

## Interest Sting

US household interest payments are surging despite low long rates

- ▶ Despite low long rates, interest payments surged by 14% over the past year, the biggest rise in twenty years.
- ▶ This depressed disposable income by 1%, an unusually large drag similar to 1985, 1989, 1995 and 2000.
- ▶ These four periods were characterized by Fed tightening that soon enough gave way to rate cuts.
- ▶ A halving in mortgage debt growth from 12% to 6%, coupled with a 25bp rise in the effective mortgage rate, would still leave interest payments rising by 10%.
- ▶ This would push up the debt-service ratio, already at a record high. Principal payments are likely to accelerate too.
- ▶ Debt growth would need to slump to 2% (zero in real terms) to allow interest payments to slow to a healthier 6%.
- ▶ But then consumption and house prices would cool sharply, forcing the Fed to consider cutting rates. By mid-2006, such a scenario could be a reality.

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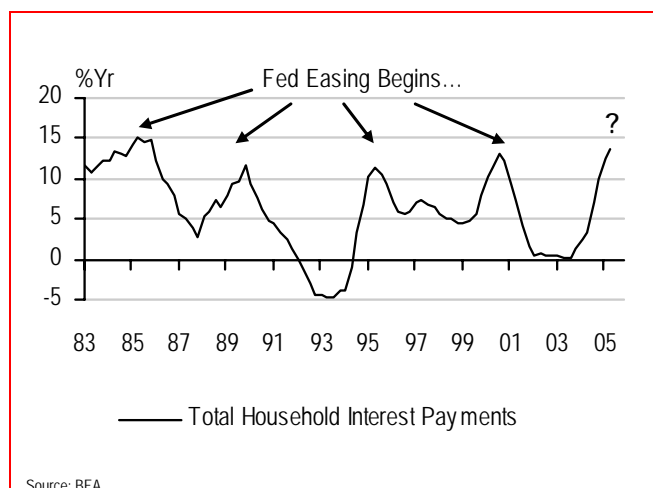
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# Interest Sting

- ▶ Consumers are feeling the squeeze from higher interest payments...
- ▶ ...which suggests the Fed will stop tightening sooner rather than later
- ▶ By mid-2006, a new Fed easing cycle could be back on the agenda

## Consuming on borrowed time

The US economy may not need higher long rates to generate an acute deceleration in consumption growth. That may appear an odd statement to give, especially given that we at HSBC have recently been forced to upgrade our Q3 consumption growth rate from 2½% to over 4%, thanks largely to an ‘employee discount’ auto-fuelled spending splurge.

### Rates are still low, so what’s the problem?

So where are we coming from? Our concern is that at some point (and that point could arrive as soon as auto sales ‘normalize’ – say Q4) consumption growth has to start rising in line with real personal disposable income growth (RPDI).

RPDI grew a paltry 1.4% in Q2 and is up a

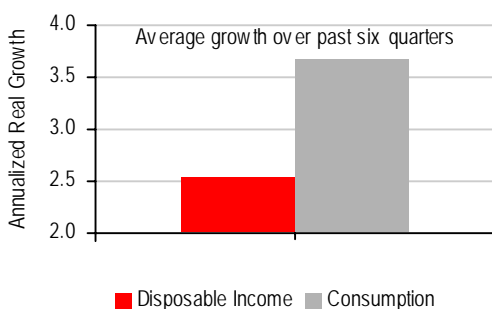
meagre 2.6% over the year to 2005Q2. This sub-trend performance is actually nothing new, as the average for the past seven quarters has only been 2.3%. And despite the decent rise in employment, Q3 RPDI is looking weak due to the renewed surge in energy prices.

But as we go into the second half of 2005, consumers are nevertheless surprising with their vigour due to their on-going willingness to add to debt levels, thereby enlarging their purchasing power beyond that of income. The optimists strike back: and what is wrong with that? After all, long rates are still low. It makes perfect sense.

### A squeeze on income

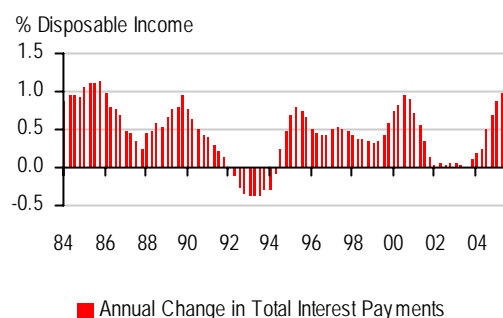
It is here that things get interesting. Despite low rates, consumers increased their interest payments (mortgage and non-mortgage) from an annualized

1. Consuming away



Source: BEA

2. A tighter squeeze



Source: BEA

\$641BN in 2004Q2 to \$729BN in 2005Q2, an \$89BN or 13.8% rise. This increased burden of \$89BN was worth 1% of disposable income, an unusually large drag equivalent to those seen in 1985, 1989, 1995 and 2000. These were periods that were in the process of, or recently had been going through, a monetary tightening phase, but in all four of these episodes the Fed had to reverse and start cutting rates, sometimes aggressively, soon afterwards.<sup>1</sup>

The next section focuses on developments in mortgage interest payments. Then we look at non-mortgage interest payments, before totalling them. Then we give some thoughts on the outlook for principal payments and the debt-service ratio. Finally, we consider the US similarities with UK and Australian mortgage debt, growth and house price cycles, given the significant change in interest rate sentiment in those countries.

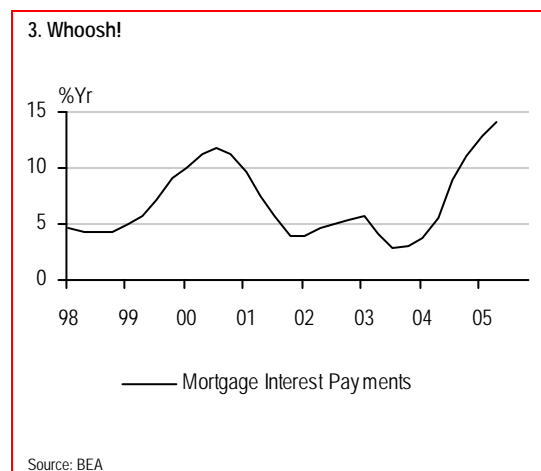
### Mortgage interest payments surging

Despite low long rates, mortgage interest payments by consumers are soaring, increasing 14.1% over the year to 2005Q2. Chart 3 highlights that the growth in interest payments has surged to above that seen during the late 1990s period, even though interest rates back then were a lot higher than today.

The reason for the surge is two-fold: (a) the stock of mortgage debt is continuing to grow fast, up an estimated 12.0% over the year to 2005Q2, and (b) the effective mortgage rate on that debt rose by 12bp from 6.11% to 6.23% over the past year.

<sup>1</sup> The 325bp Fed funds rise in 1983/84 was followed by 575bp of cuts from late 1984 to late 1986. The 325bp rise from 1988 to early 1989 was followed by 675bp of cuts from mid-1989 to late 1992. The 300bp rise in 1994/95 was followed by 75bp of cuts from mid-1995 to early 1996. The 175bp rise in 1999/2000 was followed by 550bp of cuts in 2001-2003.

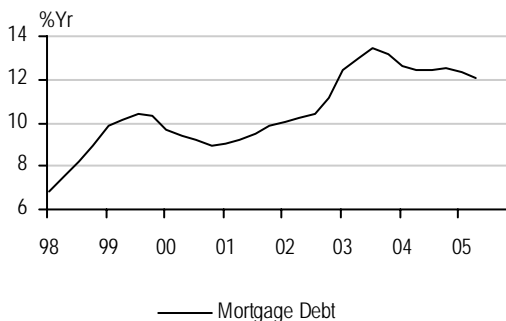
This 'effective' mortgage rate combines all fixed and adjustable rate mortgage payments, so it fully incorporates the mostly fixed rate liability structure of household debt, while it also includes interest payments on home equity loans, as home equity loans are considered part of mortgage debt.<sup>2</sup>



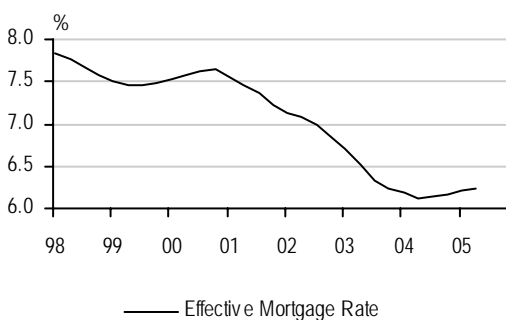
So although a 225bp tightening by the Fed over the year to 2005Q2 was only able to raise the effective mortgage rate by 12bp, this tiny increase was enough to add 2ppts to the 14% annual growth rate of mortgage interest payments. This is because a small rise in the average interest rate on a stock of debt worth over \$8½ trillion adds up to a serious amount of money. A seemingly modest 25bp rise adds roughly 4ppts to the annual growth rate of interest payments.

<sup>2</sup> Home equity loans account for about 12% of total mortgage debt. Of the rest, it is estimated that 75-80% are fixed rate mortgages and 20-25% are ARMS.

#### 4. Off the peak but still surging



#### 5. No longer rolling downhill



#### The pendulum swings the other way

This recent experience is very different to 2001-2003. Then, rapid double-digit mortgage debt growth was arguably less of a concern because the effective mortgage rate was falling at the same time. The effective mortgage rate fell from 7.65% in 2000Q4 to a low of 6.11% in 2004Q2 (chart 5). As a result, the growth in mortgage interest payments was low despite soaring debt levels.

In 2003, for instance, a 13.2% surge in mortgage debt occurred in the context of a 9% drop in the effective mortgage rate from 6.86% to 6.24%. As a result, mortgage interest payments grew just 3.1% (table 6). Clearly, the pendulum is now swinging the other way.

#### 6. The pendulum swings

| Q4/Q4* | %Chg Debt Growth | % Chg Eff. Mortgage Rate | % Chg Interest Payments |
|--------|------------------|--------------------------|-------------------------|
| 2001   | 9.8              | -5.4                     | 3.9                     |
| 2002   | 11.1             | -5.2                     | 5.4                     |
| 2003   | 13.2             | -9.0                     | 3.1                     |
| 2004   | 12.6             | -1.2                     | 11.1                    |
| 2005*  | 12.0             | 1.8                      | 14.1                    |

Source HSBC, BEA \*2005 is Q2/Q2

#### Rise in effective mortgage rate set to continue

Over the past year, the effective mortgage rate has begun to rise slightly because:

- ▶ long rates are not as low as 2003, despite still being low
- ▶ a greater proportion of mortgages are adjustable rate, which means that on the margin the stock of mortgage debt is now more sensitive to the 1-year Treasury bill rate, which itself has been drifting up as the Fed has tightened
- ▶ home equity lines of credit, which tend to be priced at the US prime rate (constant at 300bp over Fed funds), feels the full force of the Fed's tightening immediately.

Using the forward interest rate curve as a guide, we would expect the effective mortgage rate to continue rising gradually for the next two to three years as more ARMS are reset, more interest-only loans are reset with principal payments required and as the cost of home equity lines continues to rise as the Fed keeps tightening, together with a modest rise in long rates.

#### Interest Payment Growth Scenarios

Chart 7 is a matrix that calculates how much mortgage interest payments will rise based on different assumptions for mortgage debt growth and for the effective mortgage rate.

7. Mortgage interest payment matrix

| Debt Growth | Effective mortgage rate |     |     |     |     |     |
|-------------|-------------------------|-----|-----|-----|-----|-----|
|             | 6.23                    | 6.3 | 6.4 | 6.5 | 6.6 | 6.8 |
| 0           | 0                       | 1   | 3   | 4   | 6   | 9   |
| 2           | 2                       | 3   | 5   | 7   | 8   | 11  |
| 4           | 4                       | 5   | 7   | 9   | 10  | 14  |
| 6           | 6                       | 7   | 9   | 11  | 12  | 16  |
| 8           | 8                       | 9   | 11  | 13  | 15  | 18  |
| 10          | 10                      | 11  | 13  | 15  | 17  | 20  |
| 12          | 12                      | 13  | 15  | 17  | 19  | 22  |
| 14          | 14                      | 15  | 17  | 19  | 21  | 25  |
| 16          | 16                      | 17  | 19  | 21  | 23  | 27  |

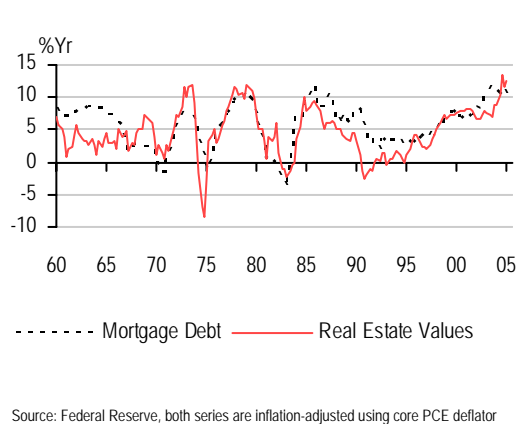
Source: HSBC

One can see that if the average mortgage rate were to rise from its current 6.23% to say 6.5%, together with a slowdown in debt growth from 12% to say 8%, interest payment growth would still be growing worryingly quickly at 13%. That is well above what is considered sustainable.

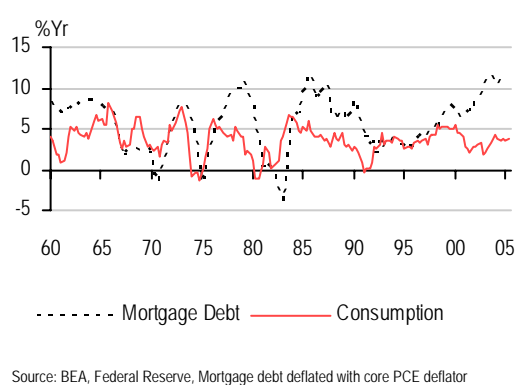
What would debt growth need to slow to so as to ensure interest payments only grow in line with trend nominal income growth - say 5-6% per annum – which would be perceived as being more sustainable?

Using the matrix, we find that with a 6.5% interest rate, debt would need to grow by less than 2%, or zero in real terms. Under these circumstances, it is very likely that both house prices and consumption growth would hit snags given the strong historical correlations between debt growth, house prices and consumption (charts 8 and 9).

8. Strong link



9. Borrow and spend



**Non-mortgage interest payments surge too**

Compounding the mortgage interest squeeze on disposable income is non-mortgage interest payments, such as credit card debt and other personal loans like auto loans. Non-mortgage interest payments are currently \$206BN, up 13.2% over the year to 2005Q2. This too is acting to lower the personal saving ratio. And it will continue to do so over the next couple of years short of the Fed aggressively easing.

The impact of rising short rates is all the more pronounced with non-mortgage debt, given most of it is linked to short-term variable interest rates, and notwithstanding zero-rate auto loans, they tend to also be more expensive forms of debt (e.g. credit cards). Over the past five quarters, the effective interest rate has increased 93bp from the cycle low to 9.69% in Q2. So although non-

mortgage debt growth is only growing by 4%, the rise in rates means that interest payments are growing by 13.2% (charts 11, 12 and 13).

Once again, chart 10 creates a matrix calculating the rise in payments based on (a) non-mortgage debt growth and (b) the effective non-mortgage interest rate.

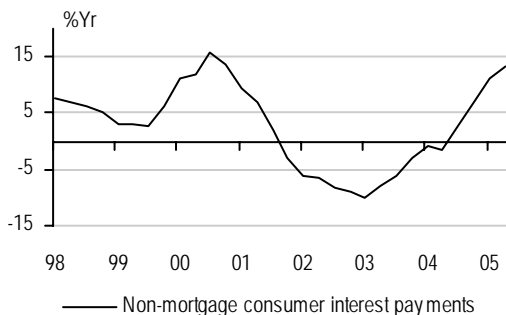
Assuming rates rise by a little over 100bp from the current 9.69% to 10.75%, one can see that even if non-mortgage debt growth stayed at its current 4%, interest payments would accelerate further to 15%. At a 10.75% rate, even zero debt growth would still raise payments by 11%.

10. Non-mortgage interest payment matrix

| Debt Growth | Effective interest rate (ex-mortgages) |      |       |      |       |      |
|-------------|--|------|-------|------|-------|------|
|             | 9.69                                   | 10.0 | 10.25 | 10.5 | 10.75 | 11.0 |
| 0           | 0.0                                    | 3.2  | 5.7   | 8.3  | 10.9  | 13.5 |
| 2           | 2.0                                    | 5.2  | 7.9   | 10.5 | 13.1  | 15.7 |
| 4           | 4.0                                    | 7.3  | 10.0  | 12.6 | 15.3  | 18.0 |
| 6           | 6.0                                    | 9.3  | 12.1  | 14.8 | 17.5  | 20.3 |
| 8           | 8.0                                    | 11.4 | 14.2  | 17.0 | 19.8  | 22.6 |
| 10          | 10.0                                   | 13.5 | 16.3  | 19.1 | 22.0  | 24.8 |
| 12          | 12.0                                   | 15.5 | 18.4  | 21.3 | 24.2  | 27.1 |
| 14          | 14.0                                   | 17.6 | 20.5  | 23.5 | 26.4  | 29.4 |
| 16          | 16.0                                   | 19.7 | 22.7  | 25.6 | 28.6  | 31.6 |

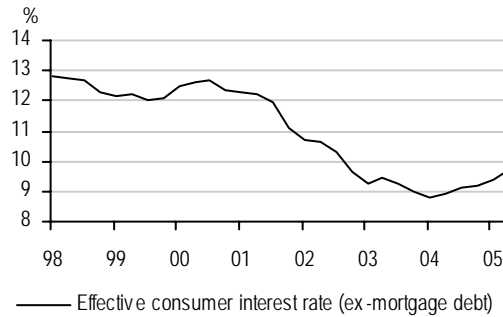
Source: HSBC

11. Up up and away



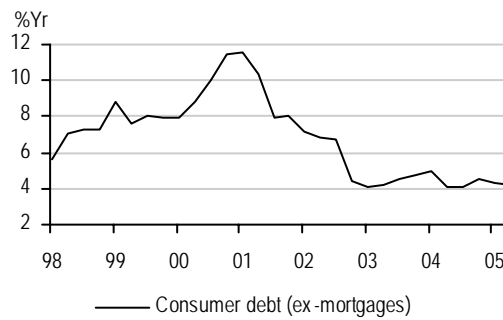
Source: BEA

12. Creeping a little higher



Source: BEA

13. Slow



Source: Federal Reserve

### Looking at total interest payments

By combining mortgage and non-mortgage debt, we can investigate how total interest payments are likely to evolve over the next year based on different assumptions given in the matrix on chart 14.

Assuming debt growth slows from 14% to 6% and that rates rise from the current 'blended' rate of 6.93% to 7.25%, payments would still rise 11%, faster than likely income growth, and therefore a drag on disposable income and the saving ratio.

Again, to get payment growth down to 6%, debt growth needs to slow to lower than 2% at a 7.25% rate. If rates go higher, then debt growth needs to go negative to achieve 6% payment growth.

14. Total interest payment matrix

| Debt Growth | Effective Interest Rate (for total debt) |     |      |     |      |     |
|-------------|--|-----|------|-----|------|-----|
|             | 6.93                                     | 7.1 | 7.25 | 7.5 | 7.75 | 8.0 |
| 0           | 0  | 3   | 5    | 8   | 12   | 16  |
| 2           | 2  | 5   | 7    | 10  | 14   | 18  |
| 4           | 4  | 7   | 9    | 13  | 16   | 20  |
| 6           | 6  | 9   | 11   | 15  | 19   | 22  |
| 8           | 8  | 11  | 13   | 17  | 21   | 25  |
| 10          | 10                                       | 13  | 15   | 19  | 23   | 27  |
| 12          | 12                                       | 15  | 17   | 21  | 25   | 29  |
| 14          | 14                                       | 17  | 19   | 23  | 28   | 32  |
| 16          | 16                                       | 19  | 21   | 26  | 30   | 34  |

Source: HSBC

**Two plausible possibilities**

It seems inevitable that either:

- ▶ consumers, in an effort to reduce the growth in interest payments ends up slowing debt growth substantially, which in turn is likely to produce a cutback in consumption growth or
- ▶ consumption stays strong thanks to decent debt growth, which in turn acts to produce outsized increases in interest payments which further squeezes disposable income and sends the personal saving ratio deep into negative terrain. (Put aside the doubts about how the saving ratio is measured for now; this is a separate issue that we will deal with in an upcoming piece soon.)

Both scenarios are possible, but it would be unusual for interest payment growth to keep surging at a time when rates are rising, even if in effective terms they are not rising by very much. Small rises in the effective interest rate in 1989, 1994 and 2000 were enough to produce recessions or soft landings in 1990, 1995 and 2001.

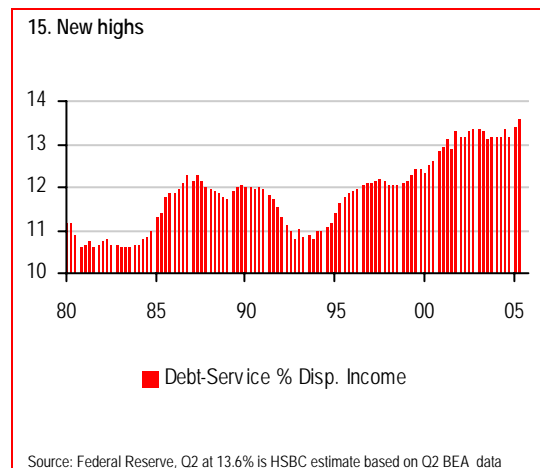
Indeed, there have even been periods when effective interest rates were falling, but because consumers were in balance sheet repair mode, the appetite for debt was missing in action. This was the case in the early 1990s when the effective

mortgage interest rate fell 200bp from 10% to 8% (see chart 19 in the annex), yet what appeared to be a sizable monetary ‘stimulus’ in the form of a 20% decline in the interest rate level could not stop inflation-adjusted house prices from falling for five long years between late 1989 to late 1994. The West Coast and Northeast housing bubbles had been punctured and lower rates could not reflate them.

**Principal payments set to grow fast**

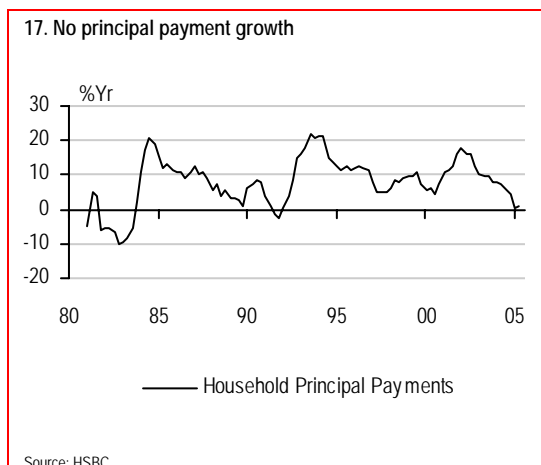
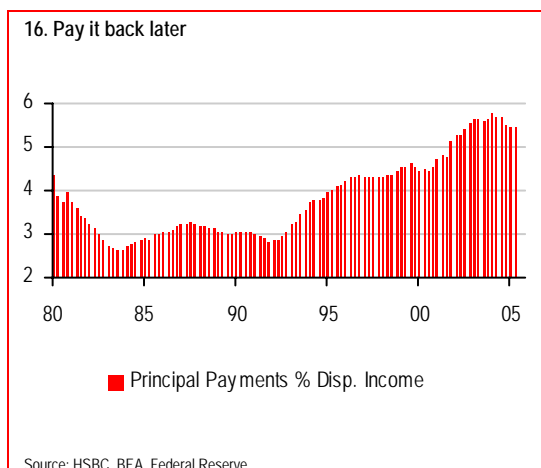
This article so far has focused on interest payments, and we haven’t even touched the principal payments of the debt, a debt which has now soared to 117% of disposable income.

Given high house prices and rising interest burdens, consumers are doing everything they can to reduce principal payments. Principal payments are only growing by 1% over the year to 2005Q2, despite double-digit debt growth (charts 16 and 17). This is thanks to the growing popularity of clever mortgage products such as interest only loans (including negative amortization loans).



Principal payments will surely rise quicker than income growth in future years as these loans are slowly but surely reset. These burdens are still to come, and they will be coming from a starting point when the household debt-service ratio (interest and principal payments relative to

disposable income) is already at a record high, despite interest rates still sitting at near record lows (chart 15).



### Lessons from the UK and Australia

The similarities and differences between the US, UK and Australian debt and house price trends have been extensively discussed by us and others, but it is still appropriate for us to mention a few points here.

Most investors understand that UK and Australian mortgage debt is linked mostly to floating short rates (these rates had been rising) while US mortgages is mostly fixed long rates (they had been flat to falling a bit).

But what is less well known, and more pertinent when considering the US, is that not only did the

UK/Aussie central bank rate hikes turn out to be much less than initially thought was required (by economists' that knew about and fully took into account the characteristics of the UK/Aussie mortgage markets), but financial innovation, in addition, meant that not all of the central bank rate hikes were ever passed on to UK and Australian consumers.

UK base rates rose 125bp but mortgage rates rose by about 75bp. And new Australian mortgage lending has typically been 25-50bp below the advertised standard mortgage rate due to the emergence of discount brokers.

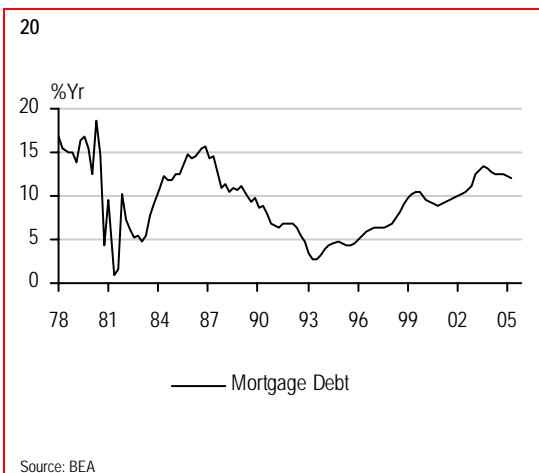
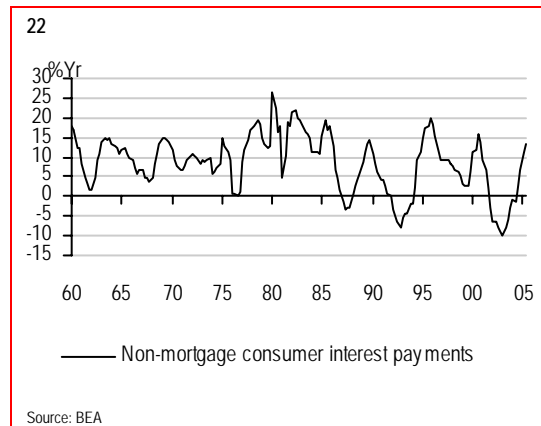
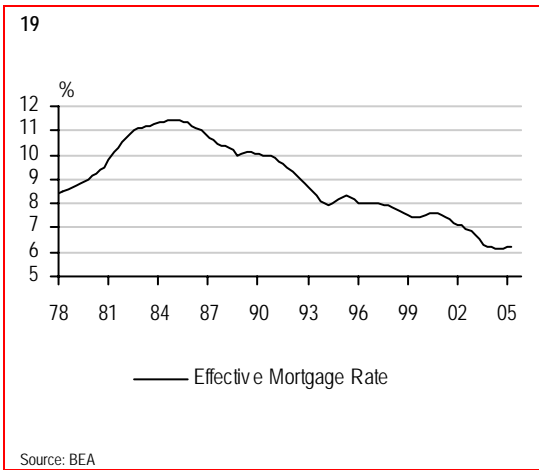
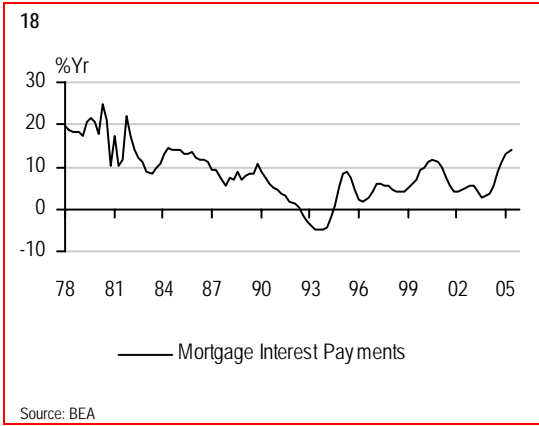
And greater proportions of UK and Aussie borrowers took out fixed rate loans such as 2 or 3 year fixed rates so that the rate hikes have not yet hurt these borrowers much, if at all. All of this presumably should have elongated the housing bull market, but it did not.

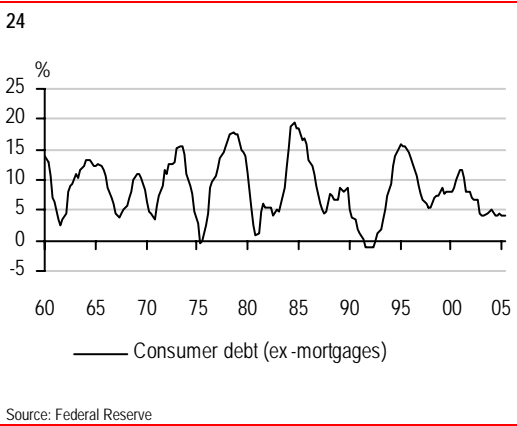
In fact, the very first Australian rate hike in late 2003 corresponded to the top of the house price cycle. In the UK, it was somewhat towards the end of the tightening phase. Now the UK is in easing mode and a growing number of economists see the next move in Aussie rates as down. House prices have been the key catalyst for the change in sentiment.

What's scary is that house prices did not even need to fall for households to start repairing balance sheets and in the process hurt growth. In both the UK and Australian case, house prices merely flattened out. Sometime in the next few quarters, perhaps sooner rather than later, our bet is that the US housing market is also punctured. By this time next year, financial markets, in our view, will then be speculating about Fed easing.



## Annex: Longer-term Charts





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