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**CSI Lincoln: An investigation into a declining housing  
market**

**Professor Chris Eves**

**Lincoln University**

**Commerce Division**

**Ph: 64 3 3252 811 (ext 8694)**

**Email: [chris.eves@lincoln.ac.nz](mailto:chris.eves@lincoln.ac.nz)**

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**Abstract**

The residential property market in New Zealand has been experiencing a boom and bubble period from 2001 through to mid 2007. Following a number of increases in the Official Cash Rate by the Reserve Bank and a decline in net migration numbers the housing market was perceived to be over inflated and due for a major correction.

Numerous media, Government Departments, property experts and economists have been predicting significant reductions in the median price of residential property throughout New Zealand.

This paper will analyse house prices in specific socio-economic locations within Christchurch over the past 12 months to determine how significant the current housing decline is. This study will review the change in residential property prices, variations in property listings since April 2008, sale volumes and days on the market across a range of housing sectors to determine the extent and range of any residential property downturn in the NZ recession.

## **Introduction**

Home ownership in New Zealand has been one of the highest levels in the world, with 70% of the population owning/paying off their own home (NZ Statistics, 2008). In most cases the family home is the major asset of most New Zealand households, with very low participation in managed funds, superannuation or savings compared to other developed countries (Reserve Bank of New Zealand, 2008).

This fixation on home ownership and investment in a second home fueled a significant increase in residential property prices from 1999 through to 2007. During this period the median house price in New Zealand increased from \$132,000 to \$345,000 (Grimes and Aitken, 2005; Grimes et al, 2003; QV, 2006, 2007, 2008).

However, at the end of 2007 the residential property market in New Zealand slowed and in January 2008 predictions of a slowing property market were forecast based on the problems being faced in the US residential property market.

By March 2008, it was evident that the NZ residential property market had slowed and the median house price had fallen for the first time across most NZ centres compared to the previous period in 2007 (QV, 2006, 2007, 2008).

During the first 6 months of 2008 a number of second tier financial institutions collapsed or placed moratoriums on withdrawals. Towards the end of 2008, 22 finance companies in New Zealand had ceased operations. This placed further pressure on the residential property markets.

In the second half of 2008, the full extent of the US financial crises further impacted on the NZ economy, with continuing pressure on finance companies, bank lending policies and the availability of credit for residential housing borrowers.

2008 has been a watershed year for the New Zealand residential property market. Despite the significant falls in interest rates to levels last seen in December 2003 (RBNZ, 2008) and the subsequent improvement in home affordability, this has not been reflected in the residential property market.

The following analysis will track the trends in the Christchurch residential property market over the period of December 2007 to December 2008 and compare this performance to the previous two years, which were the most active residential property sales periods in the last decade. The results of this analysis will then be used to show possible ramifications of this decline in the New Zealand residential property market if the current trends continue throughout 2009.

## **Research Methodology**

The data for the paper has been based on 15 residential suburbs in Christchurch. These suburbs were selected on the basis that they represented both a geographic and socio-economic areas within Christchurch city. All sales transactions for these suburbs were collected for the period November 2005 through to December 2008, representing three years of the Christchurch residential property market. In addition to the sales transaction data, the listings for residential

property in these suburbs were also tracked on a weekly basis to determine the average monthly residential property listings for each suburb. The listing data was collected on the basis of both freestanding residential property and units/townhouses. The suburbs selected are shown in Table 1.

Sales data was based on the Real Estate Institute of New Zealand sales database, with the weekly residential property listings being extracted from the main New Zealand internet sales site [www.realestate.co.nz](http://www.realestate.co.nz).

This data was analysed to show changes in monthly listings based on socio-economic criteria, as well as the change in quarterly median and average residential house prices for the three socio-economic representative suburbs in Christchurch.

**Table 1: Study Suburbs**

<b>Low Socio-Economic</b>	<b>Middle Socio-Economic</b>	<b>High Socio-Economic</b>
Addington	Avonhead	Cashmere Hills
Aranui	Halswell	Fendelton
Bexley	Papanui	Merivale
Hornby	Richmond	Queenspark
Linwood	Somerfield	Sumner

In addition to the sales transaction data for the selected suburbs, the sales transactions for Christchurch were sorted to extract repeat sales from 2007 and 2008 to determine the impact of the falling property market to individual properties to gain a more accurate assessment of the impact of the current New Zealand recession and world financial crisis on the NZ residential property market. These two years were selected for the repeat sales as they represent the years preceding and during the peak of the market and the initial decline. Repeat sales for the years 2006 and 2008 were also analysed to determine at what previous price levels the current market has moved back to. Real estate agents were also canvassed to provide details of recent sales and the actual net value of sales of houses that sold in both 2006 and 2008.

Based on the results of this analysis, projections have also been made on the potential impact of expected continuing house price falls in New Zealand in 2009, particularly in relation to the significant residential house price reductions in the US.

## **Results**

New Zealand saw record residential property sales in 2006 (106,000 transactions) and although the number of sales in 2007 was slightly lower (92,000 transactions) the median house price for New Zealand had increased significantly during 2007 (REINZ, 2008).

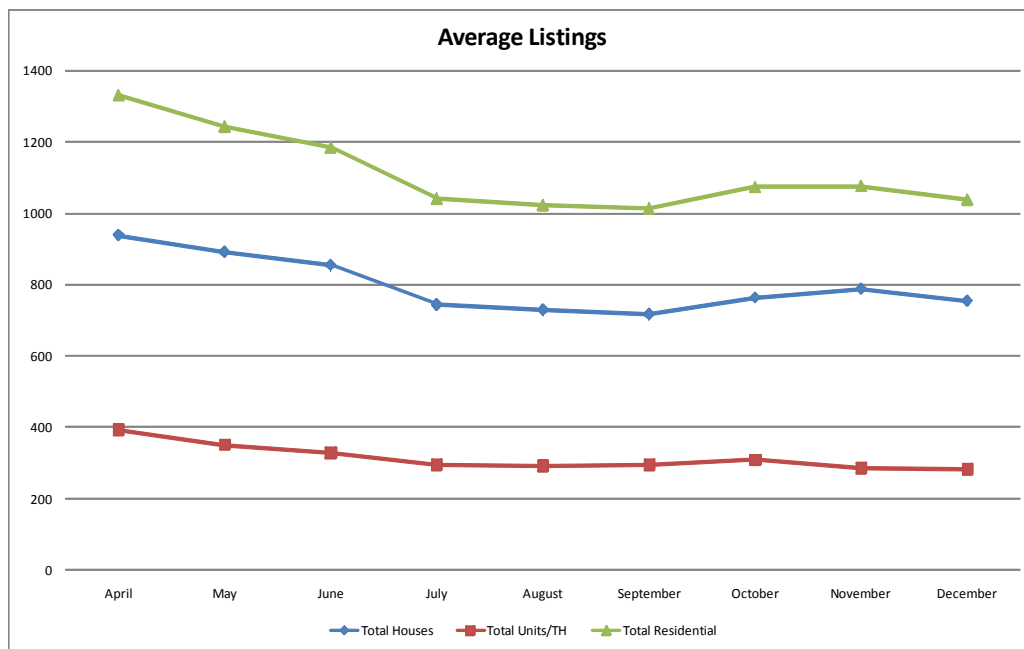
By March 2008 the median house price for NZ residential property had started to decline and this was also reflected in the number of properties being sold and properties being listed for sale.

## Property Listings

Figure 1 shows the average monthly listings for residential property in Christchurch from April 2008 to December 2008. From this figure, it can be seen that the total residential property listings declined from an average of 1330 properties in April 2008, to only an average of 1013 listings in September. This period is traditionally a slow selling period in the Christchurch market, but listings were still well below the levels for the same period in 2006 and 2007.

When the listings are broken down into houses and units/townhouses, it can be seen that the average number of listings for houses in April 2008 was 938. Again the number of house listings declined from April reaching a low of 717 properties in September. Media reports (REINZ, 2008) especially those from real estate firms had hoped that the move into the traditional high sales months of spring and early summer would improve total listings and sales. However, from Figure 1 and Table 2, it can be seen that listings rose slightly in October and November to houses but again fell in December to 755 properties.

**Figure 1: Average Monthly Listings: April 2008 to December 2008**



This fall in listings was also reflected in the actual number of property sales in the subject suburbs. Table 2 also shows that the anticipated increase in sales in the Spring of 2008 did not eventuate with October, November and December sales well below February sales and also the sales in the June and July, which are usually the lowest sales month in Christchurch.

A similar trend also occurred in the unit/townhouse property market, with 392 units listed for sale in April and this average monthly figure falling to 293 in August. In the following two months the number of units listed for sale increased slightly to 309 in October; however since

October the number of units being listed has again been falling, with 283 listed for sale in December 2008.

**Table 2: Monthly Sales: Selected Christchurch Suburbs: 2008**

	Low Socio	Middle Socio	High Socio	Total
January	23	43	22	88
February	43	54	44	141
March	18	52	31	101
April	28	40	44	112
May	34	40	32	106
June	26	54	51	131
July	30	48	53	131
August	22	51	33	106
September	23	52	43	118
October	19	51	39	109
November	23	60	42	125
December	14	21	13	46
<b>Total</b>	<b>303</b>	<b>566</b>	<b>447</b>	<b>1316</b>

**Figure 2: Total Listings: Socio-Economic: 2008**

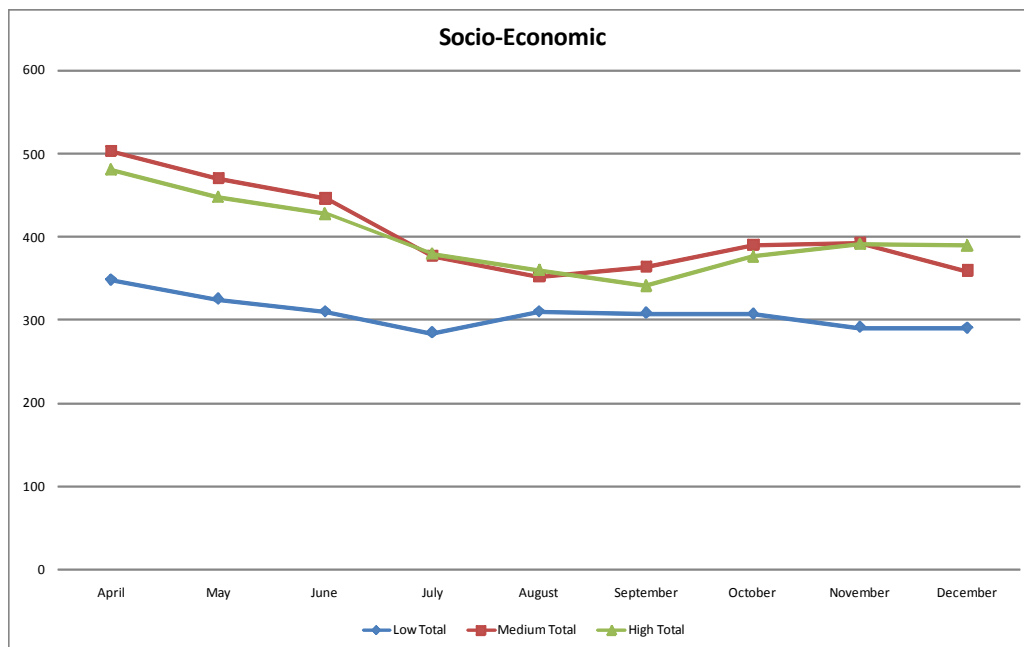
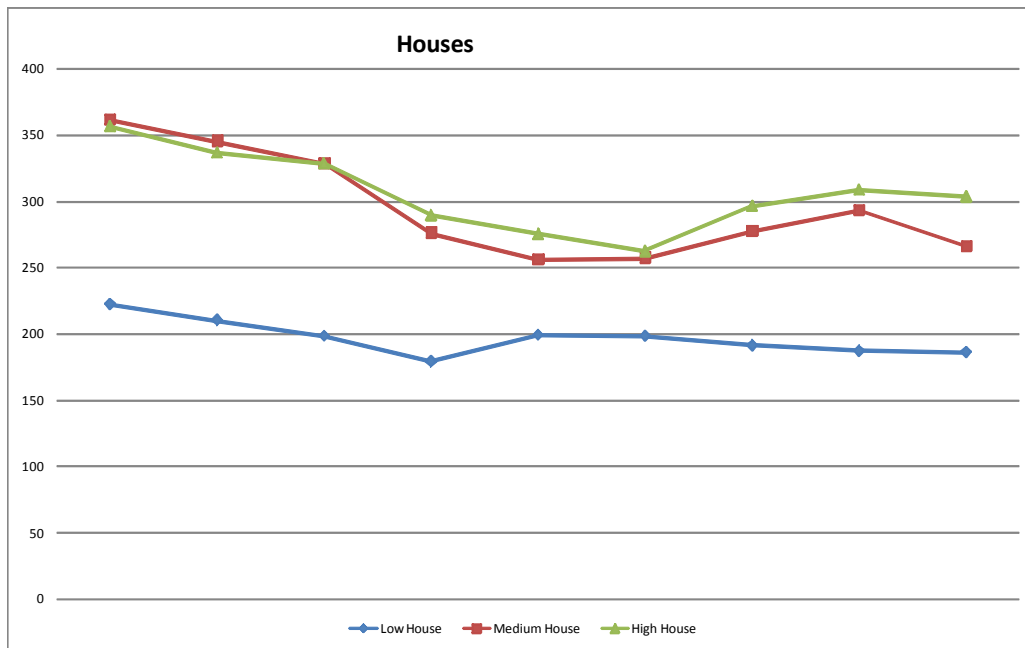


Figure 2 represents the average monthly listings based on the socio-economic classifications of the 15 suburbs in the study. From this figure, it can be seen that the trend in listings has not been consistent across the suburbs of Christchurch. This figure shows that the trend in listing numbers was similar for the middle and high socio-economic areas, with a decrease in listings from April through August, at which point the number of listings in the middle socio-economic suburbs started to increase slightly before a slight decrease from November to December 2008. Listings in the high socio-economic suburbs declined from a high in April 2008 to September 2008 at which point the number of average monthly listings has been increasing; however, still below the levels from April to June 2008.

**Figure 3: Average Monthly Listings: Houses: April to December 2008**



Although the trends in listings were similar for the middle and high socio-economic suburbs the trend for low socio-economic trends was very different. Figure 3 shows that average monthly listings for these suburbs have not been as volatile as the higher value areas.

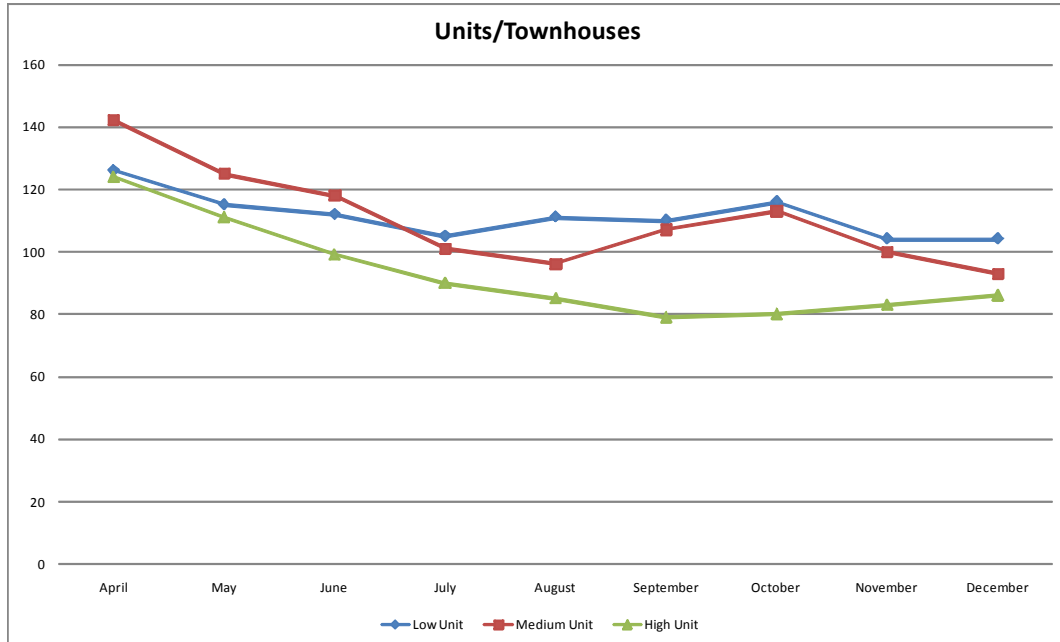
The decline in listings continued from April (392) to July (296), at which point there was a slight increase in the number of average monthly listings to 309 in October. Since October the listings have declined to 283 in December.

Figures 3 and 4 represent the break-up of listings across the various socio-economic suburbs in respect to houses and units/townhouses. Again, it can be seen that the trends in listings has been different in respect to the two property types and the socio-economic status of the markets.

Again, the trends for the middle and high socio-economic suburbs for houses has been similar, but the trend for the low socio-economic areas has been different in relation to total house listing

numbers, as well as the months where listings bottomed and recovered. The low socio-economic suburbs saw house listings decrease from 222 in April to 179 in July. The decline in house listing numbers for the other two markets continued to decline through to September.

**Figure 4: Average Monthly Listings: Units: April to December 2008**



The trends for unit/townhouse listings differ to houses. Figure 4 shows that the trends for the low socio and middle socio suburbs have been very similar but the main difference has been in the high socio-economic suburbs. Unit listings in these higher value suburbs continued to decline well after the other two areas reaching a low of 79 listings in September and then showing increases each month from then. While unit listings in the high socio-economic suburbs were increasing in November and December, they were decreasing for the low and middle socio-economic suburbs.

### Property Sales

Total residential sales transactions for Christchurch have been:

<b>2005</b>	10,307	<b>2006</b>	10,510
<b>2007</b>	8,759	<b>2008</b>	5,485

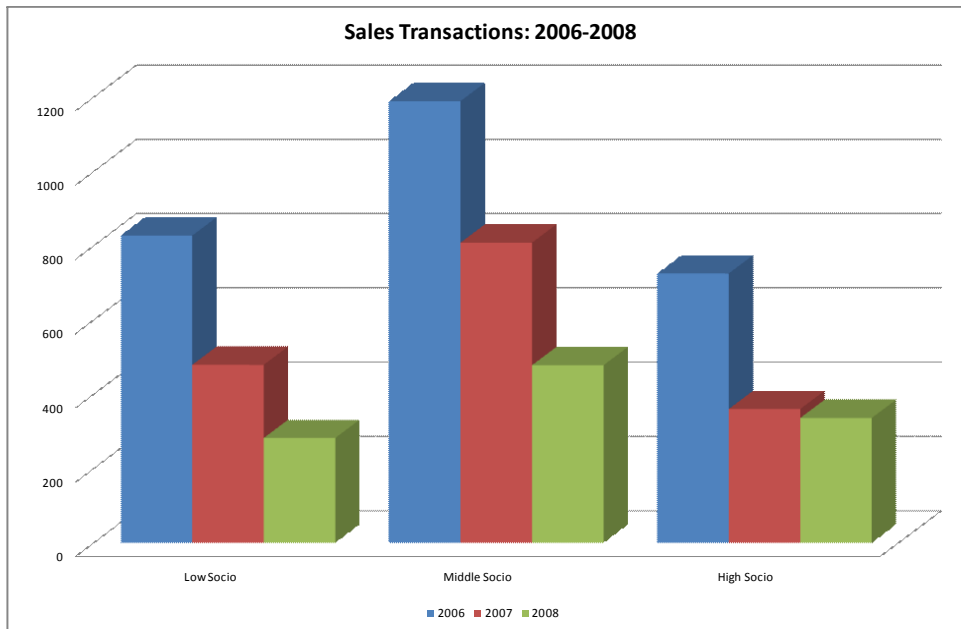
However, as the study only includes 15 Christchurch suburbs and their sale details and analysis are as follows.

Figure 5 shows the sales transactions for the suburb classification in the study. This figure shows that in the last three years the majority of sales have been in the middle price range suburbs of Christchurch (44%), with low socio-economic suburbs accounting for 28% of all sales transaction over the period. An important aspect to note with these sales transactions is that

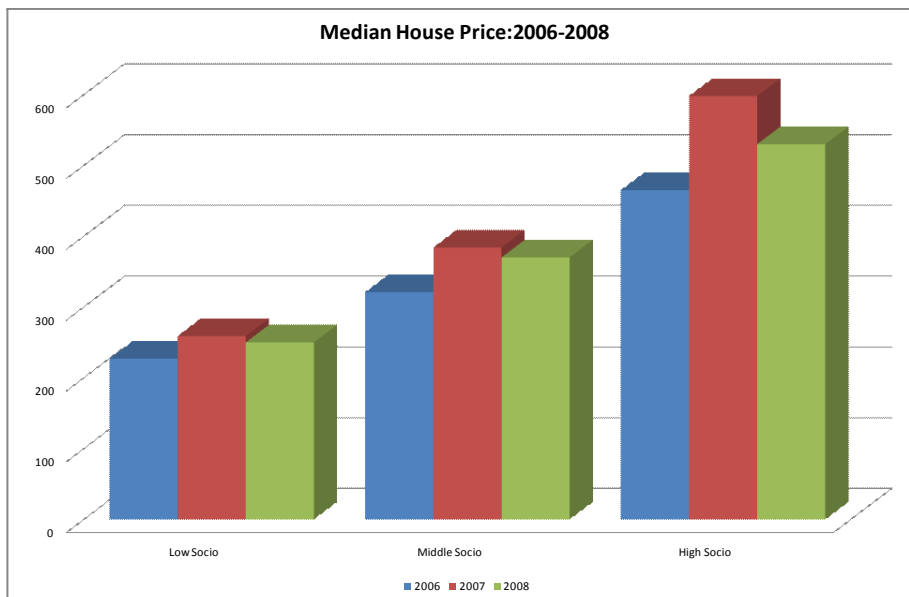
approximately 70% of all sales transactions were at or below the Christchurch median house price for the three years.

This figure also shows that the sales transactions have been decreasing over the past three years, with 2008 sales for the subject suburbs being only 33% of the number of sales recorded in 2006.

**Figure 5: Residential Property sales: Study Area: 2006-2008**



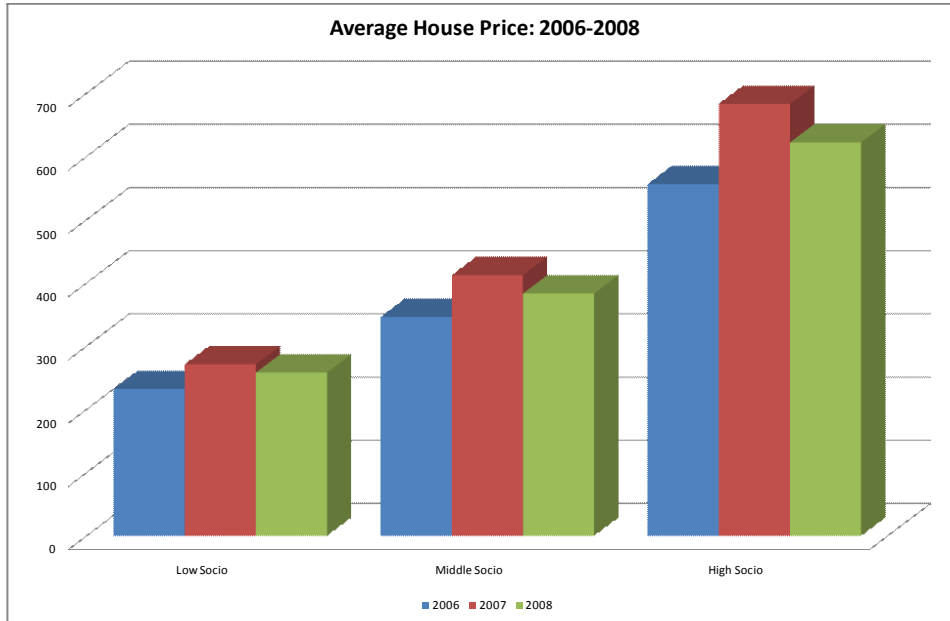
**Figure 6 Median House Price: Study Area: 2006-2008**



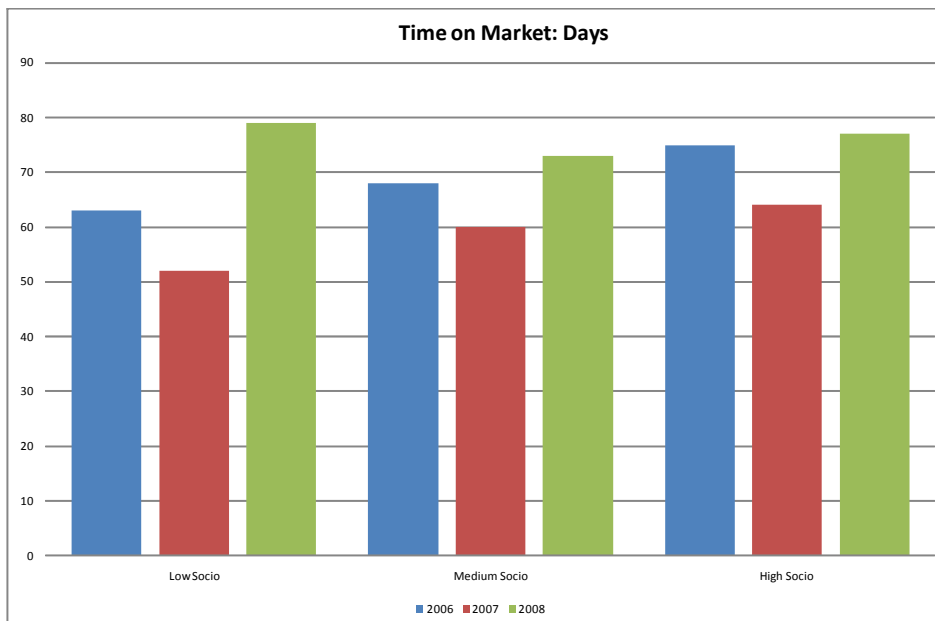


Figures 6 and 7 represent the median and average house prices for the three socio-economic areas of the study. Both these Figures show the continuing increase in house prices from 2006 to 2007, with the subsequent fall in prices during 2008.

**Figure 7 Median House Price: Study Area: 2006-2008**



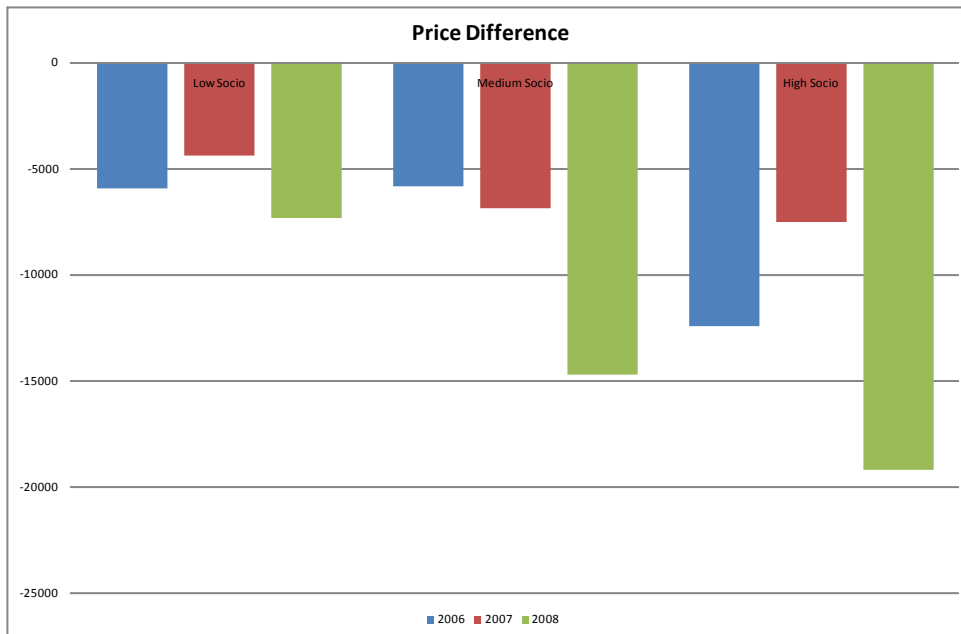
**Figure 8 Christchurch Residential Property Average Selling Periods: 2008**



The fall in both median and average house prices was greater in the high socio-economic suburbs, showing a decrease of 8.9% and 11.4% for the median and average house price respectively for the years 2007 to 2008.

Figures 8 and 9 provide details in relation to the average time to sell the properties in the various residential property sectors of Christchurch and the average difference between the asking price for the property and the final selling price for each of the past three years. Figure 8 shows that there was a reduction in the time on the market from 2006 to 2007 and this can be explained by the reduced number of properties for sale in an increasing residential property market. However, in 2008, the average time to sell increased above both the 2006 and 2007 levels for all the residential property sectors, with the longest selling period being for the low socio-economic suburbs, with the average selling period in 2008 being 79 days (difference between the date the property was listed and the contracts going unconditional),

**Figure 9 Christchurch Residential Property Average Price Difference: 2008**



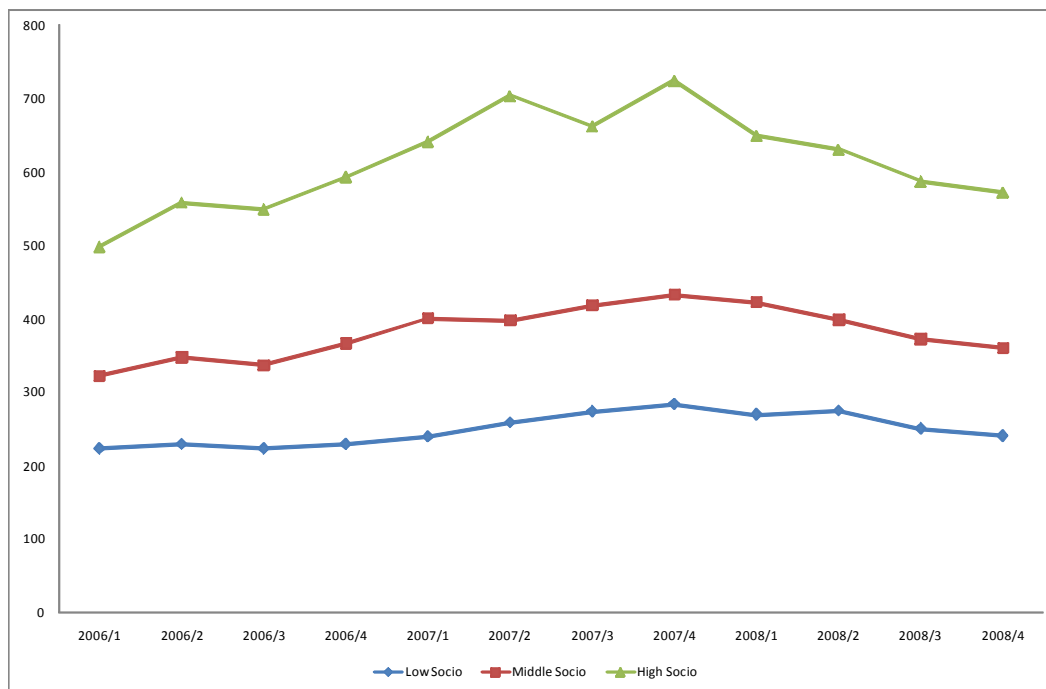
The difference between the average asking price of the property and the average final selling price is shown in Figure 9. It should be noted that this only includes those residential properties sold by private treaty; all properties offered for sale by auction are not included, as the actual listing date was not recorded in the database. In all housing sectors the price difference between the asking and selling price was negative, with a decrease in this difference from 2006 to 2007 (again demonstrating the stronger market in 2007) and the difference increasing in 2008. The greatest average difference (actual amount and percentage) in the asking and selling price from 2007 to 2008 was the residential property in the high socio-economic suburbs. Respectively, for Low, Middle and High socio-economic suburbs the difference from 2007 to 2008 was 67.2%, 114.1% and 155%.

### Quarterly Sales Analysis

Although the annual sales analysis of the subject property markets shows a decline from 2007 to 2008, it does not give a true indication of how each of the markets actually performed during 2008 and when the decline in the price of residential property actually occurred. To present a more accurate picture of the property decline the sales transactions were analysed on a quarterly basis. These results for the average quarterly house price are shown in Figure 10.

Figure 10 shows that in all the Christchurch housing markets the peak in prices occurred in the last quarter of 2007, with all markets recording declines in the quarterly average house price from quarter 1, 2008 to quarter 4, 2008. The fall in average price in the high socio-economic from the 2007 peak to 4<sup>th</sup> quarter 2008 was \$742,000 to \$572,000 (22.9%). For the middle socio-economic areas the fall was \$433,000 to \$361,000 (16.6%) and the low socio-economic suburbs \$284,000 to \$241,000 (15.1%).

**Figure 10 Average Quarterly House Price: Christchurch Study Areas: 2006-2008**



This figure also shows that the average price for residential property in the high and middle socio-economic suburbs in the last quarter of 2008 were at levels that were last recorded between the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2006. In the low socio-economic suburbs the 4<sup>th</sup> quarter 2008 average price were at levels last recorded between the 1<sup>st</sup> and 2<sup>nd</sup> quarters of 2007.

### Conclusions and Future Implications

The above analysis indicated average house price declines from 16 to 22% depending on suburb location. A review of the repeat sales in Christchurch for the period January 2007 to November 2008 show that of the properties that were sold twice in this period the decline in price ranged from 7.8% to 32.1%, with the lower end being sales that had occurred early in 2008 and then again in late 2008.

Repeat sales from January 2006 to November 2008 do not show the same decline in price but do support the above research in that Christchurch house prices in late 2008 are now at similar levels to the market in mid 2006. If the current price declines in the Christchurch residential property market continue in 2009, then the average price for residential property, based on the 2008 results, will fall to levels equivalent to first quarter 2005 for medium and high socio-economic suburbs and 2<sup>nd</sup> quarter 2005 for low socio-economic suburbs.

**Figure 11 Average Quarterly House Price: Christchurch Study Areas: 2005-2008**

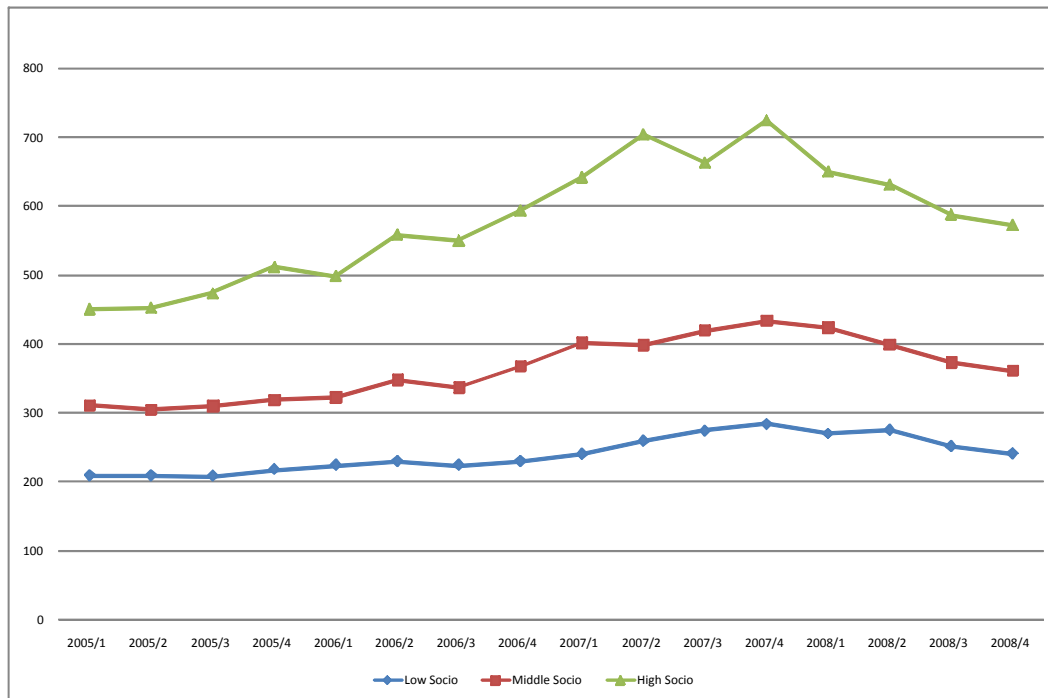


Figure 11 shows that on this prediction the average price for High socio-economic suburbs at the end of 2009 (if current economic trends continue) will be \$452,000 a fall in price from the peak of 2007 of 37.7%. For medium socio-economic suburbs the average price at the end of 2009 (if current economic trends continue) will be \$310,000, a reduction on peak prices of 28.4%. In the case of low socio-economic suburbs the average price at the end of 2009 (if current economic trends continue) will be \$208,000, a reduction of 26.8%.

In the period January 2006 to November 2008 there were 24,784 residential sale transactions in Christchurch. This number of sales represents approximately 16% of the Christchurch housing stock, with these sales being financed at relatively higher interest rates than the previous 5 to 10 years.

A further factor that has to be taken into account when assessing the loss that a home owner may suffer, in the situation where they have to sell their property in the next 12 months, is the cost of selling the property has to be deducted before their remaining equity can be calculated. When agent's commission, marketing costs and legal fees are combined, this can result in a loss of 5% of the sale price before calculating any profit or loss. This situation actually means that an

average reduction in price from 2007 to 2009 of say 30% is actually a reduction to the seller of 33.75% (based on the original sale price).

By the end of 2009 the residential property sales that occurred in 2008 will be valued between 21.3% to 27.3% (on a net basis 25.05% to 31.05%) less than their 2008 price, with property purchased in 2007 being valued between 26.8 and 37.7% (on a net basis 30.55% to 41.45%) less than their 2007 price. In Christchurch the number of residential property sales in these two years totaled 14,244 (2007, 8,759; 2008, 5485 sales). Any property that was purchased in 2007 and had to be sold in the following 12 months has the potential to achieve a net sale price 41% less than the purchase price. This would result in any seller who purchased at the peak of the boom, with a mortgage greater than 59% of the purchase price being in a negative equity position. A similar situation would apply for any 2008 purchase being sold in 2009 having the potential to achieve as low as 31% less than the purchase price. Again, any homeowner in this situation with a mortgage greater than 69% of the original purchase price would be in a negative equity position.

This is also before any losses in owners overall equity based on money that has been put into their property in respect to improvements and repairs. Under this scenario the actual losses to a homeowner selling in the current market can far exceed the loss based on the original buying price and the subsequent selling price.

An actual example in the current Christchurch market highlights this situation. The property was purchased in June 2006 for \$335,000 and subsequently sold in November 2008 for \$351,000. Although this appears to be a slight profit for the vendor, in fact it resulted in an overall loss to the owners, as shown below. Selling costs in this case were:

Agents commission	\$12,300	
Marketing/advertising	\$ 2,200	
Legal fees	\$ 1,000	\$15,500

Based on these net figures the profit on sale was only \$500. In fact to achieve the sale price the owners had spent \$71,000 on repairs, remodeling and improvements during the period of occupation, with this sum being spent to achieve the same net sale price as the purchase price in 2006. For these particular property owners they had actually suffered a 19.8% loss on the sale of the house.

Such scenarios are often ignored when the loss on sale or potential loss of equity is calculated in a falling property market. There are a large number of home owners in Christchurch, who purchased property in 2006, 2007 and 2008 who would have carried out improvement work on the property from funds other than the original mortgage (increased personal debt, savings or credit cards). These costs have to be considered when assessing the impact of a falling property market, not just the gross sale price or official bank mortgage.

The number of people suffering mortgage stress or difficulty was 265,000 in mid 2007 (Easton, 2007) and according to the NZ Statistics (2008) over 270,000 households are paying over \$400 per week for their mortgage, with 28% of all New Zealand households paying a mortgage in excess of \$500 per week. On these figures approximately 36,000 Christchurch property owners

are facing mortgage stress or difficulty and approximately 37,000 property owners are paying in excess of \$400 a week in mortgage payments.

With the prospect of house prices continuing to decline in 2009 at similar levels to 2008, there is the potential for 14,244 residential properties in Christchurch to be worth between 26% and 37% less than their purchase price in 2007 and 2008 and with the potential to be facing negative equity if placed in the situation of having to sell the property in the current market.

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