

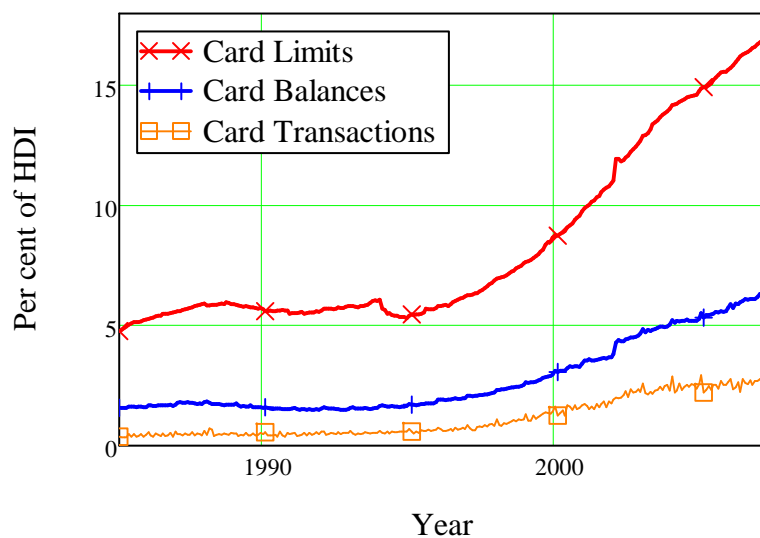
## Steve Keen's DebtWatch July 2007 Hard Times (and Soft Bodies) on Easy Money

Last month's **4th International Consumer Credit Card Summit** did not consider the most important aspect of personal credit: the growth in credit limits (and usage) relative to income.

Until 1995, aggregate credit card limits were relatively stable at about 5 per cent of Household Disposable Income (HDI). From then on however, the ratio exploded to over 17 per cent--more than tripling in just the last twelve years (Chart A).

**Chart A**

**Credit Cards To HDI**



Australians took advantage of this opportunity to supersize their credit commitments: the ratio of card balances to HDI increased even faster, from 1.72% of HDI in late 1994 to 6.23% now--more than 3.6 times as much (credit card transactions also rose from 0.7% of HDI to 2.42%).

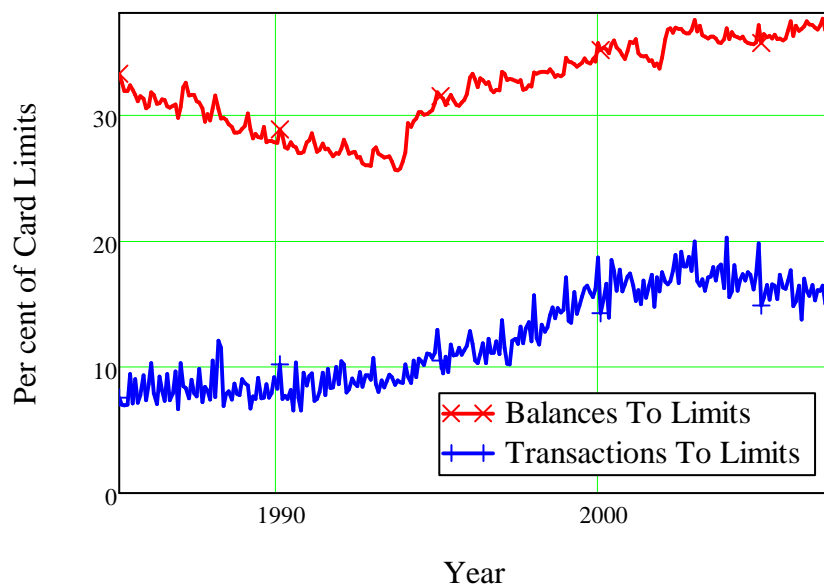
Card usage therefore also increased: in the depths of the 1990s recession, Australians used just over 25 per cent of their aggregate credit card limit; now they are using almost 37 per cent (Chart B).

The anecdotal observation that financiers are pushing credit onto the Australian public is thus no mirage. The questions "would you like a new credit card?" and "would you like an increase in your credit limit?" at the bank did indeed become the equivalent of "would you like fries with that?" and "would you like to supersize your meal?" at a fast food restaurant.

Similarly, just as there is an obesity epidemic, there is an epidemic of credit usage--"everyone is paying for everything with credit rather than cash".

Additional credit expands our ability to buy something now, but every new dollar of spending power today adds ten cents of interest payment commitments for the indefinite future. So just as having your fast food meal supersized feels good now, but then weighs you down with excess kilos for life, accepting credit makes you temporarily wealthier but permanently poorer--unless you put that credit to good use.

If the credit goes to finance productive investment, then there can be a return on those metaphorical kilos: they can be akin to eating protein bars to help put on muscle at the gym.

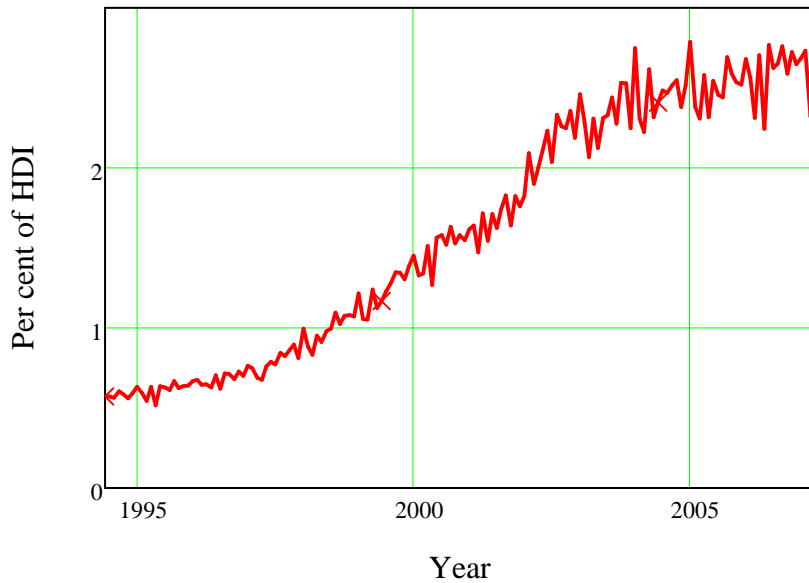
**Chart B****Credit Cards Usage**

But if the credit instead finances consumption (or asset price inflation) then the effect is more like stacking on kilos around the midriff courtesy of an indigent lifestyle. The evidence, in Australia's case, clearly favour the "muffin-top" rather than "protein bar" analogy. Most of the increase in indebtedness in the last seventeen years has been used to finance purchases of existing residential houses--and their fitout with expensive imported consumer items--rather than to finance an expansion of Australia's productive capacity.

Australian households are clearly feeling the burden of the excess financial lard they have accumulated. Credit card repayments have risen from a trivial sum of less than 1/2 a cent in every household disposable dollar, to a far more substantial 2.75 cents in the dollar in the last dozen years (Chart C).

Unfortunately, reducing accumulated debt may be even more difficult than removing excess kilos from a supersized body. We have also gone well past merely overweight into the obese range now: private debt is more than one and a half times GDP, and it is growing almost twice as quickly.

This dramatic expansion in credit card purchasing power--and its matching liability of substantially increased credit card financing commitments--underscores the main issues addressed by Debtwatch: that there has been an unsustainable blowout in debt relative to income, and that at some stage, correcting this imbalance must trigger a serious recession.

**Chart C****Credit Card Repayments**

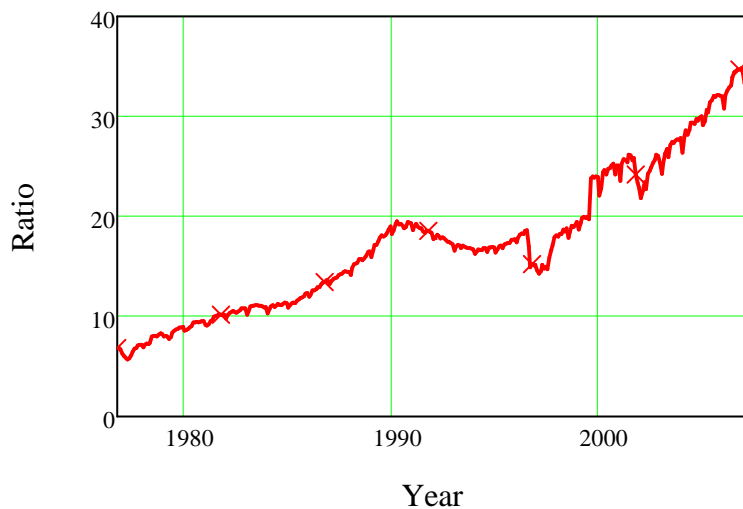
The trend in growth of debt relative to GDP has been well covered in previous Debtwatch reports (and features as Figures 1 and 2 below). However, there is also a tendency for debt to blowout relative to components of the money stock. Chart D shows the ratio of Debt to the Money Base--the one part of the money supply that is directly under the control of the Reserve Bank and the Government. That displays the same secular trend as for Debt to GDP, along with the reversal of this trend during the 1990s recession.

The secular trend is the more important aspect of the data here: the ratio of debt to "paper currency" has risen from under ten to one in the 1970s to almost 40 to 1 now. The rate at which money creation has been credit-driven during this long boom should be obvious.

A more cyclical message comes from the comparison of Debt to M3 and Broad Money--the most broadly defined component of the money supply as measured by the RBA (Chart E). As with the Debt to GDP ratio, we are in uncharted territory here.

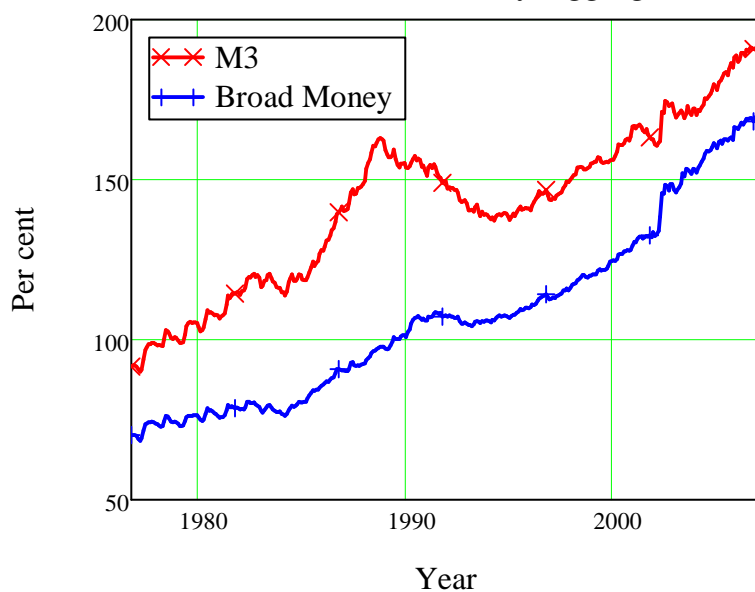
**Chart D**

### Ratio of Debt to Money Base



### Chart E

### Ratio of Debt to Money Aggregates



### The RBA Decision

Recent instability in global financial markets--in particular, the failure of the Bear Stearns sub-prime mortgage brokerages--has made it extremely unlikely that the RBA will take a risk and increase interest rates.

### Aggregate Data and Trend Growth Rates

Debt yet again rose faster than GDP last month, with the ratio increasing a further 0.55 per cent last month to 153.33 per cent (see Table One). In contrast to the trend of the last seventeen years however, the fastest-growing segment was business debt, which rose almost 2 per cent over the month and is growing at an annual rate of just under 17 per cent (versus about 13 per cent for personal debt)--more than twice the growth rate of nominal GDP (see Table Two).

Table One

**Table One**

	0	1	2
0	"Summary"	"Total Private Debt"	"Nominal GDP"
1	"Date (levels)"	2007.33	2007.25
2	"Levels (\$m)"	1583009	1024656
3	"Change Month \$m"	20471	7657.9
4	"Change Month %"	1.31	0.75
5	"Change Year \$m"	199571	73813
6	"Change Year %"	14.43	7.76
7	"Since 1990"	8.48	5.38
8	"Since 1980"	11.97	7.94
9	"Since mid-1964"	13.5	9.43
10	"Date (% GDP)"	2007.33	"N/A"
11	"As % of GDP"	153.33	100
12	"Change Month"	0.55	"N/A"
13	"Change Year"	5.99	"N/A"
14	"Since 1990"	2.85	"N/A"
15	"Since 1980"	4.09	"N/A"
16	"Since mid-1964"	4.17	"N/A"

D<sub>1</sub> =**Note to Subscribers**

I am attempting to standardise each month's report with an initial commentary followed by a standard set of tables and graphs. The format will doubtless evolve over time; please bear with any glitches in presentation, numbering, etc., as this process unfolds. These two tables will be a standard part of this presentation, and I am open to requests to include any other ratios (or graphs) that you might find useful. Please email suggestions to [s.keen@uws.edu.au](mailto:s.keen@uws.edu.au), or post them as a comment on [www.debtdeflation.com/blogs](http://www.debtdeflation.com/blogs).

**Table Two**

	0	1	2	3
0	"Detail"	"Business"	"Mortgage"	"Personal"
1	"Levels (\$m)"	595459	849380	138169
2	"Change Mth \$m"	11236	8299	936
3	"Change Mth %"	1.92	0.99	0.68
4	"Change Yr \$m"	85583	97690	16298
5	"Change Yr %"	16.79	13	13.37
D <sub>2</sub> = 6	"Since 1990"	4.77	14.73	5.32
7	"Since 1980"	10.61	14.03	10.44
8	"Since 1976"	11.15	14.31	11.23
9	"As % of GDP"	57.66	82.24	13.38
10	"Change month"	1.12	0.2	-0.11
11	"Change year"	8.14	4.63	4.98
12	"Since 1990"	-0.89	9.28	-0.48
13	"Since 1980"	3.01	6	2.61
14	"Since 1976"	3.08	5.76	2.98

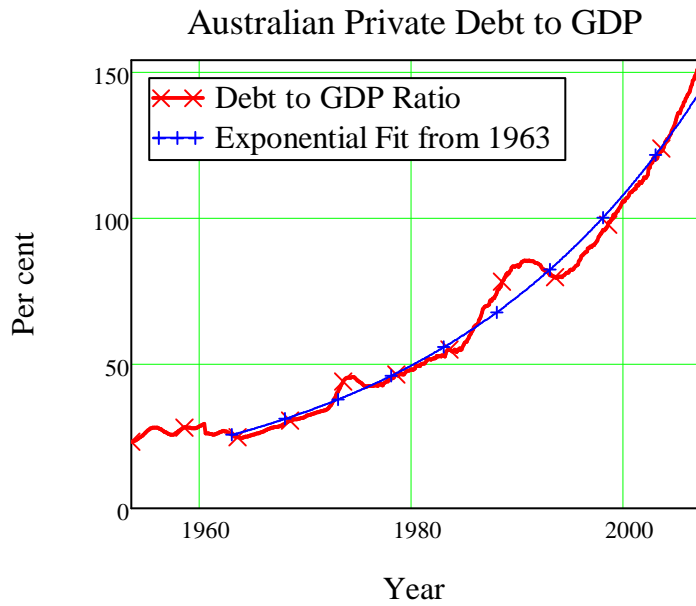
**Debt to Income Ratios**

▣ Debt to GDP (D02 &amp; G12)

**Figure 1**

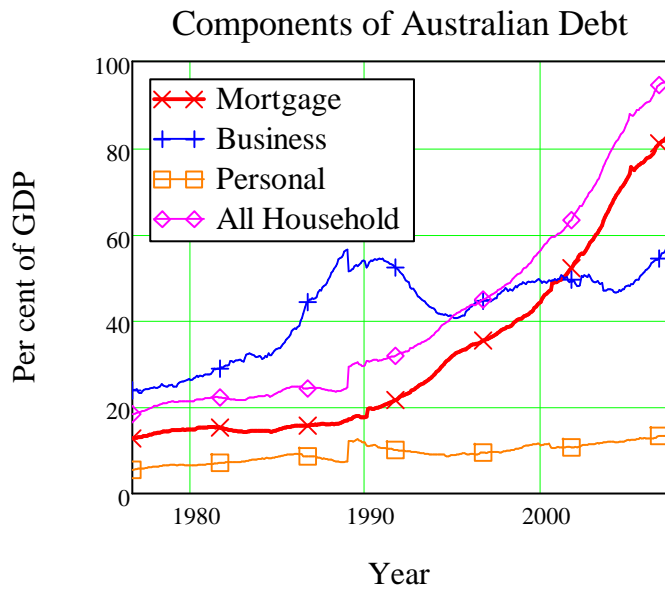
▢ Debt to GDP Regression

**Figure 2**



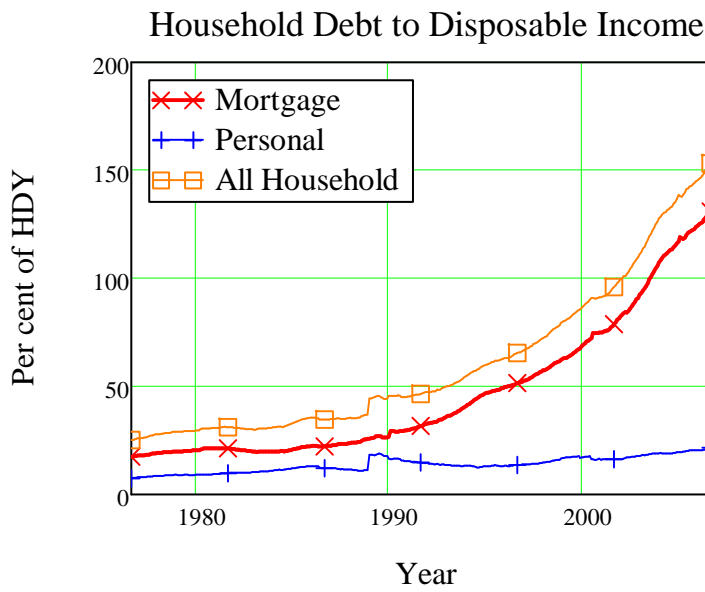
▢ Debt Components to GDP

**Figure 3**



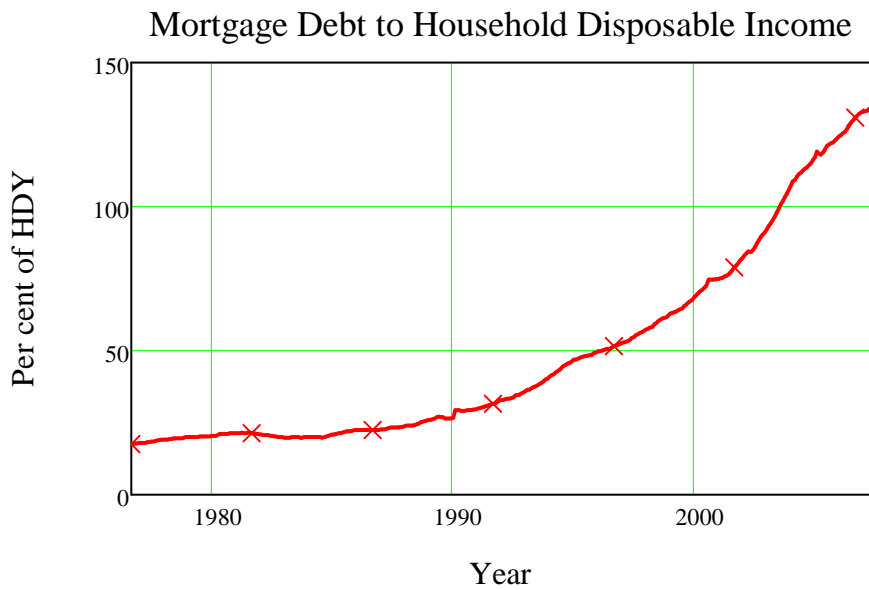
▢ Debt to Household Disposable Income

**Figure 4**



▣ Mortgage Debt to Household Disposable Income

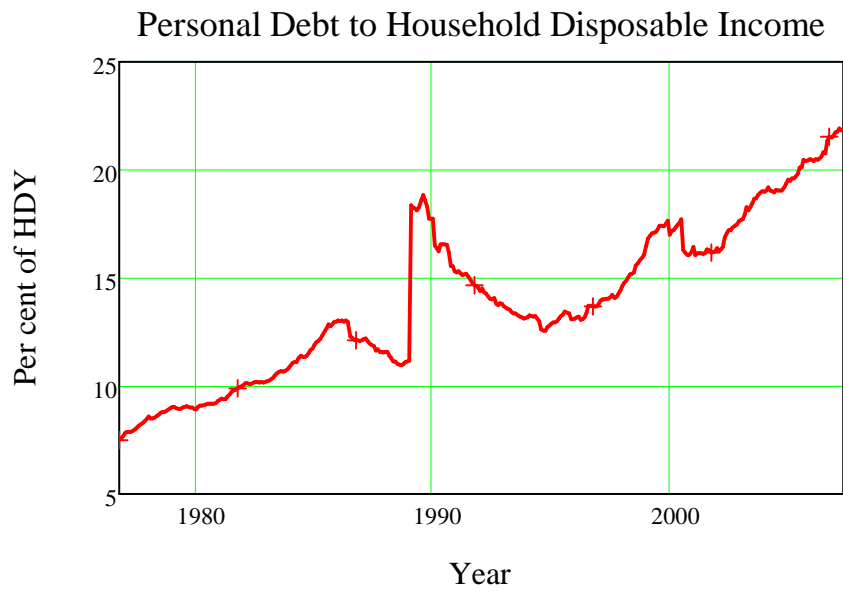
**Figure 5**



▣ 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**

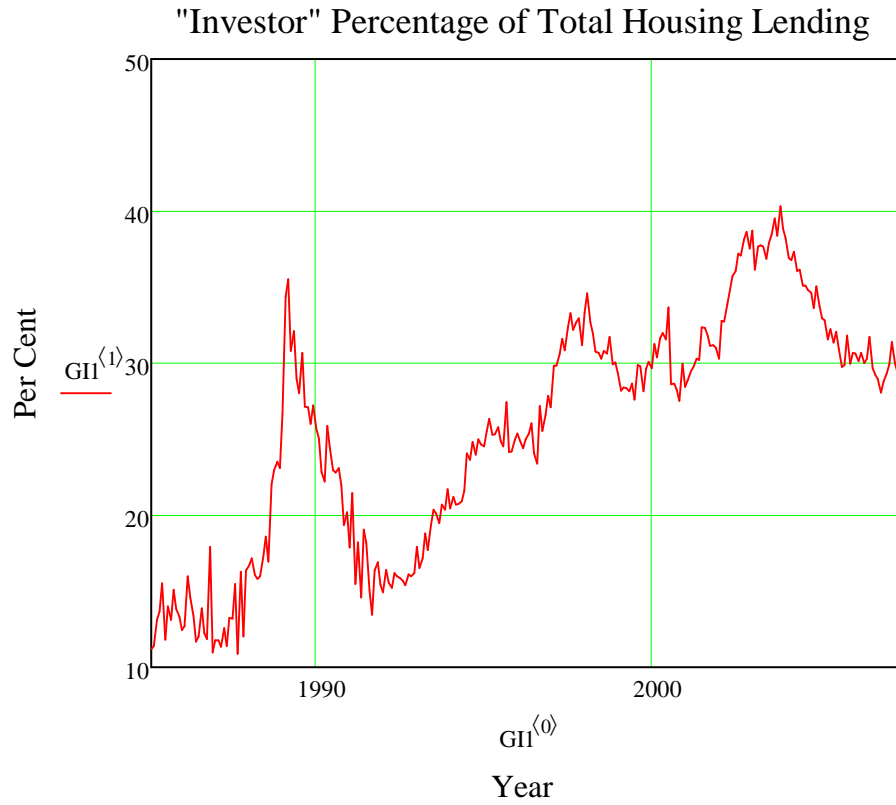
▢ Business Debt to GOS

**Figure 7**

## Housing Finance Analysis

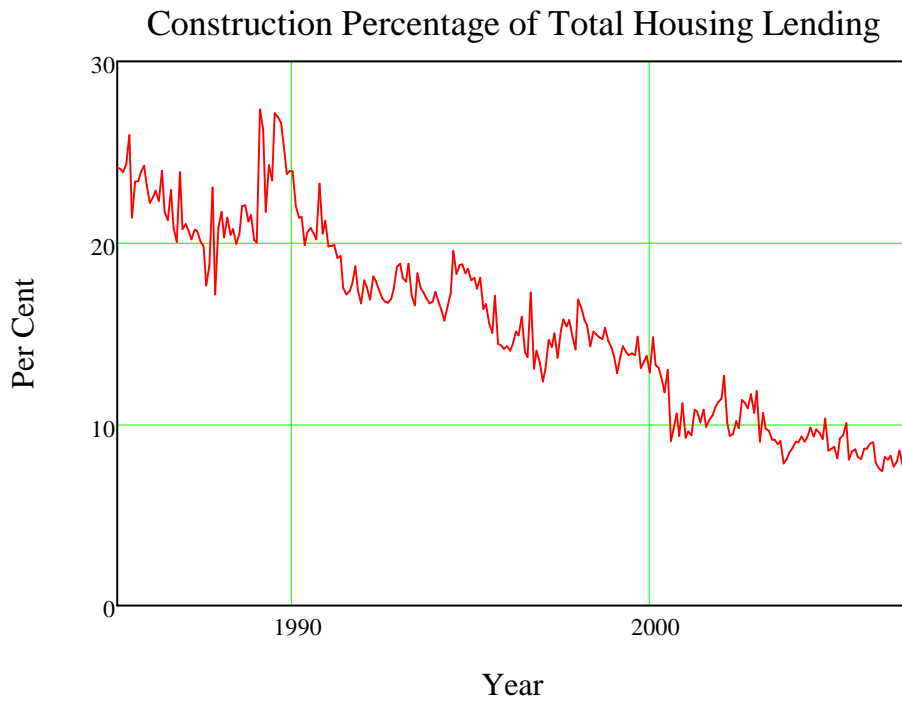
Investment Percent Total Housing Lending

**Figure 8**



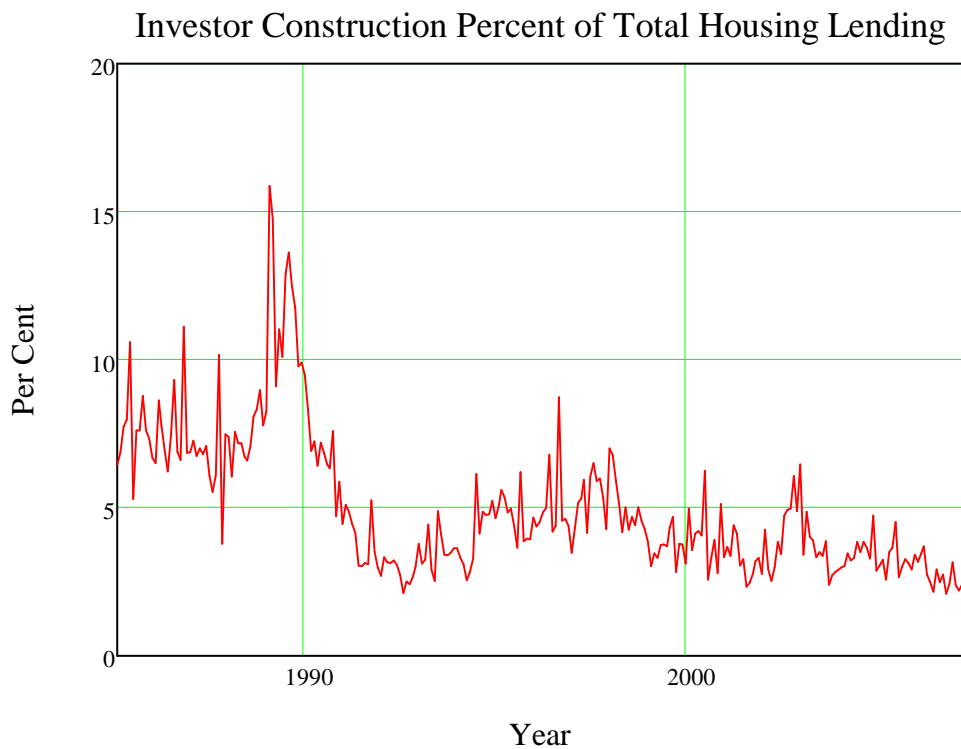
Construction Percent Total Housing Lending

**Figure 9**




▣ Investment Construction Percent Total Housing Lending

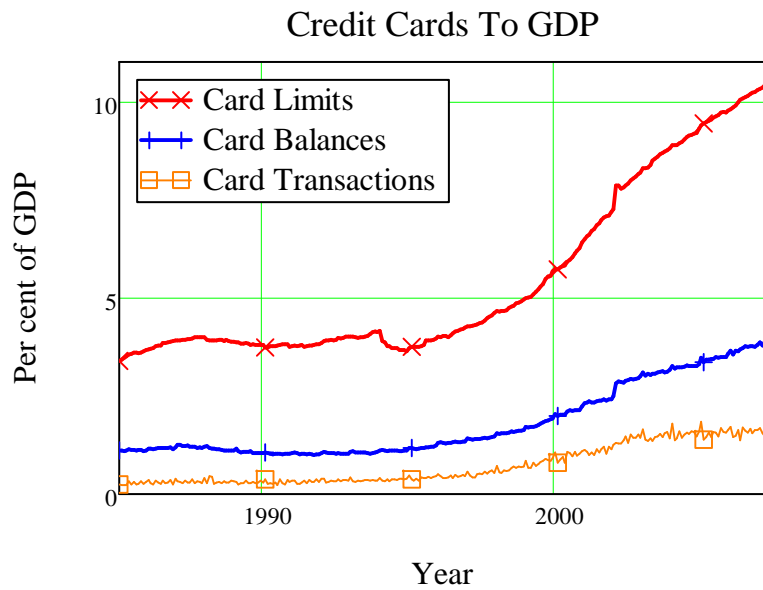
**Figure 10**



**Personal Finance Analysis**

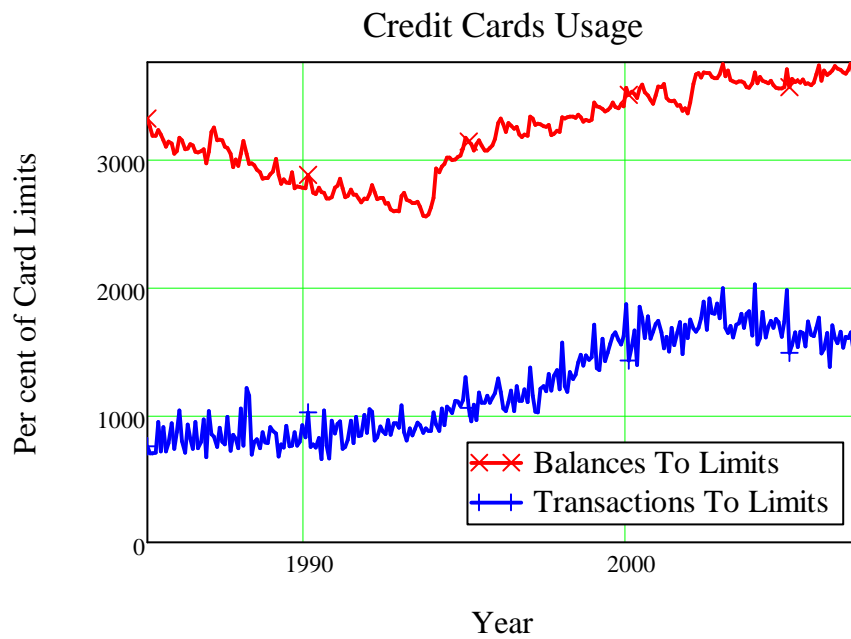
**Figure 11**

 Credit Card Data



**Figure 12**

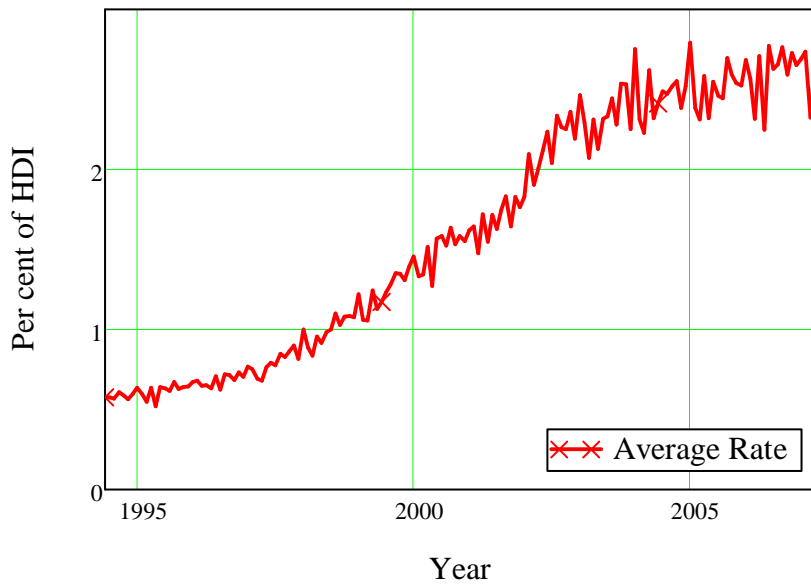
 Credit Card Data



**Figure 13**

 Credit Card Repayments

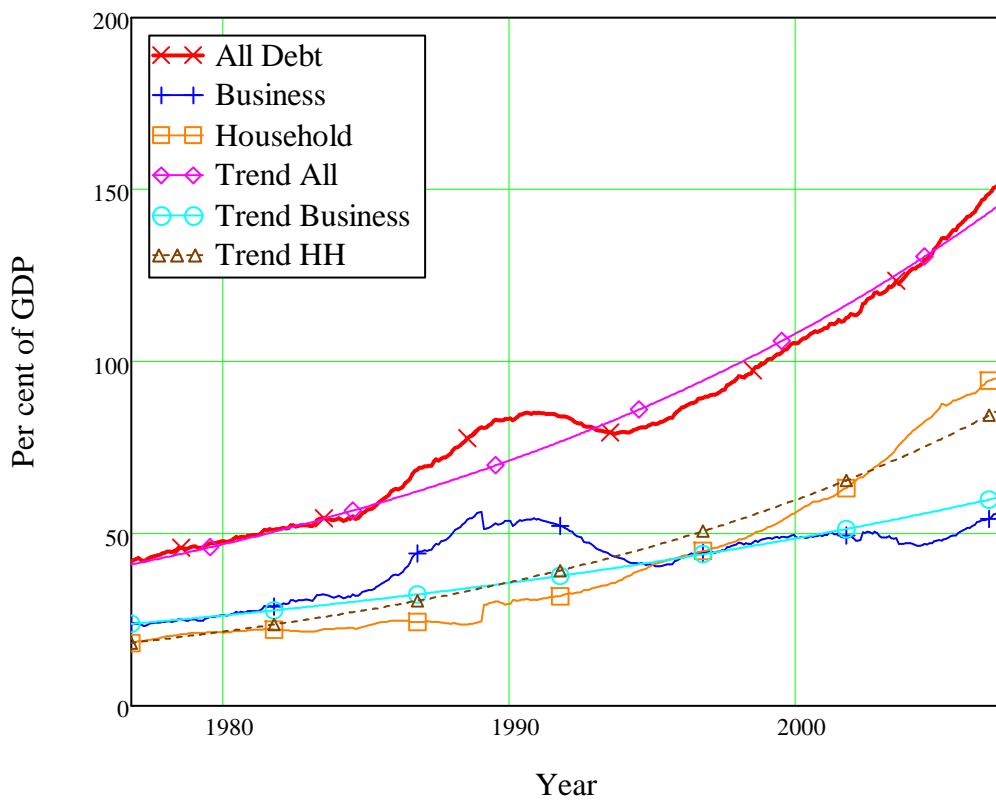
### Credit Card Repayments



▢ Debt components to Income

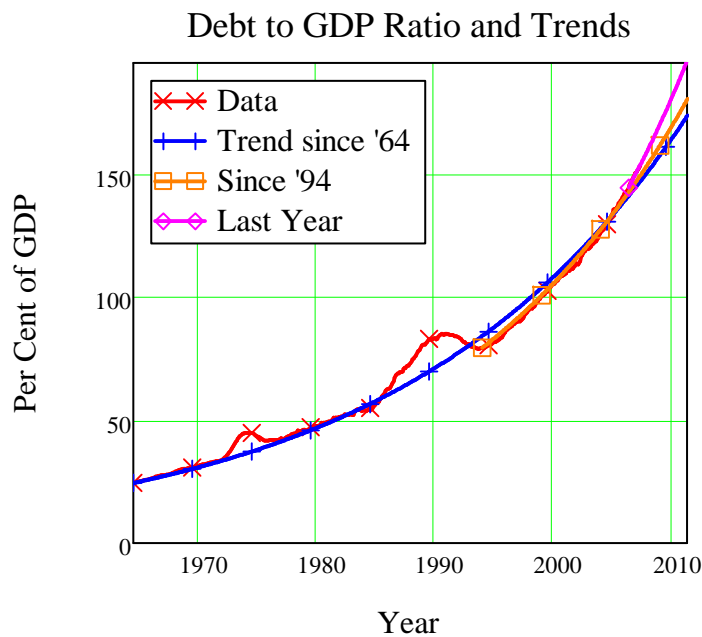
**Figure 14**

### Trends in Private Debt



▢ Debt to GDP Trends

**Figure 15**



**▣ Debt to GDP 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.

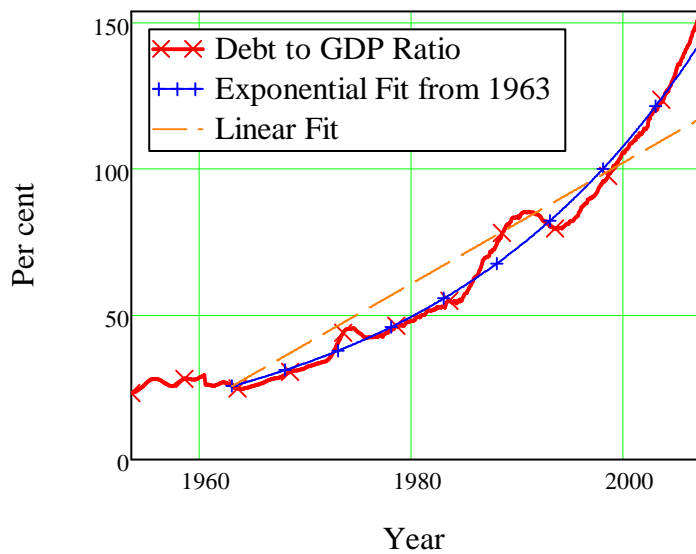
**Table Three: Exponential Growth Rates & Correlations since 1964 & 1977**

	0	1	2	3	4	5
Corr77 =	0 "Debt ratios"	"All"	"All"	"Business"	"Household"	"Mortgage"
	1 "Start Date"	"mid-1964"	1977	1977	1977	1977
	2 "Growth rate"	4.17	4.05	3.09	5.07	5.76
	3 "Correlation"	99.11	98.43	73.46	98.11	98.02
	4					

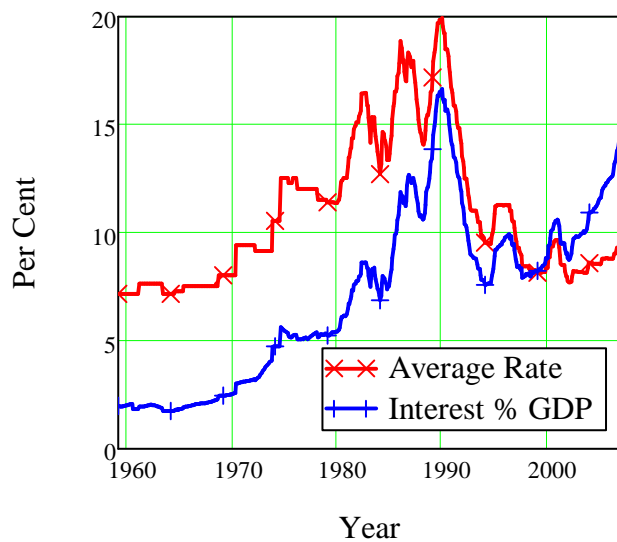
**Table Four: Exponential Growth Rates & Correlations since 1990**

	0	1	2	3	4
Corr90 =	0 "Debt ratios"	"All"	"Business"	"Household"	"Mortgage"
	1 "Start Date"	1990	1990	1990	1990
	2 "Growth rate"	2.8	-0.97	6.81	9.32
	3 "Correlation"	96.46	-17.31	99.67	99.76

## ▶ Debt to GDP Linear vs Exponential Regressions

**Figure 16****Australian Private Debt to GDP****Debt Servicing Burden**

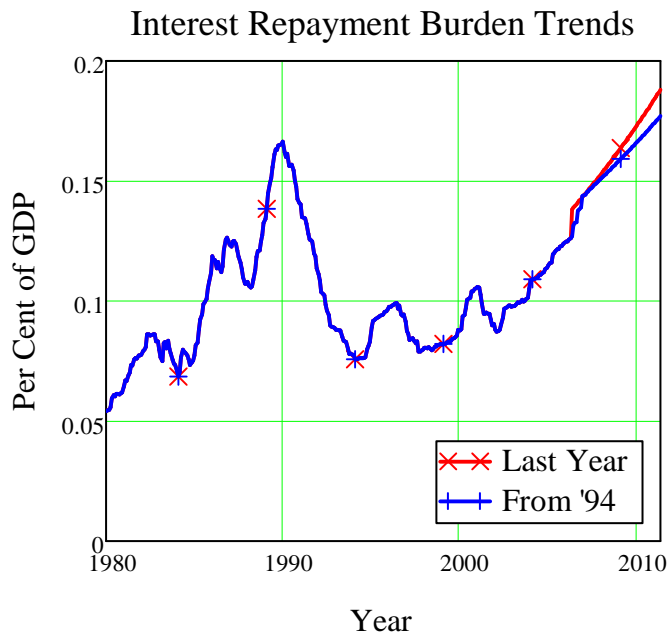
## ▶ Interest Rates &amp; Payments

**Figure 17****Interest Rates & Interest Burden**

## ▶ Interest Payment Trends

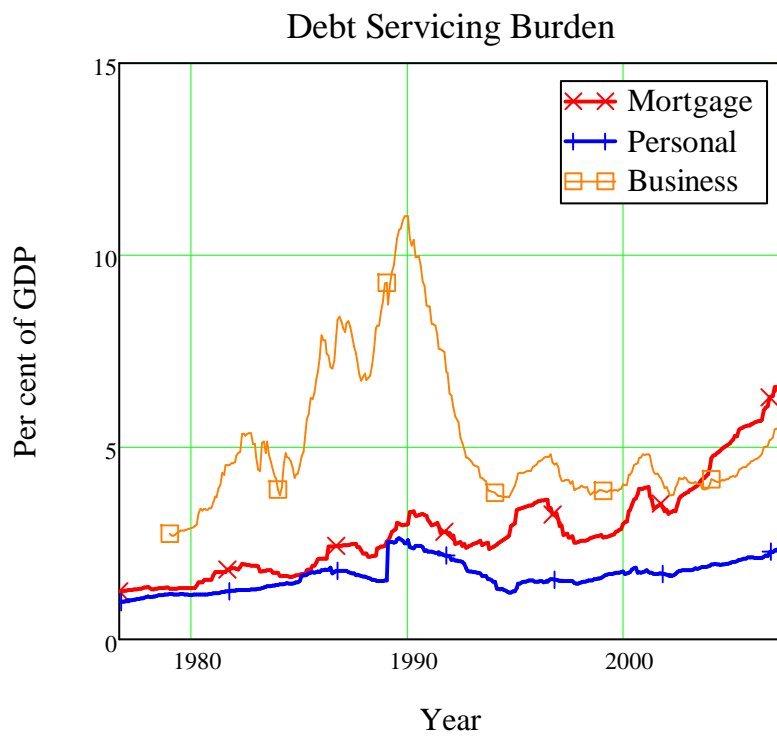
If trends in debt growth continue, then even without any increases in official interest rates, the interest repayment burden on the economy will exceed that of 1990 sometime between September 2008 and September 2009.

**Figure 18**



▢ Debt Servicing by Loan Type

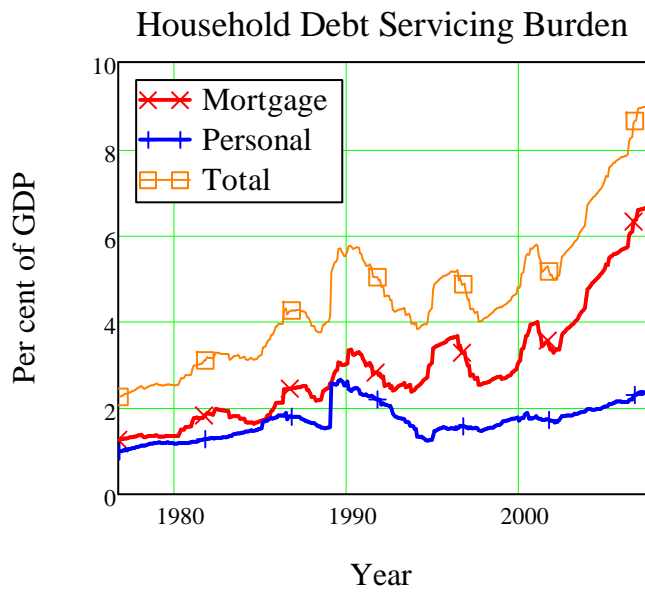
**Figure 19**





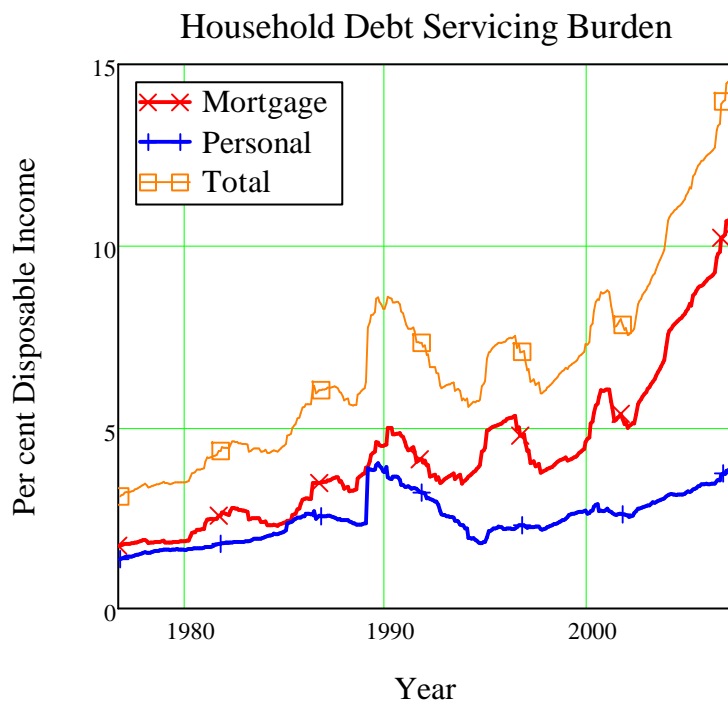
▢ Household Debt Servicing

**Figure 20**



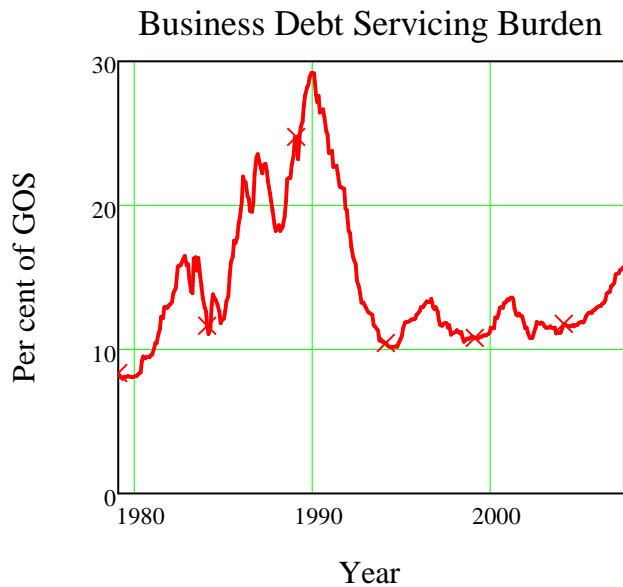
▢

**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.

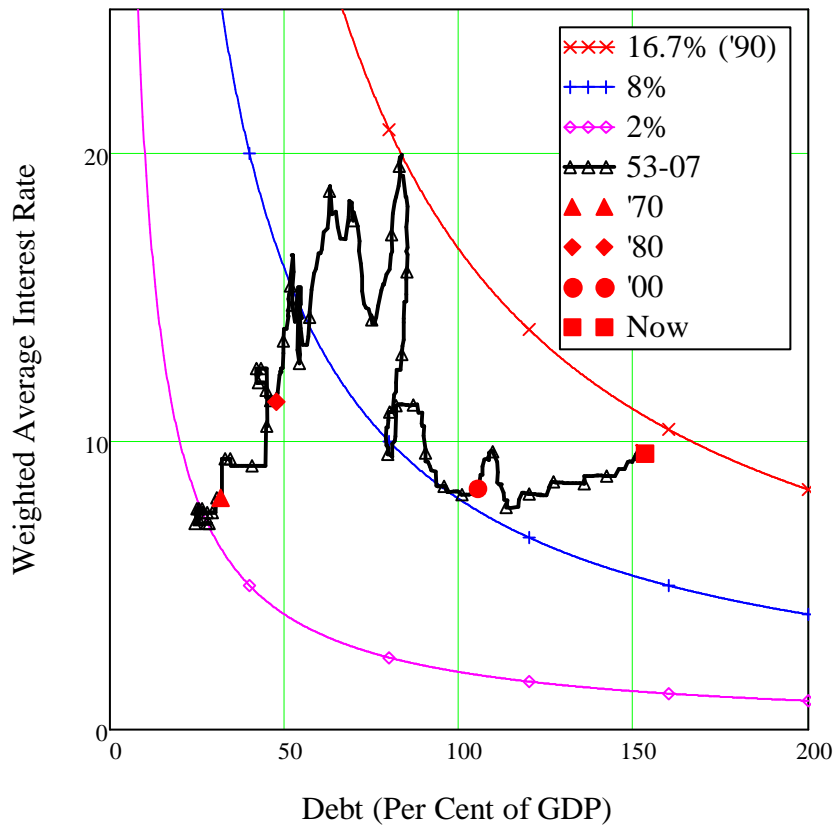
**Figure 22**



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

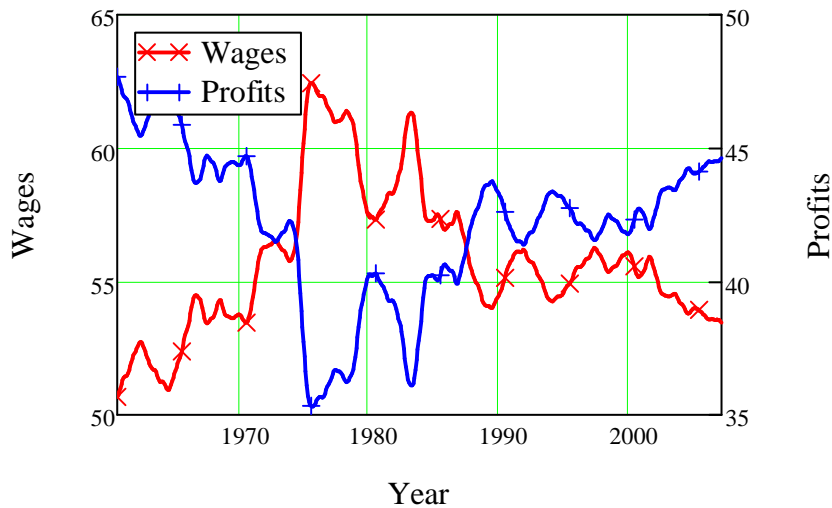


### Income Shares



Figure 24

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

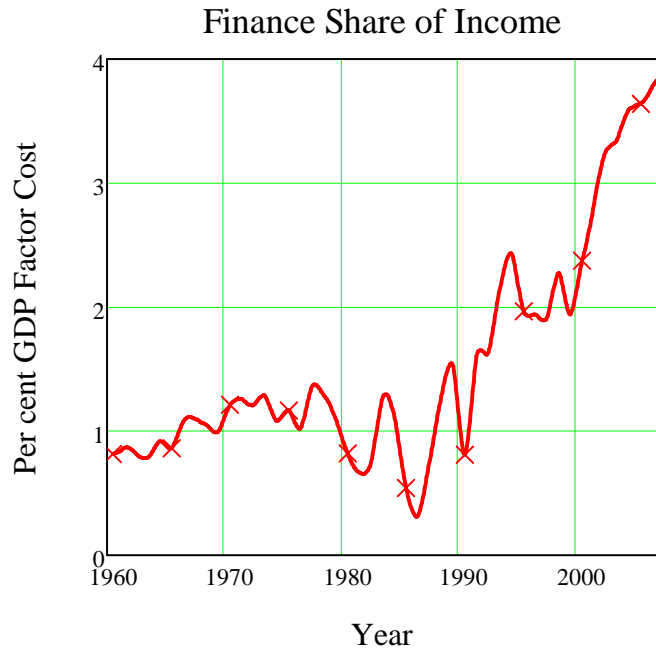


In the "it's an ill wind that blows no good" category falls the impact of rising debt levels on the share of income going to finance capital. Having shown no trend at all between 1960 and 1990, it has suddenly

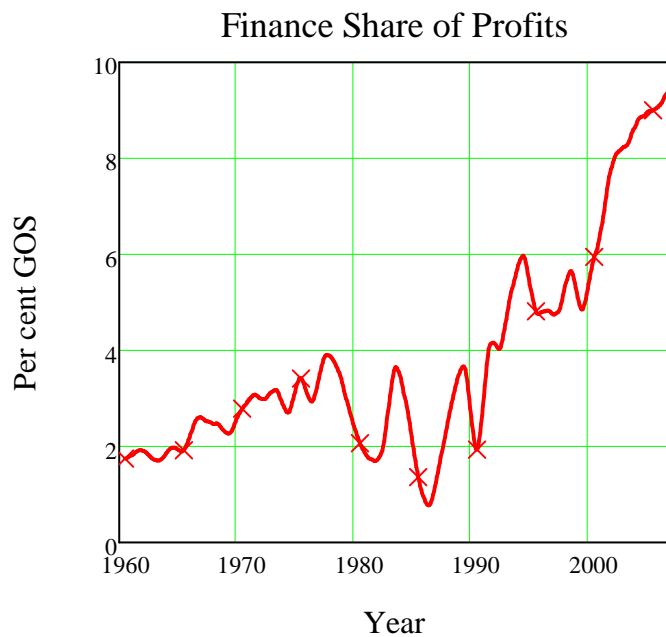
blown out in the last seventeen years, to almost four times the previous average level.

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**

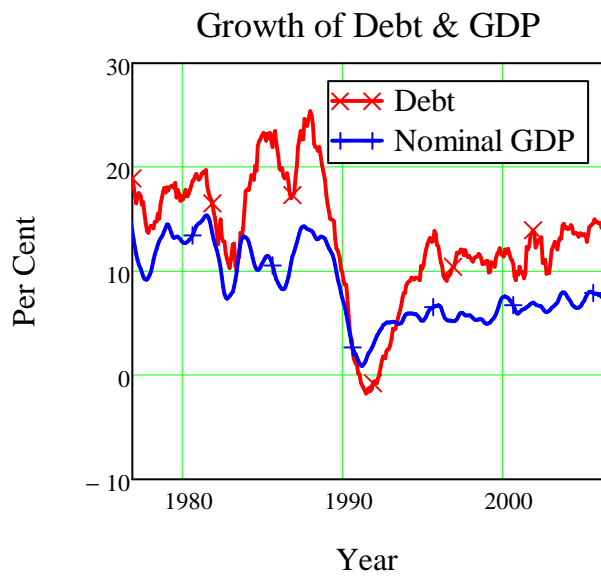


**Figure 26**

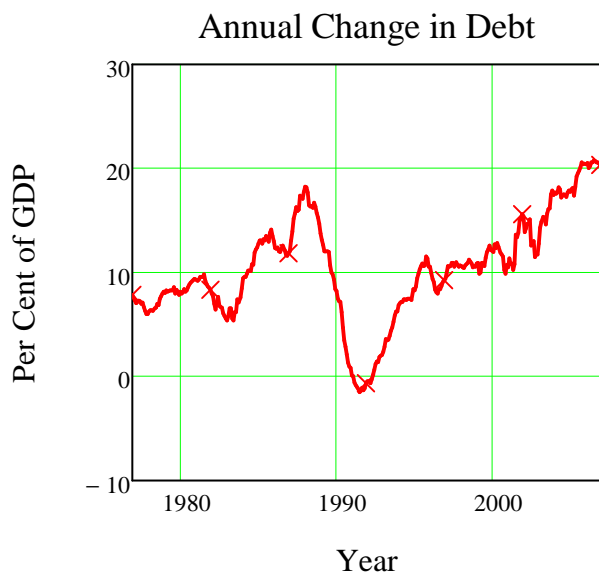


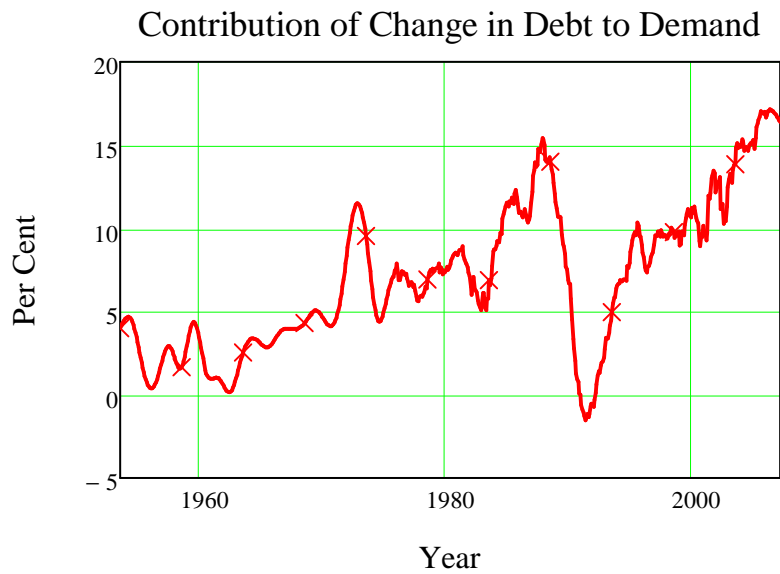
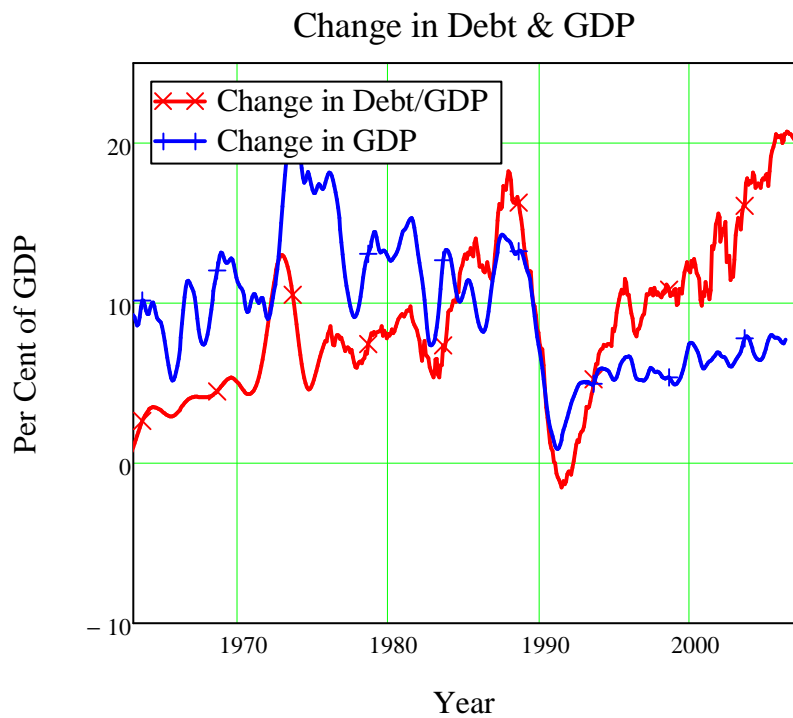
***Debt contribution to Effective Demand***

**Figure 27**



**Figure 28**

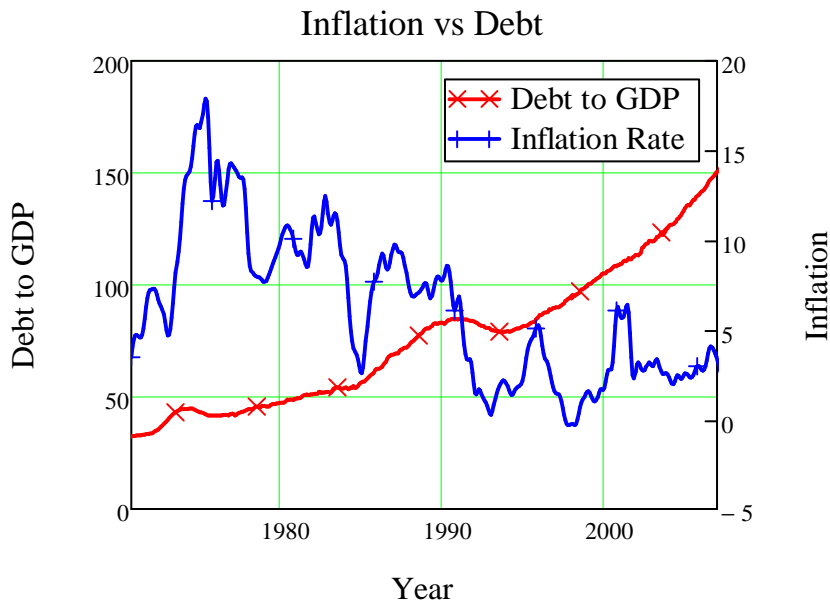


**Figure 29****Figure 30**

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).

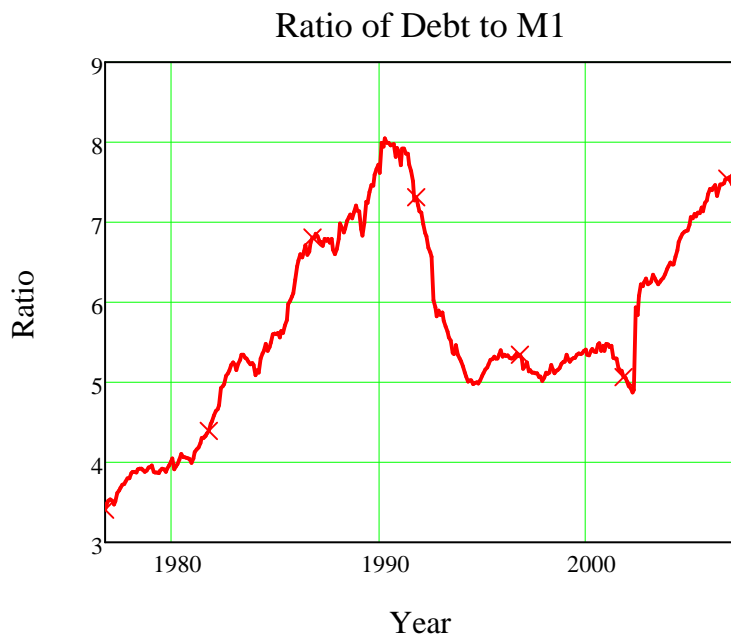
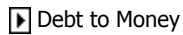
**Figure 31**



**Monetary Aggregates**

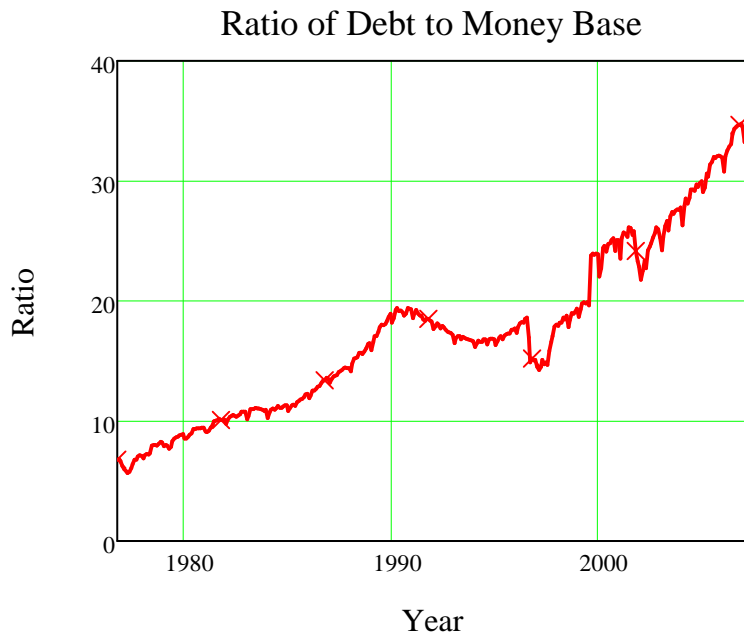
(The M1 series was affected by a substantial reclassification of assets in early 2002. I expect that the apparent downward trend in the debt to M1 ratio across 2001 can be ignored as a statistical anomaly, later corrected by the reclassification)

**Figure 32**



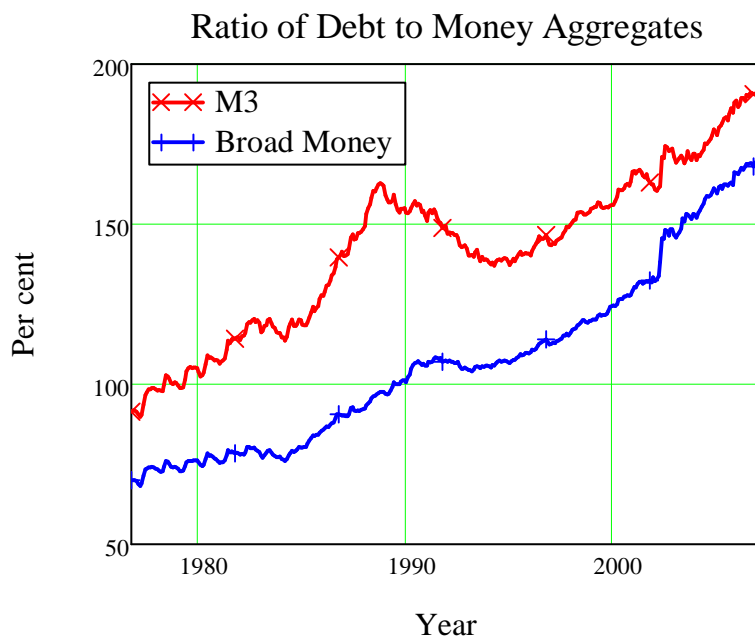
**Figure 33**

Debt to Money



**Figure 34**

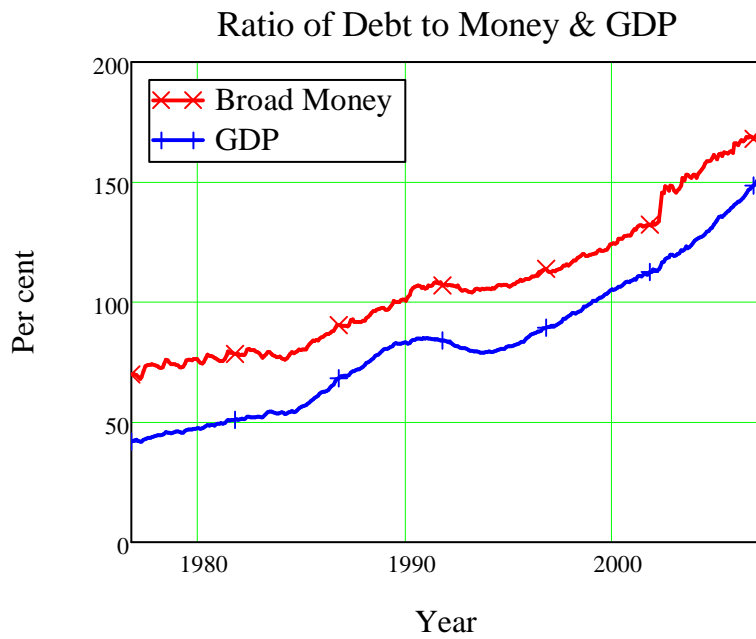
Debt to Money





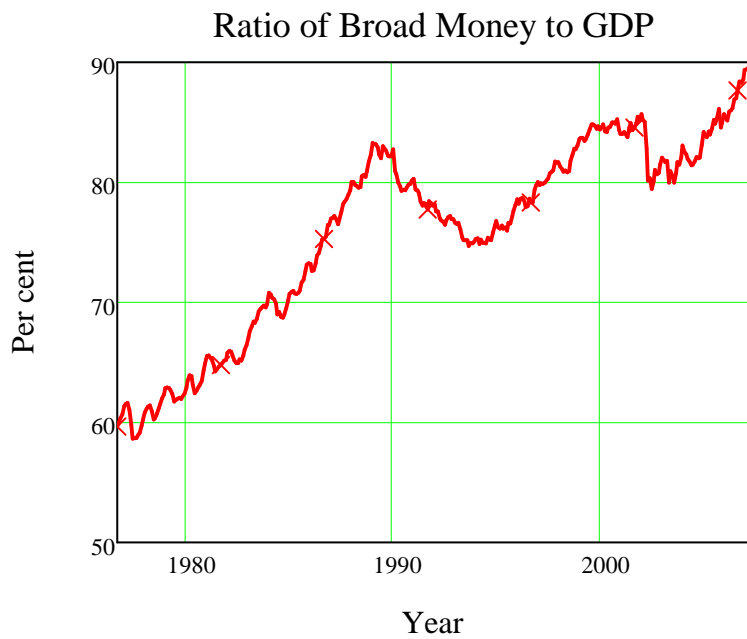
**Figure 35**

▢ Debt to Money



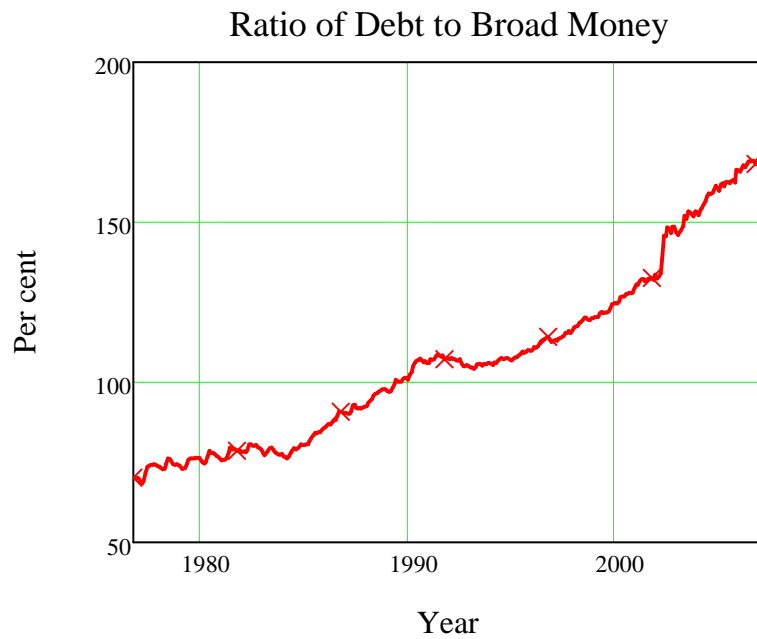
**Figure 36**

▢ Debt to Money



**Figure 37**

▢ Debt to Money

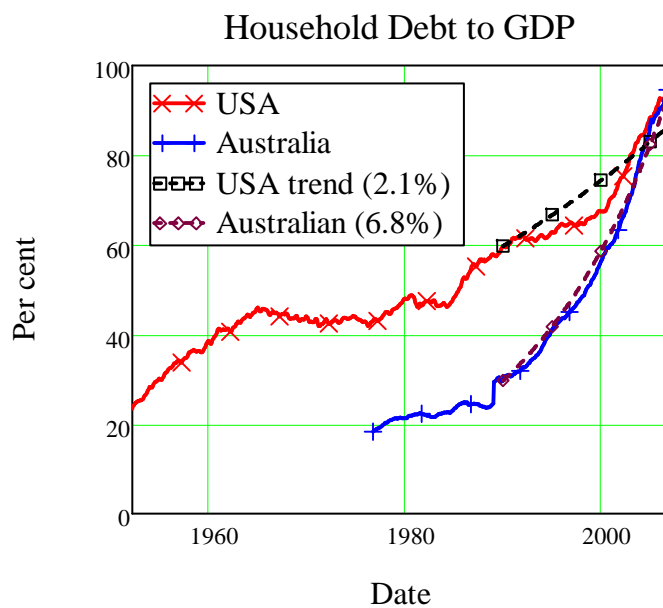


## International Data

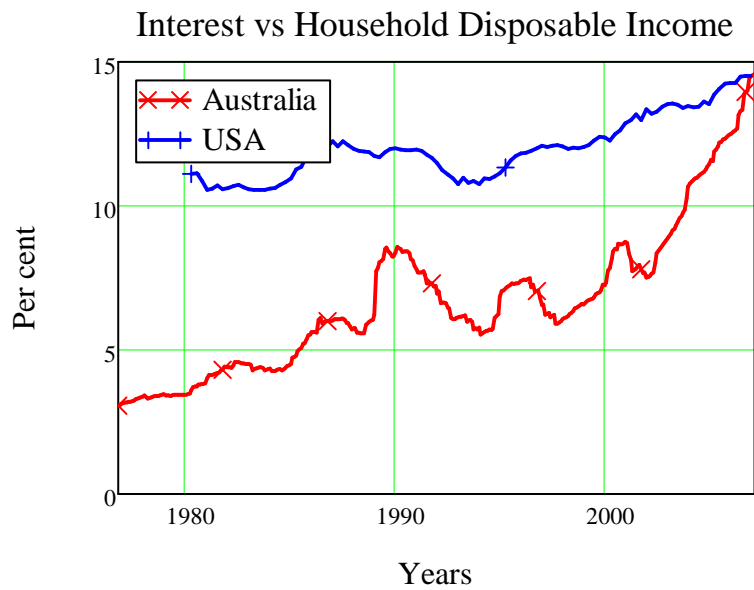
### USA Data and USA-Australia Comparisons

**Figure 38**

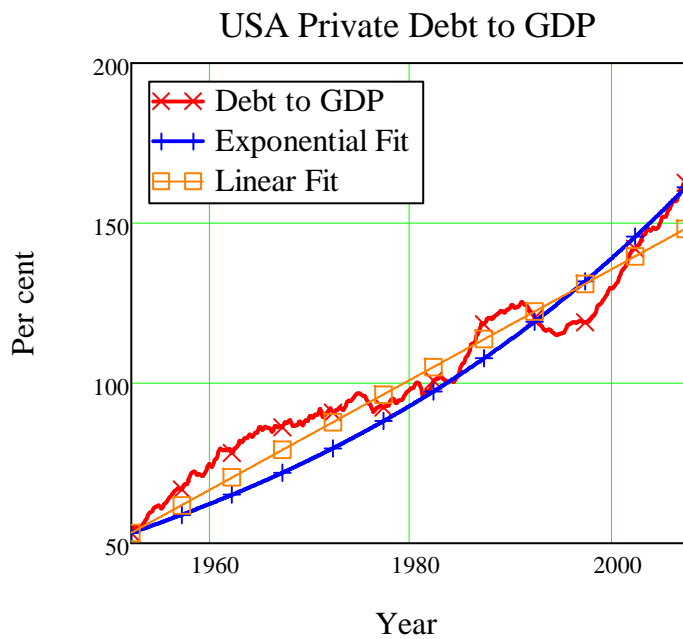
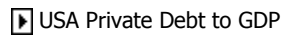
▢ USA-Australia Household Debt Comparison



**Figure 39**

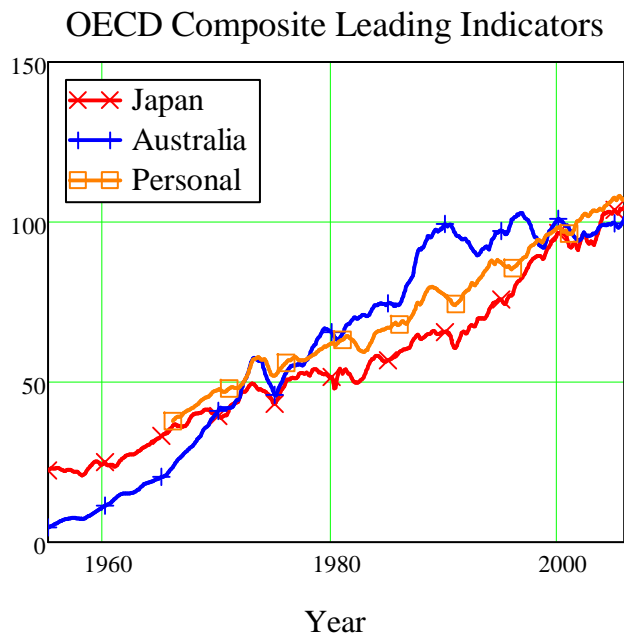


**Figure 40**

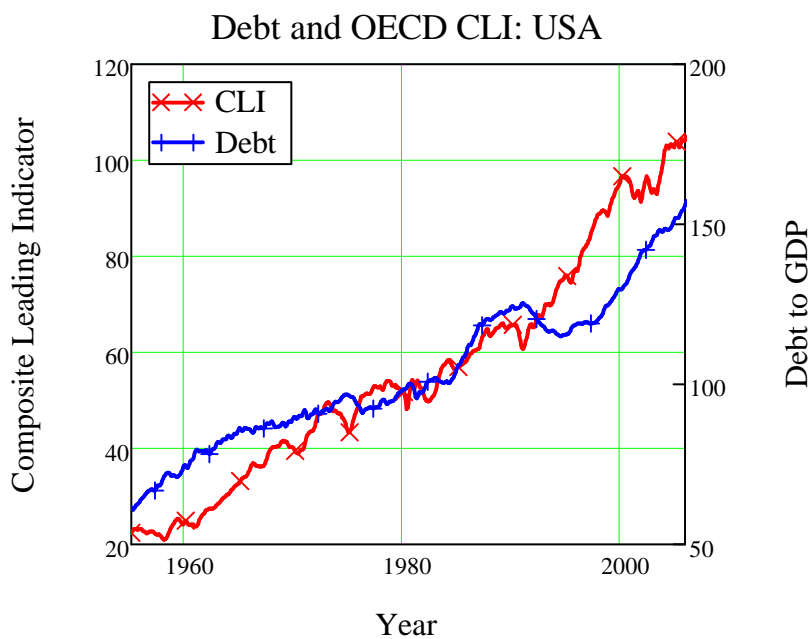


**Figure 41**



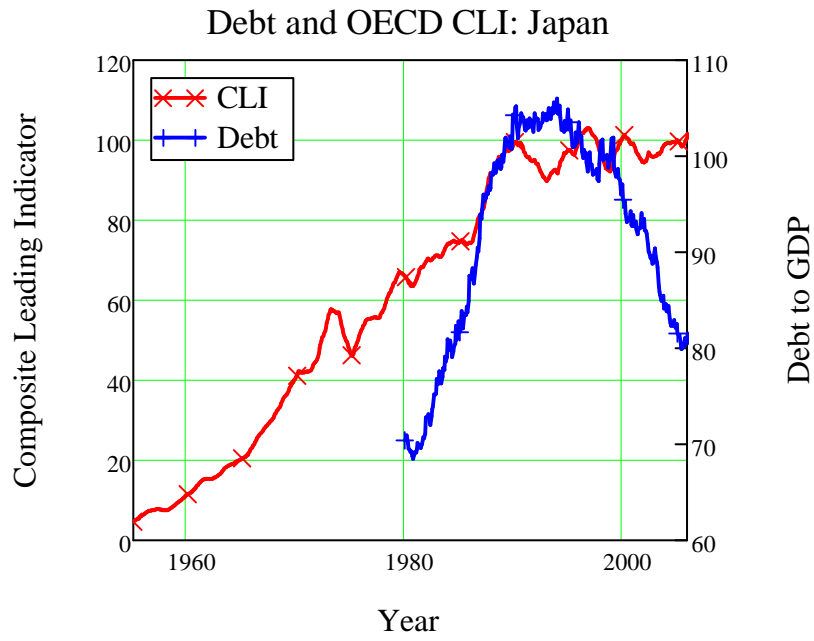


**Figure 42**

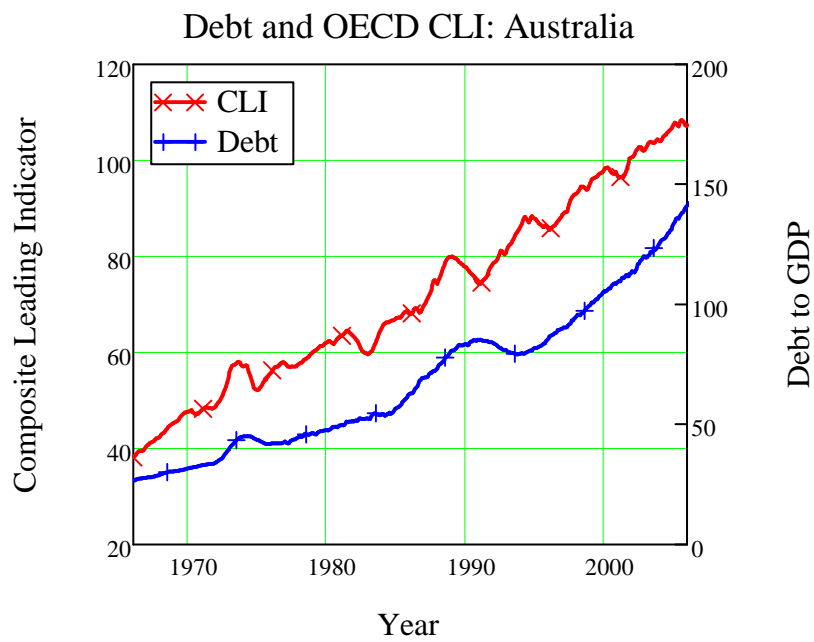


**Figure 43**

Japan was the last major economy to experience a debt deflation. Though I do not think the debt data here is comparable to that shown for the USA and Australia (which is sourced from their respective Central Banks), the role of debt in bringing the economy to a standstill is obvious from this chart. Equally obvious is how economically debilitating the process of reducing debt to income levels was--and also how necessary it was to be able to restore growth.



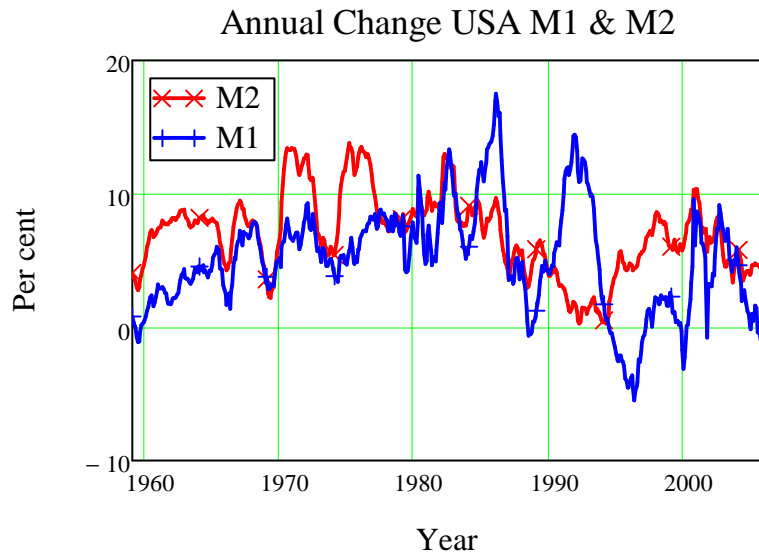
**Figure 44**



**Figure 45**

**USA Monetary Data**

▢ Change in USA Monetary Aggregates



▢ USA & Aus Debt

**Figure 46**

