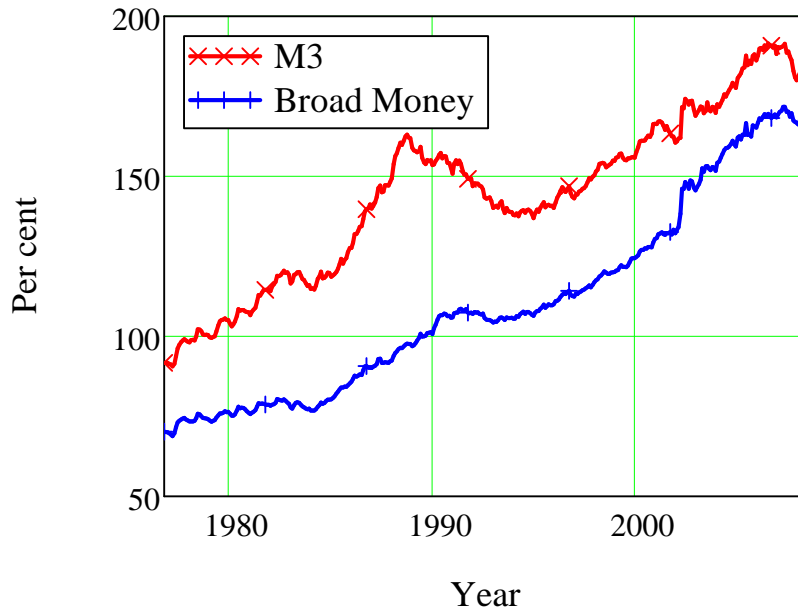
### Ratio of Debt to Money Base



Year  
**Figure 34**

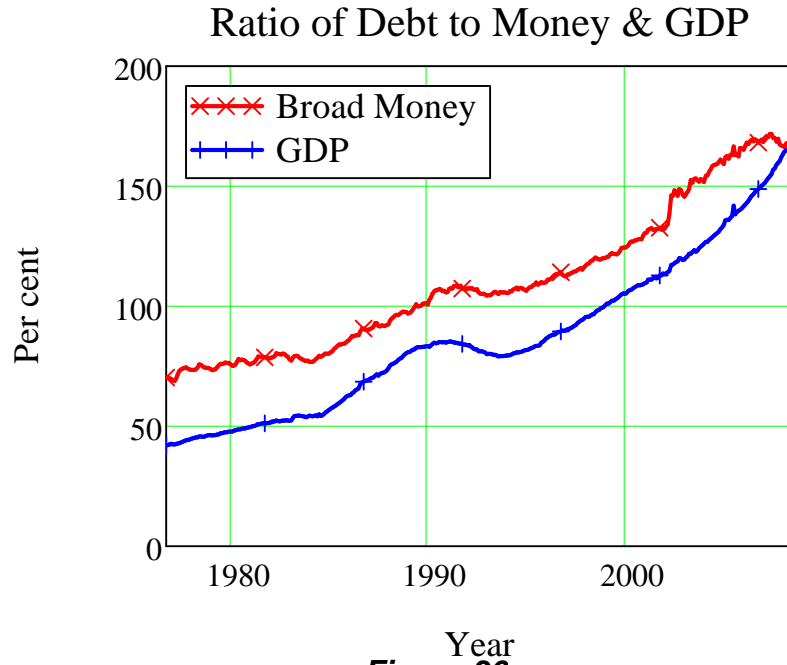
▶ Debt to Money

### Ratio of Debt to Money Aggregates



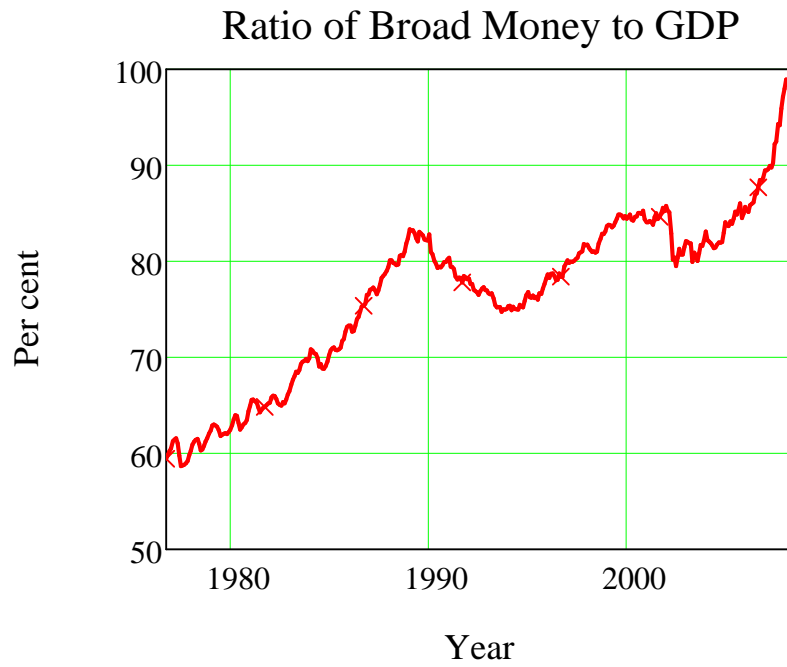
**Figure 35**

▶ Debt to Money



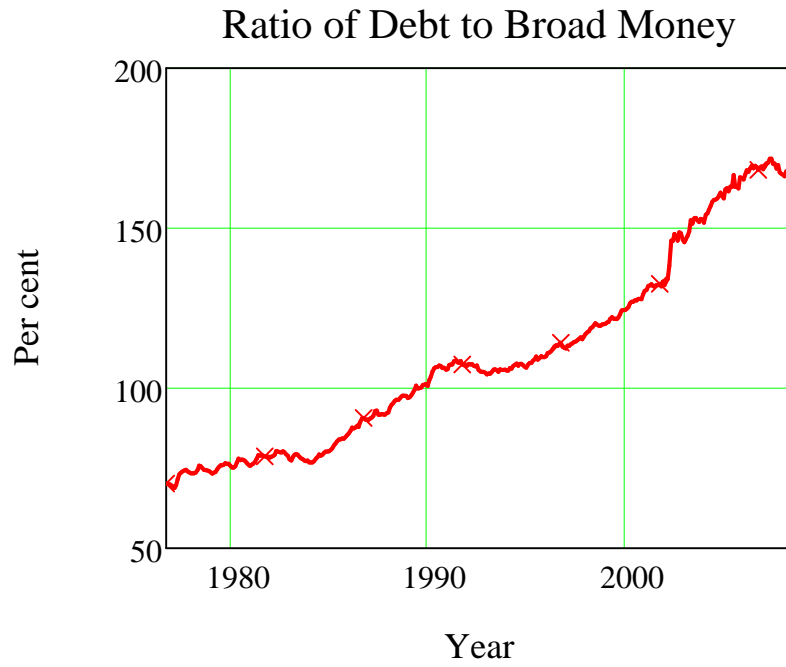
**Figure 36**

▢ Debt to Money



**Figure 37**

▢ Debt to Money

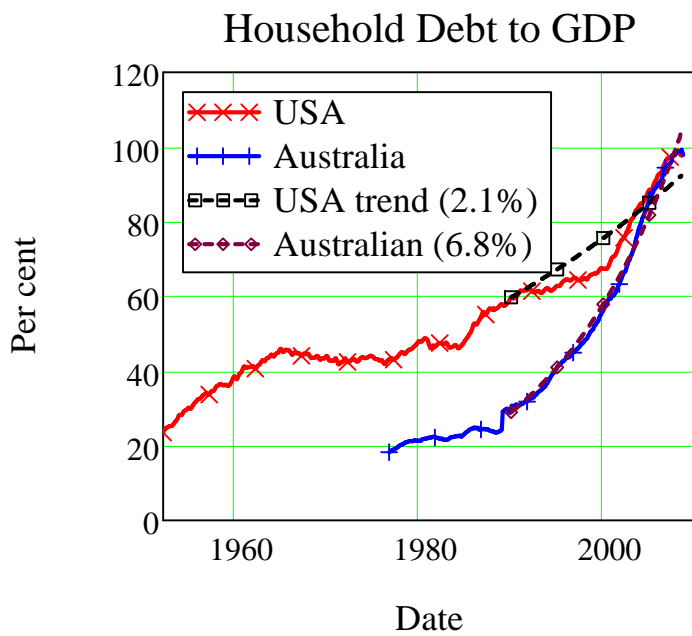


### International Data

### USA Data and USA-Australia Comparisons

**Figure 38**

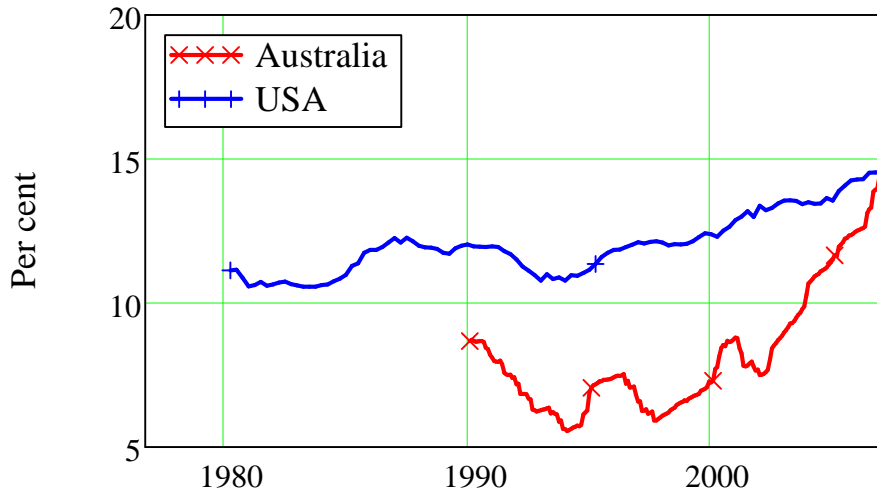
▣ USA-Australia Household Debt Comparison



**Figure 39**

▣

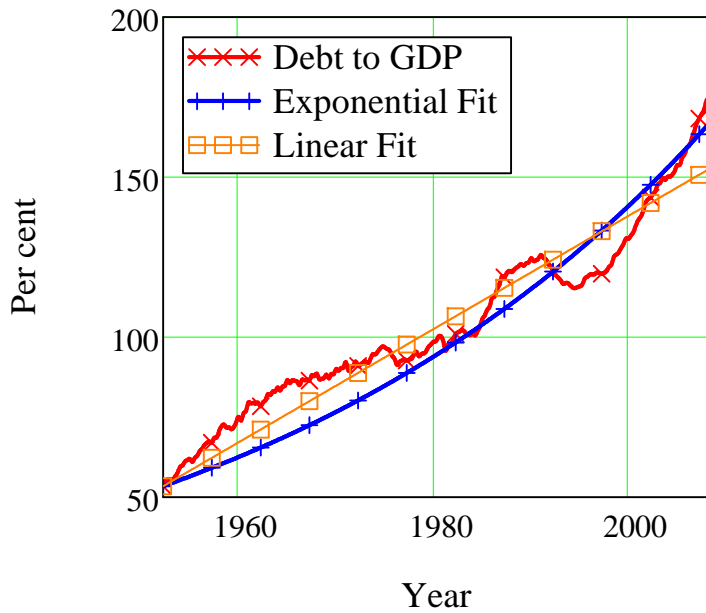
### Interest vs Household Disposable Income



Years  
**Figure 40**

▶ USA Private Debt to GDP

### USA Private Debt to GDP



▶ Debt to GDP Regression