

# EBS DKM IRISH HOUSING AFFORDABILITY INDEX April 2014

The EBS-DKM Affordability Index is a measure of the proportion of after tax income required to meet the first year's mortgage payments for an 'average' first-time buyer (FTB) working couple, each on average earnings. It takes into account, not just property prices, but changes in mortgage rates, mortgage interest relief and disposable incomes for the average FTB working couple in Dublin and across the State.





The issue of housing affordability in Ireland is back on the agenda after a modest recovery in property prices. The EBS DKM Irish Housing Affordability Index April 2014 takes an indepth look at the factors influencing housing affordability for first time buyers.

#### **KEY MESSAGES**

- ✓ Housing affordability nationally is currently estimated at 19.3% of net income for a FTB working couple. The average FTB property price is estimated at €180,000, implying an average mortgage of €162,000, assuming a 90% loan-tovalue (LTV) ratio. Further modest increases in property prices are expected to lead to a slight worsening in national housing affordability to 19.6% of net income in June.
- ✓ The house purchase proposition for a single person on average earnings is more difficult, with a single FTB currently paying 38.3% of net income to fund a mortgage. This is equivalent to 30% of gross income (€36,000), which is in line with the proportion of income deemed to be a cost burden for house buyers in the international literature. The literature also suggests that the typical FTB single person tends to earn more than average earnings. Assuming a gross income of €50,000, for example, a single FTB would allocate 31% of net income to fund a mortgage; the corresponding proportion would be 27% based on an income of €60,000.
- Housing affordability for the average FTB working couple in Dublin began to weaken in August 2012 and by December had reached 23.9%, a level last reached in December 2008. With average Dublin property prices up by 17.3% between August 2012 and February 2014, the proportion of net income required to fund a mortgage increased substantially over the period and is currently 23.7%, albeit still some way off the peak reached in December 2006 (32.5%).
- The expectation is that as the housing supply shortage in Dublin is addressed, the deteriorating trend in affordability should moderate, assuming

mortgage rates remain unchanged. However this increase in supply will take some time to come on stream.

- ✓ The housing market outside of Dublin contrasts sharply with trends in the Dublin market, with housing affordability at 16.6% in February. Given the influence of urban areas (excluding Dublin) in the overall mix, there will be non-urban locations where house purchase represents an even more affordable proposition for FTBs. The average property price outside of Dublin is estimated at around €155,000 which is around 33% below the corresponding estimated price in Dublin of €234,500.
- ✓ A separate assessment of housing affordability by county using transactions prices reveals significant differences across the country. The results are generally encouraging for anyone entering the housing market and show Dublin, Wicklow and Kildare were the least affordable counties in terms of the proportion of net income required to fund a mortgage, while Roscommon, Cavan, Leitrim and Longford were the most affordable requiring 8% or less of net income to fund a mortgage.
- There is a significant group of counties in the middle
  13 in total where housing affordability is between
  10% and 14% of net income. This indicates that these markets are not yet in the recovery phase.
- There is a further tier of counties represented by the bottom 6 counties where housing affordability requires less than 10% of net income to fund a mortgage. Based on this analysis, this would suggest that these counties are furthest away from any recovery.

## **RECENT TRENDS IN AFFORDABILITY**<sup>®</sup>

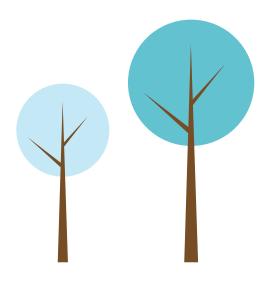
Affordable housing is an essential element of a well functioning economy. When housing is affordable, households will have more discretionary income to spend on other goods and services. This additional spending in turn generates economic activity. Conversely, higher property prices eventually put upward pressure on rents and reduce disposable income, which negatively impacts on economic growth.

Following six years during which residential property prices tumbled by up to 60% on average, the issue of affordability is receiving much attention again. This is clearly a reflection of the bottoming out of property prices in late 2012 in Dublin and in early 2013 across the country as a whole. By February 2014, average property prices, according to CSO data, had recovered by 8.6% nationally and by as much as 17.3% in Dublin. This recent pick up in property prices is leading to a worsening in housing affordability in some locations. Other factors are also responsible, most notably the emerging supply shortage in the Dublin market, as the lack of demand and development viability over recent years discouraged housebuilding. It is expected that the very limited stock of properties on the market combined with this emerging supply shortage, and the pick-up in property prices will generate an increase in supply in the medium term. However this increase in supply will take some time to come on stream following which it should help to moderate the growth in property prices.

Affordability refers to the potential buyer's ability to fund a mortgage but is also about his/her ability to raise the mortgage. For the purposes of the measure of affordability used here the main indicators used are mortgage rates and disposable incomes as well as property prices. The various scenarios shown for the EBS-DKM Affordability Index are based on a single person and a working couple, each on average earnings, borrowing 90% of the property price. Recent trends are set out on page 4.

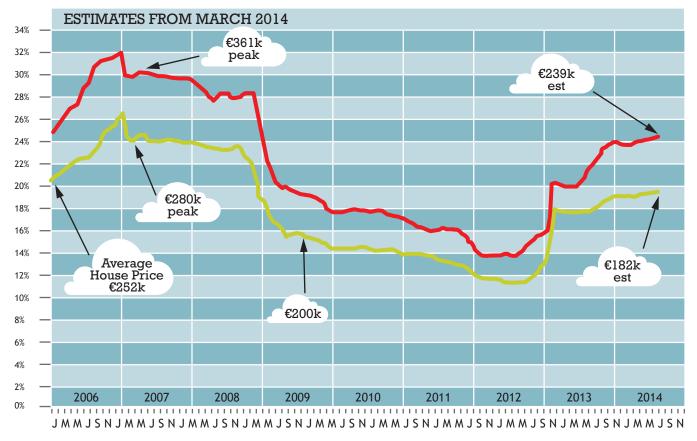
1 Please note that the assumptions used for FTB property prices in calculating the index have been revised from January 2013 based on industry discussions. A detailed explanation of the changes is provided on the last page which sets out the overall assumptions used for measuring housing affordability.





#### ESB DKM AFFORDABILITY INDEX

The proportion of net income required by a FTB working couple to fund mortgage repayments on the 'average' FTB property December 2006 - February 2014 with Projections to June 2014



DUBLIN FTB COUPLE

NATIONAL FTB COUPLE



## EBS DKM HOUSING AFFORDABILITY TRENDS

#### For a FTB Working Couple and Single Person

December 2006 - February 2014 with Projections to June 2014

	Dec 06	Dec 07	Dec 08	Dec 09	Dec 10	Dec 11	Dec 12	Dec 13	Feb 14	Apr 14	Jun 14
									Actual	Fore	cast
Average Mortgage Rate	4.81%	5.37%	4.80%	3.32%	4.02%	4.24%	4.33%	4.48%	4.48%	4.48%	4.48%
National FTB Working Couple - both working on average earnings											
Monthly Repayments	1,323	1,230	1,008	722	683	579	644	902	897	908	920
As % of Net Income	26.4%	24.1%	19.4%	14.5%	13.9%	12.2%	13.6%	19.3%	19.1%	19.3%	19.6%
Average House Price (000s)	279.0	260.8	224.2	188.1	168.4	140.3	155.0	178.7	177.7	180.0	182.3
National Single FTB - on average	earnings										
Monthly Repayments	1,390	1,306	1,008	722	683	579	644	902	897	908	920
As % of Net Income	55.4%	51.1%	38.7%	29.0%	27.8%	24.4%	27.2%	38.6%	38.3%	38.7%	39.1%
Average House Price (000s)	279.0	260.8	224.2	188.1	168.4	140.3	155.0	178.7	177.7	180.0	182.3
National (excluding Dublin) FTB	Working Coup	le - both wo	orking on ave	erage earnir	ngs						
Monthly Repayments	1,257	1,176	1,007	773	734	634	654	769	776	782	789
As % of Net Income	25.0%	23.0%	19.4%	15.5%	14.9%	13.3%	13.8%	16.5%	16.6%	16.7%	16.8%
Average House Price (000s)	266.3	249.4	224.0	201.4	180.9	153.5	146.0	152.4	153.8	155.0	156.2
Dublin FTB Working Couple - both working on average earnings*10%											
Monthly Repayments	1,741	1,577	1,326	929	877	720	825	1,183	1,161	1,183	1,207
As % of Net Income	32.5%	29.0%	24.0%	17.6%	16.8%	14.3%	16.4%	23.9%	23.3%	23.7%	24.2%
Average House Price (000s)	359.0	333.9	294.9	241.9	216.1	174.4	198.5	234.4	229.9	234.5	239.1

(See Assumptions on last page)

## **AFFORDABILITY FOR FTBs NATIONAL TRENDS:** 19.3% OF NET INCOME

Based on the most recent data available for property prices (February), mortgage rates and average earnings, the proportion of disposable income required to fund a mortgage for the average FTB working couple was 19.1% in February. This proportion has not changed much since September 2013, when it reached 19%. Although mortgage rates were unchanged at 4.48% since September, affordability has fluctuated between 19.1% and 19.3% over the past six months. It peaked at 19.3% in October, after property prices increased by 1.8% in the month. This was followed by a moderation in the rate of increase in property prices in November and December. Prices nationally fell by 0.7% in January and only recovered by 0.1% in February, resulting in an improvement in affordability

to 19.1%. The average FTB property price was estimated at €177,700 in February, implying an average mortgage of €160,000, assuming a 90% loan-to-value (LTV) ratio. The corresponding average monthly repayments were €897. The estimated mortgage compares with the average FTB mortgage of €152,449 in 2013 (latest available), according to Irish Banking Federation (IBF) data. (FTB see county analysis on page 10 and 11).

Housing affordability is currently estimated at 19.3% of net income for a FTB working couple. Further modest increases in property prices are expected to lead to a slight worsening in affordability to 19.6% of net income in June.

## AFFORDABILITY FOR FTBs DUBLIN TRENDS: 23.7% OF NET INCOME

Following a strong increase in Dublin property prices in the last six months of 2013 (+13.7%), housing affordability for the average FTB working couple weakened substantially in the latter half of 2013. By December housing affordability had reached 23.9%, a level last reached in December 2008. Average property prices in Dublin fell by 1.3% in January and by 0.6% in February, resulting in an improvement in housing affordability in the opening months of the year. The proportion of net income required to fund a mortgage for the average FTB working couple was 23.3% in February. Housing affordability is currently estimated at 23.7%. With house prices in Dublin projected to rise by 1% per month, a further modest deterioration in affordability is forecast over the next two months, with the proportion of net income required to fund a mortgage expected to reach 24.2% in June.

However, affordability in the Dublin housing market is still some way off the peak reached in December 2006 (32.5%) and the hope would be that as the housing supply shortage in Dublin is addressed, the deteriorating trend in affordability should moderate, assuming mortgage rates remain unchanged.

#### AFFORDABILITY FOR FTBs – NATIONALLY (EXCLUDING DUBLIN): 16.7% OF NET INCOME

The housing market outside of Dublin contrasts sharply with trends in the Dublin market. After declining by 4% in the first three months of 2013, property prices outside Dublin remained reasonably stable over the remainder of the year, falling by just 0.4% in the year to December 2013. Property prices opened the year unchanged from December and increased by 0.9% in February. As a result the proportion of net income required to fund a mortgage for the average FTB working couple has been relatively stable over the six months to February when it was at 16.6%. Affordability is expected to weaken slightly over the coming months to reach 16.8% by June. Given the influence of urban areas (excluding Dublin) in the overall mix, there will be non-urban locations where house purchase represents an even more affordable proposition for FTBs (see county analysis page 10 and 11).

The average property price outside of Dublin is around €155,000 which is around 33% below the corresponding estimated price in Dublin of €234,500.



## AFFORDABILITY FOR A SINGLE FTB: 38.7% OF NET INCOME

The house purchase proposition for a single person on average earnings is a more difficult one, mainly because there is only one income as opposed to two incomes to take into account in a mortgage assessment. Recent reports suggest that more FTBs are buying on their own, indicating that they are likely to have incomes above the national average. Based on the set of assumptions for property prices and incomes used in the EBS DKM Affordability Index model, which are similar to the price assumed for the national average FTB working couple, a single FTB is currently paying 38.3% of net income to fund a mortgage. This is equivalent to 30% of gross income ( $\in$ 36,000), which is in line with the proportion of income deemed to be a cost burden for house buyers in the international literature. Although the average

property price assumed is  $\notin 177,700$ , which is 4.9 times gross income, there will be property types at lower prices. For example, the proportion of income required to fund a mortgage based on a property price of  $\notin 130,000$  would be 28%.

The literature suggests that the typical FTB single person tends to earn more than average earnings, implying that in this instance, the proportion of net income to fund a mortgage would be less than 38.3%. Assuming a gross income of €50,000, for example, a single FTB would allocate 31% of net income to fund a mortgage; the corresponding proportion would be 27% based on an income of €60,000.

## **INCOMES – GROSS INCOMES DECLINED BY 0.7% IN 2013**

The data used for average earnings is based on the CSO's quarterly Earnings and Labour Costs Survey. The latest data is for Q4 2013 and shows that average annual earnings declined by 0.7% in 2013. Based on the assumptions used for ascertaining affordability, the average working couple who started out with a joint income of  $\notin$ 70,000 in 2005 would have seen their income increase by 8.2% between 2005 and 2007. Incomes have declined by 5.5% between 2007 and 2013. This has been a constraint for potential housebuyers who have also seen more demands on their disposable incomes. Average earnings are assumed to remain unchanged in the first six months of 2014. There is a risk that a recovery in average earnings this year could drive property prices up further, unless it is accompanied by an increase in supply.

## **MORTGAGE RATES –** AT 4.48% SINCE SEPTEMBER

The other variable required to calculate affordability is the average mortgage rate. Mortgage rates are based on the average of the standard variable mortgage rates for Credit Institutions/Mortgage Lenders reporting to the Central Bank and Financial Services Authority of Ireland. Based on a review of existing mortgage lending institutions, the average mortgage rate is estimated at 4.48% for a loan to value ratio of over 80%. This mortgage rate is assumed for estimating affordability in the period until June 2014 using a 90% loan to value ratio.

With ECB interest rates left unchanged, mortgage rates should remain favourable over the coming months. Indeed, the possibility of further reductions in ECB rates over the summer cannot be ruled out.

## AFFORDABILITY BY COUNTY – REVEALS SIGNIFICANT DIFFERENCES

Given the different trends which are apparent between Dublin and the rest of the country, this issues of the EBS DKM Affordability Index provides a one off assessment of housing affordability by county, to ascertain where the significant differences arise across the country. The analysis provides only a 'snapshot' at a point in time, which in this instance is 2013.

In extending the analysis to calculate a measure of affordability by county, the two data sets required are property prices and incomes by county. The latter is based on the County Income data published by the CSO, the latest data for which is for 2011. Based on a national average earnings figure of €72,000 for a FTB working couple in 2013, the corresponding earnings figures are derived for a working couple in each county based on the published indices for Total Income per Person. The differential for each county is applied to the national average to ascertain the equivalent income for a working couple in each county. These are assumed to remain unchanged between 2010 and 2013. In Dublin, for example, the differential is +17.3%, compared with Donegal, where incomes are 22.5% below the national average.

Determining an average FTB property price by county is more difficult as there is no consistent series published for property prices by county. However two sources were considered. Firstly, the median asking price from MyHome.ie and the transactions price from the Property Price Register (PPR).

There were considerable differences between asking prices and transactions prices across many counties outside of Dublin, an indication perhaps of the prices that vendors outside of Dublin and other urban areas still aspire to. As asking prices still have to adjust downwards in some locations to more realistic levels, it was considered that using asking prices would overstate affordability in many counties.

Looking at the PPR, two measures were considered: the median and the average price. The median is the "middle" price. It corresponds to the price of the house which is more expensive than exactly half of the other houses. This was used as opposed to the average, as it was assumed to be more representative of the typical house price paid by FTBs.

Thus the median transactions price is used based on transactions in each county in 2013. Only properties for which the full market value was provided were included and VAT at 13.5% was added to those properties that were listed as excluding VAT. It is stressed that this exercise is solely for illustration purpose only to show the relative differences in affordability across the country. It is also noted that the volume of transactions can be substantially lower in some counties compared to others.



#### 35% OF TOTAL TRANSACTIONS IN DUBLIN AND TWO-THIRDS OF TOTAL AT €200,000 OR LOWER

The median prices derived are based on 27,930 transactions in 2013. The distribution of transactions across each county in 2013 shows that almost 35% of the total were in Dublin followed by just under 11% in Cork. Twelve counties each accounted for less than 2% of the total. A distribution of transactions across the price bands reveals that almost one-third were below

€100,000 and two-thirds were priced at €200,000 or lower. A total of 1,689 transactions (6%) were for properties price over €500,000 and 82% of these were in Dublin. The latest information from the PPR for 2014 is up to the 4th April and shows a total of 5,883 transaction in the first 13 weeks, 17.3% above the corresponding number in the same period in 2013.

PRICE BAND

#### TOTAL RESIDENTIAL PROPERTY TRANSACTIONS IN 2013

	No. of Transactions	% Share
Dublin	9,718	34.8%
Cork	2,992	10.7%
Galway	1,459	5.2%
Kildare	1,253	4.5%
Wexford	972	3.5%
Meath	963	3.4%
Wicklow	916	3.3%
Limerick	847	3.0%
Kerry	806	2.9%
Louth	712	2.5%
Waterford	695	2.5%
Tipperary	694	2.5%
Donegal	687	2.5%
Clare	598	2.1%
Mayo	533	1.9%
Westmeath	516	1.8%
Roscommon	493	1.8%
Cavan	486	1.7%
Kilkenny	441	1.6%
Sligo	394	1.4%
Laois	367	1.3%
Carlow	333	1.2%
Offaly	306	1.1%
Leitrim	305	1.1%
Longford	222	0.8%
Monaghan	222	0.8%
National Total	27,930	100%

sponding number in the same period in 2013. TOTAL RESIDENTIAL PROPERTY TRANSACTIONS IN 2013 BY

Price Band	No. of Transactions	% Share
<€100k	8,842	31.7%
>€100K-€150k	5,597	20.0%
>€150K-€200K	4,175	14.9%
>€200K-€250K	2,694	9.6%
>€250K-€300K	1,802	6.5%
>€300K-€350K	1,193	4.3%
>€350K-€400K	891	3.2%
>€400K-€450K	616	2.2%
>€450K-€500K	431	1.5%
>€500K-€550K	330	1.2%
>€550K-€600K	256	0.9%
>€600K-€650K	185	0.7%
>€650K-€700K	142	0.5%
>€700k-€750k	134	0.5%
>€750K-€800K	96	0.3%
>€800K-€850K	80	0.3%
>€850K-€900K	63	0.2%
>€900K-€950K	50	0.2%
>€950K-€1M	53	0.2%
€1MPlus	300	1.1%
National Total	27,930	100%

Source: Property Price Register

Source: Property Price Register

#### AFFORDABILITY BY COUNTY SUMMARY GENERALLY ENCOURAGING RESULTS BUT DISPLAYING A THREE-TIER MARKET

In terms of affordability across the country, the results of the exercise are set out in the following Table and show counties ranked from the least affordable to the most affordable in the accompanying chart. The main observations are as follows:

- ✓ The national affordability figure is 16% of net income based on the median house price of €148,000 using the PPR. This compares with the estimate of 18.2% for 2013, using the figures in the EBS DKM Housing Affordability Model as per Table 1. In the latter, the average FTB property price for 2013 is higher at €170,000.
- ✓ Dublin (22.9%), Wicklow (21.0%) and Kildare (18.6%) were the least affordable counties in terms of the proportion of net income required to fund a mortgage. The Dublin figure compares with an average of 21.6% for 2013 using the average property price of €214,365 in the EBS DKM Housing Affordability Model.
- Roscommon, Cavan, Leitrim and Longford were the most affordable requiring 8% or less of net income to fund a mortgage. However a major caveat here is the lack of transactions to determine the market price as the four counties between them had just 1,500 transactions in 2013.

middle - 13 in total - where housing affordability is between 10% and 14% of net income. This indicates that these markets are not yet in the recovery phase.

✓ There is a further tier of counties represented by the bottom 6 counties where housing affordability requires less than 10% of net income to fund a mortgage. Based on this analysis, this would suggest that these counties are furthest away from any recovery.

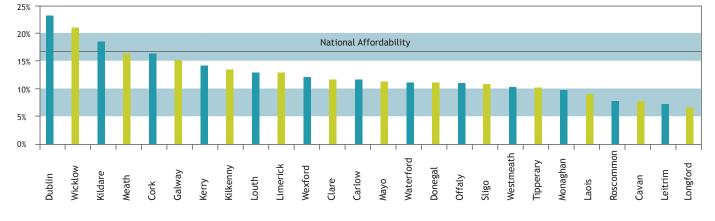
However the data relates to 2013 only and reflects the mix of transactions in that year. A similar analysis of transactions in another year may provide a different ranking, depending on the type and number of transactions in each county.

In regard to the assessment of affordability by county, these are generally encouraging results for anyone entering the housing market with the possible exception of Dublin, although affordability in Dublin remains a reasonably viable proposition, with mortgage repayments for the average working couple accounting for less than one quarter of disposable income. This assumes potential buyers have no difficulty obtaining mortgage finance.

 $\checkmark$  There is a significant group of counties in the

#### HOUSING AFFORDABILITY BY COUNTY

Based on Median Transactions Prices from Property Price Register



## HOUSING AFFORDABILITY BY COUNTY

Based on Median Transactions Prices from Property Price Register 2013

	Average Earnings for FTB Working Couple 2013	Median Transactions Price 2013	Affordability based on Median Transactions Price 2013
Dublin	84,456	234,945	22.9%
Wicklow	72,504	196,355	21.0%
Kildare	77,112	180,000	18.6%
Meath	71,136	145,000	15.7%
Cork	73,296	147,550	15.7%
Galway	67,896	135,000	15.1%
Kerry	61,200	117,500	14.2%
Kilkenny	61,992	115,000	13.7%
Louth	66,240	115,254	13.0%
Limerick	71,280	120,000	13.0%
Wexford	62,640	100,000	11.8%
Clare	65,376	100,000	11.4%
Carlow	65,592	100,000	11.4%
Mayo	63,072	95,606	11.2%
Waterford	67,680	97,500	10.9%
Donegal	55,800	83,000	10.8%
Offaly	60,840	87,250	10.6%
Sligo	65,952	92,150	10.5%
Westmeath	65,736	90,000	10.2%
Tipperary	68,184	90,500	10.1%
Monaghan	58,608	77,500	9.7%
Laois	65,016	79,998	9.2%
Roscommon	59,544	65,000	8.0%
Cavan	60,480	65,415	8.0%
Leitrim	63,216	65,000	7.6%
Longford	60,120	60,000	7.3%
National	72,000	148,000	15.9%

Source: CSO, Property Price Register and DKM analysis.



### AFFORDABILITY INDEX MAIN SUMMARY

## Supply likely to remain the key challenge in 2014 and 2015

In conclusion, it would appear that evidence of a three tier market is also apparent from an analysis of affordability. More generally, with property prices recovering in Dublin and other selected locations, confidence is beginning to return to the market. With the number of mortgage approvals for house purchase up 9.4% to 17,548 in the twelve months to February, corresponding to a total value of  $\notin$ 3.1 billion, there is demand in certain locations. Data on mortgage loans to FTBs in Q1 2014 is not yet available, but there is a greater supply of mortgage finance available now than at any stage during the

past few years. The key issue appears to be supply and with the number of commencements nationally up almost threefold in January alone, albeit from a very low base, there needs to be a full scale ramping up of housebuilding in areas of high demand if FTBs are to be accommodated. With an immediate supply requirement of around 5,700 units in the Dublin Region (Housing Agency<sup>(2)</sup>) compared with just 1,600 commencements in the year to January 2014, the supply issue is perhaps the single most important challenge facing the property market in 2014. It will undoubtedly remain so in 2015, given the long lead in time to delivering completed housebuilding units to the market.

2 http://www.housing.ie/Housing/media/Media/Publications/Future-Housing-Supply-Requirements-Report.pdf



#### **ASSUMTIONS** <sup>®</sup>

In this first issue of the EBS DKM Affordability Index for 2014, the assumptions underlying the calculation of affordability for FTBs have been reviewed following consultations with the industry and a number of financial institutions. The changes are summarised below.

#### **Monthly FTB Property Prices**

p-tsb/ESRI FTB up to July 2009. Data from August 2009 is derived by assuming that FTB prices fall in line with the CSO's Residential Property Price Index up to December 2012. The changed assumptions are as follows: The average property price nationally is assumed to be €170,000 in 2013, based on the average FTB loan of €152,449 in 2013, according to Irish Banking Federation data, assuming a 90% LTV. Average prices have been revised back to January 2013 using the monthly rates of change according to the CSO RPPI. Post February 2014, the latest data available, the average FTB property price nationally is assumed to change in line with the average for the previous six months, September 2013 - February 2014 (+0.65% per month). The revised assumptions from January 2013 reflect the pick-up in prices in 2013 but cause a sudden jump in property prices between December 2012 and January 2013 (+c.8%). The sudden jump in the Chart also reflects the termination of Mortgage Interest Relief in December 2012.

The EBS-DKM Affordability Index model uses the average Dublin house price from January 2013 as a proxy for the average Dublin FTB property price. The price is based on the old p-tsb/ESRI Dublin price up to July 2009 and thereafter the price changes in line with the CSO RPPI Dublin property price index. The average property price in Dublin in 2013 is €214,365, which implies an average mortgage of 193,000, assuming a 90% LTV. Post February 2014, the average FTB property price in Dublin is assumed to change in line with the average for the previous six months, September 2013 - February 2014 (+0.98% per month). The average property price outside Dublin is  $\leq 150,000$  in 2013. The figures are based on trends in the CSO RPPI National excluding Dublin price index.

#### Loan to Value ratio: 90% Mortgage Term: 25 years.

Average Variable Mortgage Rate: is an average of the standard variable mortgage rates for Mortgage Lenders reporting to the Central Bank & Financial Services Authority of Ireland (CSO/CB data). The average mortgage rate is 4.48% since September 2013.

#### Maximum Mortgage Interest Relief for FTBs

€20,000 max MIR available for married couples at 25% since Jan 2009 = max of €417 per month and held at this level for FTBs in 2012. MIR abolished from January 2013.

#### **Average Gross Earnings**

Gross income figures represent average earnings according to the CSO's Earnings, and Labour Costs Survey (up to Q2, 2013). The FTB working couple started out earning €70,000 in June 2005. Gross earnings for the FTB couple were increased by 8.2% by 2007 (€75,754) and fell thereafter by 5.2% by 2011. Average gross earnings increased by 0.5% in 2012. Annual average earnings declined by 0.8% in 2013 to €71,610. In the period since the peak in 2007 to 2013, average earnings declined by 5.5%.

Incomes of Dublin buyers are assumed to be 10% higher than for buyers across the State as a whole.

Income and health levies replaced by the new Universal Social Charge from January 2011.

<sup>3</sup> The Analysis of housing affordability in this report is based on data published up to the 15th April 2014.

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