



Steve Keen's Monthly Debt Report November 2006 **"The Recession We Can't Avoid?"**

Private debt is by far the most important economic issue today--far more so than the rate of inflation--and that should be the focus of policy attention.

Though inflation has risen recently, it is less than a quarter of the peak it reached in the mid-1970s; the debt ratio, on the other hand is more than three times larger (Figure 1).

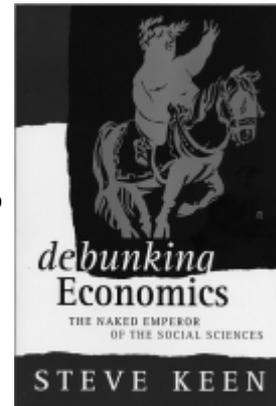
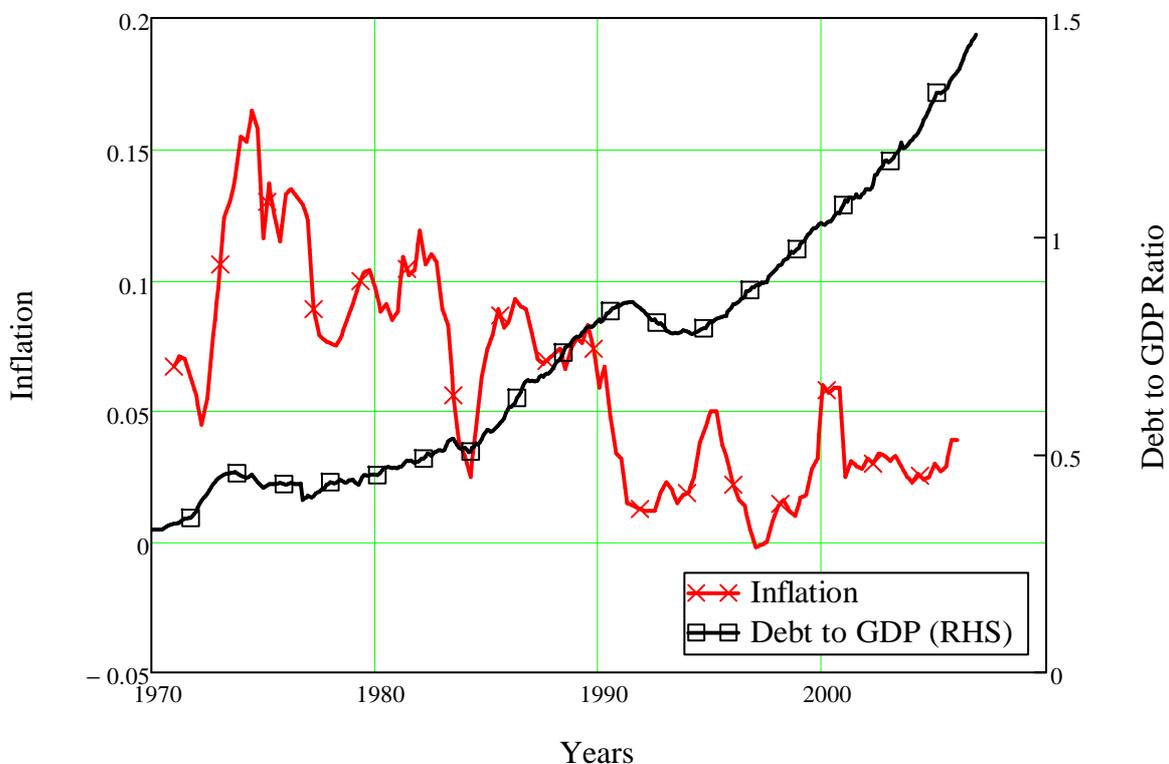


Figure 1: Inflation and the Debt/GDP Ratio



Unfortunately, the RBA will probably focus on inflation alone, and increase rates in an attempt to control inflation. This will, I fear, only make the problem of excessive debt worse.

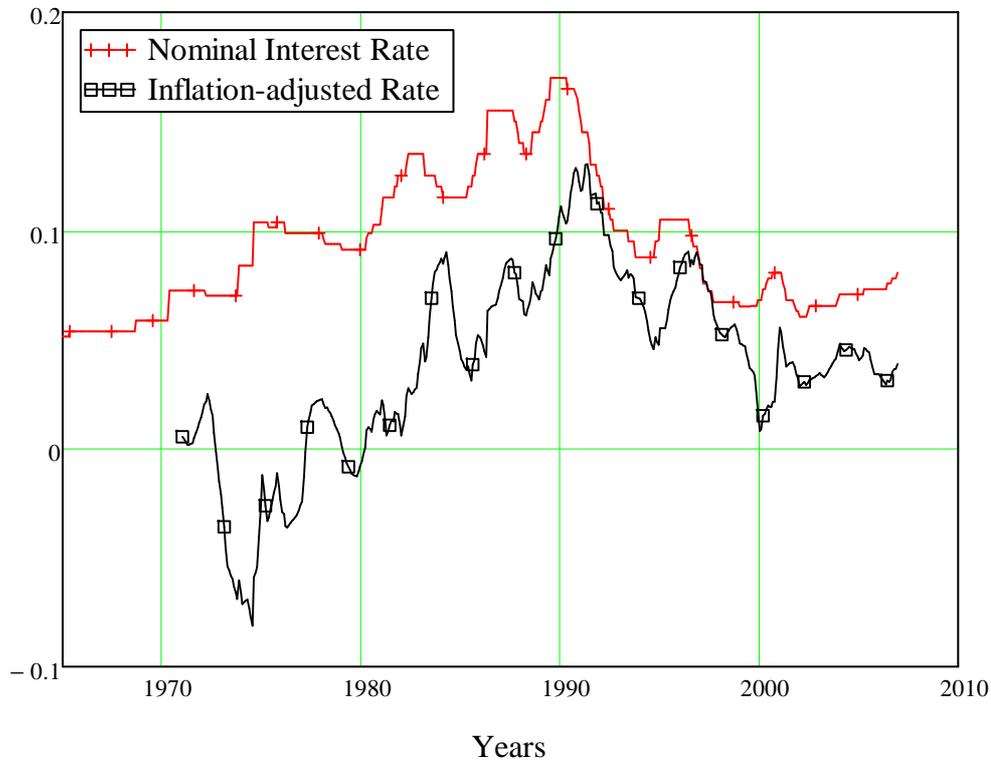
Fighting inflation and ignoring debt was a feasible policy choice when debt levels were "low"--say below the 50 per cent of GDP level that was first breached in 1982. But ever since then, the explosion in debt levels should have made debt at least as important an issue as inflation.

Whether or not the RBA has any method to control private debt--and the evidence suggests very strongly that it doesn't--its focus should be on the dangers of debt now, and not the dangers of inflation. Increasing rates would simply make the pain of a debt crisis worse, while doing little to reverse the trend towards excessive debt (see below). The RBA should leave rates on hold, and be ready to rapidly reduce them in future, should the economy fall into recession.

If the RBA does increase rates, then it may well contribute to the severity of the eventual downturn in the same way that excessive rate rises contributed to the severity of "the recession we had to have". The degree of tightening that has occurred since 2002 is already more than occurred in the

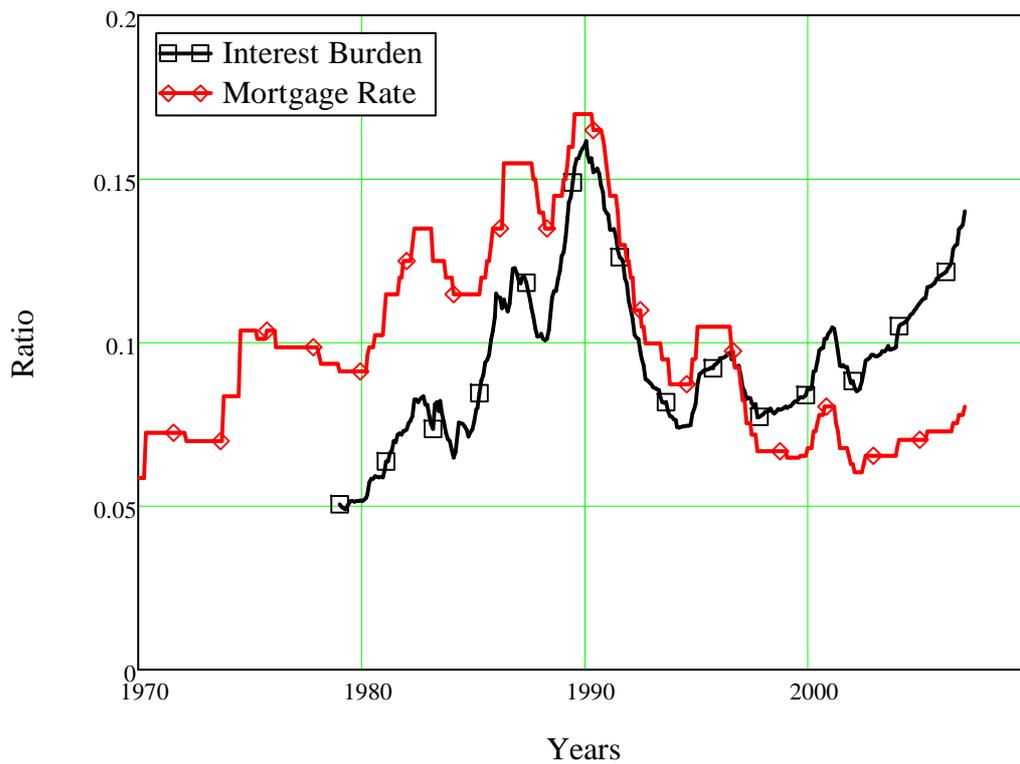
1988-1990 cycle (a 26% rise in mortgage rates from 13.5% to 17% then, versus a 29% rise from 6.05% to 7.8% now--though the inflation-adjusted rate now is much less than in the 80s; see Figure 2).

Figure 2: Nominal & Real Mortgage Rates



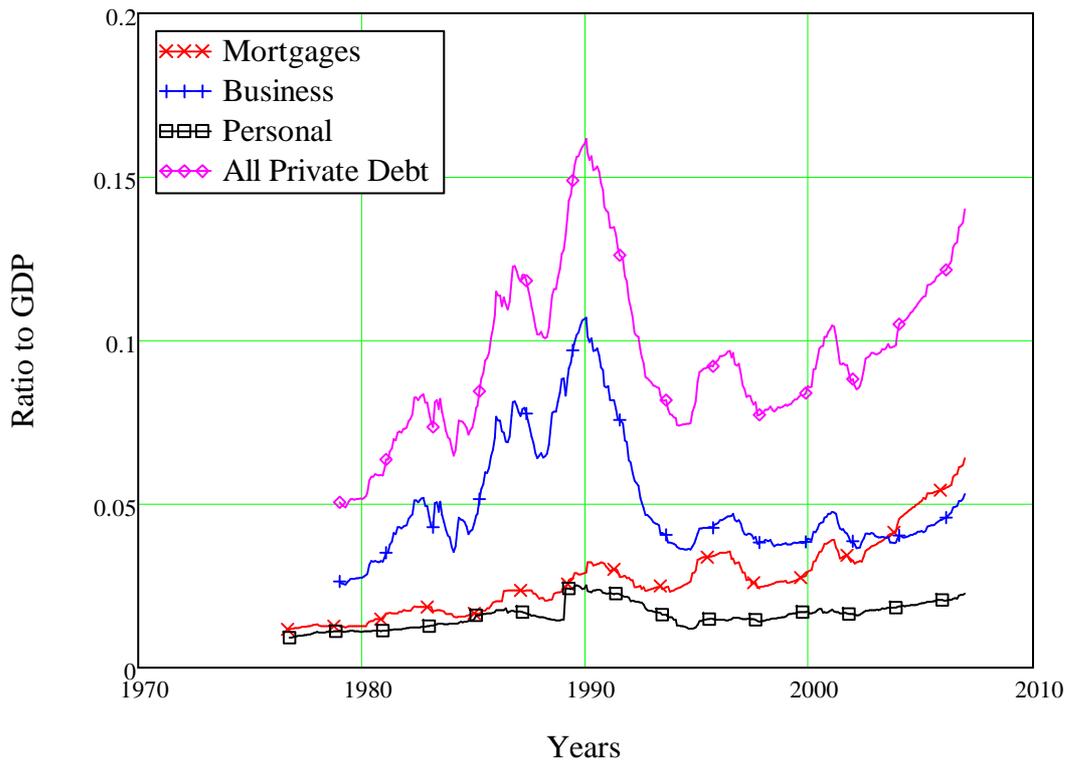
Despite the fact that mortgage interest rates are only half what they were in the 1990s, the overall debt burden is more than 13% of GDP. This is the highest debt burden since the peak of the 1990s recession (see Figure 3), even though interest rates are less than half what they were then.

Figure 3: Interest Rates and the Interest Payment Burden



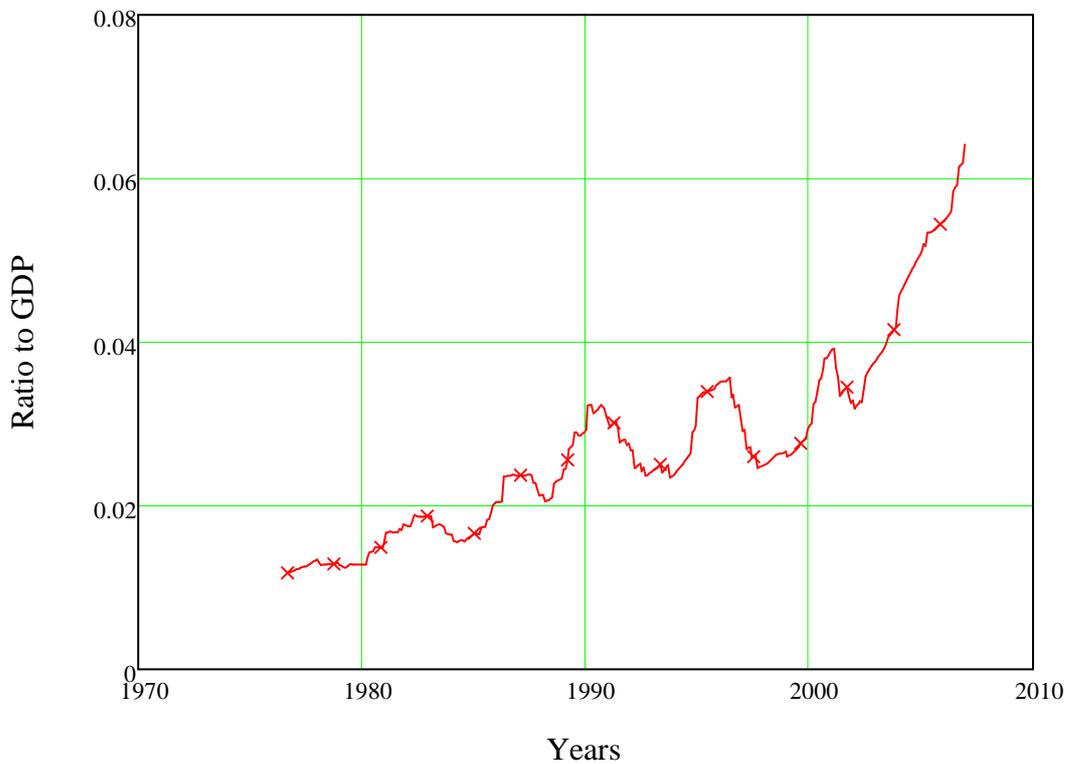
The combination of unprecedented levels of mortgage debt and rising interest rates is putting enormous financial pressure on Australian households. In the 1990s, the debt burden fell on the corporate sector. At its peak, interest payments on corporate debt accounted for over 10 per cent of GDP (Figure 4). Since then, corporate debt fell dramatically (though it is now rising again), and the corporate interest bill is less than half what it was in 1990.

Figure 4: Interest Payment Burden



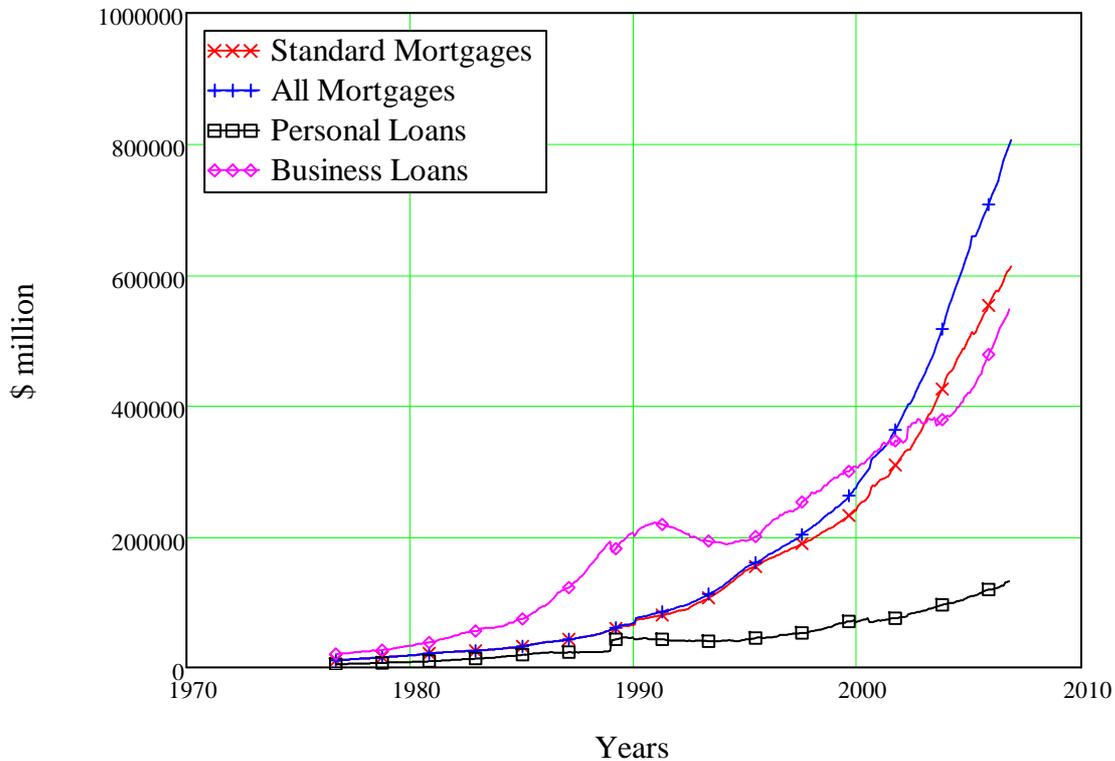
Conversely, interest payments on mortgages account for twice as much of GDP now as in 1990. The mortgage interest burden has almost doubled in just six years, from 3% in 2000 to 6% now (Figure 5). It has risen by over 15 per cent since the 2004 election.

Figure 5: The Mortgage Interest Burden



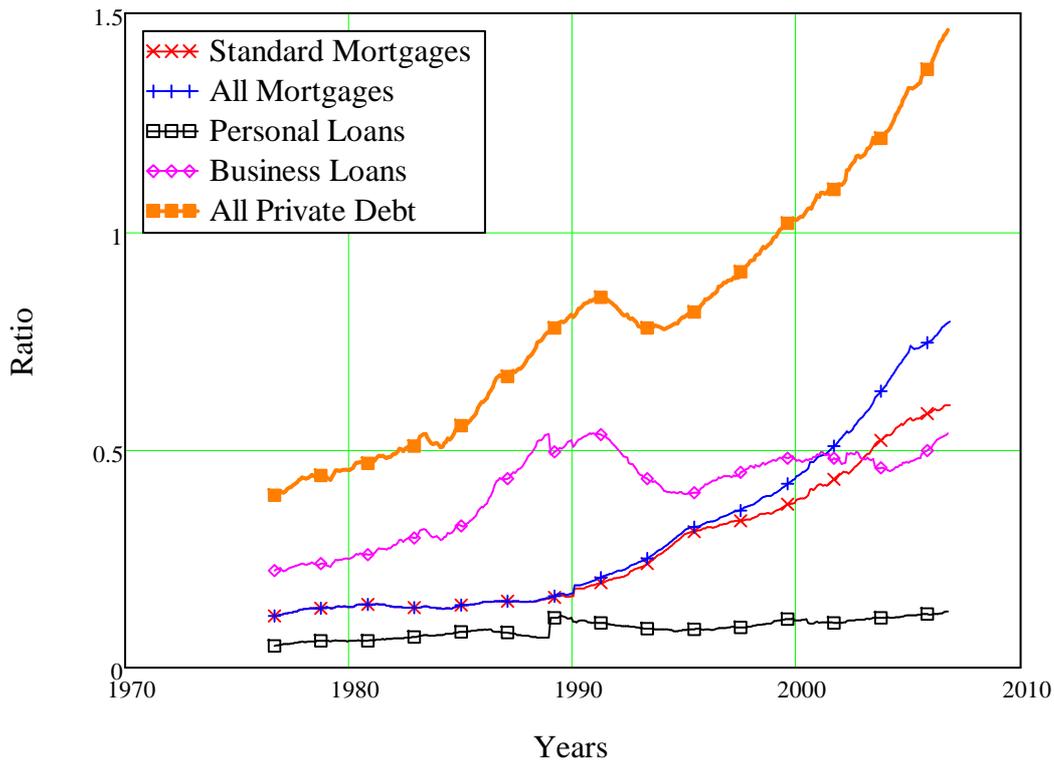
Official interest rates have risen 15% since 2000, but by far the major contribution to the increased repayment burden has been the increase in mortgage debt, which has risen a staggering 182% since 2000. The figures since the last election are 10.6% and 23.1% respectively, so even though official rates have been increased three times since then, rising debt has been more than twice as important as rising rates. Mortgage debt is now the largest component of private debt in Australia, having surpassed corporate debt in 2001 (Figure 6).

Figure 6: Credit in Australia 1976-2006



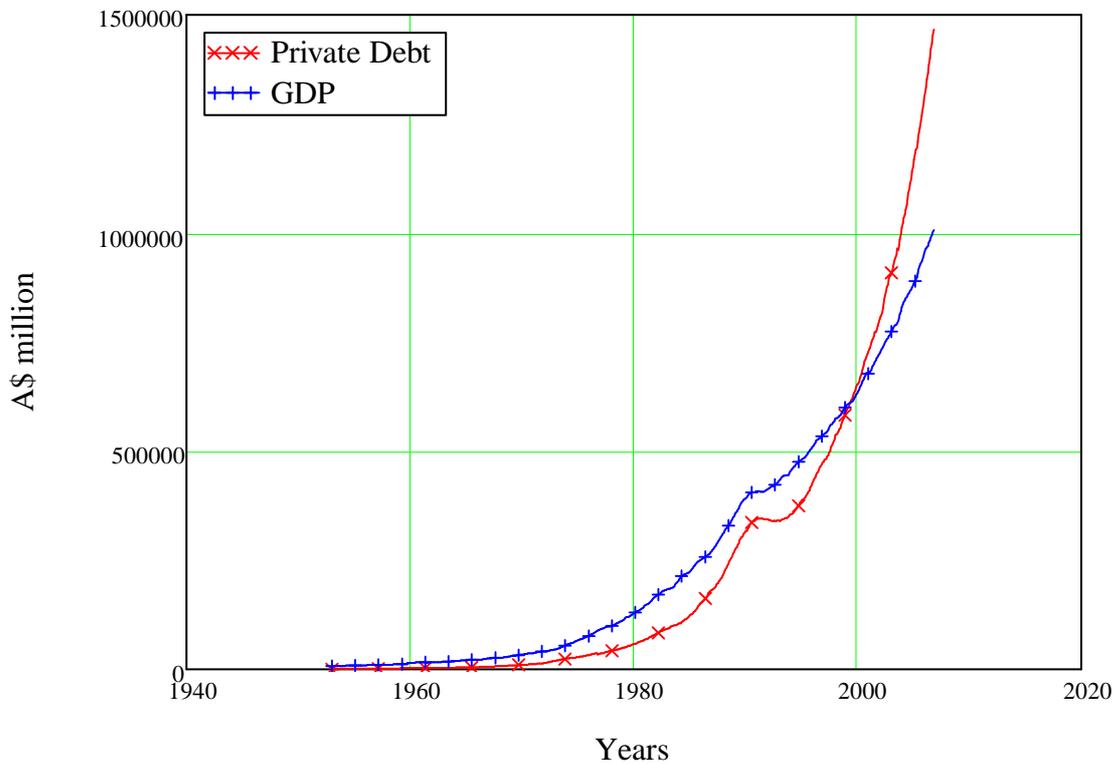
Rising debt of itself is not a problem; what is of concern is the ratio of debt to income, and the debt service burden this generates. Here we are in truly uncharted territory: though the corporate sector reduced its debt to GDP ratio significantly after the 1990s recession, households have more than compensated. The private debt to GDP ratio is now 144.5%—the highest it has ever been (Figure 7).

Figure 7: Debt to GDP Ratio



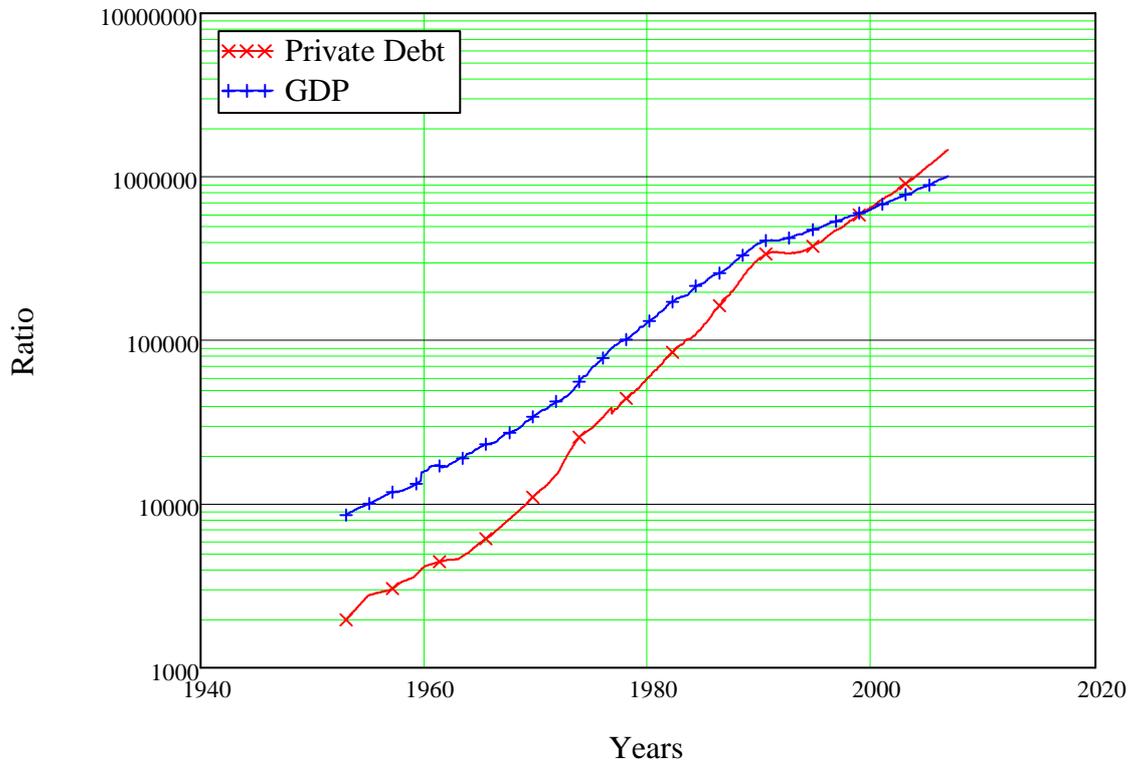
Political parties may wish to accuse each other of responsibility here, but the grim reality is that debt to GDP ratios have risen, seemingly inexorably, whether Labor or Liberal parties have held office. With the sole exception of the early 1990s, when corporate Australia drastically reduced its debt levels, the growth of debt has always outpaced the growth of GDP (Figures 8 & 9).

Figure 8: Nominal GDP and Private Debt



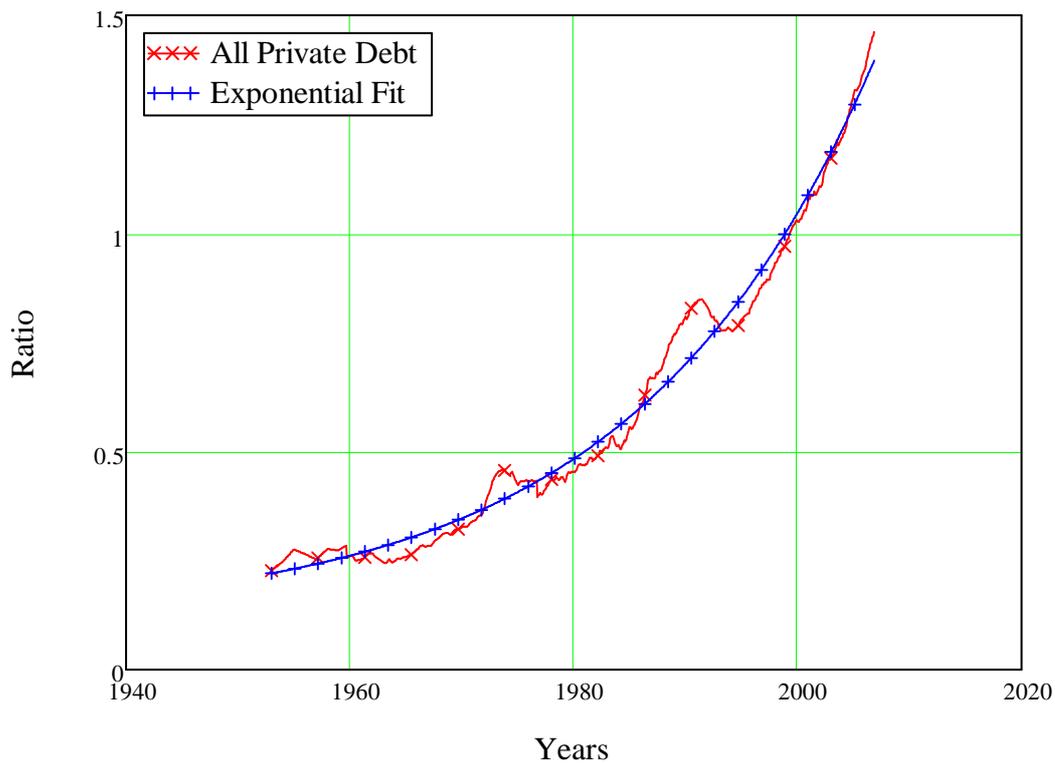
The Log scale in Figure 9 makes it easier to see that, from 1963 on, debt has grown faster than GDP--except for the period of the 1990s recession.

Figure 9: Nominal GDP and Private Debt (Log Scale)



If there is a policy failing behind the inexorable growth in debt relative to GDP, it is one that political parties hold in common. Post-WWII economic policy has been unable to restrain the exponential growth of the debt ratio, which has grown at an average rate of 4.6% per annum since the ABS first published the data in 1953 (though the blowout actually began in the mid-1960s; see Figure 10).

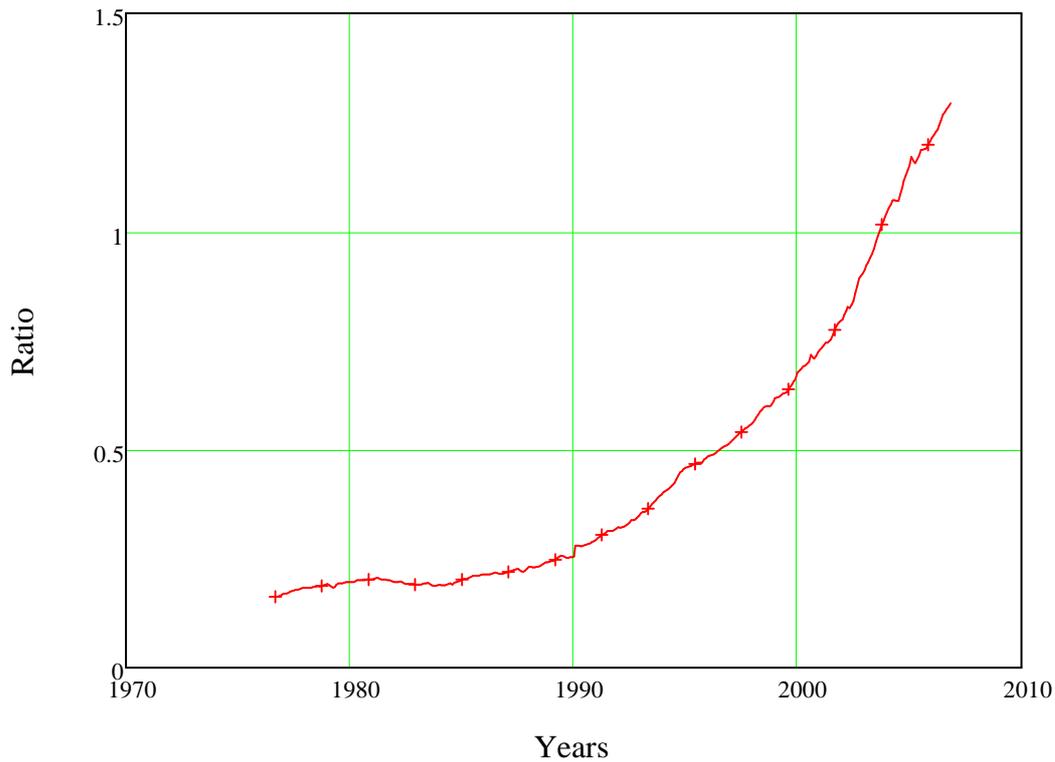
Figure 10: Exponential Growth of Debt to GDP Ratio



In the manner of exponential processes, the problem has become more critical with time: it took 35 years for the debt ratio to go from 22% of GDP in 1953 to 75% in mid-1988; it has taken just another 17 years for that ratio to almost double again. This is indisputably an unsustainable trend: debt can't keep growing four per cent faster than GDP indefinitely, because if it did, then at some point, all of disposable income would be used to repay debt.

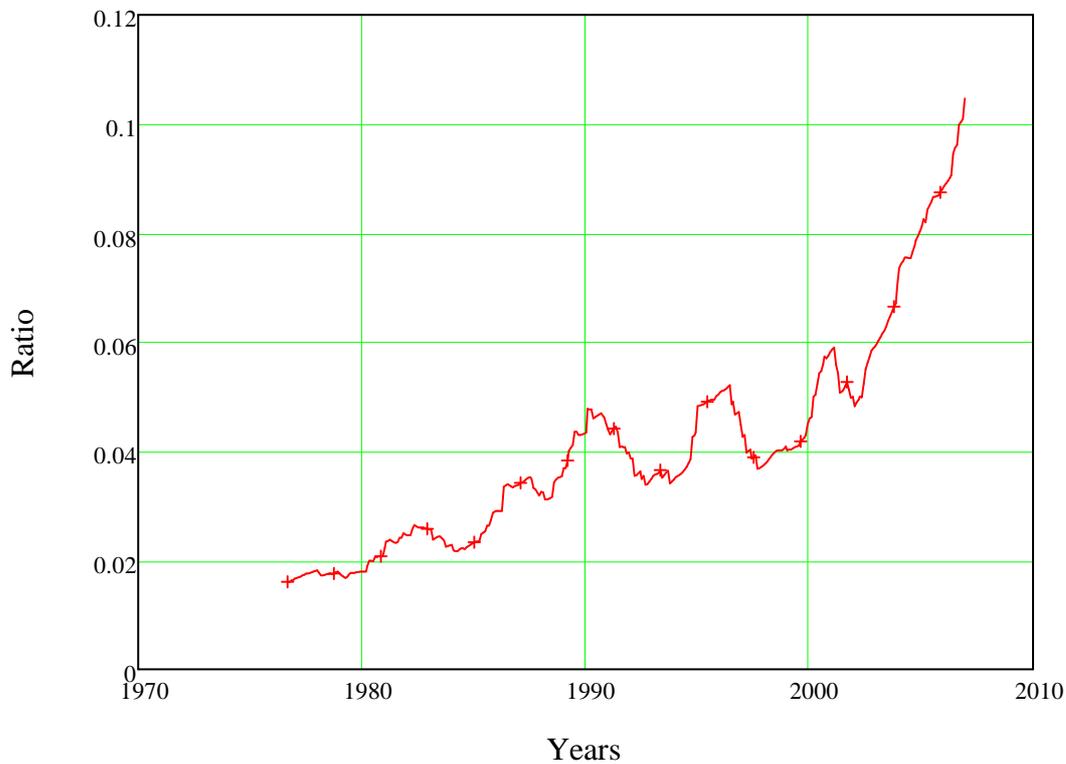
Figures 11 and 12 imply that that day may be fast approaching. Mortgage debt has exploded from just 25% of Household Disposable Income in 1990, to over 130% now (Figure 11).

Figure 11: Mortgage Debt to Disposable Income



Servicing this debt has become a major challenge: interest alone on mortgages now accounts for over 10% of household disposable income. The proportion during the sky-high interest rates of 1990 was less than half as high (4.75%; see Figure 12).

Figure 12: Mortgage Interest to Disposable Income



Should the RBA lift rates again?

In December 2005, I was against raising interest rates because the level of debt was so extreme (it was then 138% of GDP). By the time of the next rise, I felt that perhaps a rise might be justified, if only it would encourage borrowers to stop going into debt. Almost a year later, the debt to output ratio continues to rise. In particular, the mortgage debt to GDP ratio is still rising, two years after the end of the housing bubble in the Eastern states.

It appears that the price of credit has little or no impact on the demand for it. A borrowing binge only comes to an end when its adverse consequences can no longer be avoided. Then, when a slump follows a debt bubble, as in 1990, no amount of rate reductions can encourage borrowers to borrow. If interest rates are the RBA's only policy weapon, then on the issue of private debt, it appears impotent.

The RBA nonetheless seems intent upon raising rates, in the belief that inflation has reached dangerous levels, and increasing interest rates will restrain it. I expect much of their thinking is underwritten by "general equilibrium" economic models, in which interest rate increases restrain inflation by (a) making savings more attractive than spending; (b) reducing the incentive to invest; and (c) reducing growth in the money supply, thereby reducing the rate of growth of money relative to goods.

I doubt that any of these mechanisms work in the real world with the smoothness they do in models. Instead, increased interest rates act by increasing the burden of debt which has reached levels far beyond "equilibrium". Inflation, in any case, is far less than it was during the 1990s. I am concerned that the RBA may be "winning the last war" by focusing on inflation and not debt.

Inflation will undoubtedly fall if interest rates are increased sufficiently--but by the impact of a chain reaction of bankruptcies on economic activity, and not by any smooth "general equilibrium" adjustment of prices to an increased rate of time discount. "Fighting inflation first", in the current circumstances, may turn out to be slaying the David of inflation while leaving Goliath of debt alive.

The "negative" real interest rates of the 1970s provide an important commentary on whether inflation is always and everywhere a bad thing, as conventional economic theory makes it out to be. The drop in debt to GDP ratios that occurred in the 1970s took place, not because borrowers repayed debt, but because inflation eroded the real burden of debt. When debt reaches excessive levels, this may actually be a good thing--as Japan came to realise in the 1990s

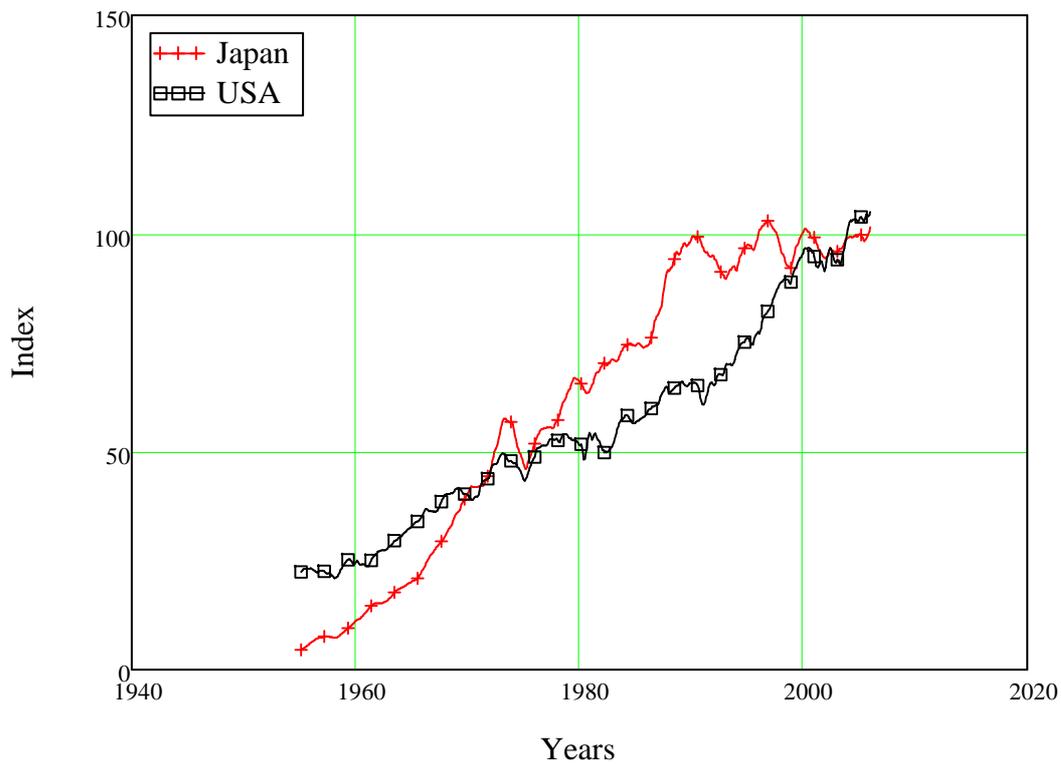
Lessons from Japan

Inflation may actually be necessary if a country falls into a debt-trap, as Japan did after its Bubble Economy collapsed in 1990. Then, falling prices made it difficult for Japanese firms to repay the massive debts they had accumulated from speculating on Tokyo real estate and the Nikkei.

To give an indication of how extreme--and how insane--this speculation became, at one stage in the late 1980s, the Imperial Palace in Tokyo, with an area of under ten square kilometres, had a nominal land value that exceeded that of the state of California. In a matching stockmarket frenzy, the Nikkei peaked at just under 40,000 on the very last trading day of 1990. It has since slumped as low as 7600, before recovering to the mid 16,000s now.

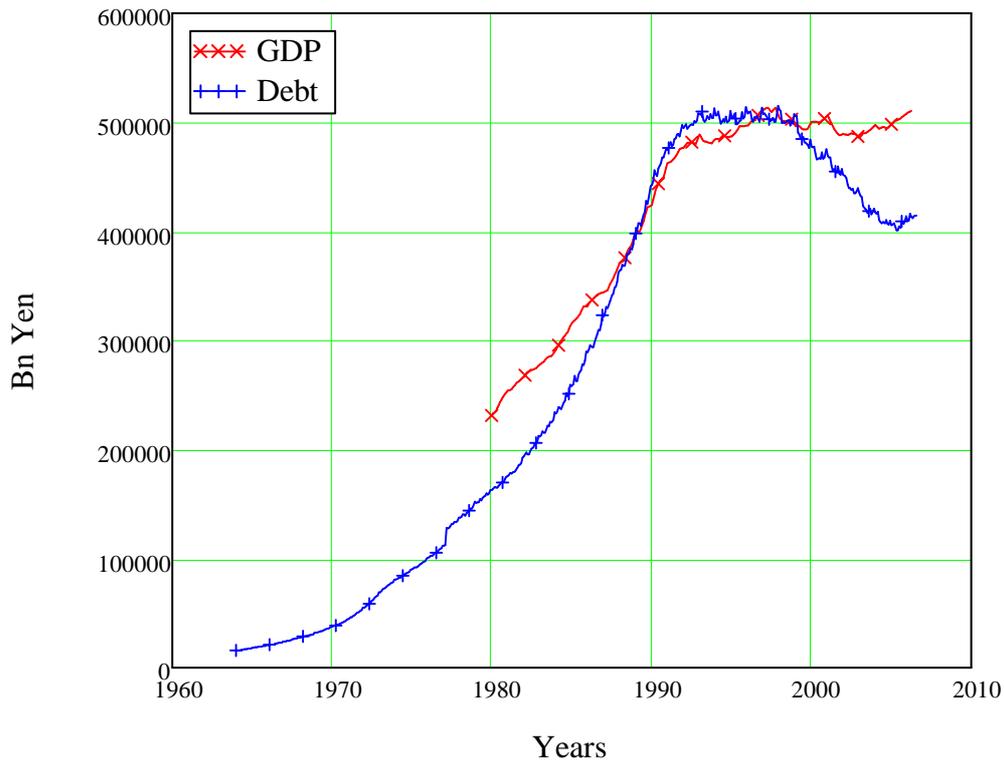
The 1990-2005 depression had a profound impact on Japan; just how profound can be seen by comparing its ranking to the USA's using the OECD's Composite Leading Indicators (Figure 13). From 1955 till 1990, Japan rapidly caught up with and then overtook the USA, and for a while it seemed that Japan was on course to conquer the world with economic rather than military might (remember Michael Crichton's *The Rising Sun*?). It all came to an abrupt end in 1990, and fifteen years later, Japan once again ranks below the USA on the OECD's league table.

Figure 13: OECD Composite Leading Indicators



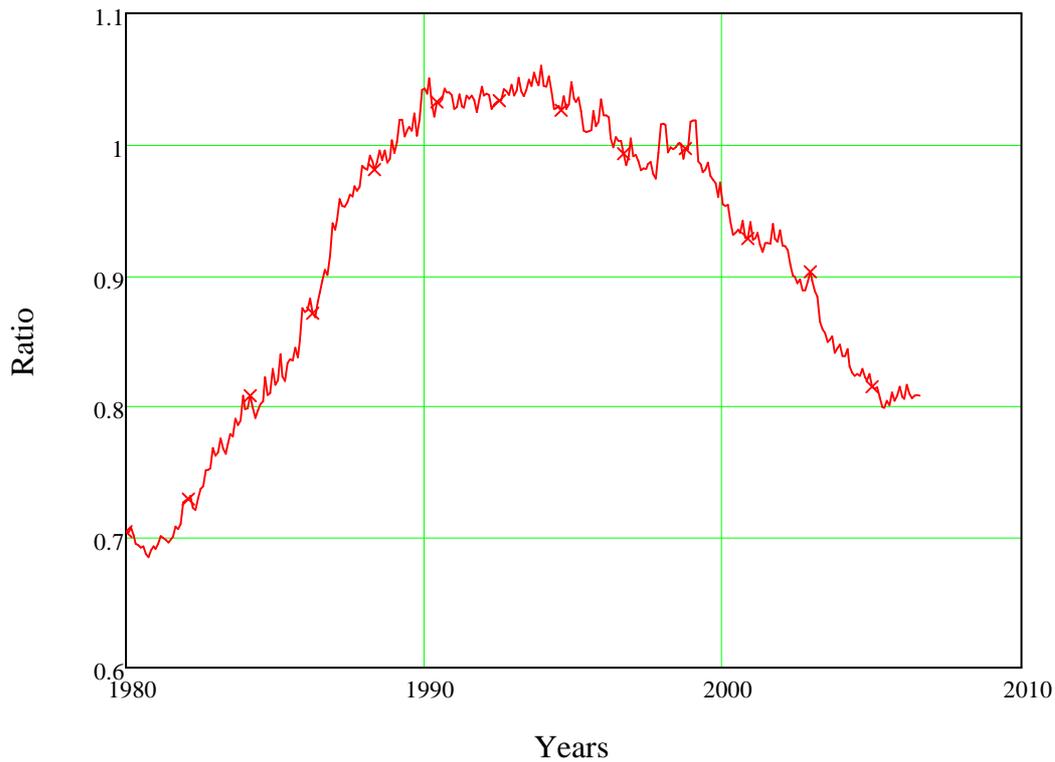
Commentators of all political and economic persuasions are in rare unanimity that the debt accumulated during the "Bubble Economy" was the root cause of Japan's 1990-2005 depression. Figures 14 and 15 show just how strong the link is between excessive debt and economic breakdown.

Figure 14: Japanese GDP and Private Debt



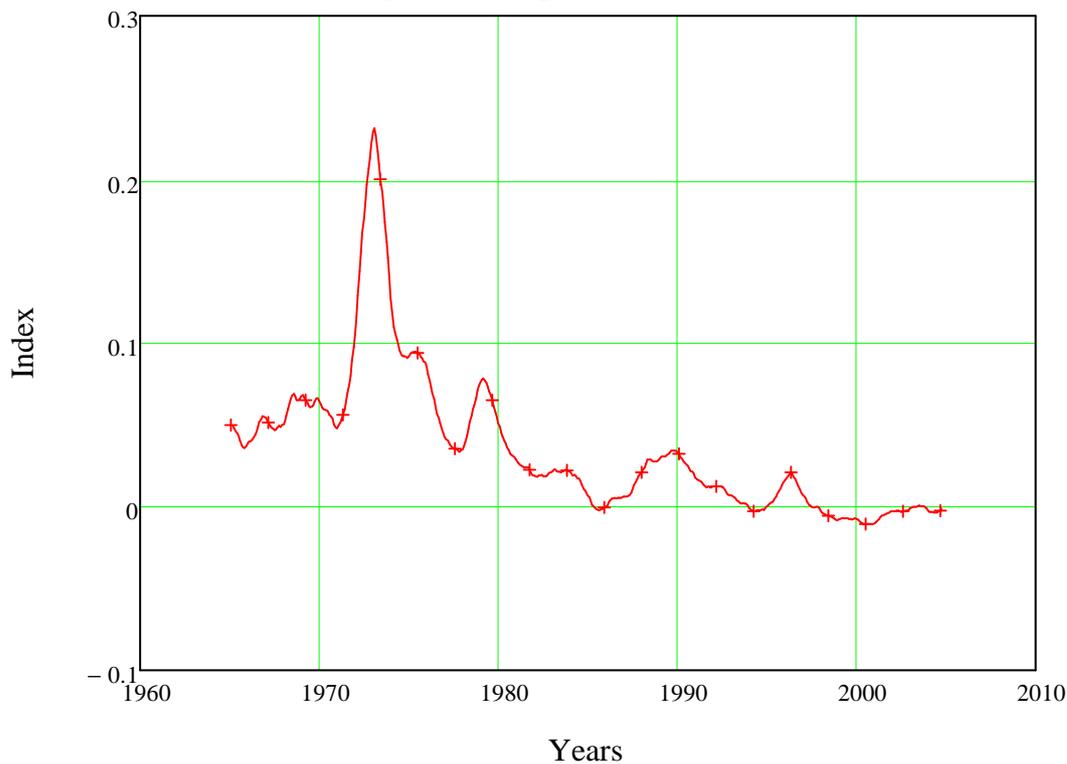
The level of debt that led to a serious crisis in Japan is about 40 per cent *below* the level that currently prevails in Australia (though there may also be some differences in statistical measures). One probable reason for the different sensitivity is the much greater role of debt financing in Japan than in Australia and the USA (which has a similar level of private debt to Australia).

Figure 15: Japan's Debt to GDP Ratio



The Japanese Central Bank actually tried to cause inflation by increasing base money--by as much as 25 per cent in one year--but to no avail. Inflation remained near or below 2 per cent for 15 years (Figure 16), and the once great Japanese economy stayed in a drawn out depression. The reduction in debt that has been achieved has been earned the hard way, with falling prices making the repayment task that much harder--and a policy of zero official interest rates for a decade.

Figure 16: Japan's Inflation Rate



When the Japanese depression began, the inflation rate was not much higher than the level that is now making the RBA worry about the "dangers of inflation". Japan's experience suggests that the dangers of deflation, and excessive debt, are much more important.

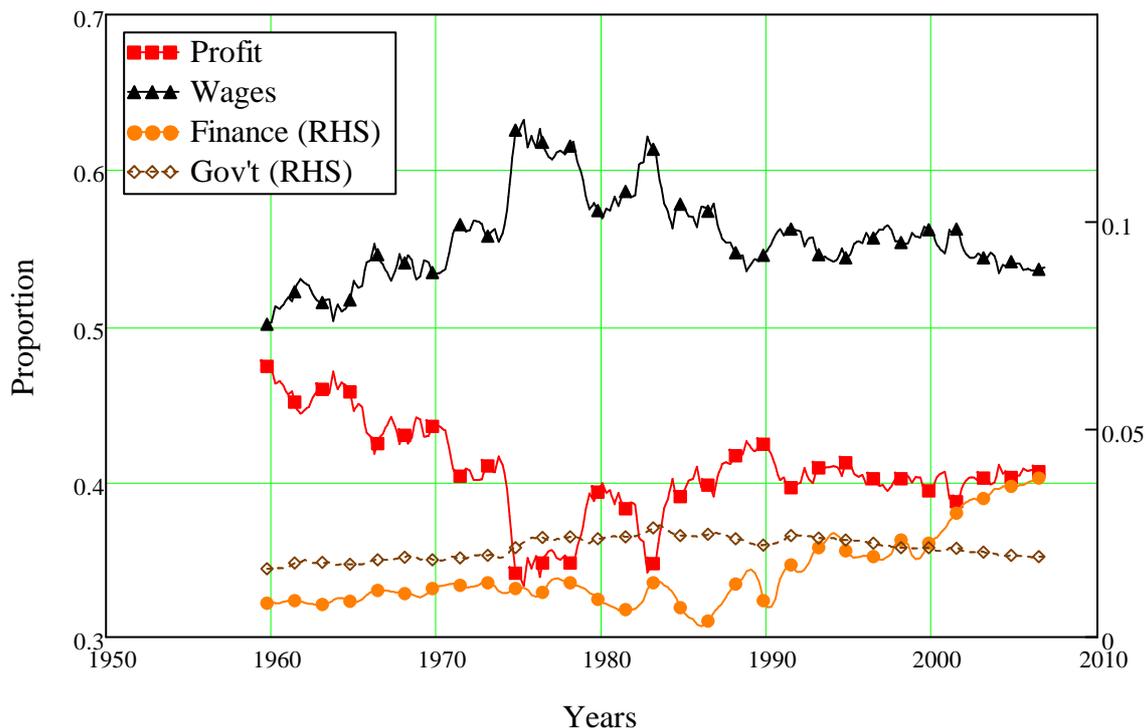
Borrowed Prosperity?

Australia has experienced a long boom while Japan has been in a depression; but it is possible that much of Australia's apparent prosperity was the by-product of debt-financed spending by households. 1991 was a key turning point in corporate debt, after the corporate borrowing binge of the 1980s came to a crashing end in the "recession we had to have". From then on, business borrowing actually fell for six years (see Figure 2), but household borrowing began its drawn-out explosion. Since 1990, households have borrowed--and presumably spent--an amount equivalent to 60 per cent of one year's GDP. That spending has in turn financed both the housing bubble, and the blowout in Australia's trade deficit. But it has done precious little to add to Australia's productive capacity, and therefore its ability to service debt in the long term.

The growth in debt servicing has been so great that the proportion of factor incomes going to financial corporations has quadrupled in the last 15 years (Figures 17 and 18).

Since most of the borrowing has been done by wage-earning households, it has resulted in a transfer of income from wages to financial institutions--whose ultimate owners are not, in general, wage earners. From mid-1991 to mid 2006, the wages share of income slumped by 2.7%, profit share rose by 0.7%, earnings of government enterprises fell by 0.7%, while the share going to financial corporations more than doubled, rising by 2.5% to 4.2%.

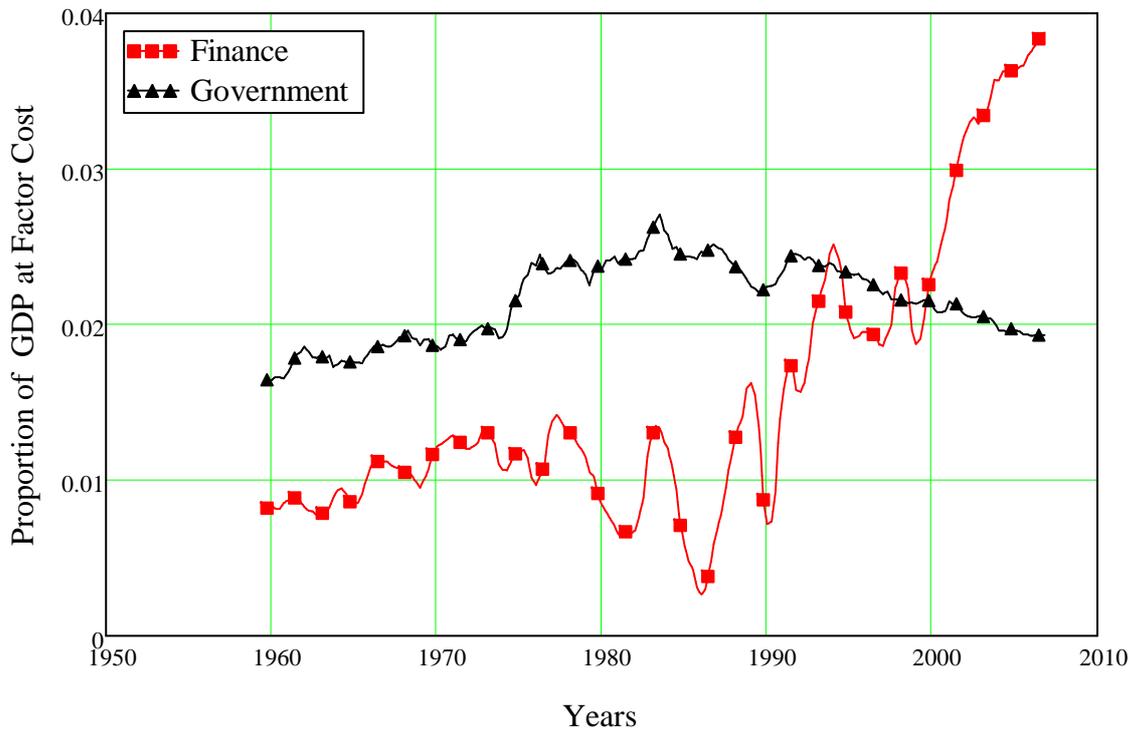
Figure 17: Shares of Factor Incomes



Given that most of the debt that has been taken out in the meantime has been in the form of mortgages, this has represented a massive income redistribution from wage earners to "rentiers" (the French term for those whose income is derived from lending money rather than investment, management or labour). This would be sustainable if there had been a wealth transfer in the opposite direction, and that appeared to be happening when house prices were rising. But now house prices are stagnant or falling (in NSW and Victoria at least), and it appears that financiers have done an "Alan Bond" all over again--they have financed a speculative bubble whose unwinding

must ultimately impact negatively on the economy.

Figure 18: Shares of Factor Incomes: the Finance Blowout

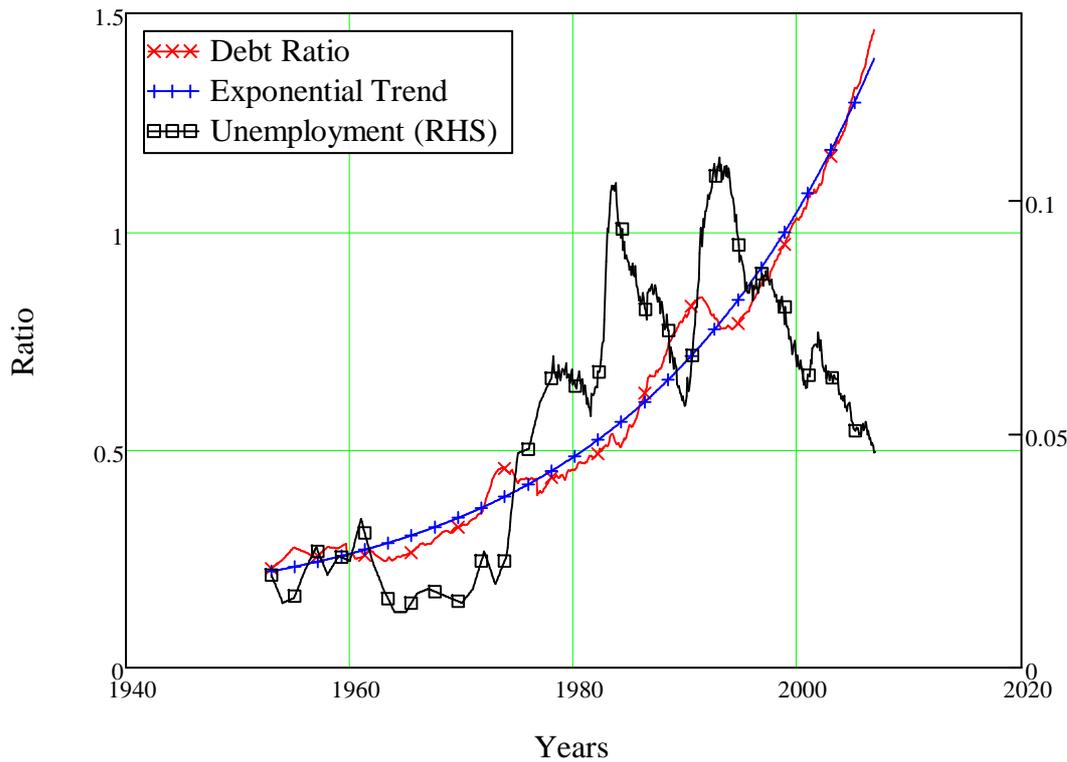


The billion-dollar question is: "When is ultimately?". Here some indication can be garnered by looking at previous times when there were changes in the rate of growth of debt--with an increasing debt ratio being associated with booms and a decreasing ratio (or a slower rate of growth of the ratio) being associated with slumps (using rising unemployment as a proxy for recessions).

The "boom to debt" link is quite immediate and distinct: the 1980s boom began in July 1983 and the debt to output ratio started to grow noticeably faster from September 1982 onwards. The 1990s boom began in January 1993 and the debt ratio began to grow in March 1993. There were thus two months from the start of the recovery in 1983 to the growth in debt in 1983, and the same in 1993.

The timing of changes between a slump and the debt ratio is more complex. Unemployment began to grow in September 1972 (peaking finally, in August 1983), and in January 1990 (reaching its post-WWII peak in 1993). The debt ratio began to fall in June 1973, and again in April 1991 (see Figure 11). The 1970s recession thus began 9 months before the debt ratio started to fall; the 1980s recession began fifteen months before the turnaround in the debt ratio (Figure 19).

Figure 19: Debt and Recessions



This relationship is difficult to interpret from the perspective of conventional "neoclassical" macroeconomics. The statistical relationship implies that unemployment drives the debt ratio; and the changing timing implies no fixed relationship at all. The theory itself expects there to be no relationship at all between debt and economic performance. However there is a "common sense" interpretation of this data which is supported by an important but non-conventional economic theory (discussed below).

Borrowing plays a large role in financing investment and speculation, and borrowing finances a boom (as does reinvestment of profits). When expectations of profits aren't met, however, a downturn ensues--especially if the investment was in property speculation rather than real production. The near-immediate timing of economic upturns and increases in debt makes sense--since firms borrow money when their investment plans exceed desired earnings; the delayed turnaround of debt during a slump occurs because profits fall and there's less money available to service debt.

There is also a commonsense interpretation of the shift in timing: as the debt to GDP ratio grows, debt has more momentum: the repayment costs are greater, and unpaid interest accumulates as additional debt.

This phenomenon can be seen in the Japanese data (see Figure 13 and 14, above): debt continued to accumulate after the crisis had started, because the momentum of debt commitments overwhelmed the ability of borrowers to finance debt. Unpaid interest is therefore capitalised into increased debt.

The "Financial Instability Hypothesis"

This data "doesn't make sense" from the point of view of conventional economic theory--which may be why the new Governor of the RBA described Australia's recent economic data as constituting "a bit of a puzzle". Unfortunately, it does make eminent sense from a very different point of view, known as the "Financial Instability Hypothesis" (FIH for short).

Developed by the Post-Keynesian economist Hyman Minsky, the FIH argues that market economies tend to develop "euphoric expectations" that lead to investors taking on excessive debt

during booms. When their expectations aren't fulfilled, they then find themselves having to pay debt down in depressed conditions. As a result, the level of debt tends to ratchet up over a series of booms and slumps--a process that can lead to a "debt deflation" if high levels of debt coincide with falling prices.

My main research activity is developing mathematical models of this hypothesis, and the figures below show two simulations from a very basic model. Though the cycles in the simulations are much more extreme than those in the actual data, their properties help make sense of the Australian and Japanese data shown above. When the model simulates the pattern shown in the Australian data, a debt-deflation ensues, as shown below in Figure 20.



The model's structure can be summarised in three propositions:

- (1) Investors are motivated by expected profits
- (2) Workers wage demands are dependent on the rate of employment
- (3) Banks lend money at interest to finance investment

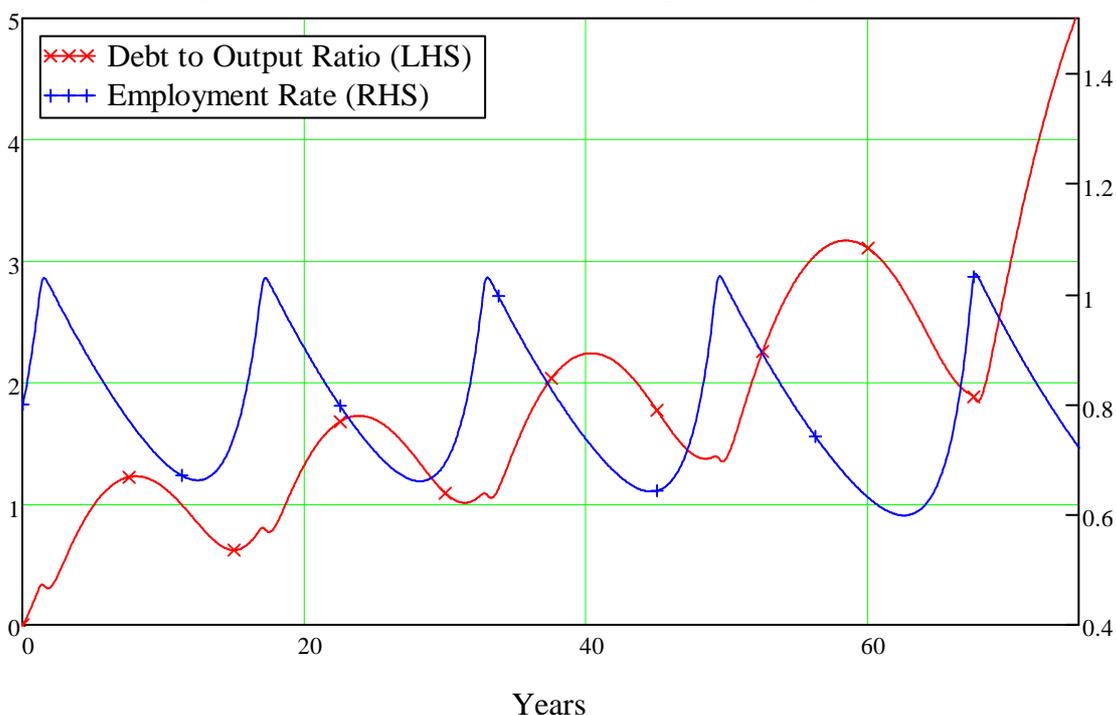
Its behaviour can also be summarised in three propositions:

- (1) The employment rate will rise if the rate of economic growth exceeds the sum of population growth and technical change;
- (2) The wages share of income will rise if wage demands exceed the rate of technical change; and
- (3) The debt to output ratio will grow if the gap between investment and profits exceeds the rate of growth times the current debt level.

The first two propositions, while derived mathematically, are actually truisms. The third is more complex, but derived from the proposition that firms will borrow money if their investment plans exceed profits--a very obvious statement that is empirically justified.

Figures 20 and 21 show two simulations--the former leading to a depression, the latter to a stable outcome.

Figure 20: Debt Deflation in a simple Minsky Model

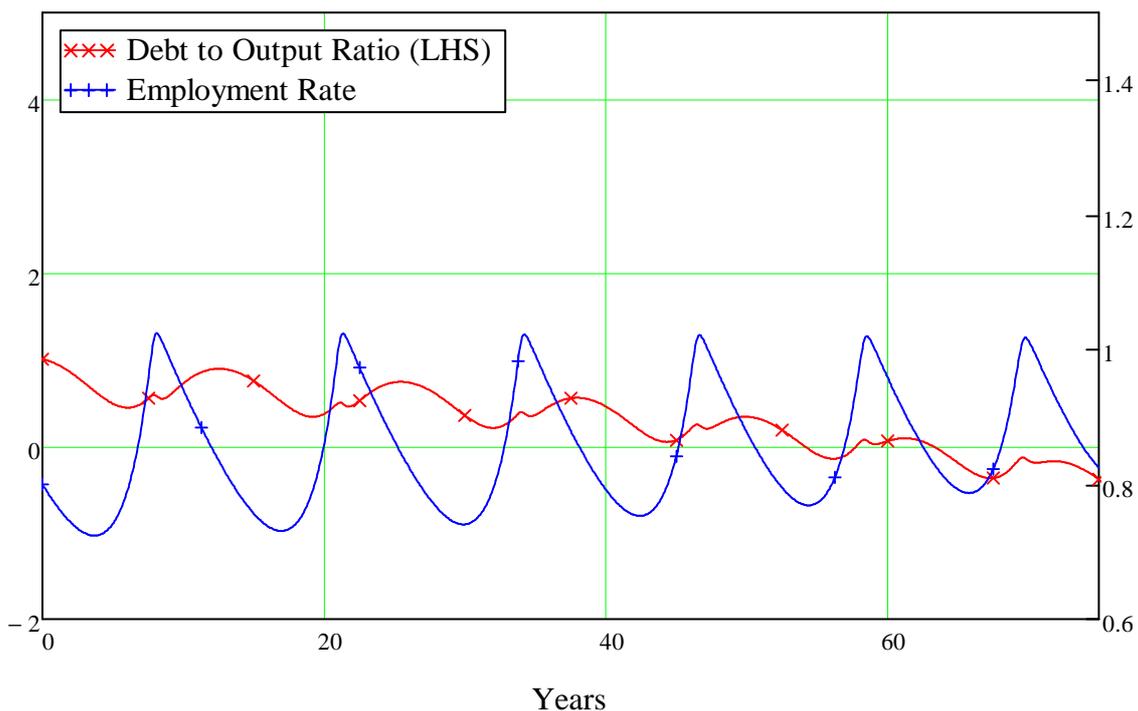


Notice that, as with the actual economy, a boom (rising employment) occurs just before the debt to

output ratio reaches its minimum in any given cycle, while the peak in the debt ratio occurs well after a slump (falling employment) has commenced. Also, as with the Australian data, the lag between the start of the slump and the peak of the debt ratio grows over time, as the system gets closer to a debt-induced breakdown: the lag starts at 6 years, and blows out to 9 years in the final cycle before breakdown. In the final cycle, debt explodes as soon as a downturn begins and the economy collapses.

On the other hand, when the model is set up to avoid a debt deflation, the lag falls over time: it is 4.6 years in the first cycle in Figure 18, and has fallen to 2.1 years by the penultimate cycle (in the final one, the peak of debt actually precedes the peak of the boom). That's the good news story--but it's not the one we see in the Australian data.

Figure 21: Stability in a simple Minsky Model



Conclusion

Debt has reached unsustainable levels, and whether its reduction is done smoothly or abruptly, economic growth has to slow in the meantime. If households reduce their debt levels smoothly, they will have less disposable income to spend and retail sales will slump. If bankruptcies become widespread, the sales downturn will be overlaid with a financial crisis.

A recession may have already started in the domestic economy, with only the China/India export boom masking the phenomenon. Certainly the NSW economy, like the global-warming affected weather itself, is in the doldrums.

In this situation, doing anything--like increasing interest rates to "contain inflation", or increasing subsidies to home buyers (as happened in 1991 with the doubling of the First Home Buyers' grant)--will be worse than doing nothing at all.

Paul Keating's most famous aphorism, "the recession we had to have", gave the 1990s recession an apt moniker. I fear that whatever policy is followed, the next recession will be known as "the recession we can't avoid".

Sources

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<http://www.rba.gov.au/Statistics/Bulletin/index.html>

Economic data for Japan and the USA: The OECD's statistical database, accessed via DSI Data Services and Information

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Background on Hyman Minsky and the Financial Instability Hypothesis

The New School's History of Economic Thought archive

<http://cepa.newschool.edu/het/profiles/minsky.htm>

The Financial Instability page at my Debunking Economics website

<http://www.debunkingeconomics.com/FinancialInstability.htm>

Analytic Software used for report

www.mathcad.com

