

# No pain, no gain: the issue of housing stress.



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## Abstract

*Much has been written regarding the increasing cost of housing in Australia and the so-called, "affordability crisis". The affordability crisis is concerned with the householder's increasing cost for housing requirement in relation to the householder's income. As the housing cost (purchase price or rental cost) increases relative to income, affordability worsens. As income increases relative to cost, affordability eases.*

*In the past, Australia was recognised as having one of the highest incidences of home ownership in the world. This is deteriorating and now there are commentators suggesting that lifetime renting may well be the position for many householders. The purpose of this paper is not to support the increasing housing price, but to put an alternative strategy for would-be purchasers of dwellings, who may be delaying their purchase in the belief that the affordability crisis will ease.*

*The paper uses Sydney housing prices and rental costs to demonstrate that the pain (stress) for the purchaser may not necessarily be long term and the pain may well result in long-term gain.*

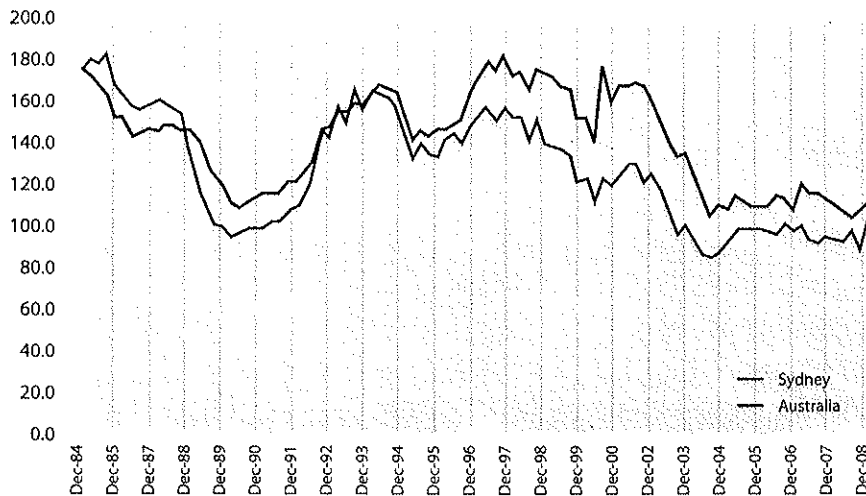
## Introduction

The definition of affordability is used to convey a notion of reasonable costs in relation to income. Gabriel et al (2005) define housing affordability as a "term usually denoting the maximum amount of income which households should be expected to pay for their housing". Similarly, PCA (2007) and Whitehead (1991) point out that housing affordability is expressed by the relationship between housing expenditure (be it rent or mortgage payment) and household income. In one way or another, housing affordability is measured and expressed as a ratio between expenditure on housing and income.

As a general rule property analysts and property industry groups (PCA, HIA, UDIA) use 30 per cent as the benchmark for housing affordability. Yates and Gabriel (2006) in a study for the Australian Housing and Urban Research institute (AHURI) have identified that there are 862,000 households in Australia experiencing housing stress. They defined stress using the "30/40 rule", which identifies the nation's lowest 40 per cent income group that needs more than 30 per cent of their disposable income for housing.

Yates and Gabriel (2006) further contend that duration of stress extends over time, reducing to 60 per cent after one

Figure 1: Australia and Sydney Housing Affordability Index



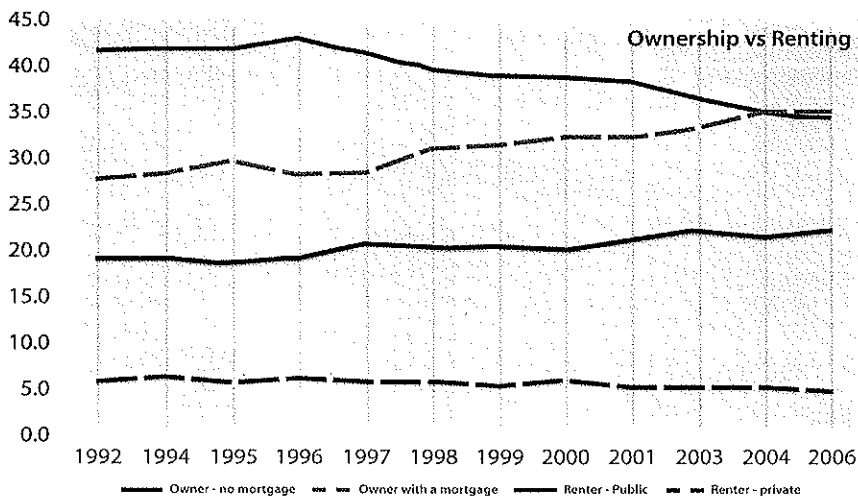
Source: HIA Housing Affordability Index Time Series (2008)

year, 49 per cent after two years and reduces to 29 per cent after three years. Unfortunately this study was over the period 2001-2003 and would have been good to extend over time.

Figure 1 shows the HIA housing affordability index for Sydney and Australia from 1984. HIA (2008) measures affordability by deriving an index which measures the ratio of net household income to net qualifying income for an 80 per cent loan of the Sydney and Australian median dwelling prices. The higher the ratio, the more affordable and vice versa, the lower

the ratio, the less affordable. As can be noted both indexes move in a similar pattern, having decreased over the period, showing housing is now less affordable in Australia than it was in the 1980s and 1990s. Sydney and Australia were most affordable in 1985 with indexes well over 170, but decreased to their lowest in December 2003; 83.6 for Sydney, and 102.8 for Australia. Since then both have improved towards the end of 2008, due mainly to prices falling across Australia. Subsequent to that, more recently there have been several interest rate cuts which will filter through the next quarterly data onwards. What Figure 1 also shows is

Figure 2: Housing Tenure in Australia



Source: ABS (2008) – Table 1 Cat No. 4102.0

that Sydney has consistently been less affordable than the Australian average with the gap between the two widening over the past 15 years or so.

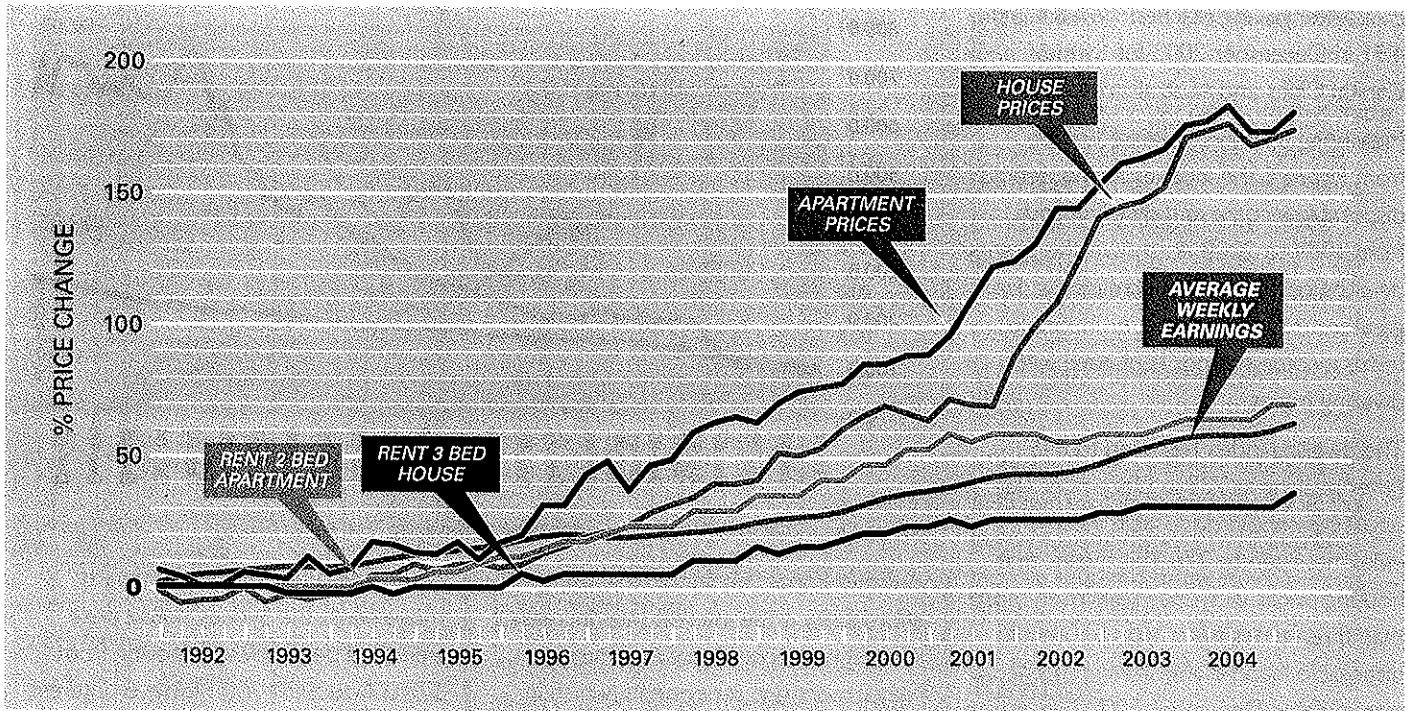
In an international study, Cox and Pavlevich (2007) used a median multiplier ratio to determine housing affordability. The ratio measured “the Median House Price to Median Household Income Multiple”, which in essence measures the numbers of years of income it takes to purchase a dwelling. Therefore the higher the multiplier the more years of income it takes to purchase a dwelling and therefore the less affordable. Hargreaves (2002) in a study of the New Zealand residential market, found that due to reduced job security, delayed family formation of new families and more single-person households, there had been a significant increase in the percentage of households renting rather than buying dwellings.

With housing becoming less affordable in Australia, the percentage of ownership has fallen from 69.2 per cent in 1992 to 64.8 per cent in 2006 (ABS, 2008). In addition to the decline in ownership, the number of those now with a mortgage has increased, in fact most owners now have a mortgage. Figure 2 shows the composition of housing tenure in percentage terms and – as can be noted – the “owners with a mortgage” has increased by 16.7 per cent, whilst the level of “owners – no mortgage” has decreased by 21.6 per cent. On the alternative rental side, public renters have decreased from 5.6 per cent to 4.1 per cent, whilst those dependent on private rentals has increased by 22.2 per cent over the same period.

## Data

To undertake the analyses, this paper used the HIA affordability index time

Figure 3: Sydney Dwelling Prices, Rents and Average Weekly Income



Source: Metro Strategy, 2005 (Figure C.5)

series for median dwelling price and disposable household income for Australia, Sydney and capital cities. Rental prices were ascertained from the NSW Department of Housing, whilst the vacancy rates were provided by the Real Estate Institute of NSW. All other variables have been derived from the Australian Bureau of Statistics (ABS).

## The Pain

Examining Sydney, Figure 3 shows the Metro Strategy's (2005) percentage change of dwelling prices, rents and average weekly income for the period 1992-2004. As can be noted, it shows the extent of how housing and apartment prices have risen in relation to income in that period. It also shows that house and apartment rents have risen over the period and in particular how the rental of apartments has risen at a greater rate than income.

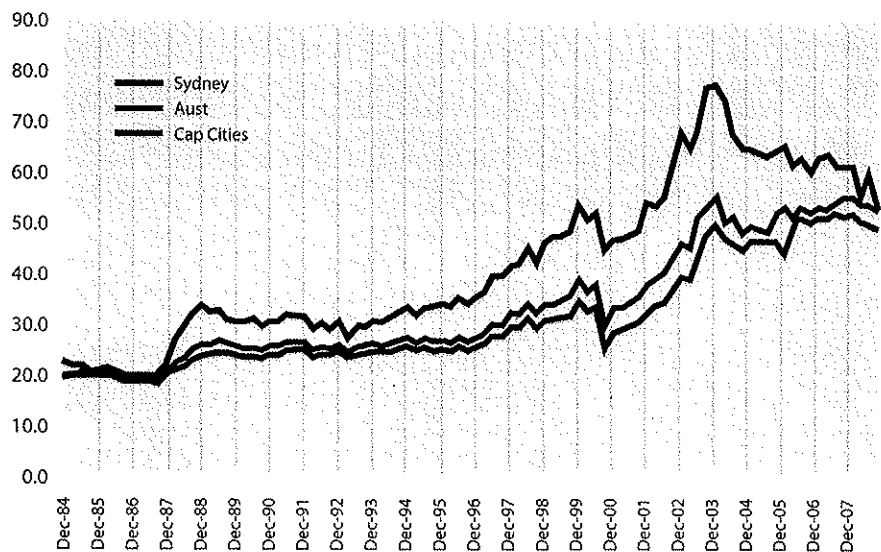
Using a multiplier similar to the Cox and Pavlevich (2007) study (discussed above), Figure 4 applies the median house price

to the household disposable income, for Australia, the capital cities and for Sydney for the period December 1984 to September 2008. The higher the multiplier the worse the position is getting.

From the Figure we can see that Sydney has the highest multiplier, particularly from

the early 1990s, where the gap between Sydney and both the capital cities and the overall Australian position has significantly increased. For Sydney, the housing cost to income multiplier in the early 1980s was just over twice the household disposable income and in September 2008 had risen to over five for Sydney and the capital

Figure 4: Dwelling/Income Multiplier (1984-2008)



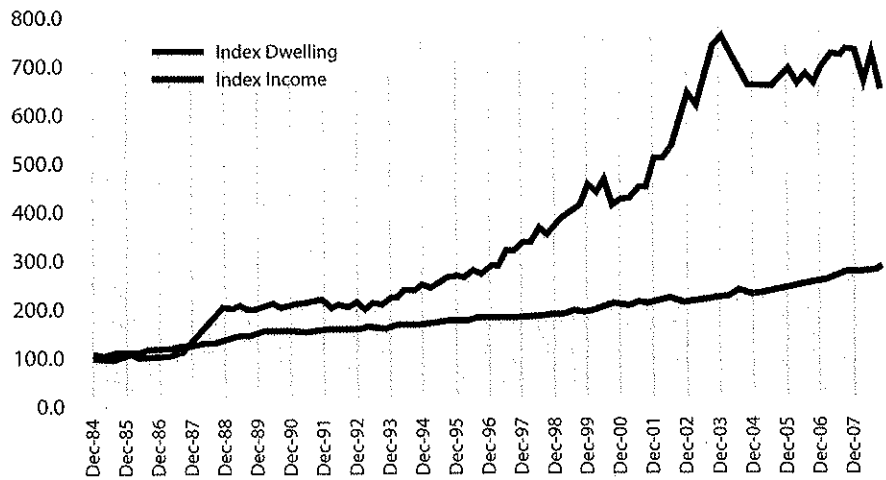
Source: Derived from HIA-Commonwealth Bank Affordability Report (2008)

Figure 5: Household Disposable Income and Sydney Dwelling Indexes (1984-2008)

cities, after having reached 7.67, 5.5 and 4.91 in December 2003 for Sydney, Capital Cities and Australia respectively.

Measuring Sydney's increase we see from Figure 5 the indexes for household disposable income and dwelling costs from 1984 to 2008. As shown, the Sydney dwelling cost has been increasing at far greater rate than income, or in simple terms income has not kept pace with dwelling prices.

The dwelling index has risen to 645 (after peaking at 735 in December '03) whilst household disposable income index has risen to 276. This means that housing prices in Sydney have risen more than three times faster than household disposable income after having reached a rate of 5.4 in December 2003. The reason for the improvement since December 2003 is the result of the Sydney medium price falling from its peak of \$527,770 in December 2003 to \$451,700 in September 2008 (HIA).



Source: Derived from HIA-Commonwealth Bank Affordability Time Series (2008)

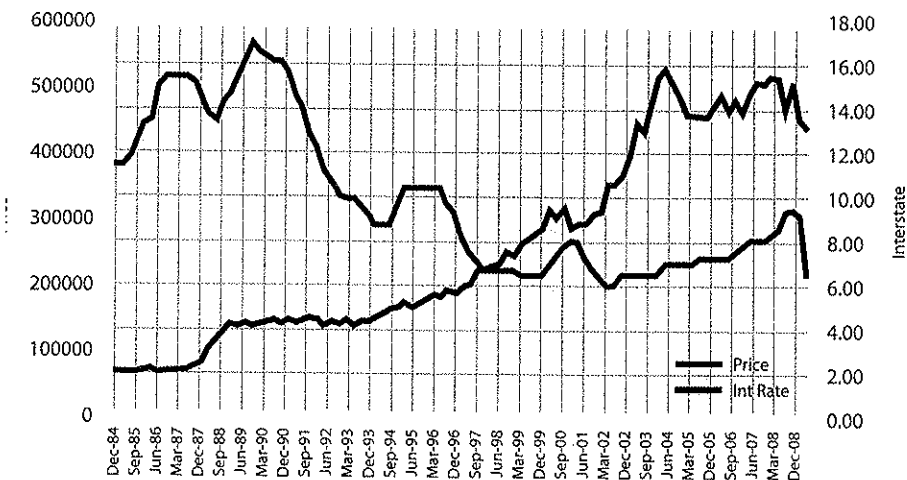
Another important factor in housing affordability is the interest rate. Increasing interest rates, ceteris paribus, means higher mortgage repayments, which in turn means a fall in affordability.

Figure 6 shows the Sydney housing price and interest rate movements from December 1984 to September 2008. Until June 2008, as can be noted,

other than a few minor downward movements, the Sydney house price trend has been upward, moving from \$70,000 to \$451,700. However interest rates have fluctuated, commencing at 11.5 per cent, increasing to 17 per cent (September 1989) and falling to 6.05 per cent (December 01), before beginning an upward movement to 9.45 per cent



Figure 6: Sydney House Price and Housing Interest Rates (1984-2008)



Source: Derived from HIA-Commonwealth Bank Affordability Time Series (2008)

in June 08. Since then, there have been several interest rate cuts due to the global financial crisis, with the rate falling to 6.45% by December 2008.

Thus before the recent interest rate falls, over the past five years or so, notwithstanding the slowing down of prices, higher interest rates have compounded the position of housing

stress brought about by the long-term higher house prices.

As discussed in the literature, housing stress is often defined when more than 30 per cent of household income is required to meet the repayments for the loan. Figure 7 shows the percentage of disposable income required to meet housing payments for Sydney median

price dwelling from December 1984 to June 2008.

From the Figure, we can note that there are two periods when the ratio has been greater than 30 per cent "stress" benchmark, namely the late 1980s and the period from December 1999 onwards, peaking at 52.3 per cent in December 2003, but still at 42.9 per cent at the end of the period (September 2008).

Allowing for the interest rate cuts to 6.45 per cent in December 2008, the percentage of disposable household income required to meet repayments reduces to 33.8 per cent.

## Renting

As everyone needs to live somewhere, the alternative to buying is renting which, when property prices are unaffordable, increases the demand for rentals. In addition, the growing population in

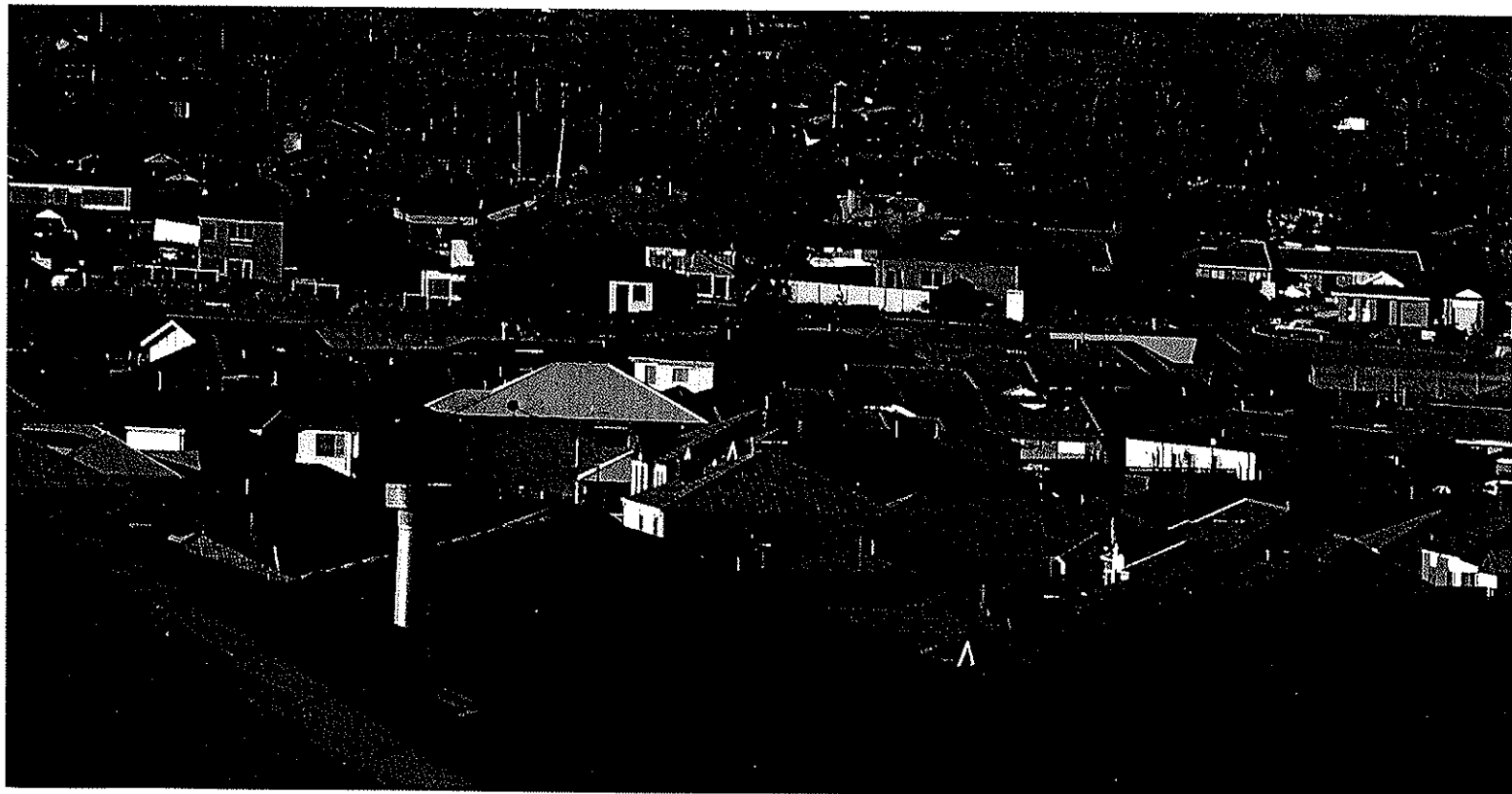
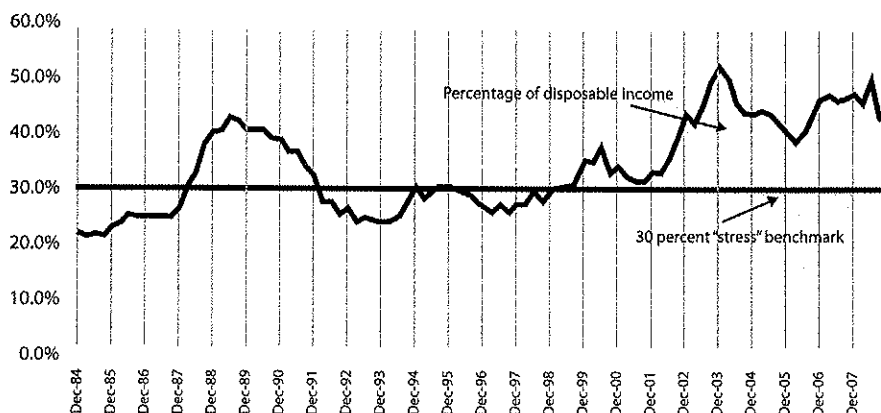


Figure 7: Percentage of Disposable Household Income (1984-2008)



Source: Derived from HIA-Commonwealth Bank Affordability Report (2008)

Sydney (Metro Strategy, 2006) without an accommodating new supply (PCA, 2007), is further compounding the increase in demand for rental dwellings, driving the cost of renting upwards. This is evident in Figure 8, which shows the level of rent from September 2001 for one-, two- and three-bedroom dwellings in Sydney. Rents have been increasing in all categories. Over the period, they have increased 29 percent for the one-bedroom dwellings and 23 per cent for two- and three-bedroom dwellings.

The level of rentals is not expected to fall, as vacancies rates have had a downward trend since March 2001, implying the potential for higher asking rents. Figure 9 shows the vacancy rate for dwelling rentals for Sydney. The downward trend can be noted with the level falling to below 2 per cent for the past 10 quarters and with no end to this trend in sight. This means that supply of rental accommodation is being rapidly absorbed and this has the effect of driving rent levels higher.

The falling vacancy rate is the result of an increase in demand for private renting as evident in Figure 2 above, whilst the lack of new supply has been attributed to a combination of economic and regulatory factors. The underlying factor of new dwelling supply is land, but as the PCA

(2007) have identified, there has been a growing imbalance of demand and supply with an expected shortfall of new land supply for the period 2006-2026.

Therefore, as the alternative to buying is renting, households will also experience stress in renting. So with rising prices and rising rents, housing stress is becoming a new phenomena.

### What is the answer?

There is no one quick fix to the problem and it could become a permanent one. Supply needs to increase and even with

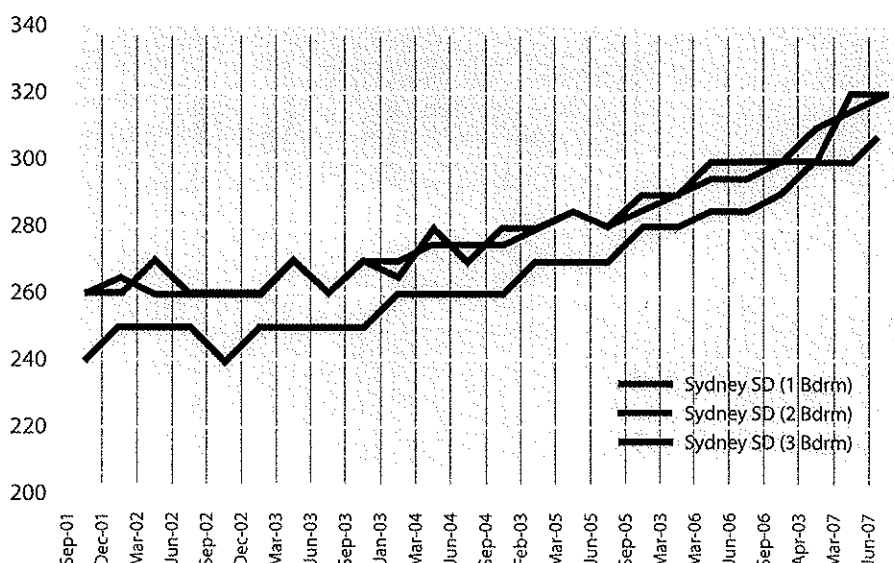
government intervention, it would take some time for the problem to ease.

Not a solution, but an alternative view, is "no pain, no gain". The above has highlighted the pain, now let us analyse the gain.

### The Gain

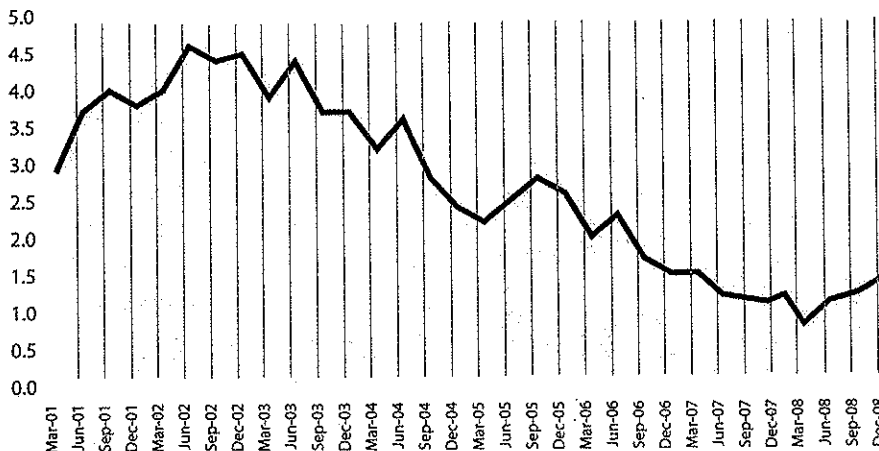
Unfortunately there are many owners that have been driven to mortgagee sales in Sydney as a result of this affordability crisis, in particular in the "outer ring" of Sydney. Supreme Court documents published in *The Daily Telegraph* (Bissett and Saurine, 2006) showed that the number of "Writs of Possession" had risen to 5363 by 2006. It also noted that a "two-tier" market had been developed with many of these mortgagee sales in the areas classified as the "outer ring" of Sydney. This is where not only are owners finding it difficult to meet the increase mortgage payments due to the increase in interest rates, but the market value of their dwelling has fallen. In many of these cases, owners have negative wealth, that is their mortgage is greater than the value of their dwelling asset. But the housing

Figure 8: 1, 2& 3 Bedroom Dwelling Rents for Sydney (2001-2007)



Source: NSW Department of Housing (unpublished)

Figure 9: Residential Vacancy Rate (%) for Sydney (2001 – 2008)



Source: REINSW (Various)

market does not necessarily move in unison and not all areas of Sydney have experienced this downturn.

In sport, it is often said, you must experience pain to gain or put simply "no

**... the household, whilst suffering affordability stress, could be having an increase in wealth ...**

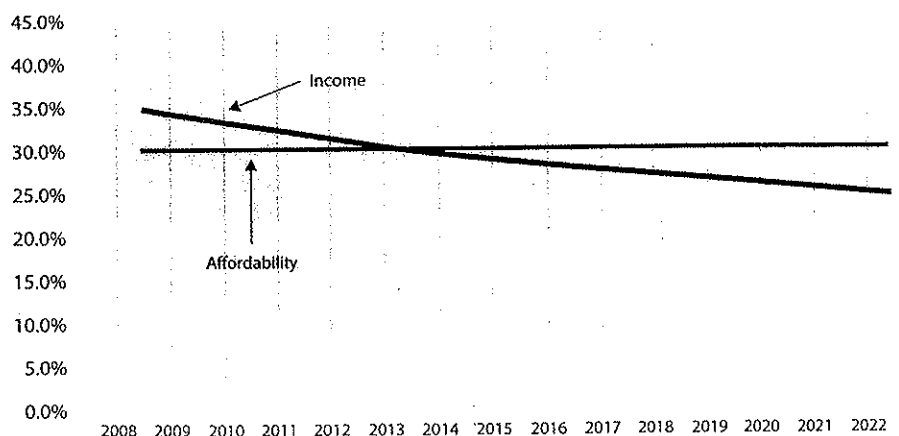
pain, no gain". Recognising that pain (in this case housing stress) is a reality, it is also a reality that household income has risen over time. In addition repayments have risen due to the increase in borrowings and can fluctuate with the rise and fall of the rate of interest.

Figure 10 shows the dwelling repayment to income ratio projected to 2022 for the dwelling purchaser in 2008, beginning with the adjusted September ratio of 33.8 per cent. This is the adjusted "repayment to income" ratio for September 08 in Figure 7. Now, when analysing the time series of "disposable income" we derive that income grew by 2.37 per cent over the past 12 months. By assuming the same growth rate for disposable income

into the future and applying it to the "repayment to income" ratio, the ratio decreases over time, that is housing stress reduces annually. Figure 10 shows that it takes some five years (2013) before it gets to the 30 per cent acceptable margin, in other words it takes five years of "pain" to get out of the accepted level of housing stress.

However, although one buys a dwelling principally for shelter, the dwelling is an asset and as we have seen over history its value increases. Hence, the household, whilst suffering affordability stress, could be having an increase in wealth, depending on the current property cycle. Hence to get a correct economic position of the householder repaying

Figure 10: Affordability ratio



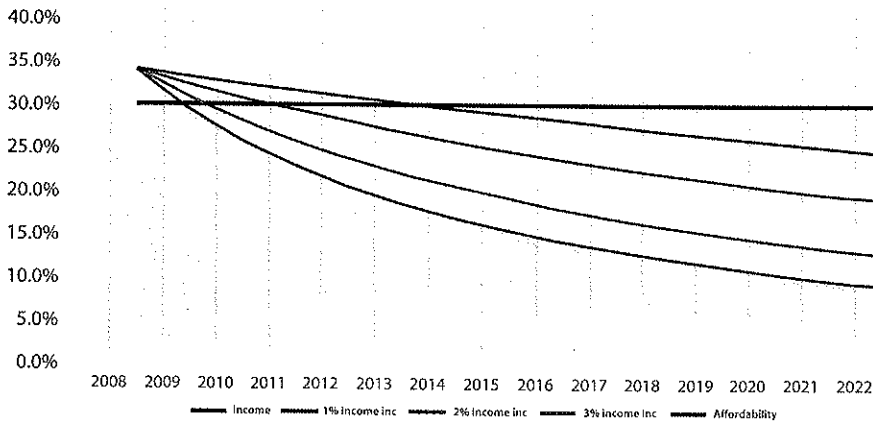
a loan on the property over time, we should also add the value of the capital gain.

Figure 11 shows the value of that capital gain and added to the household income allowing for a capital gain of 1, 2 and 3 per cent annual respectively to show that whilst the dwelling purchaser is in an affordability stress position in the early years of ownership, the dwelling purchaser is increasing in wealth.

Obviously, the higher the capital gain the higher the wealth effect; 1 per cent capital gain means the household has been reduced to the 30 per cent benchmark in about three years, reducing to two years for a 2 per cent capital gain and to one year for a 3 per cent capital gain.

The advantage of observing the position in this respect is that if in fact property is rising, the person that purchases and is in stress can overcome the stress in a short period of time and in particular those who have taken out more than one loan can consolidate their loans into one loan by re-mortgaging. Generally speaking the second loan, being a 2nd mortgage or personal loan will always be at a higher rate of interest than a 1st mortgage, plus having two loans requires two concurrent payments. Therefore the benefit to a property owner is that as

Figure 11: Affordability ratio allowing for capital gain



the value increases, the owner has more equity in the dwelling (asset) and can by re-mortgaging consolidate the loans at the standard housing rate of interest. Also the added benefit is that the household only has one repayment to make.

But prices have fallen and to be fair to the argument, what happens if housing prices continue to fall, after all we are in a financial crisis? Figure 12, using the same commencement data as Figure 11 and the subsequent fall in interest rates (5.24 per cent) in March 2009, assumes prices falling by 5 and 10 per cent over the next two years and a 1 per cent increase from the fourth year onwards, as one would expect to see increasing prices after four years of negative growth. As can be observed there is "pain", housing stress increases to over 40 per cent and nearly 60 per cent respectively and then begins to fall. With falling prices the stress period now extends to seven years and 10 years respectively.

In other the words, even with a further 10 per cent fall, the pain would be gone within 10 years and the buyer has the luxury of home ownership. One may then argue, why not wait for prices to fall? The problem with that argument is, identifying the absolute "bottom" of the market.

Whilst some commentators will argue that people are better off renting, let us look at some of the facts. The end

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result of people not being able to buy is that rents will be driven up, as has been the case in recent times. The latest

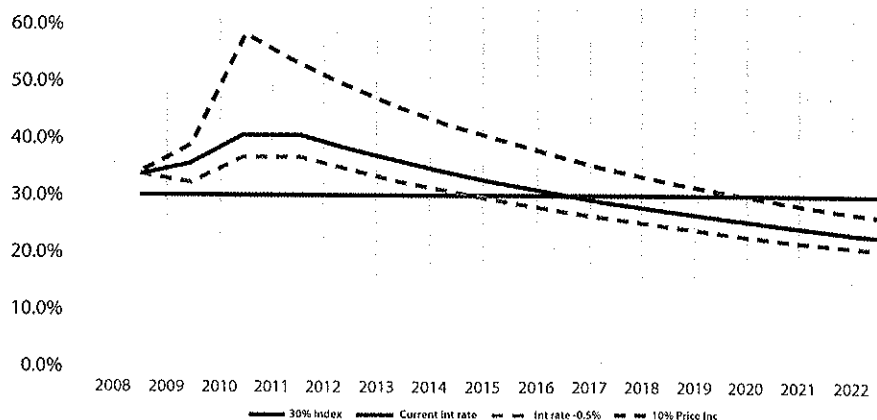
REINSW report (2008) shows that the residential property vacancy rate in Sydney has remained below 2 per cent from September 2006 – "the benchmark figure that indicates whether or not there is a rental crisis". The figure as at 2008 was 1.4 per cent. So whilst some commentators may say that people are better off renting, rental prices are also creating affordability stress.

## Conclusion

This paper does not solve the housing stress problem, but it offers a reason why consumers should still consider buying. As the alternative to buying is renting, it was shown that rents have also risen, continue to increase and are forecast to rise even further. These increases in rental costs are also eroding savings and in particular those that are in need of saving for any future deposit for purchasing.

Provided consumers have the capacity to purchase, they can sacrifice early in their purchase for lifetime gains. History has shown income grows over time and if applying last year's rate of income growth, the purchaser's housing stress reduces to about three years and possibly less, depending on capital growth. In addition, the current rate of interest is expected to fall further:

Figure 12: Affordability ratio allowing for capital loss





It must be understood that should property values stay stable then the buyer would be in the position as shown in Figure 10. More importantly, should there be a decreasing housing price environment then the initial stress would be further compounded as we saw in Figure 12.

However, history has shown that property values increase over the longer term. In this study, we found that a 1, 2 and 3 per cent capital growth rate would reduce housing stress to three, two and one year respectively. Even if prices did decrease by 10 per cent over the next two years and then only achieved a 1 per cent growth after that, the result would be that stress would extend for a period of about 10 years. But the purchaser will have the luxury of home ownership, therefore, satisfying the cliché, *no pain, no gain*. ■

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