

DEPARTMENT
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and CABINET



Final Report of the House Prices Unit: House Price Increases and Housing in New Zealand

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Housing New Zealand
Housing New Zealand Corporation



MINISTRY OF
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Te Manatū Whakahiato Ora

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1. Executive summary

Housing affects a variety of social outcomes and is a critical component of household assets

Houses have a long life and vary greatly by type and location, and households typically make infrequent and long-lasting choices about housing. Housing provides a flow of services to households and is also an asset. As a flow of services, housing adds to individuals' and families' health, safety and well-being. Most of the benefits from housing services arise from the quality or the stability of housing arrangements, rather than from home ownership. Without stable, quality housing, households are at risk of poor outcomes.

Home ownership is important through housing's role as an asset. Housing makes up just over 70% of household net wealth. As an asset, house prices can follow long, protracted cycles, with changes in prices affecting household wealth and decisions about spending and saving. Changes in house prices can contribute to wealth inequalities, with increases effectively providing a wealth transfer from non-home owners to home owners. The effect of these changes in asset values on household spending and saving decisions means that house price increases in the past five years have affected the macroeconomy, encouraging household spending, adding to inflationary pressures and pushing up interest rates and the exchange rate.

A surge in demand lifted prices, and while the number of dwellings has risen in line with the population, the cost of supplying new dwellings has increased sharply

Real house prices have increased by 80% since 2002.¹ Population growth, lower interest rates than during much of the 1980s and 1990s and increasing availability of credit have all boosted demand. Expectations of future price increases have also played a role, driving prices higher. The magnitude of this impact is highly uncertain. Meanwhile, the tax system has encouraged investors into housing, putting further pressure on prices.

Supply responses in the housing market tend to be slow as it takes time to turn undeveloped land into new houses or to subdivide land. While the response was slow, the construction industry has responded to population growth, adding over 120,000 dwellings between 2001 and 2006 (with 110,000 new occupied dwellings). Not all regions have seen an increase in dwellings to match population growth, with shortfalls in supply emerging in some areas,

¹ The measure of real house prices used throughout this report is based on the nominal house price index compiled by Quotable Value New Zealand (QVNZ). The index has been deflated by the Consumers Price Index to calculate real house prices.

particularly Manukau. In addition, demand has not been met in all segments of the market, particularly for lower income earners.

New supply has tended to come in the form of large, relatively expensive houses on the fringes of cities, which adds to pressure on infrastructure, or multi-unit dwellings, such as apartments. This surge in demand increased the construction industry's need for resources and increased the prices of sections, materials and labour as well as lifting margins in the industry. The impact of regulations and council-imposed infrastructure levies has also added to costs.

The housing market is cooling, but prices are likely to remain high relative to incomes

House price growth has slowed and is likely to continue to ease over the next 12 to 18 months as interest rate increases begin to bite and expectations of future house price increases diminish. While expectations have been important, the judgment of the Unit is that longer-term structural factors have been the primary driver of high real prices. As a result, in the absence of an economic shock, adjustment to house prices is likely to be gradual, and it is possible that real prices could fall modestly in the next 1 to 2 years, rather than record a sharp fall.

Rising prices have contributed to lower home ownership rates and constrained the housing market choices available to a growing group of New Zealanders

All measures of affordability have declined. By 2006, only 29% of renting couples and 2% of renting non-partnered individuals, with both groups including those people with and without children, could afford to buy a lower-quartile-price house in their region, and pay a maximum of 30% of their income in mortgage repayments. At current incomes and interest rates, even small falls in prices are unlikely to make a marked change in affordability. There is a growing group that cannot afford a mortgage on a house and is ineligible for state housing assistance that is likely to require secure long-term tenure arrangements in the private rental market.

Households require access to a wide range of choices, including the tenure and location of housing

As there is no single driver of house price inflation, mitigating the future effects of declining affordability will require a mix of new policy settings. The growing group that cannot afford home ownership needs access to a wider range of choices, including access to home ownership, longer-term rental arrangements to achieve security of tenure, a mix of providers of housing services and a wide range of choice of location of housing, particularly as fuel costs rise.

Reducing costs provides a sustainable way of making housing more affordable

Lower costs of sections and construction are the most likely way of achieving a long-term reduction in housing costs. A focus on streamlining regulatory systems, especially around the Resource Management Act and building consents processes, may help. Increasing the amount of land available for housing would also help, as would sustainable development, either in the form of intensive housing developments or new settlements built using sustainable methods and located outside of cities.

2. Introduction: house price increases and housing in New Zealand

The House Prices Unit conducted this study from August 2007 to December 2007, with the aim of reaching a better understanding of:

- The housing market as a national system.
- The relative importance and size of the influences of house price inflation.
- What it would take to slow house price inflation and potentially lessen the volatility of New Zealand's house price cycles or better manage their impacts.
- The consequences – for the macroeconomy, economic growth and social outcomes – of adjusting policy settings.

The Unit identified the impacts of house price increases across a variety of topics. This report summarises the findings of the Unit's analysis of the drivers of house price increases and their implications for economic and social outcomes.

The following are the key features of the New Zealand housing market in recent years:

- Real house prices have increased by 80% since the beginning of 2002.² Real prices increased 67% between the 2001 and 2006 Censuses.
- At the aggregate level supply has responded strongly to population growth, and has exceeded population and household growth in many parts of the country, however, there are signs that shortages have emerged in Auckland.
- New supply has tended to be at relatively high prices meaning that new supply has not met the needs of all segments of the market, particularly people on lower incomes.
- The large increase in supply has come with higher costs. Land prices have increased sharply, while other costs related to constructing a dwelling, including materials and labour, have also recorded large increases.
- The price of rent has broadly moved in line with real income growth.
- Measures of home ownership affordability have declined during the boom in house prices.
- Prices are likely to remain relatively high in the foreseeable future, although some small falls in real house prices are likely as the market moves past its peak. These falls are unlikely to reverse the observed declines in affordability of the past four to five years at prevailing interest rates and income.

New Zealand's recent boom in real house prices is unprecedented in comparison with historical trends, but it is not out of line with developments in many other OECD countries,

² Note that the term 'house prices' is used throughout this report to cover the prices of all types of dwellings.

including Australia and the United Kingdom. Unlike the United Kingdom, however, there are few signs in New Zealand of a shortage in the growth of dwellings relative to population growth during the boom in real house prices. The construction sector has responded to a large surge in demand driven by large net migration inflows, sustained real income growth, a period of low interest rates from 2001 to 2004 and an increase in the availability of credit; however, this response came with a large increase in costs. This cost increase reflects pressure on the price of sections, limits on the capacity of the construction sector, a large increase in demand for labour and skill shortages more widely across the economy.

The assessment of the Unit is that while some falls in real house prices are likely in the next two to three years as the housing market moves past its peak, the run-up in prices largely reflects developments in the New Zealand economy as well as the impact of the regulatory environment, and prices are likely to be maintained at relatively high levels. Nevertheless, there are signs that housing market activity is slowing and it is possible that prices could fall modestly in the next 1 to 2 years. If consumer confidence is adversely affected by external and internal events, or if New Zealand experiences a significant weakening in growth as trading partner growth slows, then a more substantial easing in housing market activity and prices is possible.

Increases in house prices have raised the wealth of home owners and driven a widening gap between the affordability of houses and the incomes of people who aspire to own a home. Wealth inequalities within New Zealand have increased as a result.

The boom in house prices has had important implications for economic outcomes. It has encouraged household borrowing and spending and led to historically high levels of housing equity withdrawal, adding to inflationary pressures in the economy and contributing to an increase in interest rates and the exchange rate. The growing propensity of households to withdraw and spend some of their own rising equity also exacerbates cyclical upswings in the economy and makes management of the economy less predictable. At the same time, the location and type of housing have important implications for sustainability and New Zealand's carbon emissions. Population growth and rising house prices can add to urban sprawl as households choose to move further out of core settlements to access relatively cheaper land. Section three of this report discusses the broad range of impacts associated with the boom in house prices.

Sections four to eight of the report provide a summary of the Unit's analysis of housing market trends since 2001. Section four provides a statistical picture of the housing market, describes the existing government provision of housing-related assistance and describes the movements in New Zealand house prices. Section five provides a framework for analysing

the factors affecting the demand and supply of housing, while sections six and seven provide a detailed analysis of these demand and supply factors. Section eight discusses the future outlook for prices.

Sections nine to thirteen discuss the impacts of the developments described in the previous sections. The analysis includes a discussion of the impacts on home ownership affordability and rent affordability as well as the economic and environmental dimensions of the housing market. Section thirteen proposes a direction for future policy based around improving housing market choices and reducing housing costs. Improving choices is about providing access to a wider variety of options for housing tenure and location. A focus on reducing costs is necessary to bring owning a home into the reach of a larger group of households.

The Unit has identified a number of areas where either the quality of available information makes it difficult, or the combination of issues means there has not been sufficient time, to reach strong conclusions. These are:

Information on the adequacy of land supply

- Scarcity of land that can be developed is one factor that appears to have contributed to higher section prices. While there are few signs of an absolute shortage of land for housing, there is little information available about how much land is ready, or close to being ready, for development.

Resource Management Act

- Developers argue that the land use decision process is lengthy, adds cost and limits their ability to provide an adequate volume of housing. Further research is needed to measure the costs to applicants of obtaining a resource consent.

Improving building productivity

- Preliminary work suggests that the New Zealand construction sector has exhibited low levels of productivity over the last 20 years. Increased gains from scale could be obtained if there was greater pre-fabrication and manufacturing of parts of the building. Further work is needed to understand how best to address these issues.

Infrastructure contributions

- There is variability between territorial authorities as to whether charges are applied and the size of the charges. This may be a reflection of different costs territorial authorities face in providing infrastructure, or the different funding choices territorial authorities are making. It could also be an indication of inconsistency and variable interpretation of the power to levy found in the Local Government Act. Further work is needed to

understand the impact that the variability and levels of infrastructure contributions have on the cost of new housing.

3. Why housing and house prices matter

- **Home ownership is closely linked to asset accumulation, especially during a period of rising prices. Rising house prices have added to wealth inequalities.**
- **Economic performance is affected by house price changes. Volatile house prices make monetary policy more complicated, and there are potential spillovers to the tradables sector.**
- **Quality of housing is important for health outcomes.**
- **Location and design of cities affects carbon emissions.**

What housing is

Housing has multiple attributes. Homes provide shelter and space for family living; they also provide a location within a neighbourhood that influences access to an array of private services and public activities that households regularly use, such as work, schools, shopping centres and leisure facilities. There is a plethora of studies that show how all these attributes of houses influence the value of homes, and the ways in which people use them. And, of course, for the majority of households in New Zealand, purchasing a home also provides an asset. As a result of all these interactions, housing touches on a range of outcomes. Its status as a durable asset means that housing also has strong links to financial markets and the construction sector, with dwelling construction peaking at 6% of GDP from 2003 to 2005.

The housing market is an important element of the macro-economy. Housing accounts for 22% of average household expenditure for owner-occupied households and 28% of renting households' average household expenditure (Statistics New Zealand, 2007).³ Housing also makes up a substantial portion of household assets, with Reserve Bank of New Zealand (RBNZ) data showing that housing's share of total household net wealth has increased from around 60% in 1978 to just over 70% by 2006. The surge in housing as a share of net wealth reflects sharp house price increases since 2002. As an asset, houses can be bought and sold at a profit or a loss, and prices can follow long, protracted cycles, with changes in prices affecting household wealth and decisions about spending and saving.

Making connections

As a flow of services, housing adds to individuals' and families' health, safety and well being. Good housing can create positive spillovers for households, and poor housing the converse. The importance of the services that housing provides can be separated into those areas that are related to good quality housing, stable housing, neighbourhood effects and home ownership. In recent years there have been a number of country-specific attempts to review

³ Statistics from Household Economic Survey.

the value of benefits from good housing and the type of tenure, not least insofar as they impact on the wellbeing of children and educational outcomes as well as health effects. In the New Zealand context strong evidence has only been gathered in the health sector.

Importance for health outcomes

There are a number of New Zealand studies that demonstrate a link between the quality of housing and health outcomes. This link is not about the type of tenure but about the quality of housing. Quality, in turn, is related to income, with higher income earners generally able to attain high-quality housing.

Maani, Vaithianathan and Wolfe (2006), show a link between health outcomes and the quality of housing, with people living in crowded dwellings achieving substantially poorer health outcomes. Maani et al. suggest that income is the key driver of crowding and therefore poorer health outcomes. Baker et al. (2006) also suggest that overcrowding is associated with elevated rates of hospital admissions for both communicable and non-communicable diseases, while Saville-Smith and Amey (1999) show that overcrowding is an important factor in health outcomes in rural locations as well as in towns.

Research from the Wellington School of Medicine and Health Sciences demonstrates that when homes are properly insulated there are significant health gains (Howden-Chapman et al., 2007). The study found insulation resulted in:

- A 30% reduction in the frequency with which occupants were exposed to temperatures below 10°C.
- A 3.8% fall in mean relative humidity causing dampness.
- Decreased energy consumption, with insulated houses using 81% of the energy of non-insulated houses. This may also result in greater disposable income, which can be spent on food and clothes.

These results show significant improvements (10%–11%) in the health and quality of life of the occupants due to insulation. The research also found that:

- Adults and children occupying well insulated homes have reduced wheezing, colds and respiratory problems (40%–50% reduction).
- People living in insulated houses are less likely to take days off work and school (40-50% reduction) than people in houses without insulation.
- People living in insulated homes had fewer visits to general practitioners and fewer hospital admissions for respiratory conditions.
- People living in warm houses were less likely to shift houses, which the research suggested had positive benefits for children's education.

Further information about the heating of houses is available from the Household Energy End-use Project (HEEP) (Isaacs et al., 2006). The HEEP data shows that while low income households appear to value increased warmth they are unable to achieve warm indoor temperatures, despite spending a higher proportion of their income on energy. This is likely to put lower income households at risk of poor health outcomes. Nearly 50% of Maori households in the HEEP survey had mean winter evening living room temperatures categorised as 'cold or below average', compared with 40% of all surveyed households.

Importance for other social outcomes

New Zealand evidence regarding the social and educational implications of housing is sparse. Internationally, a number of authors have suggested a link. Barker (2004) cites United Kingdom research showing that poor housing, particularly temporary housing, affects the educational achievement of children.⁴ It is not clear whether this benefit is directly related to the stability of tenure or whether income or some unobserved variables are the important factors. DiPasquale and Glaeser (1999), draw a direct link between home ownership and greater civic effort, and Rohe et al. (2001) have pointed to positive relationships between home ownership and satisfaction with homes and neighbourhoods.

New Zealand evidence on these influences is limited. Motu is carrying out research in the next two to three years that will help address the extent to which home ownership is associated with positive economic and social outcomes, compared with importance of the quality of housing and the stability of tenure.

Home ownership: benefits and aspirations

In New Zealand during the past 50 to 60 years, home ownership has been the main route to attain the benefits of quality housing and the stability of tenure discussed above, for those people with the income to sustain it. New Zealand evidence on the direct relevance of home ownership is limited, although it is likely that most benefits from housing services arise from the quality and/or the stability of housing arrangements, rather than home ownership itself.

Owning a home is an important aspiration for New Zealanders. Focus group research with renters indicated that participants aspired to being an owner-occupier within 10 years (DTZ, 2005). Focus-group research points to home ownership being valued for a number of different reasons:

- Ability to personalise the property.
- Investment and wealth dimensions.
- Security and social status benefits.

⁴ Department of Education and Science, 1990, cited in Barker, 2004.

There is a growing group of renters, at all but the highest levels of income, whose home ownership aspirations will not be met given current prices, interest rates and levels of income.

Importance for standard of living in retirement

Analysis by the Ministry of Social Development (MSD) (2006) of living standards in New Zealand found that, in 2004, older people who owned their own home had the highest average living standards amongst older people, and were less likely to be in hardship than those who rented. In the study, 58% of people aged 65 or older who owned their own home were recorded as having a good standard of living, with 37% having a comfortable living standard. The equivalent numbers for private renters were 19% and 57% respectively, with 13% and 46% for Housing New Zealand Corporation (HNZC) tenants.

MSD notes that the housing costs of older home owners who have paid off their mortgage are minimised, resulting in a higher standard of living. While this will be true in many cases it is possible that a household that always rents, and saves the money they would otherwise have paid as mortgage payments, could be no worse off when they retire than someone who owns their home, depending on the returns to housing compared with other assets.

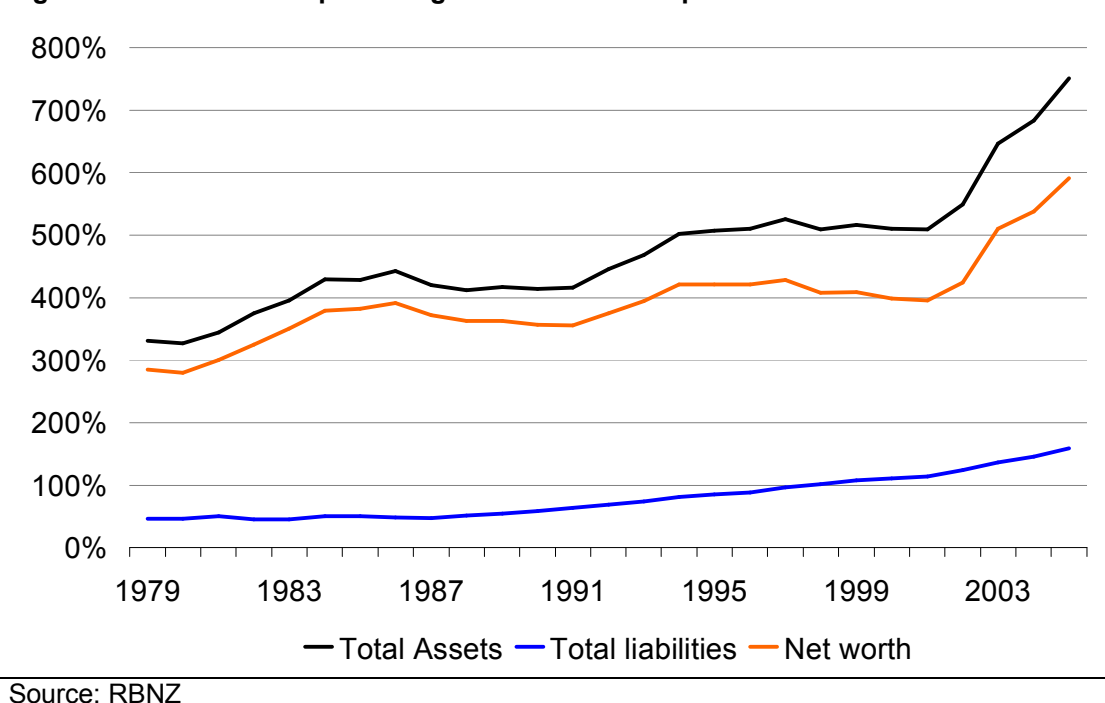
Those older people with housing costs of over \$200 a week tend to have lower average living standards than those with lower housing costs, reflecting the fact that those with higher living costs are more likely to be paying rent or mortgages on capped incomes. This result is also likely to be related to the previous income levels of retired people, with higher-income people more likely to have been able to pay off a mortgage during their working life and, therefore, able to enjoy lower housing costs when retired.

Importance for asset accumulation and wealth inequalities

Rising house prices have increased the net wealth of home owners and can contribute to net wealth inequalities. Net wealth per capita doubled between 1980 and 2001 and doubled again from 2001 to 2006 as a result of the house price boom. The increase in net wealth arising from increases in other assets was substantially smaller.⁵

⁵ Estimates derived from Reserve Bank of New Zealand (RBNZ) household wealth data.

Figure 1: Net worth as a percentage of household disposable income



International research suggests that holding household assets can provide home owners with a greater sense of opportunity and security (Centre for Analysis of Social Exclusion cited in HM Treasury, 2005). Property can be used as collateral to secure loans. Owning a house can also provide security against future rises in housing costs, and it provides rent-free accommodation in retirement (HM Treasury, 2005). Home ownership can also have inter-generational effects through wealth transfers and inheritances, which often provide additional funds to households and individuals in middle life with middle to higher incomes (Thorn, 1994).

Housing assets are not distributed equally. When prices increase there is a redistribution of wealth from non-home owners to existing home owners. Non-home owners have to save a larger deposit to buy a house, or take on more debt. Existing home owners can use the increased equity to borrow against for consumption, or accumulate more assets, or they can sell their house and capture the equity increase.⁶ These wealth inequalities can be transferred over time through wealth transfers among home-owning families.

Importance for economic performance

There are a variety of interactions between changes in interest rates, house prices and domestic demand. Lower interest rates from around 2001 to 2004, compared with New

⁶ Owning a home can be seen as a hedge against rising housing costs. When house prices increase, the future housing costs of a household increase. A home owner has a natural hedge against this as they own the house.

Zealand's historical experience, contributed to a lift in house prices. In turn, these high house prices encouraged household spending and lifted inflationary pressures, eventually leading to higher interest rates and contributing to a higher exchange rate. These developments have reduced the returns received by exporters but effectively boosted the real disposable income of consumers who purchase imported goods.

In the Supplementary Stabilisation Instruments report (Reserve Bank of New Zealand and The Treasury) prepared in 2006, the RBNZ and The Treasury conclude that house price increases and expectations of future increases have seen asset values increase sharply and private consumption rise. Home owners have felt wealthier and have therefore spent more. The increase in house prices has effectively eased credit constraints and many households have accessed the higher level of wealth by increasing mortgages on their properties.

In her review of housing supply in the United Kingdom, Barker (2004) notes that instability in the housing market can be associated with volatility in economic activity, owing to the link between house prices, credit constraints and household consumption. This means that volatility in the housing market can be transmitted into volatility in the rest of the economy, which may not be able to be fully offset by policy. Barker suggests that macroeconomic instability can have a damaging effect on the level of business investment and long-term growth prospects.

Oswald (cited in Cochrane and Poot, 2007) suggests that home ownership is detrimental to labour market flexibility because the transaction costs involved in shifting dwelling discourage people from moving to take up employment opportunities elsewhere. New Zealand evidence is mixed. Mare and Timmins (2004, cited in Cochrane and Poot, 2007) find that responsiveness to relative employment performance is greater when home ownership is higher, contradicting the results of Oswald. In their own analysis, Cochrane and Poot find a statistical relationship between home ownership and unemployment rates, but do not establish whether there is a causal relationship or whether it is spurious.

An additional link from housing to economic performance could arise through the effect of high housing costs on internal and external migration decisions. People may be reluctant to move internally within New Zealand to regions with high house prices, which would affect firms' ability to acquire labour in some regions of New Zealand. Motu (2006) suggest that there is evidence of this occurring in the Nelson, Tasman and Marlborough areas, where firms have had difficulty retaining and attracting key workers. Affected industries include resource based industries, such as fishing, farming and horticulture, as well as tourism, education and health. High house prices may also discourage skilled migrants from coming to New Zealand. Department of Labour studies suggest that the quality and price of housing is a key disappointment for migrants after arriving in New Zealand (Department of Labour,

2005). There is no evidence available as to whether it is an important factor influencing migration decisions.

Importance for New Zealand's carbon emissions and the sustainability of cities

Housing market outcomes have implications for sustainability. Urban design and the location and type of housing influence New Zealand's carbon emissions and the sustainability of New Zealand's cities. Population growth has the effect of increasing the size of cities and is contributing to growth in carbon emissions. To mitigate these impacts, housing policy needs to be well integrated with the provision of efficient public transport systems.

Higher land prices also encourage more intensive forms of housing. This can be an effective way to accommodate a growing population. Nonetheless, intensive forms of housing are also associated with a requirement for new infrastructure. For example, without investment in public transport, traffic congestion would increase.

The rising costs of fuel and peoples' desire to avoid traffic congestion suggests that there will be increased future demand for housing that is close to employment and leisure activities and well serviced by public transport. All future development will need to minimise the environmental impacts of population growth.

Summary

The broad range of impacts from housing means that housing outcomes have direct implications for the following priority areas of Government:

- National identity: through the role of aspirations for home ownership.
- Families young and old: as a result of asset accumulation, wealth inequalities and health and social outcomes.
- Economic transformation: through the impacts on household behaviour when house prices change.
- Sustainability: as a result of the location and type of housing.

4. Background statistics

4.1 The New Zealand housing stock

The 2006 Census recorded a total of 1,651,542 dwellings in New Zealand, with 1,478,709 classified as occupied dwellings and 172,836 unoccupied dwellings. The majority of the occupied dwellings are classified as private, in that the dwelling is not usually available for public use. In the 2006 Census there were around 7,000 occupied non-private dwellings, with hotels/motels accounting for around half of the non-private occupied dwellings and institutions such as hospitals and prisons accounting for just under a quarter of non-private occupied dwellings. Empty dwellings accounted for almost two thirds of the total number of unoccupied dwellings.

Table 1: Dwelling occupancy status, 2006 Census

A Occupied dwelling	Number of dwellings
B Occupied private dwelling with resident(s)	1,454,175
Occupied private dwelling with no usual resident(s)	17,751
Total occupied private dwelling	1,471,749
C Occupied non-private dwelling	6,693
Total occupied dwellings	1,478,709
D Unoccupied dwelling	
E Residents away	49,122
F Empty dwelling	110,154
G Dwelling under construction	13,560
Total	1,651,542

Notes

A A dwelling is any any building or structure, or part thereof, that is used (or intended to be used) for the purpose of human habitation. An occupied dwelling is occupied at midnight on the night of the census or at any time during the 12 hours following midnight on the night of the census.

B Private dwellings are not usually available for public use.

C Non-private dwellings are available for public use and include hotels and motels, prisons, hospitals, boarding houses, residential care facilities.

D Unoccupied at all times during the 12 hours following midnight on the night of the census, and suitable for habitation.

E Where occupants of a dwelling are known to be temporarily away and are not expected to return by noon on the day after the data collection.

F Where a dwelling clearly has no current occupants and new occupants are not expected to move in on or before the date of the data collection. Unoccupied dwellings being repaired or renovated are defined as empty dwellings. Unoccupied baches or holiday homes are also defined as empty dwellings.

G All houses, flats, groups or blocks of flats being built.

4.2 A snapshot of housing tenure

Table 2, below, shows how the home ownership rate has changed during the past 25 years and table 3 provides the sector of landlord for non-owner-occupied dwellings. In the 2006

Census, those households living in a house owned by a trust in which they are a member are classified as living in an owner-occupied house. Prior to the 2006 Census, some households in this living arrangement were not captured as owner-occupiers. The Briggs adjusted series in table 2 adjusts the pre-2006 Census home ownership rates to more adequately capture those households living in homes owned by a trust in which they are members, by classifying them as home owners. Around 50% of owner-occupiers make mortgage payments.

Table 2: Home ownership rates

	1981	1986	1991	1996	2001	2006
New Zealand (% of homes owner-occupied)	71.4	73.7	73.8	70.7	67.8	66.9
Briggs adjusted for trusts.			74.9	72.3	70.5	66.9

Table 3: Sector of landlord

	1996	2001	2006
Private person, trust or business	196,188	264,501	299,607
Local Authority or City Council	14,781	14,118	11,004
Housing New Zealand Corporation	52,688	52,500	49,419
Other state owned enterprise or government department	8,370	6,432	6,165

Sources: Statistics NZ, DTZ

The Census data provided in table 3 is an undercount of the actual number of Housing New Zealand Corporation (HNZC) dwellings. HNZC owns around 67,000 dwellings, with the Census consistently under-reporting the actual number of HNZC dwellings.

Characteristics of landlords

Rising house prices have attracted investors into the housing market. In an analysis of Survey of Family Income and Employment (SOFIE) data, Scobie, Gibson and Le (2007) found that 15% of all households in New Zealand owned an investment property, including holiday homes, rental property, timeshares and overseas property. Scobie et al. found that around 12% of households in the 45-54 age groups owning investment properties, compared with 5% in the 25-34 and 65-74 age groups. Of those households that owned investment property, Scobie et al found around 50% owned two investment properties and around a third own one property. The ANZ Property Investors Survey (ANZ, 2007) shows that property investors tend to be higher income earners, with mean annual household income of property investors of \$80,000-\$90,000, with 37% having household income in excess of \$100,000.

The National Landlord Survey (Centre for Research, Evaluation and Social Assessment, 2003) identified the following benefits as being identified by landlords:

- 38% cited the benefits of capital gain
- 32% cited regular income stream as a benefit
- 25% cited retirement investment/income as a benefit

- 9% cited tax advantages as a benefit
- 8% cited rent paying off the mortgage as a benefit of owning rental property.

The National Landlord Survey also found that over 20% of landlords had been landlords for less than a year and over 50% had been landlords for less than eight years.

4.3 Forms of government intervention in the housing market

A number of government interventions either directly or indirectly provide financial support to home-owners, renters and providers of private rental housing. The total value of government interventions that relate to housing is around \$7.5 billion p.a.

The tax system

- implicit assistance for existing home owners through the non-taxation of imputed rents (around \$4.2 billion p.a.) and non-taxation of capital gains (around \$3.1 billion p.a.). In aggregate, the former is offset by not allowing mortgage interest deductions (equivalent to around \$4.2 billion p.a.) although the impact on individual owner-occupiers depends on how much equity they have in their property.
- implicit assistance for providers of rental housing through the non-taxation of capital gains (around \$1.1 billion p.a.) and by allowing the deductibility of rental losses against other income (around \$1.1 billion p.a.).

Section 6.8 contains a more detailed discussion of the impact of the tax system on housing.

The benefit system

The Accommodation Supplement (AS) is a non-taxable benefit that provides assistance towards accommodation costs. A person does not have to be receiving a benefit to qualify for the AS. The AS can be used to pay the cost of rent or to make mortgage payments. In the year to June 2007, \$877 million was paid to 250,000 people through the AS, up from \$830 million in 2006.

The nominal total cost of the AS increased from \$711 million in the June 2002 year to \$877 million in the year to June 2007. Over the 2002 to 2007 period, the number of recipients fell from 258,000 to 250,000, with average payments increasing as housing costs increased and with more people receiving the maximum payment. The number of people receiving the maximum AS payment has increased from just over 40,000 people (around 16% of recipients) in 2002 to over 60,000 people (or 26% of recipients) in 2007. Around 80% of people receiving the maximum payment were renters.

Social housing assistance

Provision of social housing is made through Income Related Rents funding to HNZC (\$436 million in the year to June 2007) for 59,000 households and for housing at market rates for around 8,000 people.

Other small-scale programmes

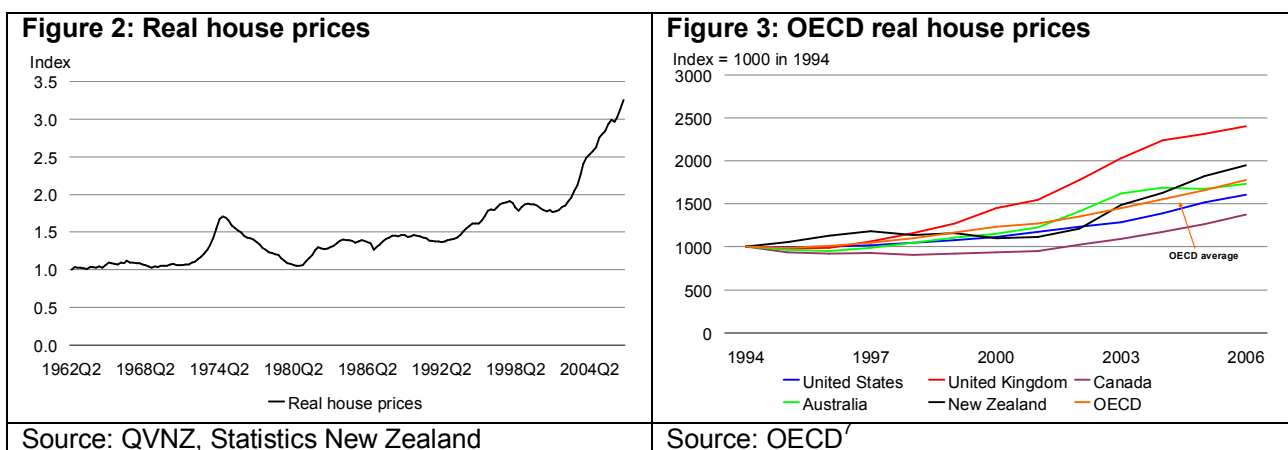
Small-scale policy interventions to support households into home ownership are currently provided through programmes such as:

- Welcome Home Loans (3,000 people since September 2003)
- Shared equity pilot scheme beginning in July 2008
- KiwiSaver (projected to assist 1,400 people into home ownership each year from 2010)
- The Housing Innovation Fund (HIF) provides support for the non-government social housing sector, including capital grants, interest rate subsidies and capacity grants (\$12 million in capital funding and \$3.7 million in operating funding in the year to June 2008, with assistance provided to 72 projects since 2003).

Additional supply of 1,000 affordable houses per annum is possible as a result of the proposed Affordable Housing: Enabling Territorial Authorities Bill.

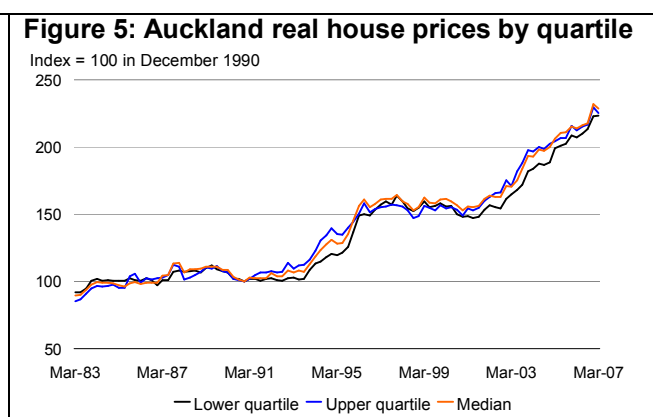
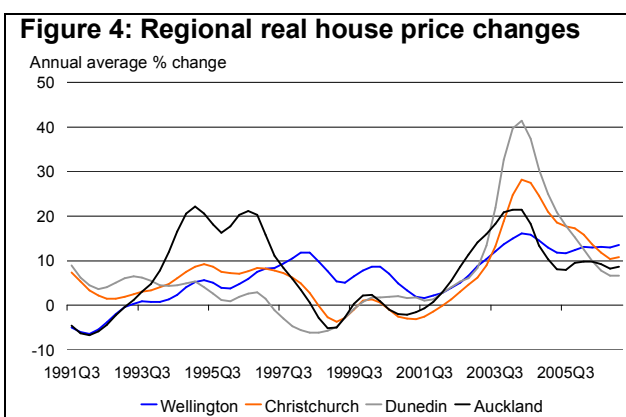
4.4 Real house prices have increased 80% and have lifted across all of New Zealand

The boom in real house prices that began in 2002 is unprecedented in New Zealand's recent history. Real house prices increased by close to 80% between March 2002 and March 2007, around the same increase as was recorded across the entire 1962–2002 period (see figure 2). While unprecedented in New Zealand's experience, such an increase has been a feature of many developed economies over the past 10 years (figure 3).



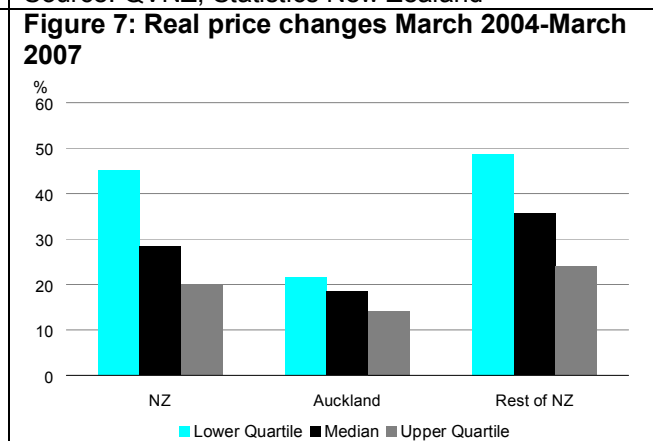
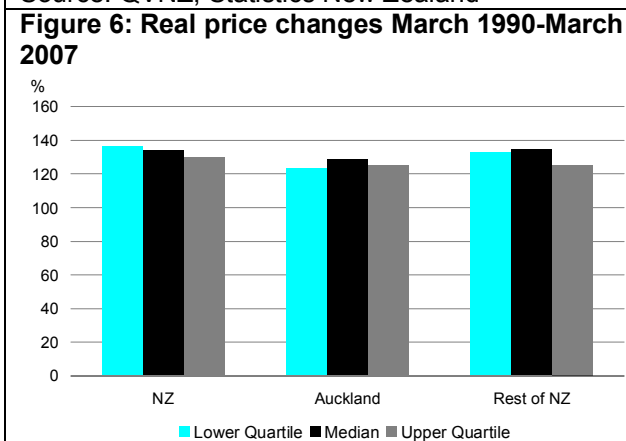
⁷ The OCED average is not weighted for the size of the housing stock in each country and does not include prices in Turkey, Luxemburg, Mexico, Poland, Czech Republic, Slovenia, Hungary, Greece and Iceland.

The boom in real house prices has occurred across all regions of New Zealand. This differs from the mid-1990s boom which was largely based in Auckland. The lift in prices since 2002 has affected all classes of dwellings, whether they are at the top end of the market or more modestly priced. Real prices increased first in Auckland. The rate of growth in other cities, where the level of prices is lower, did not begin to accelerate until 2003. While the percentage changes in real prices have been largest in Christchurch and Dunedin, where the price level is lower, the biggest increase in dollar terms has come in Auckland. The top end of the market, represented by the upper quartile real house price, increased first, edging up in 2002, while the lower end of the market remained relatively flat. This is illustrated by real price movements in Auckland in figure 5. Once prices in the lower end of the market did begin to rise they lifted sharply, with the lower quartile price generally increasing at a faster rate than the median and the upper quartile from 2003 to 2007.



Source: QVNZ, Statistics New Zealand

Source: QVNZ, Statistics New Zealand



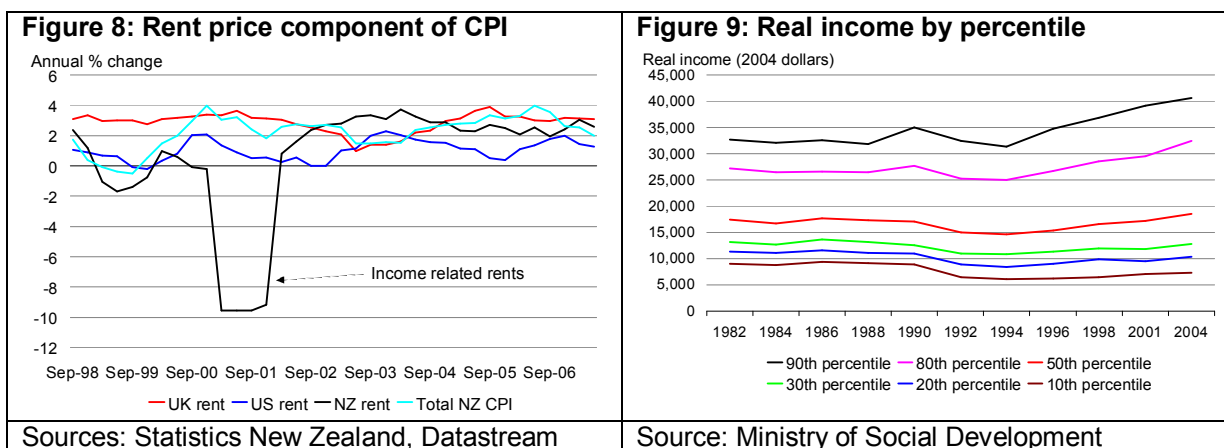
Source: QVNZ, Statistics New Zealand

Source: QVNZ, Statistics New Zealand

The increases in house prices have generally been exceeded by increases in section prices, particularly during a period from the middle of 2003 until late in 2005, where section prices accelerated sharply. Grimes and Aitken (2006) attribute almost all of the increase in house

prices between 1981 and 2004 to section prices. Section 7 contains a discussion of movements in land prices.

One feature of the boom in house prices is that it has not been associated with sharp increases in rent, in part due to the large increase in the availability of rental properties; there have been smaller increases in rents than have been recorded in the United Kingdom. This may reflect a smaller increase in the occupied dwelling stock relative to population growth in the United Kingdom. The Consumers Price Index (CPI) is the official measure of changes in rent, and tries to control for changes in the composition and quality of rental accommodation.



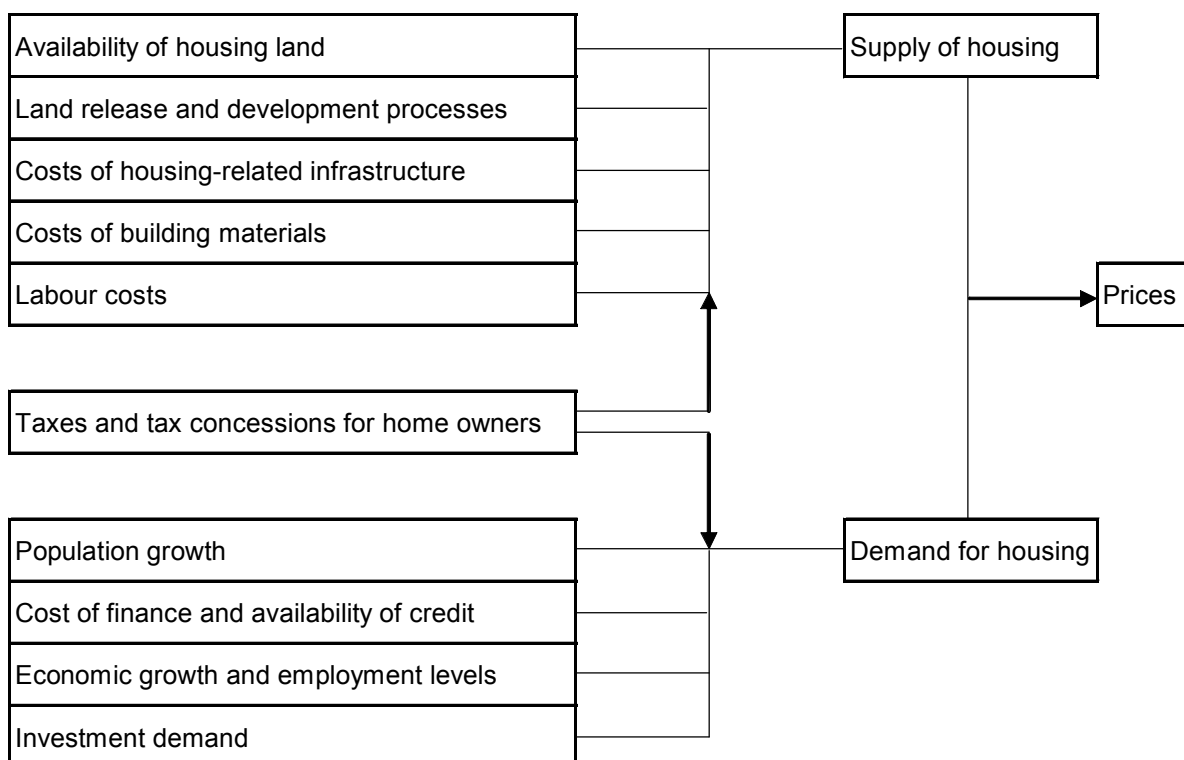
4.5 Real income growth has been uneven across the income distribution

- Between 1982 and 2004, real household income gains were concentrated at the higher parts of the income distribution.
- Between 1982 and 2004, real incomes increased close to 25% for the 90th percentile of earners (the highest 10% of earners), while at the 50th percentile (median income level) real incomes increased around 6%.
- Real household incomes fell for the lowest 30% of income earners, with the falls coming in the 1982–1996 period. From 1996 to 2004 there were small increases in real household incomes for the lowest 30% of income earners (Perry, 2007).

Comparable data is not available for the period from 2004 to 2007. New Zealand Income Survey data shows that from 2004 to 2007 the upper band of the level of real income of the lowest 20% of income earners (individuals rather than households) has increased by 9.2% (or \$15 a week in 2007 dollars), while the lower band of the income of the highest 20% of earners has increased 11% (or \$80 a week). The introduction of the Working for Families package has contributed to the increases at the lower part of the income distribution since 2004.

5. Framework for analysing house price increases

No one factor can account for the increase in house prices since 2001. The trends in house prices are the net outcome of all the factors that affect supply and demand.



Source: Adapted from Australian Productivity Commission: First Home Ownership.

Some demand and supply factors are cyclical in nature and short-lived while others are structural and influence prices over the medium to long term. The factors affecting demand are discussed in section 6, the factors affecting supply are discussed in section 7. Prices are one of the determinants of the affordability of housing, with the cost of finance, taxes and income levels, being other key determinants.

In the short term, generally less than a year in New Zealand, the supply of housing is relatively fixed, or inelastic, so that increases in demand push up prices. In the longer term, the supply of housing is more elastic as developers respond to new demand and rising prices. In general, the long-term supply curve is less than fully elastic so that as housing demand rises, supply of new units will rise but so will prices. Ways of avoiding price increases with rising long-term demand include new technologies that reduce building costs, or some other favourable shift in the supply of the factors involved in building homes; for instance a pervasive reduction in the price of land, that shifts the supply curve out. Price increases can be avoided if the unit costs of building a dwelling remain constant, as in the case of a completely elastic supply curve. Reducing demand, for example through the tax system, could also reduce pressure on prices.

6. Demand factors

- **Large increases in the size of the population, growth in the number of households, growth in real incomes, a period of low interest rates and increasing availability of credit have all contributed to rising demand for housing.**
- **Rising investor interest and expectations of capital gains have also played a part.**
- **Future demand will be underpinned by population growth and demographic changes, such as population aging, meaning that demand for housing is likely to grow at a faster rate than population growth.**

6.1 Household formation trends

Household formation has increased at a faster rate than population growth, owing to changes in household size and composition. Between 2001 and 2006, the number of households in New Zealand increased 8.2%, compared with population growth of 7.7% and a 6.0% increase in the number of households between 1996 and 2001. Between 1986 and 2006, the proportion of households made up of couples with children has declined from around 37% of households to 27%. The share of one-person households has increased from 19% in 1986 to 22% in 2006. The share of couple-only households has also increased.

These recent trends are projected to continue in the future and the number of households, and therefore the number of houses needed for them to live in, is projected to continue to increase at a faster rate than the projected increase in population. Average household size is projected to decline from 2.7 people per dwelling in 2006 to 2.4 in 2021 (Statistics New Zealand, 2005). This is due to a projected increase in the older-age population and a decrease in the average size of family households as women have fewer children.

Impact on demand

Projected household and population growth suggests that New Zealand will need an additional 200,000 dwellings between 2006 and 2016.⁸ This is in addition to any extra demand for holiday homes or other forms of second homes that are not available for permanent accommodation. Future growth in dwellings will therefore need to be around 20,000 per year to accommodate expected demand, plus any additional demand for second homes. This will underpin ongoing demand for housing. This rate of increase is only a little under the average growth achieved during a construction boom from 2001 to 2006, which

⁸ A household is defined as one person usually living alone or two or more people usually living together and sharing facilities in a private dwelling

averaged around an additional 22,000 occupied dwellings and 25,000 total dwellings per year, with the difference accounted for by unoccupied dwellings, including holiday homes. Generating this additional supply may pose some difficulties if some of the conditions that have boosted supply in recent years do not exist in the future, including the strong demand from investors and relatively low interest rates.

6.2 Population and migration

Changes in the size of the population and household numbers are important drivers of the demand for dwellings. Population growth occurs through natural changes in the population from births and deaths and through patterns of inward and outward migration. Between 2001 and 2006 the New Zealand population increased by 7.8%, well above the rate of population growth of 3.2% between 1996 and 2001.⁹ Growth in Auckland accounted for 47% of the population growth of New Zealand as a whole. While the population of Auckland increased between 2001 and 2006, around 76,000 people moved out of Auckland to another region of New Zealand over the same period, and around 59,000 moved into Auckland from another New Zealand region, illustrating a net loss of population from internal migration.

Future population growth is not projected to be consistently as fast as during the period from 2001 to 2006, however, population growth is forecast to continue, with the population size expected to reach five million within the next 20 years, underpinning demand for housing in the future. In addition, major population surges, due to immigration and/or emigration, may reoccur in response to domestic and international developments.

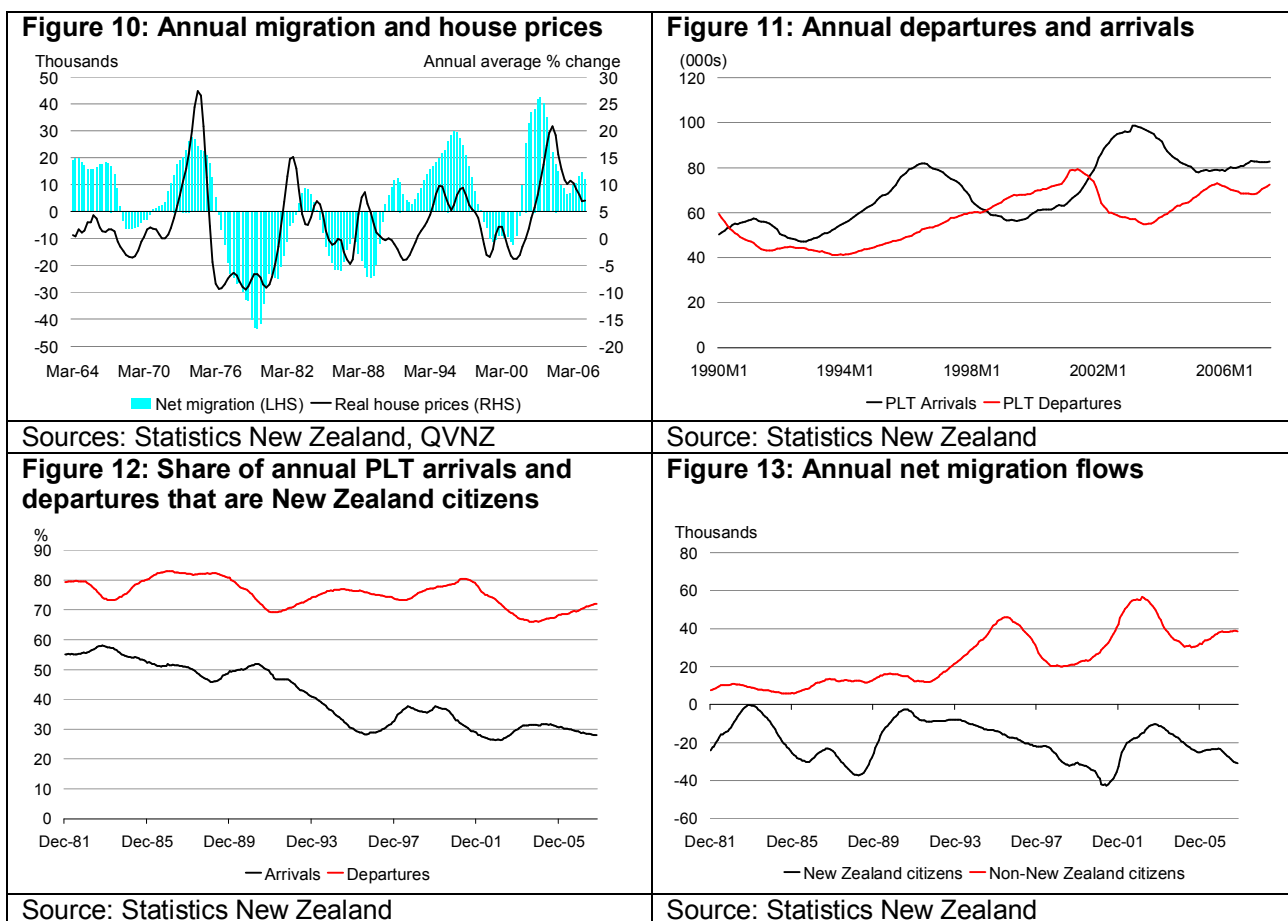
Since the 1960s New Zealand has experienced a number of periods of sizable upswings and downswings in net migration. The numbers and ages of people entering and leaving New Zealand have important implications for the demand for housing. The sharp increase in permanent and long-term arrivals from late 2001 was driven by people aged 15–24 and 25–39. The 15–24 age group saw a particularly large increase, in part due to a surge in the number of students coming to New Zealand. The annual net arrivals of New Zealanders briefly increased from 20,000 to 25,000 following the terrorist attacks in the United States of September 2001.

Temporary arrivals of longer than one year are an increasingly significant feature of migration in New Zealand, with 87% of principal applicants approved for residence in 2005/06 previously holding a temporary visitor, student or work permit. Around 30% of temporary migrants became permanent residents over the same period. As a result, it is the temporary

⁹ The usually resident population, which does not include overseas visitors, increased 7.8% between 2001 and 2006. The Census night population count grew 8.4%, between 2001 and 2006.

inflows that are the major driver of arrivals, not permanent residency approvals. Temporary inflows are largely demand driven, provided an applicant meets the relevant criteria. There is no cap on temporary arrivals, whereas permanent residency approvals are capped (currently set at 45,000–50,000 per year). In addition, returning New Zealanders are a major source of migration volatility. This is a demand-driven response that is not open to regulation.

Departures from New Zealand fell from around 80,000 in 2001 to 60,000 in 2003, further adding to the net migration inflow. The sharpest falls in departures were in the 25–39 age group, where departures fell by around one third. This is an important age group for household formation and demand for housing, so the decline in departures would have added to housing demand.



Impact on demand

Around 120,000 people were added to the population from net migration between June 2001 and June 2007 (equivalent to around 3% of the population), increasing the demand for housing at a much faster rate than supply could easily respond to.

International studies suggest that the impact of population growth on house prices is relatively small, with a 1% increase in the population associated with a 1% increase in house prices (Saiz 2003, cited in Coleman and Landon-Lane 2007). Direct New Zealand evidence

is limited; however, a recent paper by Coleman and Landon-Lane suggests that a net migration inflow of 1% of the population is associated with an 8%–12% increase in house prices after one year, and a slightly larger effect after three years. The authors note that the size of this impact seems implausible and suggest three possible explanations why it lasts for such a long period, even after supply has responded:

- If the construction sector is capacity constrained, house prices and construction costs would be high until the stock of housing caught up with increased demand.
- Migration flows could be correlated with other factors that are boosting house prices, for example, future income expectations.
- Migration could destabilise expectations about house prices.

The source of migration trends has important implications for the housing market. A new study on migration and house prices is currently underway, being conducted for the Department of Labour by economists at Motu. Preliminary results for 1986 to 2001 indicate that there is a relationship between the population in an area and the level of house prices; similarly there is a relationship between the change in the population and the change in house prices. The results suggest there is a relatively small effect on the prices of houses or rents from new immigrants to New Zealand. In contrast, there appears to be a significant relationship between returning New Zealanders and the changes in local house prices from 1986 to 2001. Non-New Zealand born migrants may have different patterns of housing tenure to other residents, temporary migrants in particular are more likely to rent if they do not expect to stay long in New Zealand.

Care is needed in interpreting these results as they do not establish a direction of causality. On the one hand, it could be that returning New Zealanders do add pressure on houses prices. Equally, it could be that New Zealand born individuals repatriate at the time there is strong economic growth and an active labour market. These factors may in themselves lead to upward pressure on prices rather than the flow of migrants per se. Migration might merely follow job growth and rising house prices rather than be an underlying cause of rising house prices.

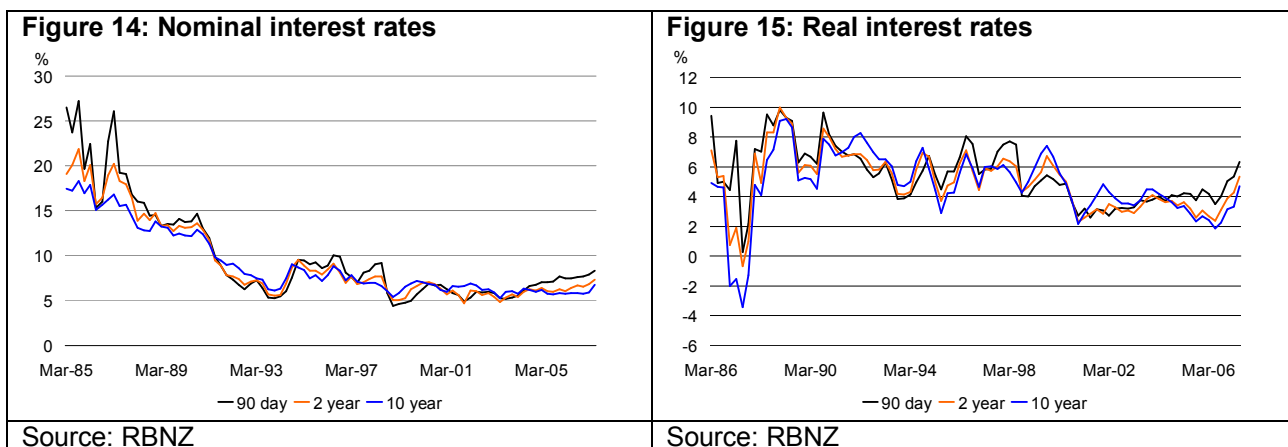
6.3 Interest rates, inflation, financial deregulation and the availability of credit

Nominal and real interest rates have moved down sharply over the past 20 years. From 1985 to 1990, nominal 90-day interest rates fluctuated between 15% and 25%. A low inflation environment following the introduction of the Reserve Bank Act in 1989 saw nominal interest rates gradually trend down. A slowdown in world economic growth around 2000/01, together with expectations of weak growth following the terrorist attacks in the United States,

saw expectations of growth in New Zealand downgraded. The RBNZ cut the Official Cash Rate (OCR) to 4.75% by the end of 2001.

During this period, central banks around the world also cut interest rates, which, in combination with large amounts of liquidity resulting from current account surpluses in Asia, saw long-term interest rates fall to historically low levels. The availability of foreign savings means that New Zealand's investment does not have to be funded from domestic savings, resulting in a current account deficit and an inflow of foreign capital. There has also been an increase in banks' willingness to lend to households through mortgages, with mortgages generally seen as a low-risk form of investment – mortgages are secured against houses, and the value of the loan is typically less than 100% of the value of the house, meaning the bank can generally recover the value of the loan in the case of default.

Real interest rates were also relatively low for a sustained period, although rates have increased in the past 12 months following a number of increases in the OCR.



These changes in interest rates have come during a period of financial deregulation. Financial deregulation has seen banks introduce new types of mortgages and relax the conditions they apply to borrowing. For example, Coleman (2007) notes that prior to deregulation, banks would generally not lend more than 75% of the value of a house, and imposed limits on the size of repayments relative to income, generally at 20–30%. Following deregulation and advances in technology, banks were prepared to lend 95% of the value of a house, mortgage repayment to income ratios were generally eased closer to 33% and the duration of mortgages was increased. In some cases, it is now possible to borrow 100% of the value of a new house.

Banks tend to express mortgage repayment to income ratios in nominal terms. As a result, for the same real interest rate, borrowers can borrow more in a low inflation environment because the nominal interest rate is lower and the mortgage repayment smaller. A combination of a higher mortgage repayment to income ratio, low nominal interest rates, and

a lengthening of the repayment period, resulted in a large expansion in the amount households could borrow. Coleman shows how a household with an income of \$50,000 could increase the amount they could borrow from \$79,000 in 1989 to \$191,000 in 2005.

Impact on demand

Financial deregulation helped put in place the conditions that have allowed households to borrow more through a gradual change in lending practices. Financial deregulation in isolation is likely to have had a relatively small impact on the demand for housing, however, the combination of deregulation, lower nominal and real interest rates and an increase in the global availability of credit has seen a large increase in borrowing capacity. This has encouraged people to 'trade up' their dwelling by buying a bigger and better house, adding to demand for housing and lifting prices. Interest rates began to increase from 2004 onwards, progressively reducing the importance of interest rates as a driver of increased demand for housing. Many of these factors have also played a part in driving house prices up in a number of other countries.

6.4 Economic growth, income growth and unemployment

The current upswing in economic activity that began in 1998 is the longest period of economic growth in the past 30 years. During the house price boom, real Gross Domestic Product (GDP) increased 19.4% between December 2001 and June 2007.

The period of strong economic growth has been associated with rising employment and labour force participation, falling unemployment and increased income. At the start of the housing boom in December 2001, the unemployment rate was 5.4%. By September 2007, this had fallen to 3.5%. Over the same time period, total nominal income earned by wage and salary earners increased by around 40%, or around 25% in real terms.

The growth in income has been unevenly distributed, with the largest increases coming at the upper end of the income distribution and much smaller changes in real income occurring at the lower end of the income distribution. This topic is discussed in more detail in section 11.

Impact on demand

A lower unemployment rate is likely to have increased people's confidence about future income and therefore their willingness to take on higher levels of debt. Rising real income, particularly towards the upper end of the income distribution, has increased the amount of money that people have for spending on houses and for servicing mortgage debt. In the future, rising incomes are likely to be associated with increased demand for housing, with more people likely to seek holiday homes or other second homes as they become wealthier.

In the past, this trend has meant that increases in the stock of dwellings have exceeded household formation, with some of the dwellings not available for permanent accommodation. These factors have also played a part in driving house prices up in a number of other countries.

6.5 Expectations

Rising house prices attracted people into the housing market, with an expectation that prices would continue to increase and a desire to enter the market before prices increased further. Coleman (2007) describes how expectations may not be formed rationally in circumstances where there are difficulties in making a well-informed prediction about prices.

Coleman suggests that when expectations are formed adaptively, prices and the number of transaction volumes in the market can diverge from fundamental or equilibrium values for an extended period of time. Willingness to purchase a house will depend on households' financial circumstances, their expectations about average house prices and the suitability of the house. A demand shock may destabilise equilibrium patterns of prices and volumes, with the shock generating a change in reservation prices for sellers and expectations of future prices for buyers, leading to a long-lasting increase in prices.

Impact on demand

The demand shocks discussed elsewhere in section 6 may have induced a change in expectations of the future path of house prices. This is likely to have been one of the drivers of price increases, as well as a factor drawing investors into the market. Establishing the magnitudes of these influences compared with more fundamental drivers of activity is complicated. Econometric analysis by O'Donovan and Stephens of Westpac bank (2007) suggests that the fundamental drivers can account for most of the rise in house prices; however, a more recent update from Westpac suggests that prices may now be overvalued following recent interest rate increases.

6.6 Preference for property as a form of investment

New Zealanders have a strong preference for houses as a form of investment due to the strong recent returns to housing and previous volatility in equity markets, such as the sharemarket crash of 1987. Estimates suggest that debt on rental properties has increased from around 21% of total mortgage debt in 1991 to around 33% in 2006, with debt on rental properties accounting for around 38% of the net increase in total mortgage debt.

Burns and Dwyer (2007) examined New Zealand households' attitudes to various forms of saving and investment. They concluded that investment decisions and preferences are influenced by a number of factors, including:

- complexity, transparency and perceived past and future performance of different kinds of investment options
- a general lack of independent financial advice
- recent superior performance of property investment
- perceptions and personal tolerance of risk
- an often low level of financial literacy about products other than property
- personal or family experience of investment, a general wish to have control over the investment and trust in the advice of friends and family over unknown professional advisors.

6.7 Preference for home ownership

Home ownership is an important aspiration for many New Zealanders because of the ability to personalise a property, the security of tenure and wealth accumulation benefits. Under existing commonly-used tenancy arrangements, tenants have limited tenure security and little capacity to personalise the property and treat it as their home. As a result, those households that want secure tenure need to buy a house. This does not increase the demand for the number of houses in New Zealand, but it does affect the demand for owner-occupied housing.

6.8 The tax system

A number of elements of the New Zealand tax system directly affect the housing sector. This section discusses each of these factors.

Absence of taxation of imputed rent for owner-occupiers

If a household invests in, for example, a term deposit and rents a house to live in, the interest earnings on the term deposit are taxable. If the household uses their money to buy a house to live in, they receive an untaxed flow of housing services that is equivalent to the money that they would have paid to rent a similar property. This flow of services is often called imputed rent. Because imputed rents are not taxed, the tax system tends to favour more investment in owner-occupied housing and less in other types of assets.

The extent of this benefit to owner-occupiers depends on the level of equity held in the property. For owners who have debt, the payment of interest on the debt diminishes part of the benefit from imputed rents. The full benefit is captured by owners with 100% equity. The system therefore encourages the early repayment of mortgages and leads to a bias in the portfolio of households towards housing.

Non-deductibility of mortgage interest payments

A dollar paid off a household's mortgage generates a return equal to the pre-tax mortgage

interest rate. The same dollar invested in another asset with comparable earnings, which is subject to tax, would generate a return of the mortgage interest rate less whatever tax is payable. Any move towards making mortgage interest deductible without making imputed rents taxable would result in a substantial subsidy to highly-g geared households (OECD, 2000).

Concessionary treatment of capital gains

New Zealand does not have a general capital gains tax. Consequently, no capital gains tax is applied to owner-occupied housing and, typically, no capital gains tax applies to rental property, unless the property was bought and sold with the intention of making a capital gain.¹⁰ New Zealand makes a distinction between revenue receipts that are taxable and capital receipts that are not. The OECD (2000 and 2006) highlighted a number of adverse consequences arising from a failure to impose a comprehensive tax on capital gains, including a narrowing of the tax base and distortion of the allocation of savings and investment. The McLeod Review (2001) recommended against a capital gains tax because of the practical difficulties and the risks of high compliance costs.

Ability to deduct losses on investor rental housing

Like other businesses, a rental property investor can combine their net rental income with income from other sources. An investor's total deductions for interest, rates, repairs and insurance may exceed the gross income from rent, creating a loss that can be applied to reduce the taxpayer's liability on other sources of income. The value of this aspect of the tax system is directly related to marginal tax rates. Therefore, the increase in 2000 to a top marginal tax rate of 39% may have encouraged some additional investment in rental housing.

No GST on imputed or actual rents

Landlords do not charge Goods and Services Tax (GST) on rents but indirectly pay GST on the inputs used in providing the service, such as maintenance. Instead, New Zealand like other jurisdictions has opted, in the case of new dwellings, to apply GST at the time of the initial purchase of a property. This treatment should, at least in theory, have the same result in present value terms as applying GST to the rental flow from the property, with fewer serious practical issues. Applying GST to rents would also (in the absence of taxing imputed rents) drive a tax wedge between tenants of rental properties and owner-occupiers.

¹⁰ The test, in fact, refers to the property owner having at the time of purchase an intention to resell it.

Depreciation allowances for investment properties

Depreciation is one of the expenses that a rental property investor can offset against other forms of income. The tax saving on depreciation is only a time-value-of-money saving as the tax on the depreciation component must be paid when the property is sold.

Local government rates

Rates are a form of taxes. Local government has discretion in setting the rates they charge in order to cover operating expenses. Grimes (2003) found that New Zealand has relatively light property taxes compared with many other developed countries. The OECD (2000) notes that the share of taxation revenue raised from property taxes (rates) in New Zealand is broadly in line with other countries and concluded that “property taxation is not acting as a significant barrier to the efficient use of land”.

Impact on demand for housing

The absence of tax on imputed rents favours home ownership over other investment options. In addition, the capacity for investors to deduct losses from rental properties against other sources of taxable income puts investors at a relative advantage to first home buyers (assuming they fund the property mainly through debt). Estimates prepared by the Unit, described in box 1, suggest that the ability to deduct losses from rental properties increases the value of a median-priced house to the investor by \$25,000, relative to a potential home owner who needs a large mortgage to buy the same house.

Box 1: An illustration of the tax advantage to investors

This box shows the estimates of the Unit of how the tax system provides an advantage to rental property investors relative to owner-occupiers with similar levels of borrowings, by effectively reducing the interest rate they face by between 1.5 and 2.5 percentage points, depending on the level of gearing in the sector as a whole.

Table 4: Tax advantage of rental investment

A. Level of investor gearing	0.33	0.33	0.5	0.5
B. Total value of rental property (\$bn)	149.2	149.2	149.2	149.2
C. Interest rate	7.5	10	7.5	10
D. Outstanding debt (\$bn)	49.2	49.2	74.6	74.6
E. Gross yield (\$bn)	7.3	7.3	7.3	7.3
F. R&M, ins,rates,depreciation (\$bn)	6.0	6.0	6.0	6.0
G. Interest costs (\$bn)	3.7	4.9	5.6	7.5
H. Net return (\$bn)	-2.3	-3.6	-4.3	-6.1
J. Average loss per unit (\$)	-4,835.2	-7,367.9	-8,749.4	-12,586.8
L. Tax benefit at 0.3 marginal rate (\$bn)	-0.7	-1.1	-1.3	-1.8
M. Net return after tax (\$bn)	-1.6	-2.5	-3.0	-4.3
N. Interest costs less tax benefit (\$bn)	3.0	3.8	4.3	5.6
O. Effective interest rate (%)	6.1	7.8	5.8	7.5
P. Implied subsidy to interest rate	1.4	2.2	1.7	2.5
Q. Tax benefit as share of total value (capitalised at 10%)	4.7	7.2	8.6	12.3

Notes

- A. The Household Economic Survey (2001) shows investor gearing of 0.33. Since 2001 the size of the rental market has grown and it is likely that new investors have had higher than average gearing. For this reason 0.5 is also used.
- B. Calculated from Statistics NZ estimates of the number of households living in private rental accommodation and REINZ median house prices.
- C. Two different rates used to illustrate the range around estimates.
- D. Row A*row C
- E. The gross yield is assumed to be 4.9%, then the \$ return is calculated from row B *0.049
- F. Assumed to be 4% of value of housing stock.
- G. Row D*row C
- H. Row E - row F - row G.
- J. Row H divided by rental stock
- L. Marginal tax rate assumed to be 0.3, could be higher if most rental investors are higher income earners. Benefit calculated as marginal rate*row H.
- M. Row H - row L
- N. Row G + row L
- O. Row N * 100/row D
- P. Row C - row O
- Q. $-1*((\text{row L}/0.1)*100)/\text{row B}$

Capitalising the average benefit per property suggests that the investor could pay \$14,500–\$37,000 more than a potential home owner who needs a large mortgage to buy the same house, with a mid-point of \$25,000 being the best judgment of the Unit.

7. Supply factors

- **The supply of new occupied dwellings has responded strongly to population growth, however, there are some signs of a shortage of supply in Auckland, particularly Manukau.**
- **The increase in new supply of occupied dwellings has come with large increases in the cost of constructing new dwellings since 2001, including increases in section prices, labour costs and the cost of materials.**
- **New dwellings are only a relatively small share of house sales.**

7.1 Supply of dwellings

Magnitude of the increase in dwellings

New Zealand does not have an annual survey of the size of the country's dwelling stock. The Census provides a snapshot of the number of dwellings every five years. In between these years, Statistics New Zealand estimates the size of the dwelling stock based on the number of building consents that are approved, incorporating some assumptions about the number of consents that are not acted on and the number of deletions from the housing stock.

Housing supply can be slow in responding to changes in population because of the time taken to assemble the required mix of land, materials and labour; planning delays; and the time required to construct a dwelling. Growth in building consents and dwellings lagged behind the sharp population growth associated with net migration inflows during 2002 and 2003, however, by June 2003 consents for new dwellings reached 30,000 per annum and increased further to more than 33,000 in the year to June 2004, before dropping back to around 26,000 a year in the 2005, 2006 and 2007 June years. This represented a sizable step up in building activity from a historical average of around 20,000 building consents a year, and it shows a construction sector that is able to respond to rising demand and prices.

The net result of this strong increase in building activity was an increase in dwellings between the 2001 and 2006 Censuses of 125,000 dwellings. Around 110,000 of these were new occupied dwellings, with an increase of around 15,000 unoccupied dwellings. This large increase in dwellings is somewhat different to the experience of some other countries that have experienced house price booms, particularly the United Kingdom, where the supply response has been muted.

The critical issue examined by the House Prices Unit is whether the increase in supply has been sufficient to match the increase in the population. If not, then a shortage of houses would be expected to flow into higher house prices, higher rents and signs of crowding as

more people are forced to live in a limited number of houses. This section also includes a discussion of the type of new dwellings that have been built.

A simple comparison of the growth in the total number of dwellings (8.1%) between the 2001 and 2006 Censuses compared with population growth (7.7%) does not point to any shortages at the aggregate level. A comparison between the growth in occupied dwellings (8.1%) and population and household growth does also not point to any shortages at the aggregate level.¹¹ This simple comparison could be misleading, for example, the regional distribution of dwelling and population growth is important, while the distribution of growth within the five year period could also be important.

The Unit has investigated two further approaches to address the question of whether the increase in supply has been enough to house the population growth. It is also important to consider the type of supply that has been added and which segments of the population have accessed the new supply.

Approach 1: Comparison of building consents and population growth

The first approach is to estimate the number of dwellings required to house the growth in the population, building in the following two assumptions:

- In the 2001 Census, the average household size was 2.6 per house. In the 2006 Census, the average household size was 2.7 people per house. The table calculates the number of houses required if average household size is 2.7 and if the 'desired' size was actually 2.5, in line with a declining trend over time.
- Building consent data is used to estimate the rate of construction of new houses, with an assumption that only 80% of new building consents translate into net additions to the country's occupied housing stock. The remaining 20% is accounted for by consents not acted on, holiday homes and by activity that is replacing deletions from the housing stock.

The table below shows the assessment of undersupply and oversupply resulting from this analysis. This provides an alternative approach to the simple comparison of Census numbers and sheds some light on the pattern of building between Census years.

The period from 1995–1997, also a period of large population growth, shows signs of an undersupply of houses. This was subsequently filled by a strong period of building activity

¹¹ Occupied dwellings increased 8.1% between 2001 and 2006 and unoccupied dwellings increased by 8.0% between 2001 and 2006.

between 1998 and 2001. House prices were relatively flat from 1998 to 2001, suggesting that there was not a shortage of dwellings.

Table 5: Analysis of shortage or surplus of dwellings

June years	Change in population	Number of houses required if household size is 2.7	Number of houses required if household size is 2.5	80% of building consents	Surplus if size 2.7	Surplus if size is 2.5
1995	53,300	19741	21320	18588	-1153	-2732
1996	58,600	21704	23440	17754	-3950	-5686
1997	49,400	18296	19760	18078	-218	-1682
1998	33,600	12444	13440	19390	6946	5950
1999	20,100	7444	8040	18086	10642	10046
2000	22,700	8407	9080	19395	10988	10315
2001	22,700	8407	9080	15476	7069	6396
2002	58,600	21704	23440	18026	-3677	-5414
2003	70,100	25963	28040	23259	-2704	-4781
2004	52,200	19333	20880	26601	7267	5721
2005	37,500	13889	15000	21955	8066	6955
2006	40,600	15037	16240	20450	5413	4210
2007	43,158	15984	17263	21230	5246	3967

Sources: Statistics New Zealand

Table 5 shows a shortage of dwellings at the aggregate level in 2002 and 2003. This shortage appears to have been more than filled by surpluses in the following years, suggesting that there was no shortage of dwellings by June 2007, regardless of whether or not an average household size of 2.5 or 2.7 is used in the analysis.

Household size is likely to be, at least in part, influenced by housing supply, affordability and house price increases. When prices are increasing sharply, the rate of household formation may slow; for example, young people may live with their parents for longer. The increase in average household size in the 2006 Census, after a long period of declining average household size, may suggest that such an impact has occurred. The analysis in table 5 is sensitive to the assumption about household size – it may be that the desired household size is smaller than the actual size. The numbers in table 5 can be recalculated with any desired household size. If the desired household size is assumed to be 2.3 people per household then there appears to be a small shortage. A household size of 2.3 is lower than the Statistics New Zealand projection of the expected average household size by 2021.

The numbers are also sensitive to the assumption that 80% of building consents end up as new dwellings. For example, if an assumption of 70% is used instead, there appears to be a small shortage. Between the 2001 Census and the 2006 Census the total number of dwellings increased by around 125,000, while there were just under 138,000 new consents issued over the same period. This calculation suggests 90% of consents were converted

into dwellings, indicating that the 80% assumption used in table 5 is a conservative estimate.¹² As consents tend to lag behind actual demand it may be more appropriate to consider the consents with a six month lag. After making this adjustment the calculation suggests just under 90% of consents were converted into dwellings.

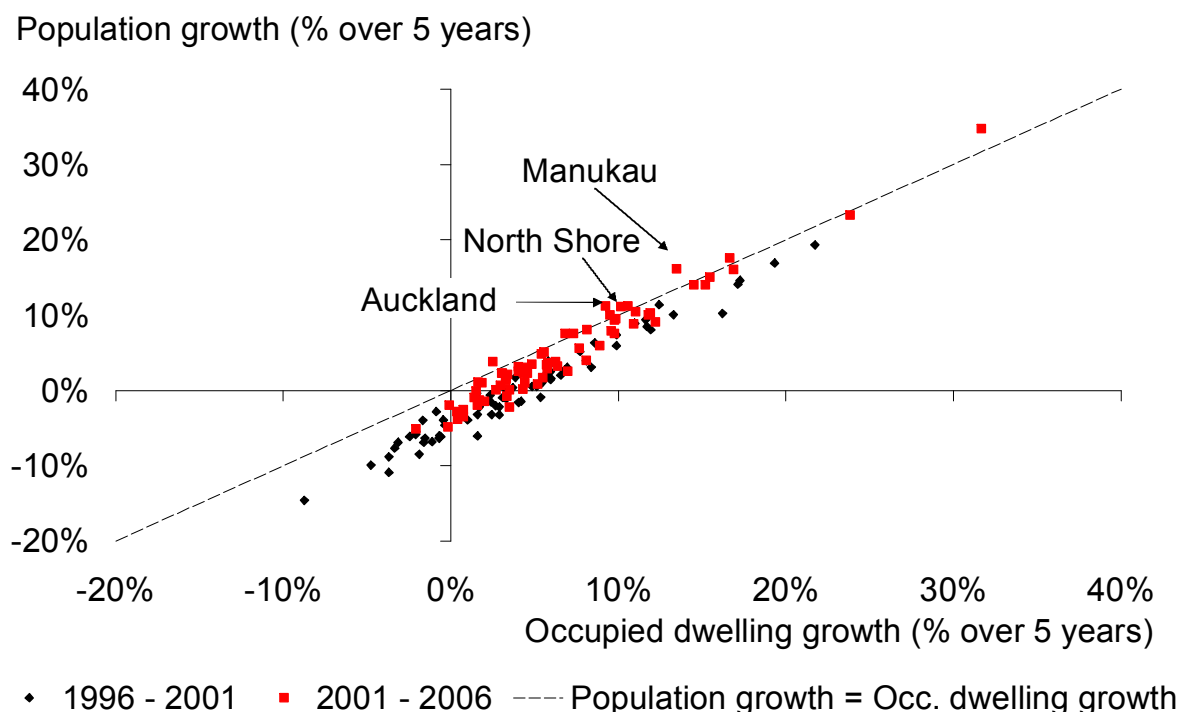
These estimates provide an approximation of the extent of undersupply or oversupply of housing. Under plausible assumptions, approach 1, suggests that there is no sign of a shortage of dwellings at the aggregate level. There are some limitations regarding the assumptions used, and the analysis does not pick up any regional dimension to the growth in dwellings and the population. For example, it may be that the increase in dwellings has come in places with little population growth, perhaps through growth in holiday homes. This appears to have been particularly important in coastal locations and the so-called sunbelt. The analysis also does not show how much of the construction has been of occupied dwellings versus unoccupied dwellings, which again may be holiday homes. These factors would all mean that a greater number of dwellings would be required to house the population, increasing the possibility of a shortage emerging. The use of a conservative estimate of 80% of building consents being converted into dwellings builds in an allowance for the construction of holiday homes that are not occupied by households on a regular basis.

Approach 2: Regional growth in occupied dwellings and population

The graph below provides an alternative approach to considering whether the increase in supply has been sufficient. It shows the population and occupied dwelling growth rates by region in the periods from 1996 to 2001 and 2001 to 2006. Unoccupied dwellings are initially excluded from the analysis as these dwellings are not available to house the population in a region, either because they are holiday homes, being renovated or left vacant for some other reason. The diagonal line shows the growth in occupied dwellings that would exactly match the population growth, implying no change in average household size. As a result, points above the diagonal line represent areas where dwelling growth has not kept up with population growth. In the 1996–2001 period, there were no regions where population growth exceeded dwelling growth. In the 2001–2006 period, there were 10 regions where dwelling growth was less than population growth, with the largest shortages in Auckland City, Manukau and North Shore City.

¹² As consents tend to lag behind demand, with developers taking time to respond to demand, it may be more appropriate to consider consents with a six month lag. This increases the number of consents issued to just over 140,000, indicating 89% of consents were turned into new dwellings.

Figure 16: Growth in population and occupied dwellings 1996-2001 and 2001-2006



Source: Statistics New Zealand

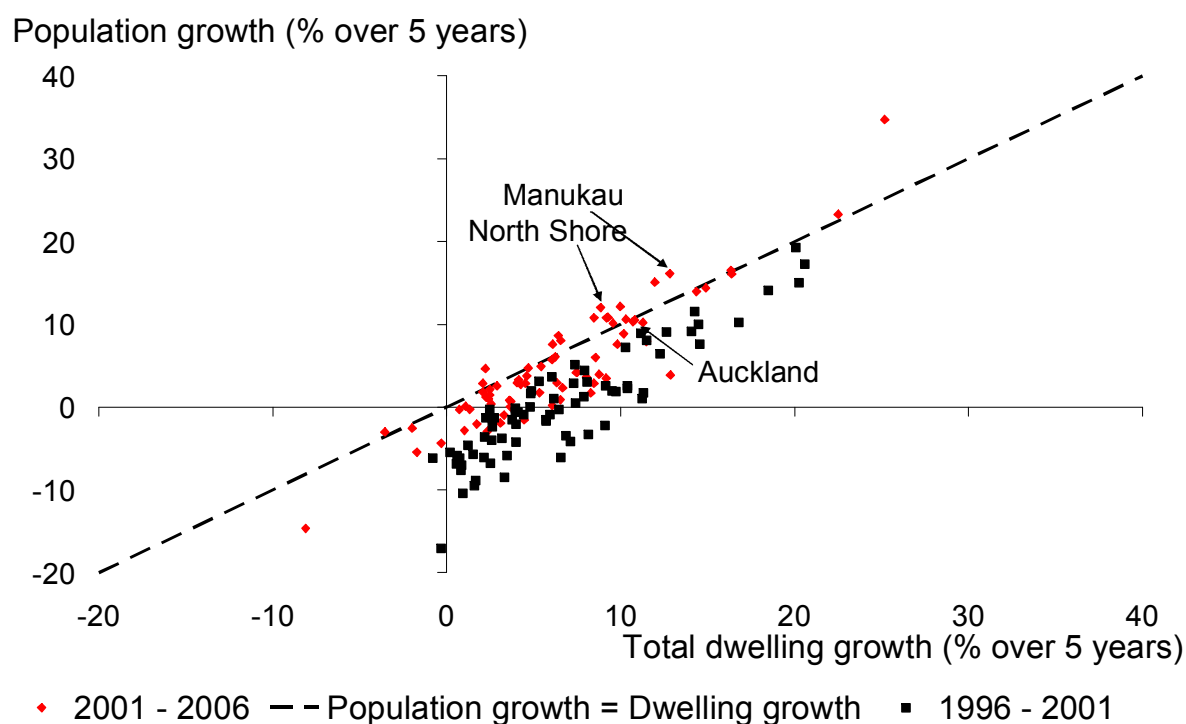
To maintain average household sizes at their 2001 level of 2.6 people per household, the Auckland region would have needed around 4,500 extra dwellings, with Manukau accounting for half of these. The total shortfall across the rest of New Zealand is around 1,500 dwellings. An alternative method of calculation is to carry out this analysis using household growth rather than population growth. Using population growth, however, provides more flexibility to consider different desired average household sizes.

Reductions in average household size would shift the 45-degree line towards the x-axis. For example, if household formation has been suppressed by high house prices, the line would shift down, meaning that a larger number of regions would have a shortage of dwellings, and regions that already had a shortage would have a larger shortage.

While this analysis is at a regional level, it does not capture dynamics at finer levels of detail. For example, Auckland is a broad category, and there may be areas within Auckland where additional new dwellings are well below population growth – this could happen if a lot of the new construction was occurring in relatively expensive areas.

Figure 17 carries out the same analysis using total dwellings instead of unoccupied dwellings. The results are broadly the same, with most regions not showing any shortages, and the most substantial shortages emerging in Manukau and the North Shore.

Figure 17: Growth in population and total dwellings 1996-2001 and 2001-2006



Source: Statistics New Zealand

Type of supply

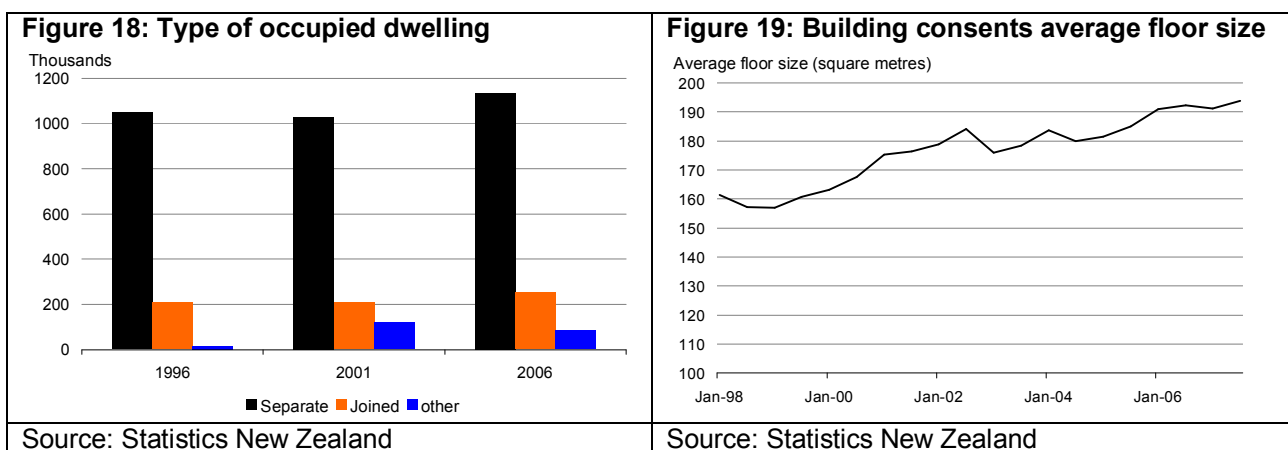
A further dimension of the increase in occupied dwellings is the type of dwellings that have been built. According to the 2006 Census, around 40,000 of the increase in occupied dwellings between 2001 and 2006 was non-separate buildings.¹³ The proportion of non-separate buildings of the total stock of occupied dwellings increased from 16.9% in 2001 to 18.1% in 2006. Non-separate buildings are likely to have been an important dimension of the growth in supply in Auckland. Non-separate buildings, such as apartments, may not be appropriate for some households, particularly multi-family households. The growth in non-separate buildings may reflect increasing demand for other parts of the market, including small families, couples without children, single people and students, for smaller units with smaller sections to maintain. It may also reflect the magnitude of house price increases and a desire amongst households to find more affordable accommodation.

There is also evidence of a general upward trend in the size of dwellings that have been constructed. Building consents data show that the average floor size of new construction has increased from around 170 square metres in 2001 to 190 square metres in 2007. This increase has come despite the growing share of apartments, which will tend to be smaller in size than separate houses. The average floor area for multi-unit dwellings, or separate

¹³ The non-separate buildings category is made up of the following types of dwelling: two or more flats, units, town houses, apartments or houses joined together.

buildings, has been approximately stable at around 100 square metres, with the size of separate dwellings increasing more quickly.

Bigger houses tend to cost more than small houses; therefore, the trend towards new supply focussing on larger houses is likely to reflect demand at the upper end of the market. This may reflect larger returns to builders from constructing larger houses, as well as declining affordability for people on lower incomes. It may also reflect an existing availability of smaller houses such that purchasers of such houses do not need to build a new one. It does, however, mean that the supply of new dwellings is not meeting the needs of low-to-middle income households.



Conclusion: magnitude of supply increase

The two approaches used here have a number of drawbacks and provide mixed evidence regarding whether there is a shortfall in the growth of the number of occupied dwellings required to house the growing population during the boom in house prices. A small rise in average household size suggests that some household formation may have been delayed by house price increases. These two approaches, as well as a simple comparison of the change in the number of dwellings and the change in the population, provide little evidence of a widespread shortfall in the number of dwellings at the aggregate level. However, there are signs that shortfalls have emerged in the Auckland region. These shortfalls are likely to have added to price pressure and led to some increase in average household size.

As further indicators, relatively flat rent price changes in recent years and little change in the housing crowding statistic reported in the *2007 Social Report* (Ministry of Social Development 2007) also support the hypothesis that the increase in the dwelling stock is close to that required to house the population. Again, there are some regions where the story is not so straightforward, with some levelling off of the long-term decline in crowding in Manukau. This result is consistent with the lift in household size and the apparent shortfall in the supply of new dwellings in Auckland.

While the trend in the growth of dwellings broadly matches, and in some cases exceeds, the growth of the population, the type of supply being generated does not meet the needs of all segments of the market. Much of the supply of new occupied dwellings has been in either non-separate buildings, including apartments, or large new houses. This has not met demand for smaller separate dwellings among low and middle-income groups. The general lift in prices has also meant that the existing dwellings that are available for these groups to buy have become more expensive and less affordable. As a result, the new supply has tended to be purchased by investors and then rented out. Even in areas where the supply of new dwellings has exceeded population growth, prices have risen sharply, reducing the supply of dwellings available for people on lower incomes.

7.2 Costs of building a house

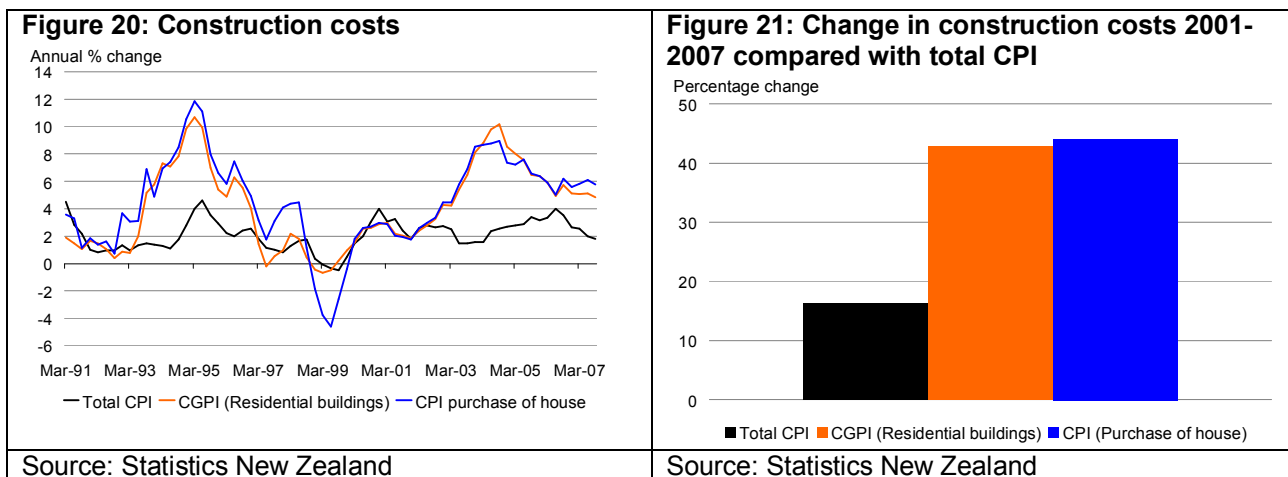
The construction sector has responded to higher demand, however, this extra supply has come at a cost, with the costs of sections, materials and labour all increasing sharply during the boom in house prices. Section 7.2 discusses a variety of measures of the costs of sections, materials and labour.

Indices of construction costs

Statistics New Zealand data provides the most consistent measure of the increase in the cost of new building and construction. Statistics New Zealand provides a variety of measures of the costs of construction from the CPI and the Capital Goods Price Index (CGPI). There are a number of different sources of data regarding the changes in the cost of building and construction. These indices are compiled following internationally developed standards to ensure that the measure records a constant quality and type of construction over time. Between 2001 and 2007 these indices point to construction price increases of around 45%. The costs of construction have increased at a substantially faster rate than the total CPI. The trends in these series are shown in figures 20 and 21. These do not include the cost of land, but do include margins received by builders and developers as they measure the price paid by consumers.

The CPI aims to exclude any changes in price arising from changes in quality. A price index is created from a survey of builders that construct standard-plan houses. Respondents are asked to provide a quote for a house plan that they build fairly regularly. The survey is designed to measure pure price change by asking for the price of a specified plan on a level section, with land costs excluded from the calculation. To ensure that pure price change is measured, adjustments are made for changes in quality such as the size (floor area) of the plan and quality difference in fittings and materials. Changes to the building consents regime have in some cases resulted in improvements to the materials used in constructing, and the

quality of, new house plans being tracked in the CPI survey. The impact these improvements had on surveyed prices was stripped out of the CPI index for purchase and construction of new dwellings (Statistics New Zealand, 2006).



Department of Building and Housing cost estimates

Direct estimates of building costs are also available. The Department of Building and Housing provides a six-monthly overview of the estimated costs of building a house.¹⁴ The Department provides building cost data to help territorial authorities, and others, arrive at realistic estimated values of building costs – particularly for local authorities when they have questioned the job value provided with a consent application. Maltby and Partners Ltd, a firm of construction cost consultants, provides the Department with costing information for a series of building types. Maltby quotes from a set of authentic construction documents in order to establish a unit cost that is as accurate as possible. It should be noted that the Maltby data includes margins received by the building industry. The data does not fully account for changes in quality so as a result using better materials or fittings will show up as an increase in price.

The costs provided are for one-off houses, chosen in line with popular building practice in New Zealand. These costs do not reflect the economies that may be gained by builders building large numbers of similar houses nor do they reflect the additional costs normally associated with architecturally designed houses. To differentiate, group houses have been assessed as being, on average, 21% cheaper than one-off houses, while architecturally designed houses are assessed as being around 20% more expensive. The estimated costs include all necessary internal and external finishes to achieve compliance with the Building Code, all services and provision of standard appliances, and site works. Estimates are provided for two types of house, a house of 145 square metres and a house of 202 square

¹⁴ www.dbh.govt.nz/codewords-10-article-6

metres house. These costs are summarised in table 6. The table also includes an additional row for median section prices to provide an estimate of the total cost of building a house.¹⁵

Table 6: Costs of building a house

	2001	2007	\$ increase	% increase
Building cost				
145 mtr ²	150,607	247,636	97,029	64.4
202 mtr ²	192,708	292,631	99,923	51.9
Land Cost				
Median section	81,250	175,000	93,750	115.4
Total cost				
145 mtr ²	231,857	422,636	190,779	82.3
202 mtr ²	273,958	467,631	193,673	70.7
Building share of total cost (%)				
145 mtr ²	65.0	58.6		
202 mtr ²	70.3	62.6		
Section share of total cost (%)				
145 mtr ²	35.0	41.4		
202 mtr ²	29.7	37.4		

Source: Department of Building and Housing, Real Estate Institute of New Zealand

The estimated increase in building costs of 64.4% for the house of 145 square metres and 51.9% for the house of 202 square metres are both higher than the increases recorded in the Statistics New Zealand indices discussed above. Some of the reason for the difference may be accounted for by changes in quality, with the DBH figures not fully accounting for quality changes. The smaller house of 145 square metres has a higher concentration of service areas, such as kitchens and bathrooms, than the house of 202 square metres.

The smaller of the two houses is likely to be more relevant for first home buyers because of the lower cost. The Unit's focus on affordability means that trends in the cost of the smaller type of house was the primary interest.

As part of the project, Maltbys provided the Unit with a more disaggregated breakdown of the costs of the smaller of the two modal houses. Table 7 summarises this more detailed breakdown.

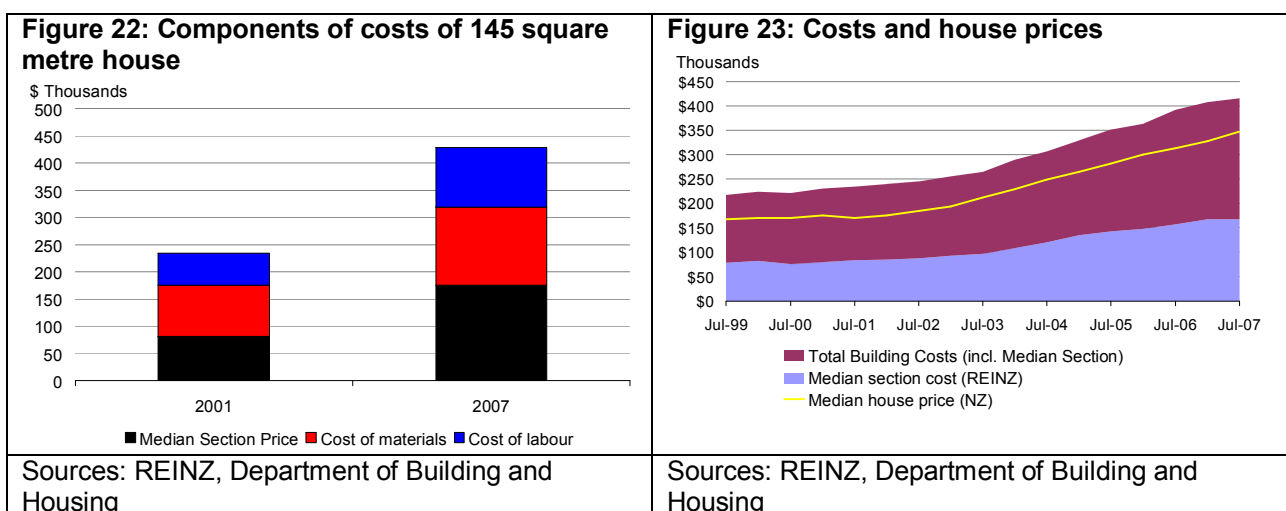
Table 7: Costs of constructing a house of 145 square metres

¹⁵ This is an indicative estimate as the median section selling price may not always be a good gauge of the type of section that would be used for the house of 145 square metres or the house of 202 square metres.

	2001	2007	\$ increase	% increase	Share of total cost 2001	Share of total cost 2007
Median Section Price	81250	175000	93750	115.4	34.7	40.8
Cost of materials	94271	143562	49291	52.3	40.3	33.5
Cost of labour	58517	110260	51743	88.4	25.0	25.7
Total	234039	428823	194784	83.2	100	100

Source: Department of Building and Housing, Real Estate Institute of New Zealand

New dwellings are a relatively small share of total house sales, accounting for around 20% of annual sales. Nevertheless, households wishing to upgrade their homes and first home buyers can substitute between new houses and existing houses. Trends in the costs of new houses can influence the prices of existing houses and vice versa.



7.3 The cost of land has doubled since 2001

New Zealand cities have historically grown by expanding the land area that they cover, with new suburbs housing a growing population. As a result, New Zealand cities have population densities that are below those in cities in much of the world, although closer to densities in most Australian cities. Local governments, particularly in Auckland, have sought to control growth in the land area covered by cities, largely in order to limit the infrastructural and environmental costs of expansion. In Auckland the expansion of the city is governed by the Metropolitan Urban Limit (MUL). The House Prices Unit was unable to ascertain the extent to which the MUL may have influenced land prices in Auckland – many of the factors that have driven land prices upward would exist irrespective of the MUL and the Unit was not able to adequately isolate which price effects may have resulted from the application of the MUL compared with other factors.

Raw land

An important dimension of land supply is the extent to which there is an adequate supply of land ready, or close to ready, for construction. There is a supply pipeline for housing that begins with land that is in other uses and available under district plans for housing use and land already in housing use that is available under district plans for more intensive housing use. That pipeline extends into a further stage when housing consents are issued and the land is developed for housing. A stock of 15–20 years worth of land supply does not provide any information about how much of that land is ready for construction. If very little of it is ready for construction, the price of land that is ready for construction is likely to appreciate.

The practical requirements for contiguous development mean that in situations of high demand, land adjoining cities is likely to appreciate in price because it is likely to be easier and cheaper to develop than converting more geographically distant land and supplying the necessary infrastructure. The quantities of land available ready for development and ready for construction are therefore important determinants of prices.

New Zealand has no data sources about the state of land, the quantities at various points of the development process and the prices of that land. As a result, it is difficult to reach strong conclusions about land supply issues. Increasing the availability of such information is a crucial component of improving the quality of monitoring and regulating land supply. Obtaining more information about land and its current status should be a priority for future work.

The Australian Productivity Commission (2004) notes that the establishment of a boundary reduces the risk of investing in designated areas, and signals that services are likely to be made available in the future, both of which will enhance the value of the land. The Productivity Commission concluded that constraints on the supply of land at the urban fringe had contributed to housing price pressures, particularly in Sydney, by increasing the scarcity value of land. It also concluded that, "...because recent price increases have been due mainly to the surge in demand in established areas, improvements to land release policies or planning approval processes could not have greatly alleviated them."

Grimes and Liang (2007) conducted a detailed econometric analysis of the impact of urban boundaries in Auckland. They concluded that land just inside the boundary from 2001 to 2003 was between 4.5 and 13 times more expensive than land just outside the boundary, with the size of the impact varying depending on the estimation technique used, and that Auckland prices had risen substantially relative to other regions in the North Island. All but one of the measures indicated a ratio of at least 10 in the final years, leading the authors to conclude that the ratio was towards the high end of the 4.5 to 13 range. Grimes and Liang

also found that land just outside the boundary had recorded the largest increases between 1993 and 2003, perhaps due to an expectation of future relaxation of the growth limit.

Other cost drivers

Other factors beside the raw land cost also influence final section prices – the costs of finance, development levies and the costs of development are a larger component of section prices than the raw land itself.

Table 8: Factors increasing the price of a developed 400mtr² section on the edge of Auckland

Factor	Impact on the change in developed section price between 2001 and 2007
Increases in the price of land sold in blocks larger than 1 hectare	Estimated very indicatively to have increased by 300% noting further analysis would be needed to verify this estimate.
Council-imposed developer levies	Estimated very indicatively at an additional \$25,000, but varies with area and can be as much as \$40,000 in Auckland city.
Higher cost of capital (including holding costs from regulatory delays)	Estimated to have increased by around 50%.

Box 2: The Metropolitan Urban Limit and Land Supply in Auckland

The Metropolitan Urban Limit (MUL) is a line drawn on regional planning documents to define the allowed extent of urban development. The MUL is set as part of the Auckland Regional Policy Statement in 1999, which is designed to achieve compact urban environments, with a greater emphasis on intensification than expansion, with the focus on promoting intensive housing development around town centres and transport corridors. Within each distinct plan there are areas identified for future growth.

Grimes, Aitken, Mitchell and Smith (2006), note that some expansion to the MUL in new greenfields areas has been necessary to provide sufficient land and location choice for dwellings and businesses. Changes need to be approved through regional and district plan change processes.

The report Auckland Metropolitan Area: Capacity for Growth 2001 (2003) and the forthcoming publication "*Growing Smarter: the Auckland Region in the 21st Century*" (2007) monitors the capacity of various types of land for additional housing in 2006. Draft 2006 results have been provided to the House Prices Unit and provide the following assessment of additional dwelling capacity:

Table 9: Availability of land in Auckland

	2001 (Household units)	2006 (draft)
Vacant residential land	58,800	57,700
Residential infill	34,200	22,300
Redeveloped business land	45,000	69,500
Total	138,000	149,500

Greenfields capacity has been maintained over the 2001-2006 period through expansions to the MUL, however, estimated infill capacity has fallen and redeveloped business capacity has increased by half.

The 2003 report compared the available supply of land with forecast demand and concluded that there was sufficient land available for 16-25 years of development, depending on the rate of increases in demand. This quantity of supply of land appears in line with international standards (Productivity Commission, 2004), however, it does not address the extent to which developed land is available or how much land is close to being ready for development, it does not address how long it takes for land to progress through the pipeline, nor does it consider the wider economic effects of the supply of land that can be developed on prices. In cases of large increases in demand, such as that experienced by New Zealand since 2002, the amount of land that can be developed is likely to be well below the surge in demand.

7.4 Costs of materials have increased

The Maltbys data suggests that the costs of almost all materials have increased substantially. The largest increases are for electrical, carpentry and plumbing materials, which together account for around 50% of the total increase in the cost of materials.

The rising prices of materials partly reflect the international price of these inputs as well as the margins of local distributors. There are only two large-scale providers of building materials in New Zealand, and during a construction boom these providers may be able to increase their margins.

7.5 Labour costs have increased

Trends in labour costs

There are a variety of measures of labour costs that are available. The Labour Cost Index (LCI) controls for the quality and quantity of labour used shows that nominal hourly wages increased 28% in the construction industry and 14% in the economy as a whole between March 2001 and June 2007. The LCI only covers wage and salary earners, so it does not capture changes in the earnings of self-employed people, which is an important source of labour in the construction industry.

Linked Employer-Employee Data (LEED) compiled by Statistics New Zealand show that median nominal earnings of self-employed people in the construction industry increased 39% between 2000 and 2006. The nominal median earnings of wage and salary earners in the construction sector have increased 20% over the same period. The increase in nominal earnings in the construction industries among wage and salary earners is close to the 19% increase across all industries over the period, however, among self employed people, the 39% increase in construction is well above the 27% increase in all industries.

Table 10: Median earnings

Main income source	Construction				Total Industry			
	Wages and Salaries	% change	Self-Employment	% change	Wages and Salaries	% change	Self-Employment	% change
Tax year								
2000	28,970		25,470		25,680		24,330	
2001	30,030	3.7	25,260	-0.8	26,190	2.0	26,410	8.5
2002	31,320	4.3	27,570	9.1	27,030	3.2	28,600	8.3
2003	31,770	1.4	30,330	10.0	27,690	2.4	28,030	-2.0
2004	32,670	2.8	32,500	7.2	28,650	3.5	29,230	4.3
2005	33,340	2.1	34,380	5.8	29,510	3.0	30,290	3.6
2006	34,930	4.8	35,320	2.7	30,570	3.6	30,840	1.8

Source: Statistics New Zealand (LEED data)

The Maltbys data also suggests that the cost of labour involved in building a house has increased. The cost increases reported in the Maltbys' data are well above the increases recorded in the official Statistics New Zealand measures of the changes in earnings of

people working in the construction industry. One possible explanation for this observation is that the Maltbys data includes the margins received by building firms and not just the wages received by people working in the industry. This suggests that margins have increased during the boom. Despite some conflicting information from the different data sources, both sources show that labour costs have increased by more in the construction sector than in the rest of the economy.

Training, skill shortages and labour demand

Rising labour costs reflect, more generally, the construction sector's increasing demand for labour during a boom in construction activity and the availability of skilled and unskilled labour to work in the sector. The Department of Labour carries out skill shortage assessments as part of its Job Vacancy Monitoring programme. In June 2006, the Department examined 14 different trade occupations and assessed all 14 trades as having genuine skill shortages, where employers have difficulties filling their job vacancies because there are not enough people with the required skills in the labour market to fill the positions on offer. Amongst carpenters, only 34% of positions were filled within 10 weeks of advertising, and there was an average of only eight suitable applicants for every ten carpenter vacancies.

The residential construction sector competes with other parts of the construction sector, which have also been expanding quickly in recent years, with strong growth in commercial and infrastructure projects, such as roads, prisons and hospitals. Non-residential construction work put in place increased 23.0% in the year to June 2007 compared with the year to June 2006. Residential work put in place increased 40.0% over the same period. Table 11 shows the strong growth in employment in the construction industry, based on LEED data, from 2000 to 2006.

Table 11: Employment growth

Tax year	Construction		Total Industry	
	Total number of people	% change	Total number of people	% change
2000	122,349		1,859,400	
2001	122,478	0.1	1,902,660	2.3
2002	124,476	1.6	1,947,339	2.3
2003	133,158	7.0	2,014,878	3.5
2004	145,254	9.1	2,086,851	3.6
2005	160,845	10.7	2,166,081	3.8
2006	173,196	7.7	2,230,170	3.0

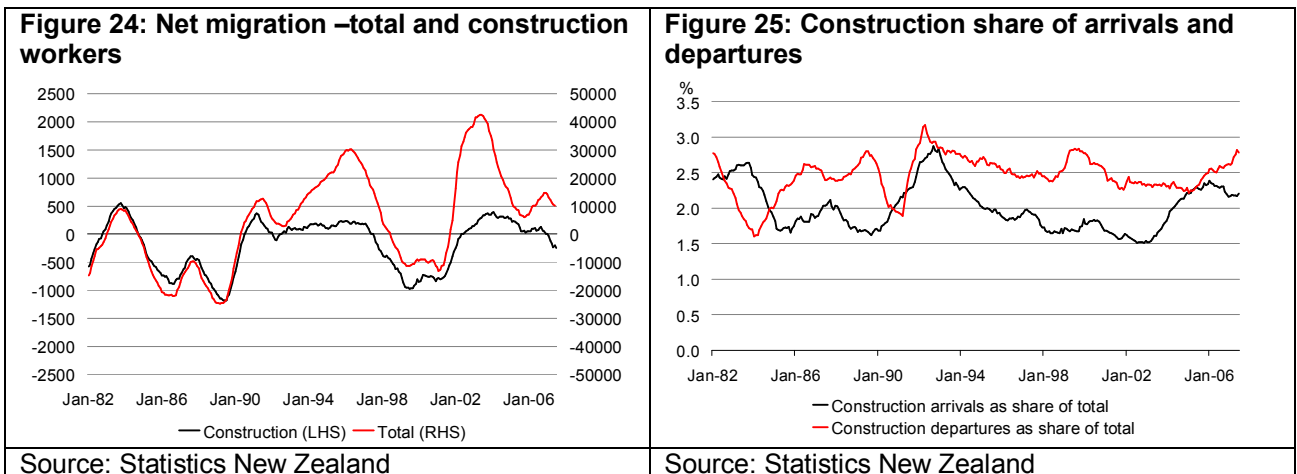
Source: Statistics New Zealand (LEED data)

A decline in the training of apprentices in the trades during the 1990s diminished the available pool of workers for the construction industry. For example, the number of fitters

and turners between the ages of 20 and 24 declined from nearly 1,150 in 1991 to around 200 in 2001. More recently, there has been an increase in training for qualifications related to the trade occupations, with the number of trainees enrolled doubling between 2001 and 2005. The carpenter occupation was the largest contributor to this increase. All occupations recorded an increase over the 2001 to 2005 period, and most recorded growth of over 10%.

Effect of migration

Immigration policy is also a significant determinant of the availability of skilled workers in the construction industry. Policy changes in 1991 and 1995 altered the way people gained points for residence. A focus on qualifications made it harder for those from the construction sector to be approved for residence, with arrivals falling to 900 in late 1998 after peaking at close to 1,500 in 1996.¹⁶ The recent introduction of the Skilled Migrant Category, where the focus is on skills and employment, has contributed to a lift in arrivals of construction workers in the past two to three years, to around 1,800 per year. The annual number of departures of construction workers from New Zealand, which has risen to 2,000 in the past 12 months, compared with around 1,400 in 2002, is also a key determinant of the availability of skilled labour.



7.6 Regulation

There are three major regulatory areas that affect housing:

- The Resource Management Act provides for the sustainable management of land.
- The Building Act requires building consent approval before building can commence.
- Development levies to be paid under the Local Government Act.

¹⁶ This data does need to be used with some caution as arrival and departure cards record an occupation for only around 44% of departures and 34% of arrivals.

Box 3: Summary of the New Zealand Land Use Planning System

The Resource Management Act 1991 governs the development of national policy statements, national environmental standards, regional policy statements, and regional and district plans. Regional and district plans are required to give effect to national and regional policy statements and to have regard to management plans and strategies prepared under other legislation. This could include, for example, long term council community plans prepared under the Local Government Act 2002 and regional growth strategies where these have been developed.

A local authority's district plan identifies objectives, policies and associated rules, which may be grouped according to zones, to manage the environmental effects of activities within a city or district. Rules act as a trigger to determine whether a resource consent is required, while objectives and policies guide local authority decision-making on applications for development. On receiving an application for a resource consent a local authority will decide whether it will be notified, non-notified or notified on a limited basis. This decision influences the level of consultation that needs to be undertaken with affected parties or the public. The time taken to process consents is governed by statutory time frames. If an applicant is not satisfied with a local authority's decision on a resource consent application, they may appeal to the Environment Court. Their decisions can be appealed to the High Court on points of law, with further limited appeal rights to higher courts of law.

Resource Management Act

There are two major features of the compliance system faced by developers under the Resource Management Act (RMA):

- There are costs associated with the resource consent notification and consultation processes for full discretionary or non-complying activities. In these cases, the developer is required to notify and consult with the public, and, may have to take a case to the Environment Court.
- Time delays in gaining a resource consent regarding the use of land and increased asset holding costs for developers may contribute significantly to the final cost of building a house.

Analysis by the Ministry for the Environment of resource consents in 2005/06 showed that:

- A total of 99.3% of all consent applications are approved
- A total of 94% of all consent applications are non-notified
- Of 52,000 consents processed in 2005/06, only 357 were declined
- Only 1% of all consents are appealed to the Environment Court.

The small number of notified consents is consistent with one of the conclusions of Grimes et al (2006b), where developers reported that notifiable consents were most at risk of delays from objections and subsequent hearings. As a result, developers reported that they would avoid developments that required consents that needed to be notified, thereby avoiding some potentially innovative projects that might make the development notifiable.

The Ministry for the Environment (2007) has analysed the processing of consents under the Resource Management Act. Local authorities were asked for the number of resource consents of each type processed within statutory time limits. This includes resource consents where the time limits were formally extended by local authorities under section 37 of the RMA.

In 2005/06, 73% of all resource consents were processed within statutory time limits. This compares with 77% in 2003/04 and 82% in 2001/02. Compared to the previous survey, water and discharge consents increased in the proportion processed within time. The other categories (subdivision, land-use and coastal) all decreased in the proportion processed within time. It is important to note that in these processing results statutory timeframes are calculated as the number of working days between the date a local authority receives a resource consent application and the date it releases its decision on that application. The time it takes for an applicant to supply further information in response to a request from a local authority is not counted, nor are appeals or objections to decisions made on consents. As a result, in some cases the actual elapsed time may be longer. Data on the actual elapsed time, which is the important factor for a developer who incurs holding costs, is not available.

Local authorities were asked for the number of notified, limited notification or non-notified consents that they processed within statutory time limits.¹⁷ This includes resource consents where the time limits were formally extended by local authorities under section 37 of the RMA. In 2005/06, 56% of notified resource consents were processed within statutory time limits. For limited notification consents it was 60%, and for non-notified consents it was 74%. Regional councils processed 86% of resource consents within statutory time limits compared with 71% for territorial authorities and 58% for unitary authorities.

¹⁷ Proposals that might have an effect on the environment that is more than minor, or may adversely affect someone who has not given their approval are publicly notified. In the case of limited notification, notice is only served on those people who may be affected. Most resource consent applications are not notified.

The Ministry for the Environment has identified a number of reasons for delays, including:

- inadequate information regarding environmental effects in submitted application
- a high number of complex applications
- a lack of local authority processing capability due to shortages of skilled staff
- difficulty obtaining expert and legal advice in small local authorities
- increased complexity, requiring additional technical and engineering input, as development takes place on land previously considered uneconomic.

The Unit has not had the time or resources to carry out a full review of the issues associated with the RMA. Results from a pilot study completed in by the Ministry for the Environment in November 2007 indicate that consent applicants had difficulty in differentiating between costs charged by the council for processing the consent, the costs of getting building consents for the same development, development contributions under the Local Government Act and regular design costs that would have been incurred regardless. Of the 24 consent applicants interviewed for the pilot, eight cited holding costs as an issue.

The Ministry for the Environment proposes to undertake research in 2008 to objectively measure the costs to applicants of obtaining a resource consent. That research will provide a better information base on the effect of land use regulations on housing costs.

Building Act

The Building Act 1991 introduced a performance-based approach to building regulation. It established the Building Industry Authority to develop the Building Code and provided Territorial Local Authorities (TLAs) with the responsibility for approving alternative solutions, issuing building consents and undertaking inspections during and at the completion of construction. Failure of the building system, including design, construction and inspections, led to the leaky buildings failures, which resulted in an amendment to the Act in 2004.

A new regulatory framework was introduced with the Building Act 2004. This lifted the regulatory burden on the construction sector, in part to address issues arising from the failure of the system to prevent leaky buildings. An estimate of the economic costs carried out as part of the assessment of the regulatory impact of the Act suggested that it would add 2.9% to the cost of building a new dwelling.¹⁸

¹⁸ No formal evaluation of the costs has been made. Estimates created by the House Prices Unit are discussed on pages 56-57.

Developers report that building consent approval times have increased in recent years.¹⁹

Factors affecting the delays include:

- innovative development proposals being treated more cautiously by authorities, due to the leaky homes problems
- inadequate staffing volumes, lack of experienced staff and recruiting difficulties in a tight labour market.

Comprehensive data about the time taken by councils to approve building consents is not currently available, however, the Department of Building and Housing is working with Local Government New Zealand to assemble time and cost data from individual TLAs. Results from 36 of the 73 councils surveyed show that of the building consents logged and closed in the 2006/07 fiscal year, 85% met the 20 working days stipulated in the Building Act 2004. This rate varies among the 36 councils analysed. Chatham Islands Council has 100% of its 15 building consents meeting the 20 working days requirement. On the other hand, Manukau City Council processed 53% percent of its building consents within the 20 working days requirement. The variation in consent processing time can be attributed to factors such as the nature and value of building consents and the number of consents councils are processing in relation to staff numbers and other supporting resources available.

The data above regarding the time taken to process consents does not measure the total time elapsed in processing consents. The statutory time excludes time where an application is suspended because of a lack of information and returned to the applicant. The analysis also only includes those consents logged and closed in the 2006/07 year so does not include any long standing applications that were still open at the end of the year. These limitations make it difficult to use this data to get a clear picture of the impacts of the time taken to get a building consent.

Among those building consents that took longer than 20 working days to process, 45% of them were processed in the next five working days. There were still a small number that took longer to complete, and these tended to be for the large building projects.

Central government has imposed a more rigorous regulatory regime through occupational licensing and building consent authority accreditation, however these costs are relatively small in the context of the price of building a house. The requirement in the Building Act 2004 for Building Consent Authority accreditation is intended to help councils improve the quality of their systems and processes which, over time, are intended to reduce delays in

¹⁹ For example, the Registered Master Builders Federation, submission to the Commerce Select Committee Inquiry into Housing Affordability, 2007.

building consent processing and improve consistency. The costs of the accreditation process have not been evaluated.

Council imposed development levies

Council infrastructure levies are a sizable component of new housing construction costs and they appear to be rising. Purchasers of new houses expect a range of services to come with the house, including sewerage, drainage, water and electricity. Councils are increasingly charging developers for the provision of these services rather than funding them out of local authority rates or the central government funding from general taxation.

There are two broad areas for which charges are sometimes levied. These are:

- Economic infrastructure: services such as water and sewerage.
- Social infrastructure: a range of community and recreational services, such as parks and libraries.

Box 4: Case study of development levies

Development levies vary across the country. Case study evidence obtained from the Department of Building and Housing provides the following examples of charges:

- Porirua City Council recreation and civic development contribution of \$5,228 for each new dwelling in 2006/07
- Tauranga City Council charges of between \$11,850 (plus 5.9% of land value) and \$32,750 (plus 3.4% of land value) per subdivision lot
- Christchurch costs rising from \$13,000 to an intended \$25,000 per lot by 2010
- Auckland City has recently increased charges from \$7,000 in 2006 to potentially up to \$40,000 per unit from July 2007, including higher charges for central city residential developments.

The Unit has not attempted to consider issues regarding who should pay for infrastructure or what the quality of infrastructure should be. There is considerable variability between territorial authorities as to where the charges are applied and the size of the charges. Further work is needed to understand the impact that the variability and levels of infrastructure contributions between territorial authorities have on the cost of new housing.

Summary of regulatory costs

The regulatory costs identified by the House Prices Unit are estimated as:

- Direct costs to developers arising from development levies of \$5,000–\$40,000 per dwelling, depending on location.

- Building consent fees of \$1,500–\$3,000 per dwelling, Building Consent Accreditation costs of around \$10 per dwelling, as well as a one-off accreditation fee of \$15–\$50,000, depending on region. In total, building consent costs are estimated to add 1–3% to the cost of a new dwelling.
- Occupational licensing of \$400–\$1,000 per licence, estimated at \$100 per dwelling.
- Holding costs of around \$15,000 per dwelling. These primarily arise from delays associated with planning approvals regarding land use under the Resource Management Act, but they can arise in the case of large building projects that take time to receive building consent approval.

While analysis by the Ministry for the Environment and the Department of Building and Housing suggests that most resource and building consents are processed in line with the specified timeframes, there are some, particularly large and/or complex applications for resource and/or building consents, that do face delays.

All of these costs add to the price of new dwellings. New dwellings account for around 20% of the total turnover of dwellings in New Zealand, so they are a relatively small part of the market. Nevertheless, a purchaser can substitute between buying a new dwelling or a second-hand dwelling, so changes in the costs of new dwellings can influence the wider market.

7.7 Design and building techniques

New Zealand has a highly customised and labour intensive approach to residential construction. Builders tend to be small businesses dealing with individual clients and their preferences, with most construction individualised or a relatively small variation on a core design. As a result, it is difficult to take advantage of economies of scale, and most work is carried out on site, rather than by assembling prefabricated materials that have been manufactured off site.

In the long term, moderation in house price growth would be assisted by sustainable cost reductions in the price of land, materials or labour. Sustainable construction cost reductions are likely to result from:

- Improved productivity and skills in the building sector. Productivity issues are addressed in more detail in box 5.
- Faster processing of building consents and approvals under the Resource Management Act.
- Increased intensification and returns to scale as the size of projects lifts.

Box 5: Productivity in the construction industry

Measures of labour productivity divide total output by a measure of the amount of labour used in production, generally either total hours worked or the level of employment. This is a partial measure of productivity as changes in the ratio of capital to labour can influence labour productivity. Total factor productivity (TFP) can be measured by aggregating capital and labour into total inputs and dividing output by total inputs. As a result, growth in TFP is the amount of growth in real output that is not explained by growth in inputs. In practice, some inputs are generally excluded (for example, land). Because TFP does not include all inputs, it is sometimes labelled multifactor productivity (MFP).

A number of studies of productivity in New Zealand have found that productivity performance in the construction sector has been weak. Black, Guy and McLellan (2003) found that MFP growth was weaker in construction than any other sector of the economy between 1988 and 2002 – with the sector almost 20% less productive in 2002 than in 1988. Within this period, MFP in construction fell from 1988 to 1993 and was followed by weak, but positive, growth from 1993 to 2002. Mason and Osborne (2007) found that average labour productivity levels in the New Zealand construction industry were around 70–80% of their United Kingdom levels. Updated estimates for labour, capital and multifactor productivity between 1997 and 2006, calculated during the project, suggest that labour, capital and multifactor productivity measures in the construction sector all fall short of the productivity performance of the aggregate economy (Davis 2007). Depending on the exact measure, these show a small fall in productivity on construction over the 1997–2006 period.

While New Zealand's performance appears to be weak, this is an issue that arises in a number of countries. Australia, the United States and Canada have all published reports highlighting weak productivity performance in the construction sector. And while the United Kingdom level of productivity compares favourable with New Zealand, the *Review of Housing Supply* (Barker, 2004) in the UK also raised concerns about the construction sector's apparent sluggishness adopting new approaches to building and difficulties taking advantage of reduced costs from economies of scale.

Some overseas studies also note there are measurement issues related to construction productivity. However, it is not clear how these issues impact on productivity measurement in the New Zealand construction industry. Putting aside measurement issues, productivity performance in the sector appears to have been poor. Both the level and growth in various measures of productivity lag behind the rest of the economy, however, this problem does not appear to be exclusive to New Zealand. There are a variety of factors that may affect the productivity of the industry including – few large scale new land supplies, training and skill levels in the industry and consumer preferences for individualised construction.

8. Future outlook for prices

- **Some easing in real house prices is likely over the next one to two years as the housing market moves past its peak, interest rate increases slow activity and expectations of future gains diminish.**
- **Most of the increase in prices has been underpinned by fundamental drivers, which for the most part are likely to continue, so house prices are unlikely to fall sharply.**
- **Price to income measures are likely to remain at elevated levels, even if they ease a little as prices adjust.**

Outlook for house prices

The role of longer-term structural factors in contributing to higher prices means that prices are likely to stay at high levels. The strong lift in demand from a surge in net migration, a period of low interest rates and the likelihood that nominal interest rates will remain well below the levels of the early 1990s, together with rising incomes, strong economic growth and increasing availability of credit account for most of the increase in demand for housing. Projections of household formation suggest that demand for housing will remain strong in the future.

Rising investor activity and the likelihood of an element of speculative behaviour as expectations of future house price increases have grown have also contributed to rising demand. New entrants to the market in this group, particularly those financed largely from debt, with low rental yields, are exposed to rising interest rates and may come under some financial pressure as capital gains diminish. This does pose a wider downside risk to the outlook for house prices in the future if substantial numbers of investors try to exit the market.

On the supply side, rising costs of land, materials and labour have all added to price pressures in the housing market. Meanwhile, margins have increased during the boom in construction activity. Falls in margins as activity slows may help decrease the cost of building a house and remove some pressure from house prices.

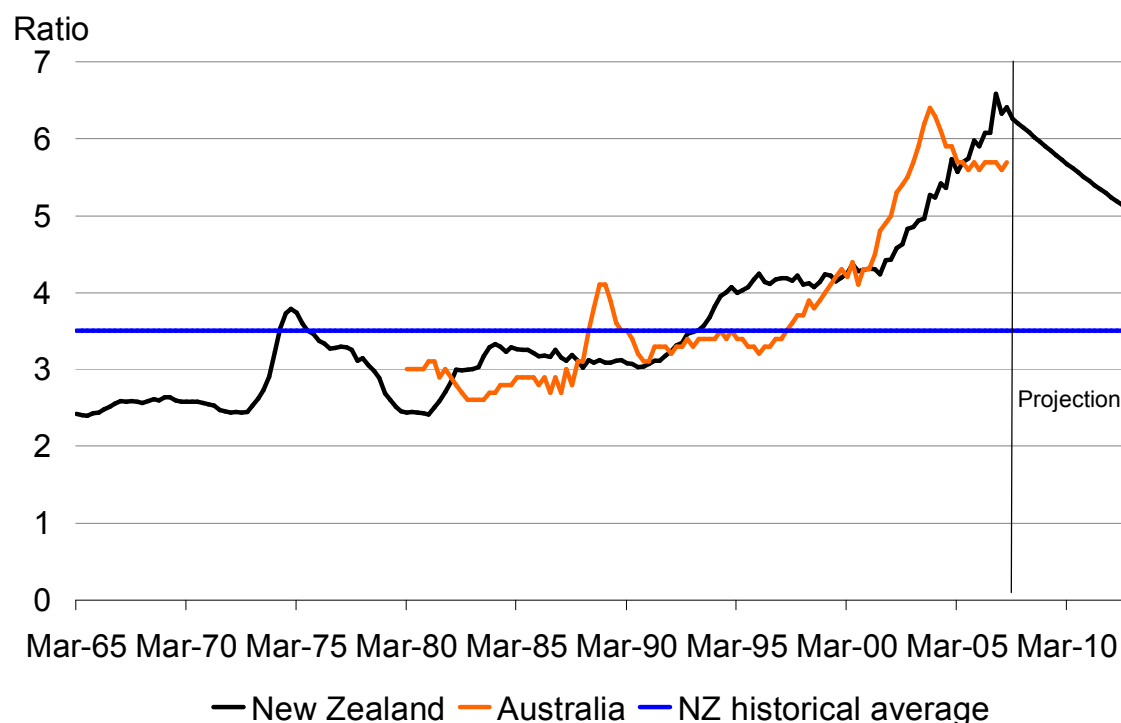
Short-term factors affecting demand may unwind in the future or have already changed: an example is recent interest rate increases. Likewise, any element of speculative behaviour that has contributed to price rises should also unwind as the housing market comes off its peak. Recent analysis by Westpac suggests that higher interest rates in the past 12 months have reduced the value of houses to investors, suggesting that at current prices, incomes and interest rates, there is an element of overvaluation in house prices.

House price growth has slowed and is likely to continue to ease over the next 12 to 18 months as interest rate increases begin to bite and expectations of future house price increases diminish. While expectations have been important, the judgment of the Unit is that longer-term structural factors have been the primary driver of high real prices. As a result, in the absence of an economic shock, adjustment to house prices is likely to be gradual, and it is possible that real prices could fall modestly in the next 1 – 2 years, rather than record a sharp fall. Nevertheless, house price to income ratios are unlikely to return to those that prevailed in 2001. A return to house price to household income ratios of close to their historical average of around 3.5 would either require household disposable income to increase by 80% or house prices to fall by over 40%. In the absence of an economic shock, adjustment to house prices is likely to be gradual.

New Zealand's historical experience suggests that prices tend to be 'sticky' on the downside. A more dramatic fall in prices is only likely to occur if there was a sharp slowdown in economic activity that saw job losses and forced house sales, or a prolonged period of negative net migration, with subsequent falls in the demand for housing.

Figure 26 shows how a period of flat nominal prices could affect price to income ratios in the future. In figure 26, nominal house prices are projected forward, assuming no change in prices over the next five years, while household disposable income is projected forward at annual growth rates of 4%. These are not forecasts of house prices and income but are presented to show how price to income ratios are likely to stay relatively high even if nominal house prices are unchanged for five years.

Figure 26: Ratio of house prices to average disposable household income



Sources: Statistics NZ, QVNZ, House Prices Unit, RBNZ

Outlook for rents

In recent years, rents have increased at a similar rate as incomes. The supply of rental accommodation has increased strongly reflecting increased investor interest in housing, and this has meant that increases in rents have been limited. The current framework for rental accommodation is predominantly based on short, fixed-term arrangements. Issues arising from rising rents are addressed in section 10.4.

The future outlook for rent prices depends on trends in supply and demand. Future demand for rental housing is likely to be underpinned by rising incomes, population growth, and by declining home ownership affordability (addressed in depth in section 10.2). In recent years, the supply of rental properties has been boosted by strong investor activity, in part in response to expected capital gains, as well as by New Zealanders' preference for property as a form of investment. Rental yields have been low, with capital gains generating most of the return to investment. The likelihood of declining capital gains in the future may discourage new supply of rental properties. With rising demand this would lead to pressure on rents. This was the experience of Sydney when house price growth slowed in 2004. Some increases in rents look likely in the next 1-2 years.

9. Impact on choices – location and dwelling type

- **Dwelling growth has occurred at the fringe of cities, in inner-city apartments and infill housing.**
- **Intensification of cities has occurred, but not to the extent envisaged, with barriers aggregating land, demands on infrastructure and strong community opposition.**
- **Brownfield and greenfield developments as well as intensification all come with demands for new infrastructure.**

9.1 Impact on dwelling type: growth has occurred at the fringe of cities and in inner city multi-unit dwellings

New Zealanders require access to a diverse range of housing choices. Future population growth will increase the demand for housing, while the projected long-term decline in the size of households means that the housing needs of many households are changing. Increased amenities, provided by close proximity to services, or well serviced via public transport, are highly valued by some groups. Focus group research by DTZ New Zealand (2005) pointed to strong aspirations for living in larger dwellings on large sections, as well as a strong aspiration towards home ownership.

Future needs are likely to include a mix of housing styles in areas with access to work, services and community facilities. To minimise environmental impacts housing needs to be serviced by public transport.

Cities are drivers of economic growth, innovation, creativity and international competitiveness. Cities, especially Auckland, have an important role in boosting economic performance and sustainability objectives. Most of New Zealand's major cities, including Auckland, Wellington, Christchurch and Tauranga, are developing, implementing or reviewing their regional growth and development strategies. These growth strategies are often based on urban intensification around growth centres and along transport corridors, urban containment through the use of growth boundaries around cities, increased residential densities, and mixed land use.

The Auckland Regional Growth Strategy, launched in 1999, set out a Growth Concept, which envisaged a greater emphasis on urban growth around existing town centres and near major public transport corridors, with less reliance on expansion on the urban fringes. The plan was for approximately 70% of new growth to be accommodated in the existing metropolitan areas by developing more intensive, mixed-use town centres, with the remaining 30% of growth occurring through development in greenfield areas and suburban in-filling. To date,

promotion of intensification has focussed mainly on regulatory tools (such as district plan zoning). Such approaches have met with a mixed response from the market place.

Intensive developments in Auckland have increased and now represent over 40% of new building consents, however, not all of these developments are occurring in identified growth centres. The remaining 60% of consents are occurring on the urban fringes or in or areas within the city not targeted for growth and not well serviced by public transport. This would appear to be due to:

- the difficulty of aggregating sufficient land for meaningful redevelopment in urban centres due to fragmented land ownership and the high level of land prices in areas surrounding the city centre
- lack of specificity in council district plans, which creates uncertainty for developers about where and when development is needed
- increased holding costs for developers awaiting approval processes
- community resistance to higher-density development based on poor perceptions of previous poorly located, low-quality developments, including leaky buildings.

Intensification should moderate house prices, all else being equal, because it uses less land per dwelling by greater use of terrace and multi-level apartment dwellings. In areas of Auckland with higher residential density, the land value per resident is lower even though the land value per hectare is higher. Apartments and flats are generally priced at 60%–80% of stand alone dwellings, which assists with affordability for some markets and in some areas.

Box 6: Intensification versus expansion

The arguments in favour of urban intensification focus on encouraging:

- More efficient utilisation of land in urban areas through the creation of higher-density land-use patterns that encourage a mix of uses (including residential, business and retail).
- Using less land per dwelling, through a greater use of terraced and apartment-style dwellings along with in-fill subdivisions, which can reduce housing costs.
- The clustering of people and economic activity in larger, denser urban settlements, with good access to amenities and transport as this can achieve greater business productivity and drive economic growth.
- More efficient movement of goods and services and reduced car dependence, with subsequent savings in overall energy demand and carbon dioxide emissions.
- Revitalisation and reinvestment in existing developed areas.

Arguments in favour of urban expansion focus on:

- Mitigating the effects of increasing land prices and thereby improving housing affordability.
- Allowing consumer choice and market response to preferences, with suburban growth seen as the preferred lifestyle choice of the majority.
- Reducing traffic intensities in low density suburban development and, as a result, increasing traffic speeds and lowering air pollution emissions.

Successful intensive development requires significant capital investment in new infrastructure and public transportation in particular. Furthermore, existing urban land values mean that the resulting developments are unlikely to be low cost, although they could include more affordable components. In developments where significant uplift in land values occurs as a result of re-zoning, this could be partly captured through affordable housing contributions as allowed for by the proposed Affordable Housing: Enabling Territorial Authorities Bill. Consideration should be given to coordinating re-zoning with major investment in public transport systems to increase the amenity and, therefore, demand in new areas. These types of investments may be outside the capacity of territorial authorities to make.

Brownfield sites can offer opportunities for more intensive development, although there may be costs associated with cleaning up contaminated sites. The redevelopment of under-utilised or abandoned sites can contribute to the revitalisation of neighbourhoods and urban districts.

International research shows that many countries are grappling with how best to achieve urban development, and that a number of similar approaches are being used in Australia, the United Kingdom and the United States from which New Zealand could learn.

Cities such as Melbourne, Sydney and Perth are all using urban development agencies. These agencies have been able to demonstrate commercially viable and sustainable development, high-quality design, and urban regeneration. Some have also facilitated the provision of affordable housing, community facilities and services, and kick-started redevelopment in strategic locations where there was little market interest.

Functions of urban development agencies can include:

- acquiring and repackaging enough contiguous land to carry out a meaningful development project
- 'master planning' the whole development area including specifications for building design and quality standards
- fast-tracking regulatory approval processes, if necessary in specific cases to create investor certainty
- entering into partnerships with private sector developers, possibly forming a separate company to carry out the physical development, to gain the capital required and to ensure that public good benefits are achieved from the development
- selling and developing land in stages to ensure that essential infrastructure is in place to further attract people and investment to the area
- gaining some of the increased value of the land from public sector infrastructure improvements.

Australian urban development examples include the following:

VicUrban Redevelopment Authority – Revitalising Central Dandenong Project

The Victorian government has designated four regional centres as 'Transit Cities' within the Greater Melbourne area, including Dandenong which is the focus of greatest investment due to its strategic location, diverse community and opportunity for economic and business transformation. The Revitalising Central Dandenong initiative is delivering a number of long term projects to provide:

- significant investment in passenger transport and other infrastructure
- upgraded community facilities and services
- better streetscapes and public places
- new places to live
- private investment opportunities.

The government's redevelopment agency, VicUrban, is responsible for the project and has partnered with the local Council to improve development approval processes and encourage private sector investment. A major early initiative has been to facilitate the amalgamation of

strategic sites on the edge of the city centre and the relocation of a bus depot to a more suitable location, enabling the development of 1,000 new homes.

VicUrban is working in partnership with the City of Greater Dandenong to deliver the project over a 15 to 20 year period. The Dandenong project will seek to attract more than \$1 billion in private sector investment. VicUrban is also involved in partnering a number of affordable housing projects to provide equity share home ownership, key worker housing and additional social housing.

Perth – East Perth Redevelopment Authority

The West Australian government established the East Perth Redevelopment Authority in 1991 to plan, manage and redevelop government owned land in Perth. The authority has access to large areas of surplus or underdeveloped government land with the power to acquire additional contiguous parcels.

The first project of the East Perth Redevelopment Authority was to undertake, promote and coordinate the redevelopment of Claisebrook Cove which was a former gasworks site. The project commenced in 1992. The Claisebrook Cove project area covers 146 hectares of land and is the state's largest inner-city urban renewal project. The project area was formerly industrial land, including the former East Perth Gasworks, scrap yards, contaminated industrial sites, empty warehouses and railway yards. Claisebrook Cove was planned to accommodate approximately 2,500 new residents with the creation of 1,450 new homes and apartments.

The East Perth Redevelopment Authority's expenditure on the project is in excess of \$127 million. A grant of \$32 million was received from the Federal Government's Building Better Cities funding program. Private expenditure on new residential and other buildings in the project area is in excess of \$680 million.

Sydney – Redfern - Waterloo Authority

The New South Wales government established the Redfern-Waterloo Authority in January 2005. The Authority is responsible for revitalising the Redfern-Waterloo area of south-central Sydney through urban renewal, improved social services and job creation.

In August 2006, the first stage of a 15 to 20 year multi-agency development plan was released. Key features of the plan include:

- the provision of around 18,000 jobs

- the construction of around 2,000 new dwellings that will provide greater housing choice, demographic and socioeconomic mix and is supported by an affordable housing programme
- an upgraded Redfern Railway Station and new civic square to serve as a hub for community and commercial activity
- the establishment of cultural and community facilities
- high quality urban design and architecture.

The Redfern-Waterloo Authority has attracted almost \$300 million in new investment for the area, including direct investment by the Authority of more than \$76 million.

The following factors would assist in encouraging successful urban intensification and the development of brownfield sites:

- Crown-owned sites could be developed intensively. The possibility of existing Crown and local government land being used for housing could be investigated through an audit of public land.
- The role of Crown-supported entities in land development could be increased. There is a potential to establish one or more urban development agencies, possibly at regional level, to enable large-scale urban development of selected sites.

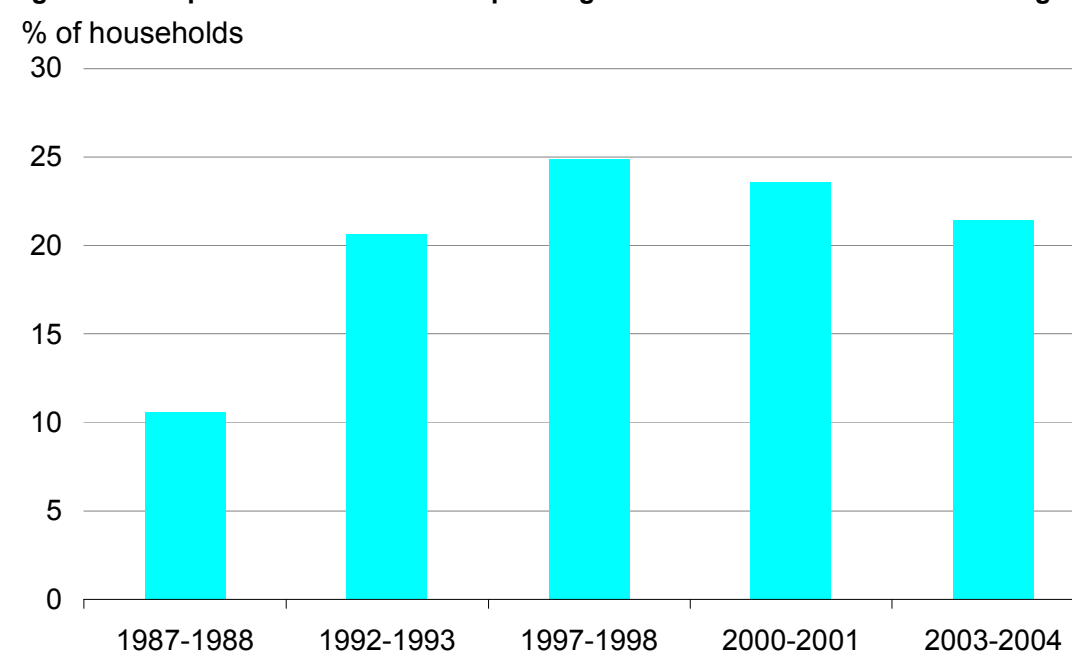
10. Impact on costs and tenure choice

- All measures of housing affordability have declined in the past five years.
- Rents have increased in line with incomes, however, there are emerging issues about rental affordability among low-income groups.
- Home ownership rates have fallen and are projected to fall further in the next 10 years.
- There is a growing group of households that cannot afford to buy a home at current prices, interest rates and income, and are not eligible for assistance through the Housing New Zealand Corporation.

10.1 A definition of housing stress

Yates and Milligan (2007), in a report for the Australian Housing and Urban Research Institute, define a benchmark of housing costs of 30% or 40% of income as a measure of housing stress. The 2007 Social Report (Ministry of Social Development) shows that in 2004, 22% of New Zealand households spent more than 30% of their net income on housing costs. This represents a decline from 24% in 2001, however, since the late 1980s there has been a substantial increase in the proportion of households spending more than 30% of their income on housing. By age group the proportion of people living in households spending more than 30% of the income on housing is concentrated largely among people under the age of 45, with the highest shares in people under 18 (29.2%) and people aged 18 to 24 (29.0%).

Figure 27: Proportion of households spending over 30% of net income on housing



Source: 2007 Social Report (Ministry of Social Development)

Some households will have made a conscious decision to spend more than 30% of their income on housing and will feel that they can afford to do so. The biggest concern is amongst low-income earners because they have less residual income to meet the cost of other living expenses. The proportion of households in the lowest 20% of the equivalised household income distribution spending more than 30% of their income on housing rose from 16% in 1988 to a peak of 49% in 1994 and fell to 35% by 2004.

10.2 Impact on tenure type – home ownership affordability has declined

Home ownership affordability is highly cyclical, moving in line with changes in house prices, interest rates and income.

There are a variety of measures of housing affordability commonly reported in the media. Massey University produce the National Home Ownership Affordability Index using data on median house prices, average earnings and interest rates. The Fairfax Media Home Loan Affordability Index calculates a measure of disposable income, based on the amount of income a buyer has left after paying the mortgage. In addition, the economics departments of a number of banks calculate and publish affordability measures. The National Bank publishes a measure of affordability that calculates the proportion of household weekly earnings required to service a 25-year mortgage based on a two-year fixed rate and a 20% deposit (National Bank of New Zealand, 2007). This measure shows that the proportion of income required fell from around 40% for most of the period from 1992 to 2000 to around 35% between 2000 and 2003 and has subsequently increased to 60%. Figure 26 in section 8 shows that house price to income ratios have lifted well above their average. Analysis of regional house price to income ratios shows that prices are most stretched in Auckland.

Measures of affordability generally attract a degree of controversy, with much debate about the appropriateness of the measure, what it includes and who it is applicable to. House price to income ratios are often criticised for not capturing the impact of interest rate changes.

The Unit has developed two additional measures of affordability. The first provides a time series of the number of hours that a purchaser needs to work to pay off their mortgage. The second uses Survey of Family Income and Employment data to calculate the number of people who can afford to service a mortgage at existing prices, income and interest rates.

Measure one: a real affordability index

Figures 28 and 29 shows how affordability indices based on real and nominal interest rates have evolved in the last two decades. The real interest rate is calculated by deflating the

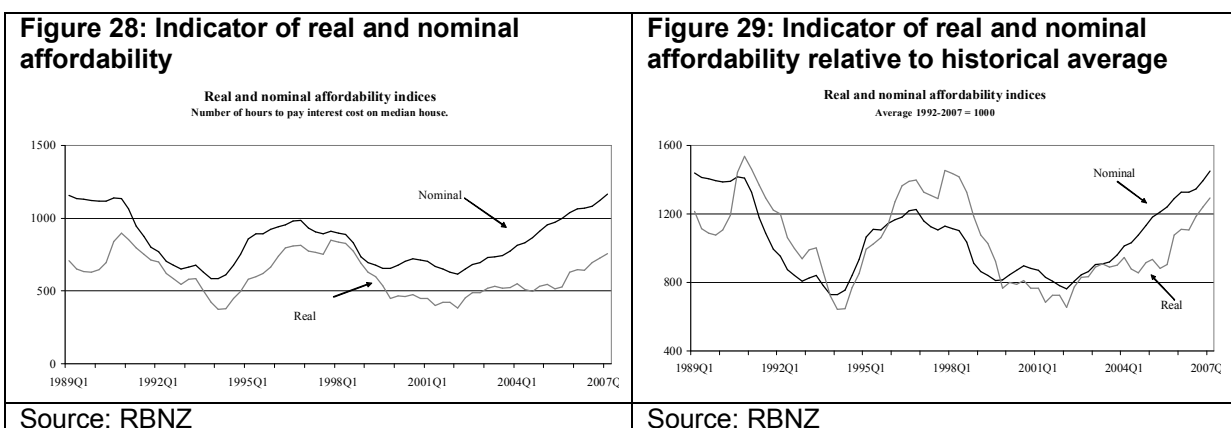
nominal interest rate by the average of the previous four quarters' and the forthcoming four quarters' change in the CPI.²⁰ The formulae for the two indices are:

$$\text{Nominal affordability index} = \frac{\text{nominal interest rate} \times \text{Quotable Value house price index}}{\text{average hourly earnings}}$$

$$\text{Real affordability index} = \frac{\text{real interest rate} \times \text{Quotable Value house price index}}{\text{average hourly earnings}}$$

In figure 28, the indices are rebased so the Quotable Value price index is equal to \$295,000 in March 2006, the median house price in that quarter. The indices have the interpretation of the number of hours of work needed to pay the annual nominal or real interest cost of a mortgage just large enough to purchase a median priced house, including principal payments. In figure 28 the indices are rebased so that they both have an average of 1,000 for the period March 1992–March 2007. It should be noted that a rise in the index means that housing is *less* affordable to those contemplating borrowing to purchase a house.

This measure of affordability does have some limitations. Average hourly earnings do not include all sources of income and are affected by changes in the composition of employment, even if there are no changes in actual hourly wages. In addition, they relate to a particular job rather than the income of a household. While the measure does have limitations, it adds to the suite of affordability measures that can be considered.



- The nominal affordability index reaches its highest level over the entire period in 2007, 45% above its average level. In contrast, the real affordability index was 30% above its average value in March 2007.
- Nominal and real affordability are volatile series.

²⁰ The real interest rates for 2006/07 assume the CPI increases at 0.6% per quarter henceforth.

- While both real and nominal housing affordability have deteriorated sharply since March 2002, both the nominal and real housing affordability indices were at very low levels between 1999 and 2001 – housing was relatively affordable. Home ownership declined between 1996 and 2001, despite relatively good affordability towards the end of the period, suggesting factors other than affordability affected ownership rates over this period, or that poor affordability from 1996-1999 had a large impact on ownership rates.
- From figures 28 and 29, it is apparent that the number of hours required to service the nominal interest cost of a mortgage is considerably larger than the number of hours required to service the real interest cost of a mortgage. It follows that part of the deterioration in nominal housing affordability in the past five years reflects the higher average inflation rate.

Measure two: the number of people who can afford to service a mortgage

The Unit has used Survey of Family Income and Employment (SOFIE) data to analyse how the number of couples and non-partnered individuals that can afford to buy a home has changed over time. In all of this analysis couples and non-partnered individuals include people with children and people without children, consistent with the definitions used in SOFIE. For example, the category called couples would include a young couple with no children and a married couple with three teenage children.

The income data discussed here is based on 2004 SOFIE results, with income indexed forwards to 2006 and back to 2000 based on changes in income²¹. The approach is to estimate the proportion of renting couples and non-partnered individuals that can afford a lower-quartile-price house in their region and keep their mortgage payments, including principal reductions, at a maximum of 30% of their gross income.²²

In 2006, 29% of renting couples (including couples with and without children) and 2% of renting non-partnered individuals (including individuals with and without children) could afford to buy a lower-quartile house in their region.²³ Based on the interest rates and house prices that prevailed in 2000, with income indexed back to 2000, 59% of couples and 11% of non-partnered individuals could have afforded a lower-quartile-price house. These numbers

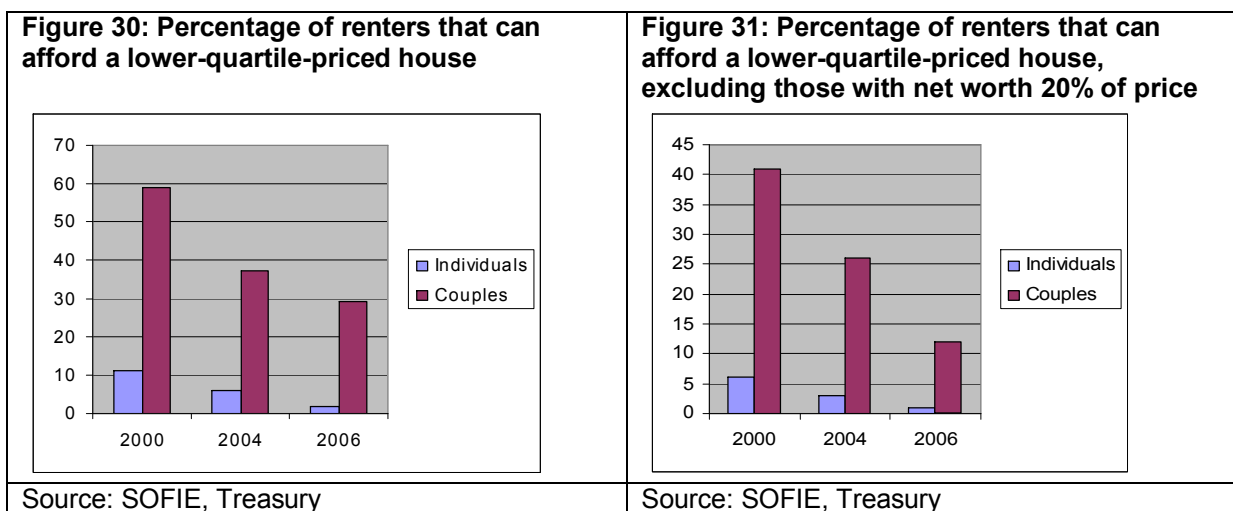
²¹ Income was backdated to 2000, based on average hourly earnings. This assumes that the level of earnings of non-partnered individuals and couples follows the trend of average hourly earnings.

²² Gross income has been adjusted for debt servicing costs on existing debt.

²³ Note that the use of the terms couples and non-partnered individuals includes couples and non-partnered individuals with children and couples and non-partnered individuals with no children

suggest a large decline in affordability between 2000 and 2006. This is shown graphically in figure 30.

Figure 31 provides the equivalent numbers if the calculation excludes renters who have net worth in excess of 20% of the price of a lower-quartile-price house.²⁴ This excludes a group who may have voluntarily decided not to use their net worth as equity to buy a house. Of course, even if this group did want to use their net worth to buy a house, not all those in it would have the income to service a mortgage and it may not be reasonable to expect people to convert some types of net wealth into a home deposit.



At current prices and interest rates, the gap between the income of those who cannot afford to buy a lower-quartile-priced house and the income needed to service a mortgage on a lower- quartile-priced house while keeping the payments at or below 30% of income is large. On average, to bridge the gap, a couple would need a deposit of \$122,000, and non-partnered individuals would need a deposit of around \$170,000. For many couples and individuals saving a deposit this large is likely to pose a considerable hurdle to home ownership, except perhaps for those at the upper end of the income distribution. Eliminating student debt would make no discernable difference to the overall numbers because the median deposit gap is too large to be offset by student debt.²⁵

²⁴ Net worth is the difference between assets and liabilities. Included in assets are: property assets (owner-occupied and investment), bank account assets, life insurance, business assets, trusts, vehicles, leisure equipment, other financial assets, and workplace and personal pensions. Included in liabilities are: mortgages, credit card liabilities, student loans, bank account liabilities and other liabilities.

²⁵ The Unit recalculated the affordability measures used in figures 29 and 30 after eliminating all student debt and the percentage of couples and individuals who could afford a lower quartile house was almost unchanged.

According to this measure, by region, affordability is most stretched in Auckland. Of the 71% of couples that are estimated to be unable to afford a lower-quartile-priced house, close to half of these couples are in Auckland. Only 6% of renting couples in Auckland could afford a lower-quartile-priced house, compared with 29% nationally.

This measure can be used to consider a number of different groups within the population. For example, affordability can be calculated based on the number of children that non-partnered individuals and couples have. The numbers are broadly the same as those discussed above and are shown in table 12. In the table each of the non-partnered individuals and couples groupings are separated into income quartiles and into three different groupings based on the number of children they have. For example, 20% of non-partnered individuals in the fourth income quartile with one child can afford a lower quartile house in their region.

Table 12: Affordability by number of children and income

	Percentage who can afford lower quartile house by number of children			
	One child	Two + children	No children	Total
Non-partnered individuals				
<i>Income quartile</i>				
1 (Less than \$14,803)	0	0	0	0
2 (\$14,804 to \$23,463)	0	0	0	0
3 (\$23,464 to \$39,665)	0	5	10	10
4 (\$39,666 and above)	20	1	2	2
Total	4	1	2	2
Couples				
<i>Income quartile</i>				
1 (Less than \$41,175)	0	0	0	0
2 (\$41,176 to \$66,955)	0	1	1	1
3 (\$66,956 to \$100,246)	40	39	39	39
4 (\$100,247 and above)	88	89	89	89
Total	27	30	29	29

Source: SOFIE, The Treasury

Home ownership affordability: conclusion

Affordability is a function of house prices, interest rates, income and initial wealth, or the equity that a household has available. A wide range of measures of affordability show that affordability has declined in the past four to five years. As a result, there is a growing group, sometimes described as the 'intermediate market', that cannot afford to service a mortgage at prevailing prices, interest rates and income, and are not eligible for state assistance through Housing New Zealand Corporation.

10.3 Impact on tenure type – home ownership rates have fallen and are projected to continue falling

Ownership rates increased from around 57% in 1945 to just over 71% by 1981. As shown in table 2 in section 4.2, between 1981 and 1991 home ownership rates increased by around 3 percentage points. Since 1991, home ownership rates have declined, reaching 66.9% in the 2006 Census. Around 28% of households rent from private landlords.

An international comparison

In their May 2007 submission to the Select Committee of Inquiry into Housing Affordability in New Zealand, Westpac provided the following international comparison of home ownership rates.

Table 13: Home ownership rates (percentage)

	<u>1960-1970</u>	<u>1980-1990</u>	<u>2000-2003</u>
NZ	68	72	67
Australia	65	69	71
Canada	53	61	67
France	43	53	57
Germany	33	39	40
Ireland	66	78	80
UK	36	63	68
USA	64	66	68

Data for 2006 shows that home ownership rates in the United Kingdom have further increased to just over 70%. New Zealand's experience has been somewhat different to the other countries in table 13. Most of these countries have had a large increase in house prices but have generally had increasing home ownership rates, in some cases facilitated by significant subsidisation by government, for example, the Right-to-Buy programme for state housing tenants in the United Kingdom. While aggregate home ownership rates in the other countries in table 13 have either increased or remained broadly constant, there are declining home ownership rates in New Zealand.

Changes by region

Between 1986 and 2006, Auckland, Nelson and Bay of Plenty experienced the largest percentage point falls in home ownership. Between 2001 and 2006, the largest percentage point falls in home ownership have been in West Coast, Taranaki and Waikato. Home ownership rates are highest in Tasman and Southland, and lowest in Auckland.

Table 14: Regional profile of home ownership

Percent of homes owner-occupied	1986	1991	1996	2001	2006
Northland	72.3	73.9	71.2	70.5	68.6
Auckland	74	72.7	69.2	64.6	63.8
Waikato	70.2	71.4	68	67.8	65.4
Bay of Plenty	74.4	76.2	71.7	68.4	67.3
Gisborne	67.7	67.2	65.1	63.2	61.8
Hawkes Bay	73.1	73.7	70.6	67.8	67.9
Taranaki	73.9	75.1	72.1	72.2	69.9
Manawatu-Wanganui	70.8	71.7	68.7	67.9	66.8
Wellington	71.9	72.1	69.9	66.9	66.1
Tasman	77.1	78.3	74.7	73.7	72.5
Nelson	79.6	77.3	72.3	68.7	68.6
Marlborough	77.3	80.1	77.4	76.1	75.8
West Coast	74.2	76.2	73.7	72.6	69.3
Canterbury	76.7	76.6	73.8	71.4	70.4
Otago	74.8	74.7	71.9	69.6	69.1
Southland	79.3	80.3	77.7	75.6	73.5
New Zealand	73.7	73.8	70.7	67.8	66.9

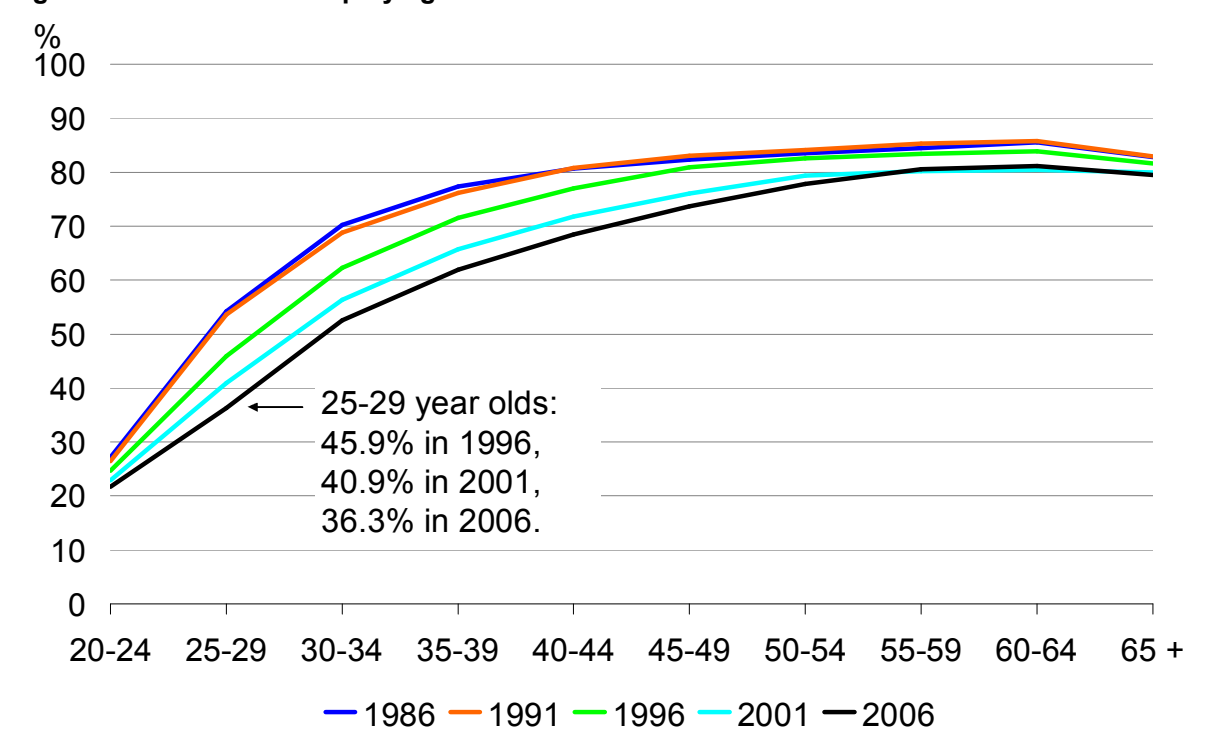
Source: DTZ 2007

Changes by age

The decline in home ownership has been larger for younger households than for older households. The largest falls in home ownership have been in the 25-29 and 30-34 age groups. Between 1986 and 2006, home ownership rates fell 17.9 percentage points in the 25–29 age group and 17.7 percentage points in the 30–34 age group. The next largest falls were in the 35–39 (15.5 percentage points) and 40–44 (12.2 percentage points) year age groups. For most age groups, the largest falls have come in the past 10 years, with the biggest falls in the group that historically make up first home buyers. For each of the most affected groups discussed above, there was a fall in home ownership rates of around 5 percentage points between 1996 and 2001 and a further fall of 3–5 percentage points between 2001 and 2006.

Analysis of different age cohorts suggests that the time it has taken successive household cohorts to enter home ownership has lengthened. In addition, analysis by Morrison (2007, forthcoming) shows that deferral of home ownership only partly explains declining home ownership, with a structural downward shift in home ownership rates also being an important factor.

Figure 32: Home ownership by age



Source: DTZ, 2007, derived from Census

Changes by ethnicity, income and sex

In line with the general decline in home ownership, Centre for Housing Research in Aotearoa New Zealand (CHRANZ) reports declines in home ownership across all ethnic groups, with the biggest percentage point falls in the Asian ethnicity group.²⁶

Table 15: Home ownership by ethnicity

	1986	1991	1996	2001	2006
Asian	69.1	62.7	61.9	58.8	56.5
European	76.4	77.1	74.1	71.9	70.5
Maori	49.2	52	48	44	42.5
Not Elsewhere included	69.1	64.7	59.4	58.5	53.5
Other	56.3	52.4	39.7	32.8	42.3
Pacific peoples	44.5	43.7	40.2	35.5	34.1
Middle Eastern/Latin Am/African					33.2
New Zealander					76.1

Source: CHRANZ

Rates of home ownership have also tended to fall by household income group. CHRANZ (2007) show declining home ownership rates across income groups since 1986. Not surprisingly, in 2006 the highest rates of home ownership in every region in New Zealand

²⁶ Ethnicity data in the Census needs to be interpreted with some caution as it is defined in terms of the group that the respondent identifies with, and people may provide more than one response. Statistics New Zealand also added two new ethnicity categories to the Census in 2006, which makes comparisons between Censuses more complicated. One of these new categories is New Zealander, which could include people from every ethnicity category used in previous Censuses.

were in the \$100,000 plus household income group. The strong real income growth results, discussed in section 4.5, amongst the highest parts of the income distribution have contributed to high home ownership rates in this group.

Home ownership patterns also have an important gender dimension. Older women have high rates of home ownership, largely due to their tendency to outlive their spouses. Dwyer (2007) notes that in the 2006 Census, slightly more women than men owned or partly owned the dwelling they lived in, partly due to the older age structure of the female population. Sole parent households, which have lower home ownership rates than most other household types, tend to be headed by women. The income level of women is lower than men (Statistics New Zealand, 2007), which may also affect home ownership rates, particularly for sole parent households.

Future outlook for home ownership

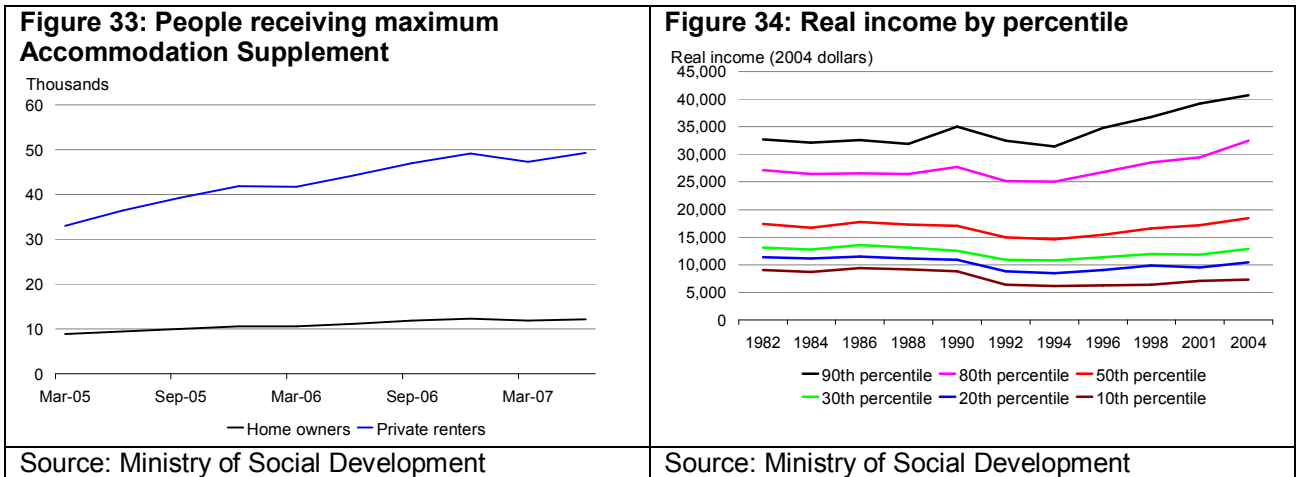
Projections in research commissioned by the Centre for Housing Research in Aotearoa New Zealand (DTZ, 2007) suggest that home ownership rates are likely to decline further in the future. Based on demographic and population projections, and expectations of high prices, DTZ project that the home ownership rate will fall a further 5 percentage points by 2016 to 62%. To avoid this fall in the home ownership rate, around 10,000 additional renting households would need to move into home ownership each year.

10.4 Impact on tenure type – rental affordability

Despite small changes in rents relative to house prices, housing costs for the lowest 20% of income earners have increased sharply over the past 20 years, and there are signs of increasing housing stress amongst the lowest income earners, particularly beneficiaries (Ministry of Social Development, 2007). Benefits are indexed to the CPI, so if rents increase by more than the CPI, beneficiaries will be negatively affected. Part of the increase in housing stress may also reflect the Accommodation Supplement maxima, which are not indexed and were last changed in 2005 when they were set at 2003 rent prices. The number of renters receiving the maximum Accommodation Supplement has increased from around 40,000 in 2005 to 60,000 in 2007.

The rising housing stress for the lowest 20% of income earners also reflects changes in income more widely, as discussed in section 4.5, with little real income increase between 1982 and 2004 in the lowest parts of the income distribution. Proportionately, housing stress is greater for renting households than for owner-occupied households with similar incomes. In 2004, 35% of renting households spent more than 30% of their income on housing, compared with 15% of home owners. The different age structures of the groups makes this comparison complicated as many older people own their home and have different

expenditure and income from younger groups. CHRANZ (2004) reports that in Auckland renting households with the highest levels of stress are in the lower to middle-income bands, have children in the household, have five or more people living in the dwelling and either unemployed or not actively seeking work as well as not being retired.



While rental affordability is not a widespread problem at present, rents could increase in the future, particularly as capital gains diminish and yields are rebuilt through increasing rents or private sector investment in new housing supply diminishes.

11. Housing policy and the intermediate market

- **The current home ownership affordability gap means that there will be a growing group of people unable to afford to own a home and ineligible for state housing assistance.**
- **The tenure choices for people in this group are limited, and it may be difficult for them to attain security of tenure.**
- **Those who cannot afford home ownership will miss out on the asset accumulation benefits of home ownership, and avoid the costs of home ownership and the risk of price falls.**

New Zealand housing policy

While most housing in New Zealand has been built and funded by the private sector, and a large majority of the rental market is provided through the private sector, the government has played a role in the supply of housing. For most of the second half of the 20th century, governments expanded the supply of state housing and supported the growth of home ownership as the preferred form of tenure for working families.

A public lending programme that tied State Advances loans to home building kept the housing industry buoyant and paved the way for the creation of a large group of property owners. Housing demand was dominated by families with secure earnings, and state housing generally functioned as an affordable transitional tenure that enabled workers to save a home deposit. Capitalisation of the Family Benefit helped to bridge any deposit gap. On the supply-side, policies such as a Group Building Scheme ensured that new entry level housing was affordable for first time buyers by only subsidising single storey houses limited to 150 square.

Over a 15 year period between 1951 and 1966, state housing averaged 6%–7% of the dwelling stock, and home ownership grew. Housing policy was tailored to suit the economic conditions that underpinned occupational mobility and entry to home ownership; and with the private rental sector offering choice and flexibility to the one in five households not ready to own, there was little incentive to develop not-for-profit community-based housing as an alternative to traditional state housing. For this reason, community-based housing is still an embryonic sector in New Zealand.

Since the 1980s, demographic and social changes accompanying economic restructuring have led to greater diversity of demand, involving much more fluid living arrangements, an increase in smaller households and later family formation. These shifts in the composition of housing demand will continue into the future. What is becoming increasingly apparent is that

housing supply is not adequately adjusting to meet the emerging demand for affordable home ownership amongst households occupying an intermediate market position between state tenants and home owners. This intermediate segment of the housing market has been growing, meaning a larger role for private rental arrangements.

On the one hand, state housing now functions as a 'safety net' for those high and special needs households who are unlikely to be able to transition into affordable housing in the private market. On the other hand, analysis of new supply indicates that, notwithstanding the development of an inner city apartment sub-market, developers and home builders are no longer building 'entry level' homes that were traditionally supplied to first time buyers.

In the last 15 years, the private rental sector has expanded from about 20% to 28% of the housing stock, with new landlords drawn into the market in pursuit of financial returns. Rental accommodation helps meet demand for more flexible living arrangements, provides temporary accommodation for eventual home buyers, or permanently accommodates households that will never be able to afford to buy. The long term needs of disadvantaged groups have been met with state provision of social housing. While Housing New Zealand Corporation tenants have security of tenure, an increasing number of long-term renters are generally in short-term arrangements with private sector landlords. Community housing in New Zealand has been a small component of the rental stock and generally focused on the most disadvantaged people. Often the providers of social housing are also providing other forms of assistance to the group.

Lifetime renting exposes vulnerable households, especially low income families and the elderly, to the private rental market, while home ownership exposes owners to the risks and costs of home ownership. These are the households that would have the most to gain from the development of a not-for-profit housing sector to complement the state housing sector.

Impact on wealth inequalities

About one-third of the recorded rise in household wealth over the past three decades has come from the rise in real house prices – wealth per capita doubled between 1980 and 2001 and doubled again from 2001 to 2006 as a result of the house price boom. Rising house prices have therefore been associated with a large increase in the net worth of a large proportion of people in New Zealand. Those households that do not own property have not experienced this large increase in wealth. This may lead to widening wealth inequalities as those who own or inherit property experience rising wealth and those who do not own property find it difficult to enter the market. This increase in wealth has also enabled home owners to borrow against their growing equity to buy other properties, including rental properties and holiday homes. Of course, it is by no means certain that returns to home

owners will continue to exceed returns to renters in the future, particularly if there is a period of no change, or falls in nominal house prices.

12. Impact on economic performance and sustainability

- **Rising house prices have boosted demand in the economy.**
- **Strong domestic demand has added to inflationary pressure, with the Reserve Bank responding by increasing interest rates.**
- **Higher interest rates have added to upward pressure on the exchange rate.**

Macroeconomic impacts

Girouard and Blondal (2001) show that movements in real house prices across a number of OECD member countries have been closely correlated with the business cycle. They conclude that house prices have a significant impact on private consumption through two channels²⁷:

- **Wealth effects:** rising house prices make owners feel wealthier and therefore spend more on private consumption. Alternatively, falling house prices would have the opposite effect.
- **Easing household liquidity constraints:** rising house prices mean that households that would otherwise not be able to borrow much capital can borrow against the rising equity in their house and spend more on private consumption.

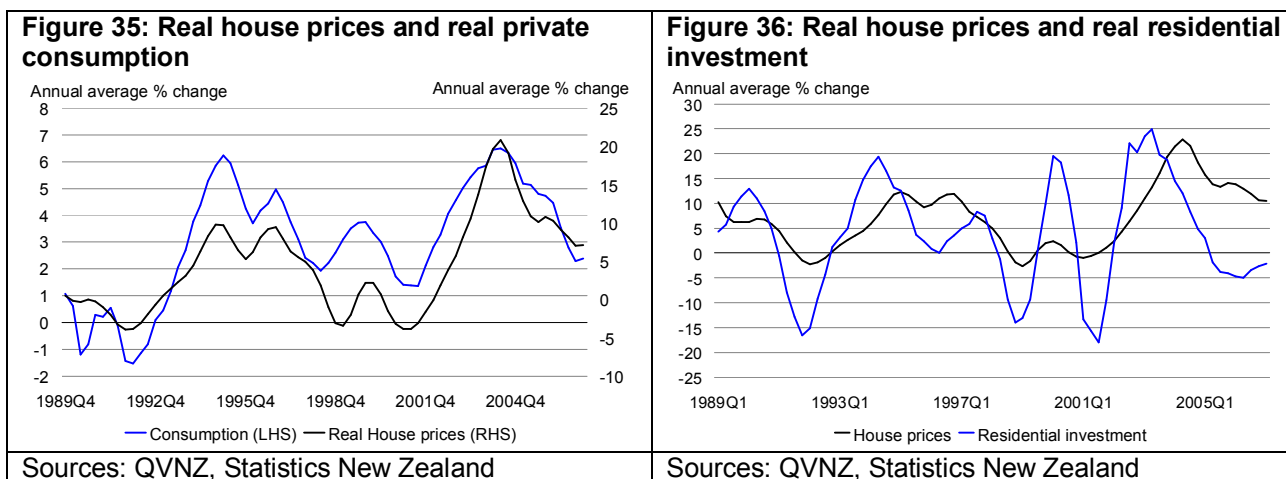
House prices may also have an impact on residential investment activity – the construction of new houses. The Tobin's q statistic provides the ratio between house prices and the cost of constructing new houses. When the ratio is greater than unity, it is profitable to construct new houses as new units which can be sold at a price above the costs of construction. A period of rising house prices may therefore lead to a lift in construction of new houses if the costs of construction do not increase at the same rate. This impact of rising house prices on residential investment is also likely to lead to a further increase in consumption as the new houses need to be furnished with a range of durable items, such as beds, televisions, fridges and stoves.

There are a variety of interactions between changes in interest rates, house prices and domestic demand. Lower interest rates, compared with New Zealand's historical experience, particularly from 2001 to 2004 contributed to a lift in house prices. In turn, these high house prices encouraged household spending and lifted inflationary pressures, eventually leading to higher interest rates, and have contributed to a higher exchange rate. These developments have increased pressure on exporters, limiting their international

²⁷ Smith (2006) provides further international references relating to the impact of lifts in housing wealth on household spending.

competitiveness but effectively boosting the real disposable income of consumers who purchase imported goods.

House prices and domestic demand have been correlated in recent years but establishing direct causation is difficult. Rising house prices can contribute to domestic demand growth and to the rise in inflationary pressures in the economy, through the effect of rising house prices on household wealth in easing liquidity constraints.



Just as house price increases may lift other forms of economic activity the reverse is also true – an upswing in economic activity is likely to lift incomes and contribute to an increase in house prices.

In the *Supplementary Stabilisation Instruments* report prepared in 2006, the RBNZ and The Treasury conclude that house price increases and expectations of future increases have seen asset values increase sharply and boost private consumption. Home owners have felt wealthier and have therefore spent more. The increase in house prices has effectively eased credit constraints, and many households have accessed the higher level of wealth by increasing mortgages on their properties. This process is called housing equity withdrawal (HEW) and is sometimes called active equity withdrawal (RBNZ. 2007). Passive equity withdrawal happens when a house is sold and the seller has a smaller mortgage on the property than the buyer.

Smith (2006) estimates that between April 2003 and March 2006 there was housing equity withdrawal of \$7.6 billion in New Zealand, driven by an increase in mortgage debt. This estimate is likely to be at the high end, however, and Smith concludes that only a small proportion of it was spent. Smith suggests that in the long run the marginal propensity to consume out of increases in housing wealth is around 5%–7%. In the short run, Smith finds a range for the marginal propensity to consume from increases in housing equity withdrawal of 40%–70%, with the largest impact on the consumption of durables.

The recent increases in house prices pose some additional risks to the economy if we were to see a fall in house prices. There could also be a sizable effect on domestic demand, as a fall in house prices would represent a decline in household wealth. This could lead households to reassess their financial position and cut spending, particularly households with high debt levels and low levels of equity. This type of scenario could see a sharp slowing in domestic demand, with consequences for business decisions around investment and employment, which could potentially lead to a more widespread slowing in economic activity. A sharp fall in prices would be likely to be associated with a substantial slowing in economic growth.

In her review of housing supply in the United Kingdom, Barker (2004) notes that instability in the housing market can be associated with volatility in economic activity, owing to the link between house prices, credit constraints and household consumption. This means that volatility in the housing market can be transmitted into volatility in the rest of the economy, which may not be able to be fully offset by policy. Barker suggests that macroeconomic instability can have a damaging effect on the level of business investment and long-term growth prospects.

The precise impacts of falling house prices on the wider economy are uncertain. Small falls are unlikely to be associated with substantial changes in economic conditions or financial stability. Large falls in house prices, for example falls of over 20% in one year, could have a number of implications for economic activity. Widespread falls in household net wealth are likely to be associated with reduced household spending and slower economic growth, with the risk that this could spillover into business decision making about investment and employment. While lower house prices would increase affordability, large falls that were associated with sizable macroeconomic impacts, rises in unemployment and falls in incomes would work against improving affordability.

Impact on productivity, labour markets and migration

The table below summarises some other potential economic impacts of rising house prices. There is little information available about whether these have been important in New Zealand.

Table 16: Other economic impacts of rising house prices

Reduced labour market performance and loss of productivity	<ul style="list-style-type: none">• Housing costs influence internal migration decisions and affect firms' ability to acquire labour in some regions of New Zealand.• Skilled migrants may be discouraged from coming to New Zealand.• Department of Labour studies suggest that the quality and price of housing is a key 'disappointment' for migrants after arriving in New Zealand (Department of Labour, 2005). There is no evidence available as to whether it is an important factor influencing migration decisions.
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Impact on environmental and sustainability outcomes

Housing market outcomes have implications for sustainability. Urban design and the location and type of housing influence New Zealand's carbon emissions and the sustainability of New Zealand's cities. Population growth is pushing people to the fringes of cities, increasing pressures on the infrastructure and social services and contributing to carbon emissions. To mitigate these impacts, housing policy needs to be well integrated with the provision of efficient public transport systems.

Rising costs of fuel and a desire to avoid traffic congestion mean that there is likely to be increasing future demand for housing that is close to employment and leisure activities and well serviced by public transport. This is also likely to minimise the environmental impacts of population growth.

13. Policy directions

As discussed throughout this report, rising house prices are the result of both short-term and long-term drivers of the demand and supply of housing. There are signs that housing market activity is slowing and it is possible that real prices could fall modestly in the next 1 – 2 years. If consumer confidence is adversely affected by external or internal economic conditions, a more substantial easing in activity and house prices is possible. In the absence of any significant economic shocks, however, prices are likely to remain high relative to disposable income.

The housing stock in New Zealand is nearly all held within the private sector; almost two thirds in owner occupation and one third in the private rental market. Social housing represents less than 5% of the housing stock. The implication of this structure is that to make a significant difference to house prices, affordability and home ownership rates, policies would need to alter the incentives and opportunities available to investors and home buyers.

Policy responses should not just add to the demand for housing as this is likely to fuel prices further. In a housing market that has seen considerable house price growth in the past six years the focus should be on increasing the supply of housing through reducing the input costs per dwelling and by building more affordable housing.

Increasing the supply of housing through identifying new land for residential development and lowering the costs of construction, which are both inputs into the cost of housing, are the most likely ways to achieve a reduction in house prices in the long run. The cost of land per dwelling could be lowered through more intensive use of existing land or the creation of new settlements outside of the central city with good transport links and amenities, or a mix of the two. The costs of construction could be reduced by improving the levels of research development and innovation and increasing offsite pre-fabrication and manufacturing.

Streamlining regulatory systems such as the building consent process will also help to reduce the cost of building a house. While these are not the largest drivers of house prices it is important to ensure that housing is produced as efficiently and cost-effectively as possible. But this does not mean quality should be compromised. One way of doing this could be to work with the industry to simplify the design of “starter homes” which could be subject to a minimal, streamlined building consent application and approval process.

As home ownership has become less affordable, peoples’ housing choices have become constrained and renting long-term and assisted pathways to home ownership will become more important for a growing number of people. There will be an increasing need for more long-term stable tenancies and better quality rental properties to ensure that a wider group

receive the social and health benefits associated with stable, quality housing. This could be achieved through encouraging more institutional investors and the development of a large not-for-profit sector in New Zealand to provide more affordable options for owner-occupied and rental housing. Not-for-profits and large investors may be more effective and efficient at providing rental properties in a timely way to meet demand. They may also be better at providing accommodation that renters are more likely to want and have the capacity to provide pathways to home-ownership. They may be more likely than individual investors to take a longer-term view on their investments resulting in more longer-term stable tenancies. The development of a large not-for-profit sector could include working more closely with existing providers and iwi to scale up the provision of affordable housing, or creating new dedicated entities like the UK's housing associations.

New Zealand, like many countries, has a complex set of taxes and subsidies that impact on the housing sector. Existing tax arrangements favour housing over other investment options. The tax system also gives mortgaged investors in rental property an advantage over similarly mortgaged first home buyers. Accordingly, there are a number of changes that could be made to the current tax regime that could contribute to a moderation in the growth of house prices, through a reduction in investor demand.

13.1 Further work

There were a number of issues that, in the time available, the House Prices Unit was not able to analyse sufficiently to draw firm conclusions. The Unit has identified the following areas for further work:

Information on the adequacy of land supply

Councils argue that they have between 12 and 21 years supply of land available for residential housing. Other stakeholders argue that not all of this land is suitable for development, and that there are blockages to it passing through to development including the presence of existing properties (and their owner-occupiers) and 'land-banking'. The House Prices Unit has not been able to establish objectively, from the data and research that is readily available, whether there is an adequate supply of land that is either ready or close to being ready for development, or whether blockages in the land supply pipeline are contributing to price increases. These are key questions that warrant further investigation.

Resource Management Act

Developers argue that the land use decision process is lengthy, adds cost and limits their ability to provide an adequate volume of housing. Further research is needed to measure the costs to applicants of obtaining a resource consent. This research will provide a better information base on the effect of land use regulations on housing costs.

Improving building productivity

Preliminary work suggests that the New Zealand construction sector has exhibited low levels of productivity over the last 20 years. A study commissioned for the House Prices Unit suggests that problems with skills, investment quality, innovation and management practices would merit further analysis (Davis, 2007). Increased gains from scale could be obtained if there was greater pre-fabrication and manufacturing of parts of the building. Further work is needed to understand how best to address these issues. This would need to be carried out by, or in close conjunction with, the industry itself.

Infrastructure contributions

Under the Local Government Act and Resource Management Act, territorial authorities are able to charge developers infrastructure contributions during the development process. The ability to require a contribution rests on territorial authorities being able to reasonably link the infrastructure contribution to increases in infrastructure requirements flowing directly from a development attracting the charges. Developers have expressed concerns that the:

- contributions are not applied consistently between territorial authorities
- cost of infrastructure contributions is increasing the cost of sections and new dwellings
- contributions are levied on new housing when benefits also accrue to the rest of the community.

There is considerable variability between territorial authorities as to whether charges are applied and as to the size of the charges. This may be a reflection of the different costs territorial authorities face in providing infrastructure, or the different funding choices territorial authorities are making. It could, however, be an indication of inconsistency and variable interpretation of the power to levy found in the Local Government Act. Further work is needed to understand the impact that the variability and levels of infrastructure contributions between territorial authorities have on the cost of new housing.

14. Bibliography

Baker, M., Zhang, J., Howden-Chapman, P., Blakely, T., Saville-Smith, K. and Crane, J., 2006, "Housing, Crowding and Health Study: Characteristics of cohort members and their Hospitalisations -February 2003 to June 2005", Interim Report, 26 July 2006, Wellington School of Medicine and Health Sciences.

Barker, K., 2004, *Review of Housing Supply*, London, United Kingdom.

Black, M., Guy, M. and McLellan, N., "Productivity in New Zealand 1988 to 2002", Treasury Working Paper 03/06, The Treasury, Wellington.

Burns, J. and Dwyer, M., 2007, "New Zealand household attitudes toward saving, investment and wealth", Reserve Bank Bulletin, Vol. 70, no.4, December 2007, Reserve Bank of New Zealand, Wellington.

Centre for Housing Research in Aotearoa New Zealand, 2005, *Housing Tenure Aspirations and Attainment*, Wellington.

Cochrane, W., and Poot, J., 2007, "Home ownership and New Zealand Labour Market Flexibility: a spatial perspective".

Coleman, A., 2007, "Credit Constraints and Housing Markets in New Zealand", Reserve Bank of New Zealand Discussion Paper, DP2007/11, Reserve Bank of New Zealand, Wellington.

Coleman, A. and Landon-Lane, J., 2007, "Housing and Migration in New Zealand, 1962-2006", Reserve Bank Discussion Paper 2007/12, Reserve Bank of New Zealand, Wellington.

Davis, N., 2007, Construction Sector Productivity, Unpublished draft scoping report for the House Prices Unit.

Department of Labour, 2005, *Life in New Zealand: Settlement Experiences of Skilled Migrants*, Wellington.

DiPasquale, D., Glaeser, E., 1999, "Incentives and Social Capital: Are Home Owners Better Citizens?", *Journal of Urban Economics*.

DTZ, 2004, *Future of Home Ownership and the Role of the Private Rental Market in Auckland*, Report for Centre for Housing Research in Aotearoa New Zealand.

DTZ, 2004, *Changes in the Structure of the New Zealand Housing Market*, Report for Centre for Housing Research in Aotearoa New Zealand, Wellington.

DTZ, 2005, *Housing Tenure Aspirations and Attainment*, Report for Centre for Housing Research in Aotearoa New Zealand.

DTZ, 2007, *2006 Census and Housing in New Zealand*, Report for Centre for Housing Research in Aotearoa New Zealand, 2007.

Dwyer, M., 2007, "Housing in New Zealand: Trends and Issues, A report prepared for the Ministry of Women's Affairs", Wellington.

Girouard N. and Blondal S., 2001, "House Prices and Economic Activity", OECD Economics Department Working Paper 279, Paris.

Grimes, A., 2003, "Economic Growth and the Size and Structure of Government: Implications for New Zealand", *New Zealand Economic Papers*, 37(1), June.

Grimes, A., Kerr, S. and Aitken, A., 2004, *Bi-Directional Impacts of Economic, Social and Environmental Changes and the New Zealand Housing Market*, prepared for Centre for Housing Research in Aotearoa New Zealand.

Grimes, A. and Aitken, A., 2006a, *Regional Housing Markets in New Zealand: House Price, Sales and Supply Response*, prepared for Centre for Housing Research in Aotearoa New Zealand.

Grimes, A. and Aitken, A., Mitchell, I. and Smith, V., 2006b, "Housing Supply in the Auckland Region 2000-2005", Motu Working Paper, prepared for Centre for Housing Research in Aotearoa New Zealand.

Grimes, A. and Liang, 2007, *Spatial Determinants of Land Prices in Auckland: Does the Metropolitan Urban Limit Have an Effect?*, Motu Working Paper 07-09.

Howden-Chapman P., Matheson J., Crane J., Viggers H., Cunningham M., Blakely T., Cunningham C., Woodward A., Saville-Smith K., O'Dea D., Kennedy M., Baker M., Waipara

Isaacs, N., Camilleri, M., French, L., Pollard, A., Saville-Smith, K., Fraser, R., Rossouw, P. and Jowett, J., 2006, *Energy Use in New Zealand Households*, Report on the Year 10 Analysis for the Household Energy End-use Project.

Howden-Chapman, P., Matheson, J., Crane, J., Viggers, H., Cunningham M., Blakely, T., Cunningham, C., Woodward, A., Saville-Smith, K., O'Dea, D., Kennedy, M., Baker, M., Waipara, M., Chapman, R. and Davie, G., "Effect of Insulating Homes on Health Inequalities", *British Medical Journal*, March 2007, London.

Housing New Zealand Corporation, 2005, *Building the Future: The New Zealand Housing Strategy*, Wellington.

HM Treasury, 2005, *Housing Policy: an overview*, London, United Kingdom.

KMPG, *Australia Population Growth Report*, November 2007, Sydney, Australia.

Maani, S, Vaithianathan, R, and Wolfe, B., 2006. "Inequality and Health: Is Housing Crowding the Link?" Motu Working Paper 06-09.

Mason, G. and Osborne, M., 2007, "Productivity, Capital Intensity and Labour Quality at Sector Level in New Zealand and the UK", Treasury Working Paper 07/01, Wellington.

McLeod, 2001, *McLeod Tax Review*, Wellington.

Ministry for the Environment 2005, *The Value of Urban Design: the economic, environmental and social benefits of urban design*, Wellington.

Ministry of Social Development, 2006, *New Zealand Living Standards 2004*, Wellington.

Ministry for the Environment, 2007, *Resource Management Act: Two Year Survey of Local Authorities 2005/06*, Wellington.

Ministry of Social Development 2007, *2007 Social Report*, Wellington.

Morrison, P. 2008, *On the Falling Rate of Home Ownership in New Zealand*, Report for Centre for Housing Research in Aotearoa New Zealand.

Motu project team, 2006, *Affordable Housing in Nelson, Tasman and Marlborough: Taking Action*, prepared for Centre for Housing Research in Aotearoa New Zealand.

Motu, forthcoming, "House Prices and Migration".

National Bank of New Zealand, November 2007, *Property Focus*, Wellington.

O'Donovan, B., 2007, "House Values: shifting foundations", Westpac Bank, Wellington.

O'Donovan, B., and Stephens, D., 2007, "Bubble, Schmubble", Westpac Bank, Wellington.

OECD, 2000, *Economic Survey of New Zealand*, Paris, France.

OECD, 2006, *Economic Survey of New Zealand*, Paris, France.

Office of the Deputy Prime Minister, UK, 2005, *Affordability Targets: Implications for Housing Supply*, London, United Kingdom.

Perry, B., 2007, *Household incomes in New Zealand: trends and indicators of inequality and hardship 1982 to 2004*, Ministry of Social Development, Wellington.

Productivity Commission, First Home Ownership, 2004, *Productivity Commission Inquiry Report*, No. 28, March 2004, Canberra.

Reserve Bank of New Zealand, 2007, *Financial Stability Report*, November 2007.

Reserve Bank of New Zealand, 2007, *Submission to Commerce Select Committee enquiry into housing affordability*.

Reserve Bank of New Zealand, 2007, *Submission to Finance and Expenditure Select Committee Investigation into Monetary Policy*.

Reserve Bank of New Zealand and The Treasury, 2006, *Supplementary Stabilisation Instruments*, Report to Governor of the Reserve Bank and Secretary to the Treasury.

Rohe, W., Van Zandt, S., and McCarthy, G., 2001, "The social benefits and costs of home ownership: a critical review of the research", Joint Center for Housing Studies of Harvard University.

Saville-Smith, K. and Amey, B., 1999, *Overcrowded families in New Zealand : Regional patterns*, Centre for Research, Evaluation and Social Assessment.

Scobie, G., Gibson, J. and Le, T., 2007, *Housing in the Household Portfolio and the Implications for Retirement Saving: Some Initial Findings from a Longitudinal Survey*, Treasury Working Paper 07/04.

Statistics New Zealand, 2005, *National Family and Household Projections Update*.

Statistics New Zealand, 2006, *Consumers Price Index Review*.

Statistics New Zealand, 2006, *Demographic Trends*.

Statistics New Zealand, 2007, *Quick stats about housing, Census 2006*.

Statistics New Zealand, 2007, *New Zealand Income Survey*.

Smith, M., 2006, "What do we Know about Housing Equity Withdrawal in New Zealand?", paper presented at the Reserve Bank workshop on "Housing, saving and the household balance sheet".

Yates, J., and Milligan, V., 2007, "Housing Affordability: a 21st century problem", report to Australian Housing and Urban Research Institute.