States of Jersey Statistics Unit

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Housing Affordability in Jersey

2013

Contents

Overview

The principal aims of this report are:

- to provide an analysis of the ability of working households in Jersey to purchase and rent accommodation "affordably";

- to present trends in housing affordability in the Island over time.

In addition, the ability of lower income working households, potential first-time buyers and individual key workers to house themselves affordably in Jersey is examined.

A number of different indicators of housing affordability are in use internationally; such indicators are generally based on a comparison of residential property prices with household or individual income. This report presents a set of indicators of housing affordability in the Island for the period from 2002 to 2013.

There are four main sections to this report: the first section presents the **Jersey Housing Affordability Index**; the subsequent sections present complementary measures of housing affordability involving the **30/40 method** of identifying housing stress, a **Ratio analysis** and a **Key worker analysis**.

The headline measure of affordability, the Jersey Housing Affordability Index (JHAI), is based on a comparison of residential property prices and net household income. This index incorporates the effects of variables such as mortgage interest rates, levels of deposit and mortgage payments relative to income.

The rationale underpinning the **JHAI** is that of producing an overall single indicator of housing affordability in the Island which enables the sensitivity of the assumptions used in the definition of "affordability" to be explored and also allows comparison over time.

The **30/40 method** of identifying mortgage or rental stress calculates the proportion of lower income households (in the lowest 40% of the income distribution) which are paying more than 30% of their gross income on housing costs.

The **Ratio analysis** is based on a direct comparison of property prices and income. Such a measure of housing affordability is conceptually straightforward and enables comparison with other jurisdictions to be made.

The **Key worker analysis** examines the ability of key workers in Jersey (teachers, police officers and nurses) to purchase property in Jersey of varying types and sizes, at the lower quartile price.

The measures of affordability presented are derived from information on property prices and income compiled by the States of Jersey Statistics Unit; see Appendix: Data Sources. Due to the availability of information relating to share transfer transactions, the measures of affordability derived from distributions of property prices (e.g. the JHAI and lower quartile comparisons) are presented only for the period 2010 to 2013, whilst measures derived from mean averages of property prices (e.g. the ratio analysis) are shown for the full period 2002-2013.

Throughout this report only the major costs of purchasing residential property are considered, specifically the purchase price of the property and the mortgage payments (principal and interest). Other acquisition costs (such as stamp duty, estate agents' and legal fees) and other housing costs (such as rates and repairs and maintenance costs) are not considered.

Definitions

"Average" property price
(the same statistical definitions apply to income)

- the **mean** average of a distribution of property prices (purchase or rental) is calculated by adding together the prices of all the properties and then dividing by the number of properties;

- the **median** average is the '**middle'** price if all the properties were listed **in order** of their price, from lowest to highest; half of all properties lie below the median and half lie above;

- a small number of very highly priced properties will tend to increase the mean average but not the median average;

- the median average may, therefore, be considered to be a more representative measure of the 'central' property price.

Lower quartile: the lower quartile price is determined by putting all properties in order of their price, from lowest to highest. The lowest 25% of property prices are said to constitute the lower quartile, i.e. they fall below the lower quartile price.

Starter home: a flat or house with 1 or 2 bedrooms.

Gross household income: all gross earned and unearned income, pensions and gifts (e.g. inheritance), plus benefits.

Net household income: gross household income, plus benefits in kind, minus income tax, social security contributions and pension contributions; *before the deduction of housing costs.*

Qualifying income: the income required to service a mortgage affordably on the purchase of a dwelling at a specified purchase price or the mean monthly rental payments in the private sector (based on the assumptions of affordability considered in this report).

Working household: a household with at least one adult in employment.

Young working household: a household with at least one adult aged between 20 to 39 years in employment.

Key workers: individuals employed in the public sector; in this report, key workers are represented by teachers, police officers and nurses who have worked in these roles for three to four years.

Summary of results

A set of measures of housing affordability in Jersey for the period 2002-2013 is presented.

The JHAI

- in 2013 housing affordability in Jersey worsened marginally compared to 2011 and 2012 due to increases in the overall median dwelling price and mean mortgage interest rate;

- between 2002 and 2012, a working household with mean net income was <u>not</u> able to service a mortgage affordably on the purchase price of a median priced <u>house</u> of any size;

- in 2013 a working household with average income was able to service a mortgage affordably on the purchase price of a median price <u>2-bedroom house</u> for the first time since at least 2002;

- a working household with mean net income <u>was</u> able to service a mortgage affordably on the purchase price of a median priced 1-bedroom <u>flat</u> throughout the period 2002 to 2013;

- a working household with mean net income <u>was</u> able to service a mortgage affordably on the purchase price of a median priced 2-bedroom <u>flat</u> for most of the past 10 years, but not in 2006 or 2008;

- in order to purchase a median priced 3-bedroom house in 2013, a household with mean net income would have needed an additional deposit of £78,000; in order to purchase a 4-bedroom house, an additional deposit of more than £280,000 would be needed;

- the gross income needed to service a mortgage on a median priced dwelling in 2013 was 2.2 times the mean earnings of individuals (FTE employees);

- in 2013, almost half of all working households could <u>not</u> service a mortgage affordably on the purchase price of a property at the <u>lower quartile price,</u> a greater proportion than in 2011 and 2012;

- a third of young working households in Jersey could <u>not</u> afford to service a mortgage on a lower priced starter home in 2013; this proportion was closer to a quarter of such households in 2011 and 2012.

Mortgage and rental stress (30/40 method)

- in 2013:
    - more than half of lower income households living in private rental or non-qualified rental accommodation could be considered as being in 'housing stress', the highest proportions of all tenure categories;

    - around a third of lower income households in the owner-occupier (with mortgages) and social rental sectors could be considered as being in housing stress.

Ratio analysis

- in 2013
    - the mean price of 1-bedroom flats was around 3 times the mean gross household income, whilst for 2-bedroom flats this ratio was less than 5;

    - the ratio of mean price to mean gross household income for 2-bedroom houses was below 6, having been around 6 since 2008;

- the ratio of mean price to mean gross household income for 3-bedroom houses was greater than 7, whilst that for 4-bedroom houses was around 10;

- the ratio of mean dwelling price to mean household income was essentially unchanged from 2012 for 1-bedroom flats and 4-bedroom houses whilst a marginal decrease in the ratio was observed for all other property types;

- the ratio of lower-quartile property price to lower-quartile income increased to 8 in 2013, representing a worsening in affordability compared to 2011 and 2012 (ratio of 7).

Key worker analysis

- in 2013

  - the individual earnings of any of the key workers considered were not sufficient to service a mortgage affordably on the purchase of a property at the lower quartile price in Jersey;

    - the mean earnings of all individual (FTE) employees in Jersey corresponded to less than two-thirds of the gross income needed to purchase a lower priced dwelling;

Overall housing affordability in 2013 compared with 2012

- overall housing affordably in Jersey worsened slightly in 2013 by all the measures presented in this report;

- the decline (worsening) in affordability in 2013 can be largely attributed to the increase in average flat prices; fewer lower priced share transfer flats were sold in 2013 than in 2012;

- overall housing affordability worsened marginally in 2013 despite the affordability of 2- and 3-bedroom houses improving in the latest year; a decrease in the average house price for these dwelling types was recorded in 2013.

Section 1 – The Jersey Housing Affordability Index

The Jersey Housing Affordability Index (JHAI) is an indicator of whether a working household with an average (mean) income is able to purchase a median priced property affordably[1].

The index attempts to quantify the impact that factors such as mortgage interest rates and deposits have on housing affordability. In general terms, affordability is considered to decline (worsen) when property prices grow faster than borrowing capacity.

The JHAI computes the ratio of mean <u>net</u> household income to "qualifying income", defined as the income required to service a mortgage affordably on the purchase price of a median priced dwelling. The index is based to 100 such that when equal to 100 the index implies that a household at the mean level of income may be considered to be able to service a mortgage on a median priced dwelling "affordably".

A complementary index based on <u>gross</u> household income is also presented and enables a comparison of housing affordability before and after the application of income tax and social security contributions.

A further analysis is presented which is based on a measure of individual earnings: the mean earnings per full-time equivalent (FTE) employee. This perspective enables the calculation of an "affordability multiple", defined as the number of full-time equivalent earners required to achieve the "qualifying income".

An <u>access analysis</u> is also presented: using this methodology it is possible to estimate the proportion of working households in Jersey who cannot afford to access property at the lower end of the market (using JHAI affordability criteria). The ability of young working households to access lower-priced starter homes is also investigated.

Central assumptions

The central assumptions through which the JHAI attempts to quantify housing affordability are:

- mortgage payments (principal and interest) should consume no more than:
  40 percent of net income; or 30 percent of gross income;
- the purchaser has a cash deposit of 10 percent of the purchase price;
- the purchaser is financing a 90 percent mortgage at a variable interest rate for a term of 25 years, with both principal and interest payments paid each month throughout the term.

The interest rates used in the computation of indices are derived from data published by the Bank of England: the sterling standard variable mortgage rates quoted to households by UK monetary financial institutions (excluding the central bank).

Results

Table 1 shows the information from which the housing affordability indices are derived:
- mean gross and net income for households with at least one adult member earning income from employment;
- median property price (all property types and sizes);
- mean mortgage interest rate;
- qualifying gross and net household income.

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[1] The Jersey Housing Affordability Index is based on a measure of affordability developed by the Housing Industry Association Economics Group and the Commonwealth Bank of Australia, HIA-CBA.

Table 1 - <u>Household</u> income, property prices and interest rates, 2010-2013

Year	Mean household income (working households)		Median dwelling price	Mean mortgage interest rate %	Qualifying income	
	Gross	Net			Gross	Net
2010	£64,000	£51,000	£405,000	3.96	£76,000	£57,000
2011	£65,000	£52,000	£380,000	4.04	£72,000	£54,000
2012	£66,000	£53,000	£385,000	4.23	£74,000	£56,000
2013	£68,000	£54,000	£400,000	4.37	£78,000	£59,000

As Table 1 shows, the qualifying income (gross and net) required to service a mortgage affordably on a newly purchased property at the median dwelling price in 2013 was greater than it had been in any year since 2010; this can be largely attributed to an increase in the median dwelling price and a marginal rise in the average mortgage interest rate observed in the latest year.

It is also evident from Table 1 that in each of the last four years the qualifying income required to service a mortgage affordably on a median priced property was greater than the average working household income.

Table 2 presents two affordability indices, based on mean gross and net household income, respectively.

Table 2- Affordability indices based on <u>household</u> income of working households

Year	Affordability index	
	<u>Gross</u> income	<u>Net</u> income the JHAI
2010	84	89
2011	90	96
2012	89	95
2013	87	92

As Table 2 shows, housing affordability worsened marginally in 2013 compared with the previous two years.

Housing affordability had seen some improvement in 2011 and 2012, driven largely by a small decrease in the overall median property price. In those years, the JHAI almost reached 100, implying that the mean net household income was almost sufficient to service a mortgage affordably on the purchase price of a median priced dwelling.

Effect of property type and size

Separate indices are also calculated for each type and size of dwelling (1- and 2-bedroom flats and 2-, 3- and 4-bedroom houses), in order to enable an understanding of the category of property which a household might be able to purchase affordably. These indices, shown in Figures 1 and 2, are based on mean net household income and the respective median prices for each category of property.

Figure 1, showing the affordability indices for flats, indicates that a working household with mean net income was able to service a mortgage affordably on a median priced 1-bedroom flat throughout the period from 2002 to 2013 (the index is above 100 for all of this period).

Figure 1 - Affordability indices based on <u>net</u> household income – <u>flats</u>
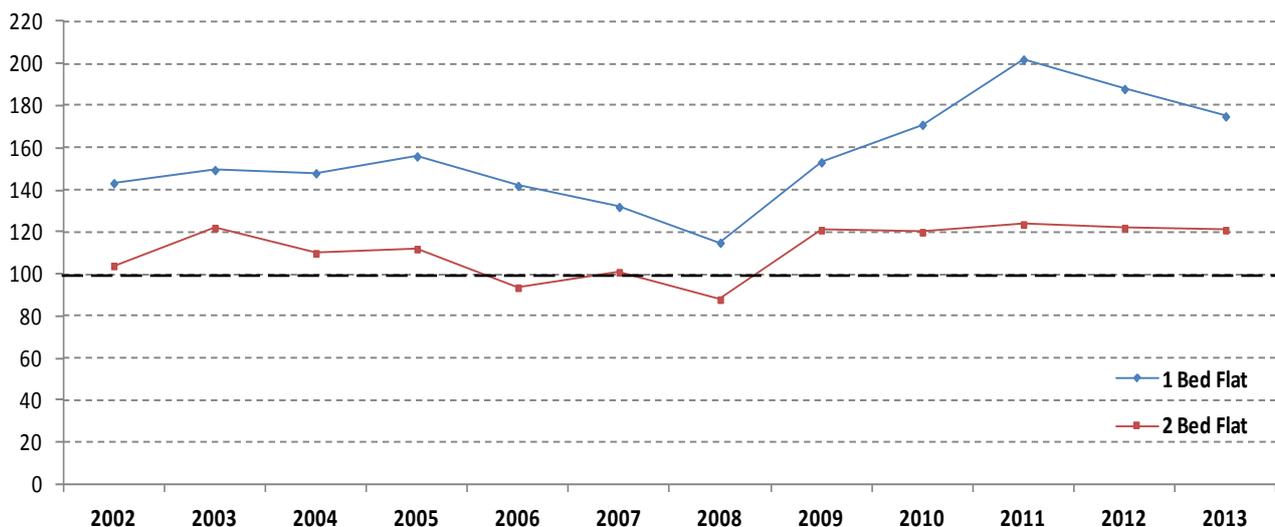
Flats

The affordability of 1-bedroom flats improved significantly throughout the period 2008 to 2011 due to falls in median price and lower mortgage interest rates. In the latest two years (2012 and 2013) the affordability of 1-bedroom flats has declined slightly, due to annual increases in the median price of this property type, coupled with increases in the mean mortgage interest rate.

The index for 2-bedroom flats fell below 100 in 2006 and 2008, indicating that a working household with mean net income was not able to service a mortgage affordably on a median priced 2-bedroom flat in these years. In 2009 the affordability index for 2-bedroom flats rose above 100 and has since remained at a similar level.

Houses

The affordability indices shown for houses in Figure 2 indicate that during the period from 2002 to 2012 a working household with mean net income was <u>not</u> able to service a mortgage affordably on the purchase price of a median priced <u>house</u> of any size at any time. However, in 2013 the affordability index for 2-bedroom house rose above 100 for the first time since at least 2002; marginal improvement in the affordability of 2-bedroom houses was recorded in the latest year compared to 2012 due to a fall in the median house price for this dwelling type.

The affordability of 3-bedroom houses has increased marginally in each year since 2008, whilst the affordability of 4-bedroom houses remained constant in 2013, following improvements in the affordability of this property type in each year from 2008 to 2012.

Figure 2 - Affordability indices based on <u>net</u> household income – <u>houses</u>
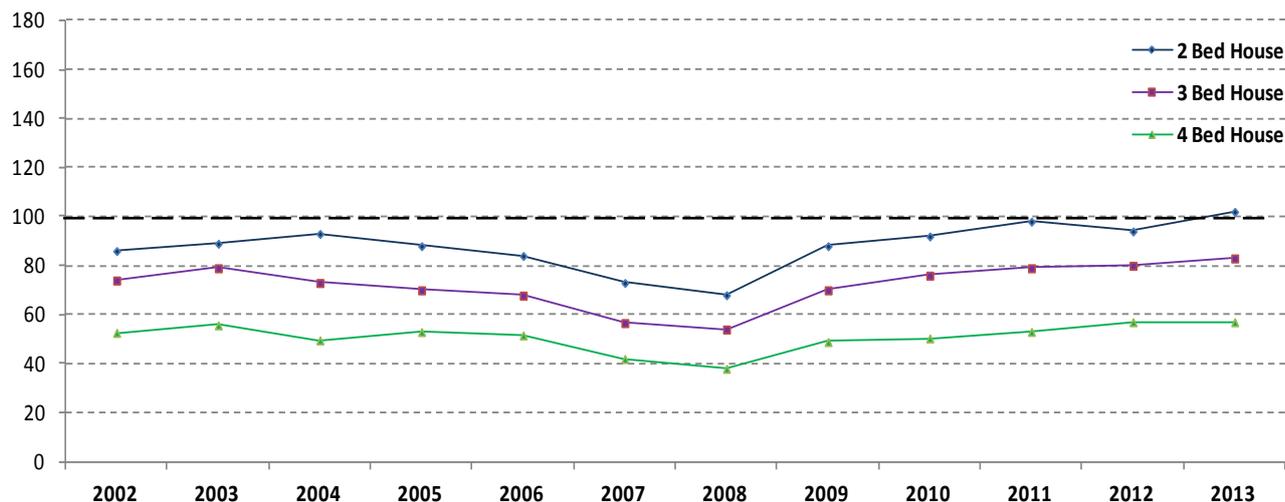
Table 3 shows the median prices of 2-, 3- and 4-bedroom houses in 2013 and the qualifying net income that would be required in order to service a mortgage "affordably" on the purchase price of each dwelling type. The 'deposit gap' represents the difference by which the median dwelling price exceeds the affordability threshold, expressed as a factor of mean net household income (£54,000).

Table 3: Median house prices, qualifying household income and deposit gap, 2013

	Median House Price	Qualifying Net Income	Additional deposit required	Deposit Gap* *as a factor of mean net income*
2 bed House	£360,000	£53,000	£0	0.0
3-bed House	£445,000	£65,000	£78,000	1.4
4-bed House	£650,000	£95,000	£283,000	5.2

*Gap between the median house price and the affordability threshold, as a factor of mean net household income.

In 2013 a household with mean net income could service a mortgage affordably on the purchase of a median-priced 2-bedroom house; no additional deposit would be required.

For the purchase of a median-priced 3- or 4-bedroom house, the additional deposit required was £78,000 and £283,000, respectively, representing a deposit gap of around one and half for a 3-bedroom house and of more than five for a 4-bedroom house.

Effect of interest rates and property prices

Figure 3 shows the effect on the affordability of 3-bedroom houses of changes in mortgage interest rates and median property prices. The increase (improvement) in the affordability index from 2008 to 2013 was driven by lower interest rates, notably between 2008 and 2009, coupled with marginal annual decreases in the median dwelling price of 3-bedroom houses observed year on year throughout the period.
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Figure 3 – The JHAI, median dwelling price (3-bedroom houses) and mean mortgage interest rates, 2002-2013
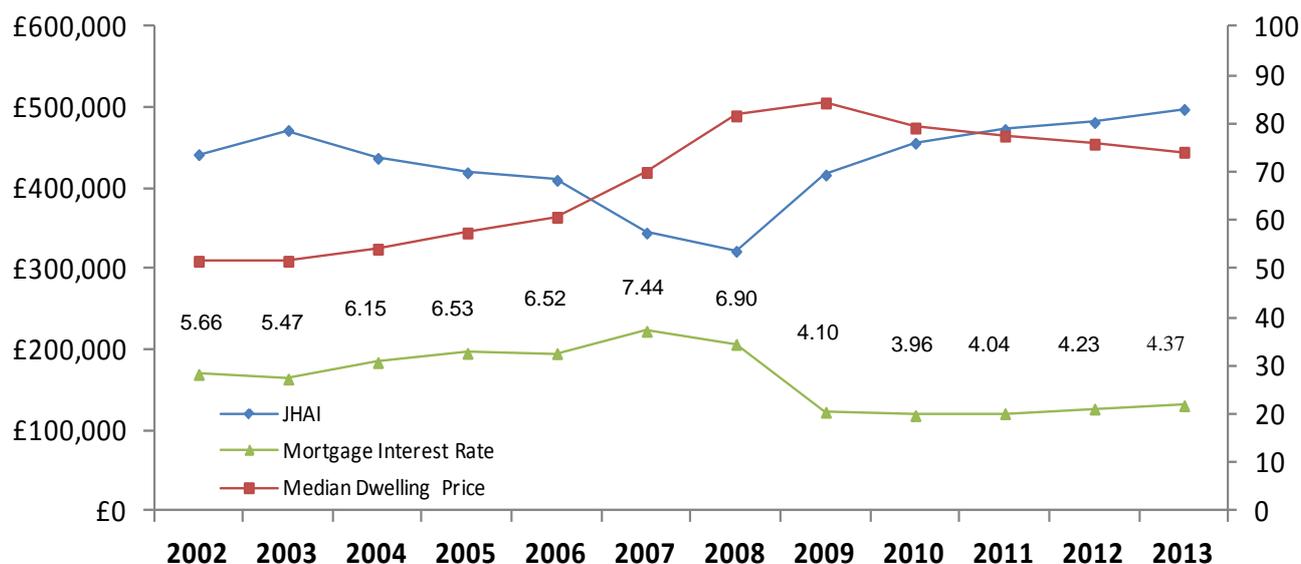
Individual earnings

Using the criteria assumed in the JHAI, an analysis has been undertaken which assesses the ability of individuals with average earnings to purchase a median priced property affordably in Jersey. Based on the mean earnings per full-time equivalent (FTE) employee, this approach enables the calculation of an "affordability multiple", defined as the number of full-time equivalent earners required to achieve the "qualifying income".

Table 4 shows that from the perspective of individual earnings (the mean gross earnings of a FTE employee) housing affordability in Jersey has remained essentially stable throughout the period 2010 to 2013; the qualifying income for the purchase of a median priced dwelling has been more than twice the mean earnings of a FTE employee in Jersey in each of the last four years.

Table 4 - Affordability index based on Individual earnings (per FTE employee)

Year	Median dwelling price	Mean mortgage interest rate %	Annual mortgage payments	Mean gross annual earnings	Qualifying gross earnings	Affordability multiple
2010	£405,000	3.96	£23,000	£33,000	£76,000	2.3
2011	£380,000	4.04	£22,000	£33,000	£72,000	2.2
2012	£385,000	4.23	£22,000	£34,000	£74,000	2.2
2013	£400,000	4.37	£23,000	£35,000	£78,000	2.2

In 2013 the level of income required to service mortgage payments on a median priced dwelling affordably was 2.2 times the mean individual earnings of a FTE employee. For context, the 2011 Jersey Census showed that on census day, 27 March 2011, there was a mean number (headcount) of 1.7 workers (full-time or part-time) per household in households in which there was at least one adult member earning income from employment. This mean number of workers corresponded to 1.6 FTE employees per working household.

Access analysis

Using the JHAI methodology it is possible to examine the ability of households in Jersey to <u>access</u> property at the lower priced end of the property market. It is also possible to estimate the capacity of young working households in Jersey to access starter homes, in an attempt to evaluate the situation commonly faced by first-time buyers on the Island.

Table 5 shows the percentage of all working households in Jersey who <u>could not</u> afford to service a mortgage affordably on a property purchased at the lower quartile price in Jersey (all dwelling types and sizes) throughout the period 2010 to 2013.

Table 5 – Affordability of lower quartile properties (all types); all working households

Year	Lower quartile price	Household income required to service mortgage affordably	% of all working households <u>unable</u> to purchase affordably
2010	£278,000	£52,000	50
2011	£252,000	£48,000	43
2012	£256,000	£49,000	44
2013	£275,000	£54,000	49

In 2013, half (49%) of all working households in Jersey could <u>not</u> afford to service a mortgage at the lower quartile price of all property types. In 2011 and 2012 this proportion was closer to two-fifths. The increase recorded in the latest year is the result of an increase in the lower quartile dwelling price and an increase in the average mortgage interest rate.

To reflect the situation commonly faced by first-time buyers, the proportion of young working households (with one or more working representative aged between 20 and 39 years) who <u>could not</u> afford to purchase a starter home (1- or 2-bedroom flat or house) has also been estimated.

As Table 6 shows, the percentage of young working households who, by the assumed criteria of the JHAI, <u>could not</u> afford to purchase a starter home at the lower quartile property price increased in 2013 to a third (33%); in 2011 and 2012 this proportion was closer to a quarter. The latest increase in the proportion of such households is the result of increases in the lower quartile price of starter homes and mortgage interest rates.

Table 6 – Affordability of lower quartile <u>starter</u> homes (1- or 2-bedroom flat or house); young working (FTB) households.

Year	Lower quartile price (starter homes)	Household income required to service mortgage affordably	% of FTB households <u>unable</u> to purchase
2010	£230,000	£43,000	39
2011	£195,000	£37,000	26
2012	£200,000	£39,000	28
2013	£215,000	£42,000	33

It should be noted that greater proportions of young working FTB households would have been able to afford a property priced <u>below</u> the lower quartile price. Similarly, greater proportions would have been able to purchase such properties affordably if they had larger deposits available.

For context, the number and type of starter homes which sold in 2013 at or below the lower quartile price of £215,000 were: 120 1-bedroom flats, whilst fewer than 10 2-bedroom flats and 2-bedroom houses were recorded as having been sold at or below the lower quartile price in 2013.

Sensitivity to central assumptions

The methodology underpinning the JHAI enables examination of the effects of changes in property prices and mortgage interest rates and also of changes in the central assumptions (e.g. the percentage of gross or net income consumed by mortgage payments). In this section, the effect of such variations on the affordability of 2-bedroom flats and of 3-bedroom houses is considered.

Two-bedroom flats

In 2013

- a median priced 2-bedroom flat (£305,000) was affordable to a household with annual gross income of at least £60,000 and net income of at least £45,000;

- a household with mean income was able to service a mortgage on a median priced 2-bedroom flat, with mortgage payments accounting for a quarter (26%) of their gross income or a third (33%) of their net income;

- if mortgage interest rates and household incomes remained constant at 2013 levels, then the median price of a 2-bedroom flat could increase by around £62,000 before such a property would be considered unaffordable to a household with mean income;

- if property prices and household incomes remained constant at 2013 levels, then mortgage interest rates could rise to an average of 6.4% before the mortgage payments on a median priced 2-bedroom flat became unaffordable;

- the gross earnings of 1.5 FTE employees were required in order to service a mortgage affordably on the purchase of a median priced 2-bedroom flat.

Three-bedroom houses

In 2013

- a median priced 3-bedroom house (£445,000) was affordable to a household with annual gross income of at least £87,000 and net income of at least £65,000;

- the mortgage payments on a median priced 3-bedroom house accounted for two-fifths (39%) of the mean gross income and for about half (48%) of the mean net income of working households;

- if interest rates and incomes remained at 2013 levels, the median price of a 3-bedroom house would need to fall by a fifth (by 18%, corresponding to almost £80,000) in order to make the purchase of such a property affordable to a household with mean income;

- the gross earnings of 2.1 FTE employees were required in order to service a mortgage affordably on the purchase of a median priced 3-bedroom house.

Section 2 - Mortgage and rental stress (30/40 method)

Introduction

The 30/40 method refers to the point at which a household in the lowest <u>40</u> percent of the entire equivalised[2] income distribution spends more than <u>30</u> percent of its gross income (including benefits) on housing costs. This measure can be applied to both home ownership affordability and rental market affordability. The methodology was introduced in the early 1990s by the Australian Federal Government to provide a measure of the proportion of households that were over-burdened by their housing costs.

Prior to the adoption of the 30/40 method, a widely used measure of mortgage and rental 'stress' assumed that any household, regardless of their income level, which spent more than 30 percent of their gross income on mortgage or rental costs was in housing stress. However, this approach has the potential to overestimate housing stress, since some high earning households are able to spend more than 30 percent of their income on housing costs and still have sufficient funds remaining to pay for non-housing expenses.

Results

Table 7 shows the percentage of households in Jersey which are in the lower 40% of the household equivalised income distribution <u>and</u> are paying more than 30% of their gross income either on mortgage payments (principal and interest) or on rental payments; such households would be classified as being in housing stress according to the 30/40 criterion.

Table 7 - Percentage of lower income households living in housing stress (30/40 method); by tenure, 2013

	Owner-occupiers <u>with</u> mortgages[3]	Social rental	Private rental	Non-qualified
2013	35	31	56	52

It is apparent from Table 7 that the greatest proportions of households living in housing stress were in the private and non-qualified rental sectors; more than half of the households living in private sector or non-qualified rental accommodation, whose income was in the lowest two quintiles of the distribution, were paying more than 30% of their gross income on housing costs.

In contrast, around a third of the lower income households in the owner-occupier (with mortgage) and social rental sectors were living in housing stress, according to the 30/40 criterion.

Overall, <u>including</u> owner-occupier households without mortgages, almost a quarter (22%) of all households in Jersey (across the entire income distribution) spent more than 30% of their gross income on mortgage or rental payments in 2013. This proportion increases to around a third (31%) if we consider only those households in the lowest 40% of the income distribution.

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[2] Equivalisation is the process used to standardise household income levels, accounting for differences in household size and composition; the modified OECD equivalence scale is applied.

[3] This category excludes owner-occupier households who own their properties out-right and are therefore making no mortgage payments. Including such households reduces the proportion of owner-occupiers in the lowest two income quintiles who are paying more than 30% of their income on housing costs to 10%.

Section 3 - Ratio Analysis

Introduction

The ratio of property price to income is a widely used measure of housing affordability and particularly useful for examining trends in affordability over time.

Several versions of this conceptually simple indicator are used internationally however many of these methodologies compare dwelling prices with the earnings of individuals, an approach which can amplify affordability difficulties. Therefore, the ratio of mean and lower quartile property price in Jersey to mean and lower quartile household (gross) income is presented in this section.

Mean property price and mean gross household income

Figures 4 and 5 show the ratio of mean property price to mean gross household income (all working households) for flats and houses in Jersey during the period from 2002 to 2013.

Figure 4 - Ratio of mean property price to mean gross household income: flats
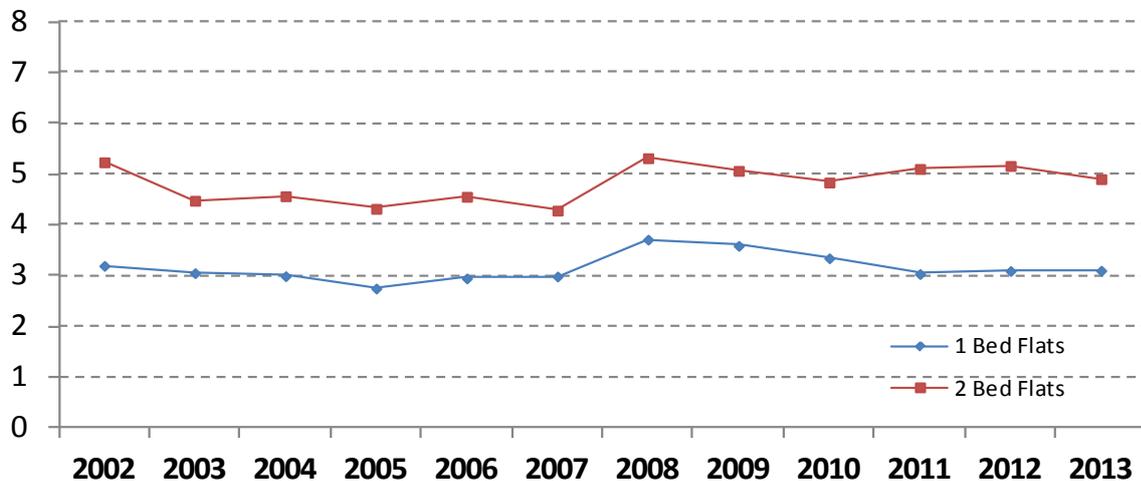

Figure 5 - Ratio of mean property price to mean gross household income: houses
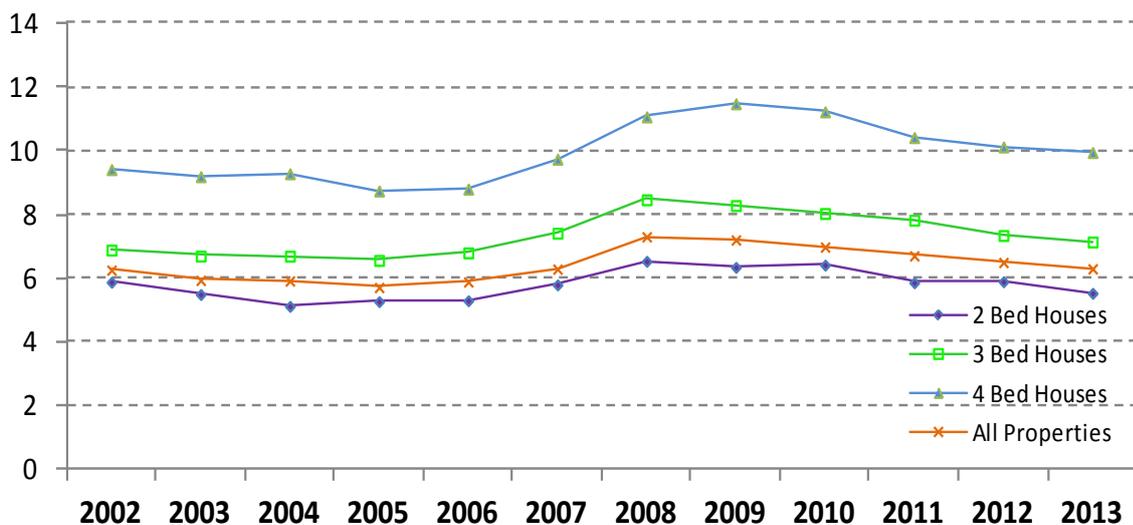
From Figures 4 and 5 it is apparent that the ratio of the mean property prices to mean gross household income in Jersey was:

- around 3 for 1-bedroom flats, and approached 4 in 2008-2009;

- around 5 for 2-bedroom flats since 2008;

- around 6 for 2-bedroom houses since 2008 and fell below 6 in 2013;

- around 8 for 3-bedroom houses from 2008 to 2011; falling to 7 in 2012 and 2013

- around 11 for 4-bedroom houses from 2008 to 2010; and around 10 subsequently.

In the latest year (2013) the ratio of mean dwelling price to mean household income in Jersey has remained essentially unchanged compared to 2012 for 1-bedroom flats and 4-bedroom houses. In contrast, the ratio of property price to income for 2-bedroom flats and 2- & 3-bedroom houses declined slightly in 2013, due to marginal falls in the mean property prices of these dwelling types.

Lower quartile ratio

The ratio of lower quartile property price to lower quartile income is often used to assess whether households with lower levels of income can afford to purchase lower priced properties[4].

Table 8 - Lower quartile ratio, 2010-2013

Year	Lower quartile property price	Lower quartile gross household income	Ratio
2010	£278,000	£34,000	8
2011	£252,000	£35,000	7
2012	£256,000	£36,000	7
2013	£275,000	£36,000	8

In 2013, the ratio of lower quartile household income and lower quartile property price in Jersey increased to 8. The increase in this ratio in the latest year was due to an increase in the lower quartile property price of around £20,000; in 2011 and 2012 this ratio had been 7.

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[4] The ratio of 'lower quartile' property price to income is calculated by ranking all property prices and gross household incomes in ascending order; in each distribution the lower quartile are those values lying below the 25th percentile value. The lower quartile ratio is calculated as the ratio of the 25th percentile property price to the 25th percentile gross household income.

Section 4 - Key Worker Analysis

This section focuses on the ability of three different types of individual "key workers" (teacher, police officer and nurse) to be able to afford to purchase a property in Jersey at the lower quartile price (all property types).

The analysis of the ability of key workers to <u>purchase</u> lower priced property in Jersey is based on the methodology of the JHAI; a purchaser is assumed to have a 10% deposit and be servicing a variable rate mortgage over a 25 year term. It is assumed that for a dwelling to be affordable, mortgage payments (principal and interest) should consume no more than 30% of gross earnings.

For each key worker, earnings represent that potentially achieved after three to four years of service.

It should be noted that for this analysis earnings is measured at the <u>individual</u> level and, therefore, is not representative of a household containing more than one person with income contributing towards a mortgage. For comparative purposes, the affordability measure is also calculated for an <u>individual</u> employee earning the mean FTE income of all employees in Jersey.

All properties at lower quartile purchase price

Table 9 shows key worker incomes as a percentage of the income required to service a mortgage affordably at the lower quartile price of all properties in Jersey, and also that for all individual employees in the Island.

Table 9 – <u>Individual</u> and <u>key worker</u> earnings as percentage of the income required to service a mortgage affordably at the lower quartile price of <u>all</u> properties, 2013

Year	Lower quartile price	Qualifying annual income (gross)	Earnings as % of qualifying income			
			Teacher	Police officer	Nurse	All employees (FTE)
2013	£275,000	£54,000	68	86	71	65

Of the three types of key worker considered, affordability issues by this measure were most severe for teachers and nurses. The earnings of a nurse or a teacher amounted to less than three-quarters of the income required to service a mortgage affordably on the purchase of a dwelling at the lower quartile price.

In contrast, the earnings of a police officer reflected more than four-fifths of the income needed to service a mortgage affordably on the purchase price of a lower-quartile dwelling.

In 2013, the average (mean) earnings of <u>all</u> employees in Jersey were almost two-thirds (65%) of that required to service a mortgage affordably on a property at the lower quartile price.

Data Sources

Property purchase prices

Mean average property prices and measures of distributions, such as median and lower quartile prices, are derived from data collected for the compilation of Jersey's quarterly House Price Index. The data on transaction prices comes principally from the Jersey Property Bulletin (for freehold and flying freehold properties, recorded by the Royal Court) and the States of Jersey Income Tax Department (for share transfer transactions).

Property prices (means and measures of distributions) have been calculated using the transaction prices of all 1- and 2-bedroom flats and 2-, 3- and 4-bedroom houses sold in Jersey in each year. Certain property types (e.g. bedsits, 1- and 5- or more bedroom houses and commercial properties) are excluded from the analysis.

To determine mean property prices, distributions are winsorised in order to prevent exceptionally high or low values from overly influencing the estimate of the mean. Mean prices of each dwelling type in each calendar year are derived from quarterly data weighted by turnover; furthermore, the overall mean price for each calendar year is "mix-adjusted", i.e. it is independent of the particular "mix" of properties sold in a given year.

Median and lower quartile prices are measures derived directly from distributions and do not account for differences in the mix of properties sold.

Housing costs (30/40 method)

Data pertaining to household spending on housing (mortgage interest and capital repayments and rental payments), used in the 30/40 method of identifying housing stress, is derived from the Household Spending and Income Survey 2009/2010.

This survey represents the combination of the Jersey Household Spending Survey and Income Distribution Survey in which all households were asked about their income and spending behaviour.

Housing loan interest rates

Housing loan interest rates are derived from figures published by the Bank of England and represent a yearly mean average of interest rates offered by UK monetary financial institutions. The rates used are those for sterling variable rate mortgages quoted to households.

It should be acknowledged that a different range of mortgage products from that in the UK may have been available to Jersey residents throughout the period covered by this report.

Income

Measures of net and gross **household** income have been derived from data collected by the 2009/2010 Jersey Income Distribution Survey. Household level data are weighted by tenure.

A process of winsorisation was applied for the calculation of mean household incomes, to prevent exceptionally high or low values from overly influencing the estimate of the mean.

Since the Jersey Income Distribution Survey is not conducted annually, measures of household income for each year of the period from 2002 to 2012 have been calculated by deflating/inflating values derived from the 2009/10 survey according to the annual percentage changes determined by the Jersey Index of Average Earnings.

Data on **individual** employment income is sourced from the annual survey for compiling the Jersey Index of Average Earnings; this survey enables estimation of the mean full-time weekly earnings for both private and public sector workers in Jersey (gross earnings, including overtime, but excluding bonuses, employers' insurance contributions, holiday pay and benefits in kind).

For this survey, firms report the total gross wages and salaries paid to employees before any deductions (e.g. for income tax, social security or pensions) as well as the number of people employed (part-time employees are converted to full-time equivalents, FTEs). Mean earnings are compiled for each sector and the sectoral means are weighted according to the sectoral share of total employment in order to provide an estimate of the overall mean weekly earnings per FTE employee in Jersey.

Statistics Unit
12th March 2014