



The RTB Rent Index Quarter 4 2016

# About Us

## We are a public body set up to support and develop a well functioning rental housing sector.

Our role is to resolve cheaply and speedily disputes between landlords and tenants, maintain a national register of tenancies and supply data and advice on the sector. Our remit extends to the Approved Housing Body sector, as well as the private rental sector.

The work of the RTB can be divided into three main areas;



# **REGISTRATION:**

All private residential landlords and Approved Housing Bodies, who are not for profit housing providers, often referred to as Housing Associations, are obliged to register their tenancies with us. By 2016 year end there were 325,372 tenancies registered with us and we have a public register of tenancies available on our website. The registration of tenancies enables us to collect important data on the sector, but is also a key part of regulating the sector and ensuring landlords and tenants are aware of their rights and responsibilities.



## **DISPUTE RESOLUTION:**

Since 2004 we have replaced the courts in dealing with the majority of disputes between landlords and tenants through our Dispute Resolution Service. This service offers a choice of resolution types to parties, mediation or adjudication. By 2016 year end we had received 4,837 applications for dispute resolution, our highest number to date.



## **INFORMATION AND ADVICE:**

We provide high quality information and advice to the public, tenants and landlords on the rights and obligations in terms of both living and providing accommodation in the rental sector. We also provide high quality data on the rental sector, such as the rent index, which allows us to monitor trends in the rental sector but also allows individuals to check and compare rents in particular locations.

We continuously strive to improve and develop our services so that our customers are supported in registering with us, resolving disputes, and accessing information.





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# Introduction

Since October 2012, the Residential Tenancies Board (RTB), in conjunction with researchers in the Economic and Social Research Institute (ESRI), has produced, on a quarterly basis, a measure of private sector rents – the RTB Rent Index.

The rental index generated is for every private rental property registered with the RTB, which cumulatively numbers approximately 950,000 properties since 2007, and is the most accurate and authoritative rent report of its kind on the private accommodation sector in Ireland. The measure, which covers rents on a quarterly basis from 2007 Q3 to 2016 Q4, has until now been estimated for three regions; (i) nationally, (ii) the Dublin area and (iii) outside the Dublin area. The index is also broken down for these regions on the basis of rental pressures for houses versus apartments.

For some time the RTB has been considering the inclusion of more localised geographical information to help improve the Index. Recent legislation, which established Rent Pressure Zones in certain areas, and which provided a process to establish further zones, has provided an opportunity for the RTB, working with the ESRI, to achieve this goal. Consequently, the information presented for the Q4 2016 Rent Index is largely based on this new method of analysing rent prices.

The Rent Pressure Zone system requires rental price information at Local Electoral Area (LEA) level. Building on this, the RTB has been able to map its data in order that a series of rental indicators for each LEA over the period 2007 Q3 to 2016 Q4 is now available. The RTB has sought to provide this information as soon as possible to all concerned - tenants, landlords, estate agents, central government, local authorities and other State agencies - so that all users can benefit from this more granular level information, and relate the information contained in the Index to the rules governing the establishment of the Rent Pressure Zones.

It is worth noting that:

- The model used to estimate the LEA indicators, and to also provide our Rent Index was adjusted to accommodate this new information and the new model. The methodology is detailed in the technical appendix. The model captures local rental price variations more accurately and allows for the disaggregation of standardised rents across local electoral areas. It is important that the best possible model is used for the RTB's Index;
- However, the old model, because it provided results at aggregated levels (National, Dublin, and outside of Dublin), has worked very well and is still useful in providing us with detailed analysis on differing trends between apartments and houses; the distributions of rents, and analysis of the Dublin and outside of Dublin markets. In the interests of transparency, we will continue to provide data using both methodologies for at least the next two quarters in order that confidence is maintained in the integrity of the index. As demonstrated by Figure 9 in the report, the new and old model, apart from the earlier part of the index, are almost identical. Consequently, the new model, while enabling us to understand rent price movements at a much more local level, presents an assessment of national trends in rents that is entirely consistent with the existing model;

Regardless of whether the new or old model for the calculation of standardised rents is used, the difference is marginal. This is demonstrated by Table 7, which includes columns comparing standardised rents under the old and new models. It is particularly important to note that in no instances would the transition from the old to the new model have resulted in a different result for the areas proposed for designation as rent pressure zones.

The RTB and the ESRI will continue to work together to ensure that the information provided in the Rent Indices is as useful and robust as possible. The rest of this report is structured as follows: in the next section, we examine the results from Quarter 4 2016 using this new model, focusing on both the trend at the national level as well as those for the different LEAs. We also compare the results for the national trends in both the new and existing models.

Heat-maps of the results are also presented. At this stage, the new modelling approach has not been used to examine the difference in rental levels between houses and apartments. Consequently, in a subsequent section, using the older approach, we examine the most recent developments in rental pressures between these different types of accommodation for the Dublin and outside of Dublin areas.



# **Summary of Results for Quarter 4**

# Data for the fourth quarter of 2016 indicates that private sector rents continued to trend upwards.

At a national level, annual growth was 7.8% in Quarter 4, 2016; this compares to 6.6% annual growth in Q3 2016. The standard national average rent in Q4 2016 stood at €986 per month. This is nearly the same as peak rents in 2007. The new national index is plotted in Figure 1 and summarised in Table 1.

Quarter on quarter growth also indicates an increased growth rate of 2.7%, higher than the growth rate in the previous quarter Q 3 2016).

Table 2 reports the strength of recent rent growth at the more granular (Local Electoral Area – LEA) level in terms of the number of quarters where annualised rent increases have been greater than 7 per cent. It also shows how rent levels in each LEA compares to the national average using the standardised rent approach, which adjusts for any changes over time in the composition of the housing stock. Rents in Dublin and surrounding commuter counties are amongst the highest relative to the national average, with parts of Cork and Galway cities also above average.

Given the large amount of regional information now available, an alternative way to present the results is through the use of "heat-maps". Figure 2 breaks down the LEAs by the annual growth rate of the standardised index for 2016 Q4.

Figure 3 plots the LEAs by the following three criteria:

- (1) whether the LEA has an annualised growth rate in excess of 7 per cent for 4 of the last 6 quarters,
- (2) whether their average standardised rent is above, or below, the national average and, finally,
- (3) where both conditions prevail.

The purple areas in Figure 3, which are mainly centred around Dublin, Cork and Galway, are those LEAs which experience both conditions.

From examining the data, 45 LEAs across the 6 counties of Dublin, Cork, Galway, Wicklow, Meath and Kildare have rents above the standard national average.

Based on Quarter 4 2016 data, two additional LEAs will now meet the designation criteria for rent pressure zones: Cobh and Maynooth.

The number of tenancies registered with the RTB in Q4 2016 was 26,276.





Period	Index	€	Year-on-Year	Quarter-on-Quarter
2007Q3	100.00	988.09		
20007Q4	100.04	988.47		0.04
2008Q1	99.67	984.82		-0.37
2008Q2	99.09	979.12		-0.58
2008Q3	91.83	907.38	-8.17	-7.33
2008Q4	92.68	915.76	-7.36	0.92
2009Q1	88.33	872.76	-11.38	-4.70
2009Q2	84.54	835.35	-14.68	-4.29
2009Q3	81.15	801.80	-11.64	-4.02
2009Q4	79.06	781.22	-14.69	-2.57
2010Q1	78.12	771.90	-11.56	-1.19
2010Q2	77.73	768.05	-8.06	-0.50
2010Q3	76.88	759.65	-5.26	-1.09
2010Q4	77.50	765.75	-1.98	0.80
2011Q1	76.12	752.09	-2.57	-1.78
2011Q2	76.65	757.37	-1.39	0.70
2011Q3	77.11	761.93	0.30	0.60
2011Q4	76.34	754.35	-1.49	-1.00
2012Q1	75.36	744.61	-1.00	-1.29
2012Q2	76.27	753.60	-0.50	1.21
2012Q3	77.73	768.05	0.80	1.92
2012Q4	77.11	761.93	1.01	-0.80
2013Q1	77.03	761.17	2.22	-0.10
2013Q2	77.96	770.36	2.22	1.21
2013Q3	79.86	789.07	2.74	2.43
2013Q4	79.62	786.71	3.25	-0.30
2014Q1	79.78	788.28	3.56	0.20
2014Q2	82.46	814.73	5.76	3.36
2014Q3	84.29	832.85	5.55	2.22
2014Q4	84.80	837.86	6.50	0.60
2015Q1	85.73	847.13	7.47	1.11
2015Q2	87.92	868.75	6.63	2.55
2015Q3	91.11	900.24	8.09	3.62
2015Q4	92.62	915.21	9.23	1.66
2016Q1	92.79	916.86	8.23	0.18
2016Q2	96.12	949.78	9.33	3.59
2016Q3	97.15	959.93	6.63	1.07
2016Q4	99.85	986.59	7.80	2.78

#### Table 1: New Rent Index Model

**Note:** The periods 2007Q3 through to 2008Q2, in the Year-on-Year column, are empty as year on year data collection began in Q3 2007.



Figure 1: RTB Rent Index - National Q 3 2007 = 100



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## Figure 2: Heat Map of Annual Growth Rates by LEA

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#### Figure 3: Heat Map of Breakdown of LEA rents by 3 Different Criteria

	Quarters >7%	2016Q4€	Local average compared to standard national average
NATIONAL	5	986.50	100
Carlow (10)	1	750.49	76
Muinebeag (8)	3	685.29	69
Cavan - Belturbet (6)	5	551.75	56
Bailieborough - Cootehill (6)	4	618.10	63
Ballyjamesduff (6)	4	567.96	58
West Clare (8)	2	541.60	55
Killaloe (6)	5	628.98	64
Shannon (6)	3	710.24	72
Ennis (8)	6	668.63	68
Kanturk - Mallow (6)	3	708.43	72
Fermoy (6)	2	656.27	67
East Cork (6)	4	823.39	83
Cobh (7)	4	1040.51	105
Ballincollig - Carrigaline (10)	5	1138.10	115
Bandon - Kinsale (6)	3	907.24	92
West Cork (8)	2	671.67	68
Blarney - Macroom (6)	2	895.46	91
Glenties (6)	2	337.79	34
Letterkenny (10)	5	580.61	59
Inishowen (9)	1	421.27	43
Stranorlar (6)	3	478.08	48
Donegal (6)	0	510.00	52
Conamara (9)	4	738.94	75
Tuam (9)	6	633.79	64
Ballinasloe (6)	1	586.64	59
Loughrea (8)	5	630.41	64
Athenry - Oranmore (7)	3	841.12	85
Galway City West (6)	4	1042.53	106
Galway City Central (6)	5	1021.51	104
Galway City East (6)	6	960.75	97
Listowel (7)	0	535.56	54
Tralee (9)	5	677.48	69
Killarney (8)	1	681.17	69
South And West Kerry (9)	4	600.95	61
Maynooth (9)	4	1246.63	126
Celbridge -Leixlip (7)	4	1266.77	128
Naas (9)	5	1153.70	117

## Table 2: Rent Growth Summary 2016 Q4 Rent and Rent compared to National Average by LEA

	Quarters >7%	2016Q4€	Local average compared to standard national average
Athy (6)	5	758.94	77
Kildare -Newbridge (9)	6	989.18	100
Castlecomer (6)	2	606.15	61
Kilkenny City East (6)	4	812.60	82
Piltown (6)	6	777.18	79
Kilkenny Citywest (6)	4	832.71	84
Cork City North Central	4	1046.90	106
Cork City North East	4	860.54	87
Cork City North West	5	1169.08	119
Cork City South Central	6	1082.27	110
Cork City South East	4	1170.47	119
Cork City South West	1	1059.31	107
Borris-In-Ossory -Mountmellick (6)	5	643.29	65
Portlaoise (7)	5	751.53	76
Graiguecullen-Portarlington (6)	5	758.08	77
Manorhamilton (6)	1	452.00	46
Ballinamore (6)	3	419.33	43
Carrick-On-Shannon (6)	4	505.86	51
Newcastle West (6)	3	467.35	47
Adare - Rathkeale (6)	4	773.56	78
Cappamore - Kilmallock (7)	2	648.39	66
Limerick City West (7)	5	984.84	100
Limerick City North (6)	3	804.84	82
Limerick Cityeast (8)	5	868.10	88
Granard (6)	2	551.85	56
Ballymahon (6)	6	553.95	56
Longford (6)	6	555.90	56
Dundalk Carlingford (6)	5	684.55	69
Dundalk South (7)	5	898.70	91
Ardee (6)	4	778.48	79
Drogheda (10)	6	907.17	92
Ballina (8)	3	579.51	59
Claremorris (7)	3	563.92	57
Castlebar (8)	3	588.25	60
West Mayo (7)	2	603.55	61
Kells (7)	4	727.22	74
Laytown -Bettystown (7)	6	1165.29	118
Ashbourne (6)	5	1005.47	102
Ratoath (7)	3	1185.02	120
Trim (6)	5	919.22	93

	Quarters >7%	2016Q4€	Local average compared to standard national average
Navan (7)	4	867.97	88
Monaghan (6)	2	586.99	60
Carrickmacross-Castleblayney (6)	1	630.33	64
Ballybay -Clones (6)	3	486.80	49
Birr (6)	1	504.91	51
Tullamore (7)	2	689.78	70
Edenderry (6)	4	665.81	67
Boyle (6)	3	451.10	46
Roscommon (6)	1	571.91	58
Athlone (6)	3	665.24	67
Ballymote - Tobercurry (8)	5	491.93	50
Sligo (10)	2	617.56	63
Nenagh (9)	0	634.80	64
Templemore -Thurles (9)	2	560.70	57
Carrick-On-Suir (6)	1	568.94	58
Clonmel (9)	1	654.21	66
Cashel -Tipperary (7)	3	596.37	60
Dungarvan -Lismore (8)	4	631.29	64
Comeragh (6)	4	619.85	63
Tramore - Waterfordcity West (6)	5	634.72	64
Waterford Citysouth (6)	4	656.33	67
Waterford Cityeast (6)	4	746.89	76
Athlone (7)	3	651.99	66
Mullingar - Kilbeggan (6)	3	674.04	68
Mullingar - Coole (7)	5	670.97	68
Gorey (8)	4	707.06	72
Enniscorthy (8)	3	617.32	63
New Ross (8)	2	645.11	65
Wexford (10)	4	691.43	70
Baltinglass (6)	3	865.47	88
Bray (8)	4	1194.89	121
Greystones (6)	2	1359.11	138
Wicklow (6)	3	1071.17	109
Arklow (6)	5	886.61	90
Balbriggan (8)	4	1170.92	119
Swords (9)	6	1412.37	143
Mulhuddart (8)	3	1339.20	136
Castleknock (7)	5	1536.44	156
Howth - Malahide (8)	3	1584.39	161
Stillorgan (6)	3	2062.34	209

	Quarters >7%	2016Q4€	Local average compared to standard national average
Dundrum (7)	3	1837.12	186
Glencullen - Sandyford (7)	4	1830.57	186
Killiney - Shankill (6)	3	1611.23	163
Dun Laoghaire (8)	5	1555.88	158
Blackrock (6)	4	1695.17	172
Lucan (8)	4	1502.79	152
Tallaght Central (6)	5	1388.23	141
Templeogue - Terenure (6)	3	1653.05	168
Rathfarnham (6)	4	1702.67	173
Tallaght South (6)	4	1393.40	141
Clondalkin (8)	4	1251.87	127
Ballymun (7)	4	1285.38	130
Cabra - Finglas (7)	4	1257.63	127
Ballyfermot - Drimnagh (6)	5	1427.21	145
Crumlin - Kimmage (6)	4	1419.08	144
Rathgar - Rathmines (6)	4	1261.98	128
Pembroke - South Dock (8)	6	1689.62	171
North Inner City (8)	5	1353.01	137
Clontarf (6)	2	1376.98	140
Beaumont - Donaghmede (9)	5	1423.86	144



# Detailed Results – Regional and property variances using previous model

As noted previously, the new model has not yet been developed to examine the difference between rents for houses and apartments. Consequently, in this section we summarise the results of the old approach for this breakdown.

The previous approach also allowed for the index to be broken down on the basis of National, Dublin and areas outside Dublin.

The upward trend in rents appears to be consistent across the regions covered by the index. For example, the rate of quarter-on-quarter growth in Dublin for houses and apartments in Q4 2016 was 3.3 per cent and 4.2 respectively. Outside Dublin, the pace of growth in rents for houses declined by 0.3 per cent in the quarter, while the pace of growth in apartments quickened. After

a brief slowdown in the Dublin market in Q3 2016, driven mainly by a moderate fall in rents for houses, the growth rate picked up again, increasing by 3.8 per cent, in Q4, 2016. This brings the average quarterly growth rate for 2016 in Dublin to 2.2 per cent.

Annual growth in rent costs remained solid across all regions in the index. We can see that in Q4 2015, growth in rents outside Dublin outpaced growth in Dublin as demand for rented accommodation increased in the commuter regions outside the capital. The latest data release indicates that this trend has reversed, with growth in Dublin rents now exceeding rents outside Dublin. This indicates that demand in Dublin increased significantly in the last quarter of 2016 and, in particular, it seems to have been driven by an 11.1 per cent increase in rents for apartments. Peak rents both in Dublin and Outside Dublin were observed in Q4, 2007. After declining significantly to a low point in Q1, 2011, rents have broadly been increasing, with rents in Dublin now 8.3 per cent greater than the previous peak. In particular, the growth in rents for apartments appears to be more pronounced than housing, at 12.3 per cent above the previous peak, compared to 5 per cent for houses. Trends outside Dublin indicate that rents are still below peak levels. Overall, nationally, rents are still 2.7 per cent below their peak. Outside of Dublin, houses are 11.1 per cent below their peak level, while apartments are 5.8 per cent below, although they have been steadily increasing since the beginning of 2015.





Figure 4: RTB Rent Index - Dublin

Source: RTB data



#### Figure 5: RTB Rent Index Outside Dublin

Source: RTB data



#### Figure 6: Annual Growth in the RTB Rent Index

Source: RTB data

## Figure 7: National House Prices and National Rents Q3 2007 = 100



Source: RTB data and own calculations using CSO data.



#### Figure 8: Distribution of weekly rents nationally

Source: RTB data and own calculations using CSO data.

## Location

Dublin is still the largest rental market in Q4 2016, accounting for around 38 per cent of the total. Compared to Q3 the share of rental properties in Dublin has remained relatively unchanged. However, at the previous peak of the market, this number was closer to 41 per cent of the total.

### **Property Size and type**

The data indicates that 2 and 3 bed properties are still the most common on the market and this trend has been broadly consistent over time. Together, 2 and 3 beds make up around 69 per cent of the market. Nationally, the most common property type is apartments, accounting for 43 per cent of the total, broadly similar to the previous quarter. The second most common properties on the market are semi-detached houses, accounting for just over one quarter of the total.

#### **Rents and House prices**

Both the CSO property price index and the RTB rent index for Dublin and Outside Dublin increased in the final quarter of 2016 (Figure 6). The pace of growth in the Dublin rent index exceeded that of house prices in Q4, growing 2.2 per cent compared to 1.4 per cent. Although there was an increase in rents outside Dublin, the growth was moderate at 0.6 per cent.

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#### **Distribution of rents**

Figure 8 shows the distribution of weekly rents on a national basis. On a quarterly basis, the underlying trends have remained relatively stable over the last number of years. Around 44 per cent of properties are being rented for between  $\in 100-200$  per week. Compared to Q3, 2016, there was a 1 percentage point increase in the proportion of rents costing more than  $\in 300$  per week, which is equivalent to more than  $\in 1,300$  per month, now accounting for 23 per cent of the total. Compared to 2007Q3 when the index began, the proportion of properties renting at the higher end of the distribution has increased 6 percentage points.

		National	National Houses	National Apts	Dublin	Dublin house	Dublin Apt	Outside Dublin	Outside Dublin house	Outside Dublin Apt
2007	Q3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Q4	102.5	100.6	104.5	103.5	100.0	104.7	101.5	100.9	102.7
2008	Q1	101.7	99.2	104.2	102.2	98.8	103.4	101.3	99.5	104.0
	Q2	101.1	99.6	102.8	101.1	100.1	101.5	101.0	99.5	103.2
	Q3	96.1	95.1	98.6	95.1	94.2	97.0	96.4	95.5	98.3
	Q4	95.5	94.1	97.2	94.8	93.1	95.1	95.6	94.5	97.3
2009	Q1	91.1	89.6	92.5	89.0	87.2	89.2	92.2	90.6	94.3
	Q2	87.4	87.0	87.4	85.0	85.4	84.0	88.7	87.7	89.5
	Q3	84.1	84.9	83.1	81.6	82.9	80.2	85.1	85.6	83.9
	Q4	81.2	81.4	81.1	78.9	79.3	78.0	82.4	82.2	82.8
2010	Q1	80.4	80.1	80.5	78.0	77.8	77.4	81.4	81.1	81.6
	Q2	80.1	79.9	80.4	77.9	78.0	77.3	81.1	80.7	81.7
	Q3	79.2	80.3	78.2	77.4	79.4	75.9	80.1	80.8	79.0
	Q4	78.4	78.4	78.5	77.6	77.9	77.5	78.9	79.1	78.4
2011	Q1	77.5	77.3	78.0	76.5	76.7	76.3	78.0	77.8	78.4
	Q2	78.1	77.8	78.8	78.0	78.6	77.8	77.9	77.8	77.8
	Q3	78.8	78.7	78.8	78.4	79.2	77.8	78.8	79.0	78.0
	Q4	77.9	76.8	79.0	78.5	78.4	78.6	77.2	76.5	77.8
2012	Q1	76.7	75.8	77.8	77.4	77.6	77.8	76.2	75.4	76.7
	Q2	78.0	76.7	79.2	79.5	78.8	79.7	76.5	76.2	76.3
	Q3	78.7	76.4	81.3	80.4	79.4	81.7	76.6	75.3	77.8
	Q4	77.9	75.3	80.5	81.3	79.5	82.8	75.1	73.8	76.2
2013	Q1	77.5	75.7	79.0	79.8	79.5	79.9	75.7	74.4	77.0
	Q2	78.5	76.1	80.9	82.3	81.5	83.3	75.7	74.3	76.8
	Q3	80.0	77.6	81.9	84.8	84.1	85.2	76.5	75.4	76.9
	Q4	79.9	76.7	83.3	86.3	84.9	87.5	75.8	74.0	78.0
2014	Q1	80.1	76.8	83.6	86.4	84.8	88.1	76.2	74.3	78.6
	Q2	82.6	78.9	86.5	90.7	88.3	92.9	77.6	76.0	79.5
	Q3	84.4	81.0	87.9	93.4	90.3	95.9	79.1	78.1	80.0
	Q4	84.6	80.4	88.6	95.0	91.5	97.4	78.5	77.1	79.8
2015	Q1	85.3	81.5	89.5	94.7	91.8	97.6	79.7	78.3	81.4
	Q2	87.6	83.2	92.2	98.7	95.3	101.5	80.9	79.6	82.6
	Q3	90.8	86.6	95.0	101.1	97.9	103.4	84.6	83.1	86.4
	Q4	92.5	87.7	97.7	102.9	98.5	105.9	86.3	84.4	89.0
2016	Q1	92.6	87.4	98.4	102.6	98.7	105.7	86.8	84.0	91.3
	Q2	95.9	90.7	101.7	107.1	101.8	111.3	89.3	87.2	92.1
	Q3	97.7	92.8	102.9	108.0	101.7	112.9	91.9	90.1	94.3
_	Q4	99.7	93.3	106.9	112.1	105.0	117.6	92.5	89.8	96.8

## Table 3: The RTB Rent Index - Regional and Accommodation type breakdown (Previous Model), Q3 2007 = 100

Note: The data in this table may be revised due to retrospective registrations.

		National	National Houses	National Apts	Dublin	Dublin house	Dublin Apt	Outside Dublin	Outside Dublin house	Outside Dublin Apt
2007	Q4	2.5	0.6	4.5	3.5	-0.0	4.7	1.5	0.9	2.7
2008	Q1	-0.8	-1.4	-0.3	-1.2	-1.1	-1.3	-0.2	-1.4	1.2
	Q2	-0.5	0.4	-1.3	-1.1	1.3	-1.8	-0.3	-0.1	-0.8
	Q3	-5.0	-4.5	-4.1	-6.0	-6.0	-4.4	-4.6	-4.0	-4.7
	Q4	-0.6	-1.0	-1.5	-0.3	-1.1	-2.0	-0.8	-1.1	-1.0
2009	Q1	-4.6	-4.8	-4.8	-6.1	-6.4	-6.3	-3.6	-4.1	-3.2
	Q2	-4.1	-2.9	-5.5	-4.6	-2.1	-5.8	-3.7	-3.2	-5.0
	Q3	-3.8	-2.5	-4.9	-3.9	-2.9	-4.5	-4.1	-2.4	-6.3
	Q4	-3.4	-4.1	-2.4	-3.4	-4.3	-2.7	-3.1	-3.9	-1.4
2010	Q1	-1.1	-1.6	-0.8	-1.1	-1.9	-0.7	-1.2	-1.4	-1.4
	Q2	-0.3	-0.2	-0.1	-0.1	0.3	-0.2	-0.4	-0.5	0.1
	Q3	-1.2	0.5	-2.7	-0.6	1.8	-1.8	-1.3	0.2	-3.3
	Q4	-1.0	-2.3	0.4	0.3	-1.9	2.1	-1.5	-2.1	-0.7
2011	Q1	-1.1	-1.4	-0.7	-1.5	-1.5	-1.5	-1.2	-1.6	-0.0
	Q2	0.8	0.6	1.0	2.0	2.5	2.0	-0.1	0.0	-0.8
	Q3	0.9	1.2	0.0	0.5	0.7	0.0	1.1	1.5	0.3
	Q4	-1.2	-2.5	0.3	0.0	-1.0	1.0	-2.0	-3.1	-0.3
2012	Q1	-1.5	-1.2	-1.5	-1.4	-1.0	-1.0	-1.3	-1.5	-1.4
	Q2	1.6	1.2	1.8	2.7	1.6	2.4	0.3	1.1	-0.6
	Q3	0.9	-0.4	2.7	1.2	0.7	2.4	0.2	-1.1	2.0
	Q4	-1.0	-1.5	-1.0	1.1	0.1	1.4	-1.9	-2.0	-2.1
2013	Q1	-0.6	0.4	-1.8	-1.9	-0.0	-3.5	0.8	0.8	1.1
	Q2	1.4	0.7	2.4	3.2	2.5	4.3	0.0	-0.0	-0.2
	Q3	1.8	2.0	1.2	3.0	3.3	2.2	1.1	1.4	0.1
	Q4	-0.1	-1.3	1.7	1.8	1.0	2.7	-1.0	-1.8	1.4
2014	Q1	0.3	0.1	0.5	0.1	-0.2	0.7	0.6	0.4	0.7
	Q2	3.1	2.8	3.5	5.0	4.2	5.4	1.8	2.3	1.2
	Q3	2.2	2.7	1.6	3.0	2.2	3.3	1.8	2.8	0.6
	Q4	0.1	-0.8	0.7	1.7	1.4	1.5	-0.8	-1.3	-0.3
2015	Q1	0.9	1.4	1.1	-0.3	0.3	0.2	1.6	1.6	2.1
	Q2	2.6	2.1	3.0	4.2	3.9	3.9	1.5	1.6	1.4
	Q3	3.7	4.1	3.1	2.4	2.6	1.9	4.5	4.4	4.7
	Q4	1.9	1.2	2.8	1.7	0.7	2.4	2.0	1.5	3.0
2016	Q1	0.1	-0.3	0.7	-0.3	0.2	-0.1	0.6	-0.4	2.6
	Q2	3.5	3.7	3.4	4.4	3.1	5.3	2.9	3.8	0.8
	Q3	1.9	2.3	1.2	0.9	-0.1	1.5	3.0	3.2	2.5
	Q4	2.1	0.6	3.9	3.8	3.3	4.2	0.6	-0.3	2.6

#### Table 4: The RTB Rent Index Regional and Accommodation Type breakdown (Previous Model), Quarter on Quarter % change

		National	National Houses	National Apts	Dublin	Dublin house	Dublin Apt	Outside Dublin	Outside Dublin house	Outside Dublin Apt
2008	Q3	-3.9	-4.9	-1.4	-4.9	-5.8	-3.0	-3.6	-4.5	-1.7
	Q4	-6.8	-6.5	-7.0	-8.4	-6.8	-9.1	-5.9	-6.4	-5.3
2009	Q1	-10.4	-9.7	-11.3	-12.9	-11.8	-13.7	-9.0	-9.0	-9.3
	Q2	-13.6	-12.6	-15.0	-16.0	-14.7	-17.2	-12.2	-11.8	-13.2
	Q3	-12.5	-10.8	-15.7	-14.1	-12.0	-17.4	-11.7	-10.4	-14.6
	Q4	-15.0	-13.5	-16.5	-16.8	-14.9	-18.0	-13.8	-13.0	-15.0
2010	Q1	-11.8	-10.7	-13.0	-12.4	-10.8	-13.2	-11.7	-10.5	-13.4
	Q2	-8.3	-8.2	-8.1	-8.3	-8.6	-8.0	-8.5	-8.1	-8.8
	Q3	-5.8	-5.4	-6.0	-5.2	-4.2	-5.4	-5.9	-5.6	-5.9
	Q4	-3.5	-3.7	-3.3	-1.6	-1.7	-0.6	-4.2	-3.8	-5.3
2011	Q1	-3.5	-3.5	-3.1	-2.0	-1.4	-1.5	-4.3	-4.1	-4.0
	Q2	-2.5	-2.6	-2.0	0.1	0.8	0.7	-4.0	-3.6	-4.8
	Q3	-0.5	-1.9	0.8	1.3	-0.2	2.6	-1.6	-2.3	-1.2
	Q4	-0.6	-2.1	0.6	1.1	0.6	1.4	-2.1	-3.2	-0.8
2012	Q1	-1.1	-1.9	-0.3	1.1	1.2	2.0	-2.3	-3.1	-2.1
	Q2	-0.2	-1.4	0.5	1.8	0.2	2.5	-1.9	-2.1	-1.9
	Q3	-0.2	-2.9	3.1	2.5	0.2	5.0	-2.8	-4.6	-0.3
	Q4	0.1	-1.9	1.8	3.6	1.4	5.4	-2.7	-3.5	-2.1
2013	Q1	1.0	-0.2	1.6	3.1	2.4	2.6	-0.6	-1.4	0.4
	Q2	0.7	-0.7	2.2	3.6	3.3	4.5	-1.0	-2.4	0.8
	Q3	1.6	1.6	0.7	5.5	6.0	4.3	-0.1	0.1	-1.1
	Q4	2.5	1.8	3.5	6.2	6.8	5.7	0.8	0.3	2.5
2014	Q1	3.4	1.5	5.9	8.4	6.6	10.3	0.7	0.0	2.0
	Q2	5.2	3.6	7.0	10.2	8.4	11.5	2.5	2.2	3.5
	Q3	5.6	4.3	7.4	10.2	7.3	12.6	3.3	3.6	3.9
	Q4	5.8	4.8	6.4	10.0	7.8	11.3	3.6	4.2	2.2
2015	Q1	6.5	6.1	7.0	9.6	8.3	10.8	4.6	5.4	3.7
	Q2	6.0	5.5	6.5	8.8	8.0	9.2	4.3	4.7	3.9
	Q3	7.5	6.9	8.1	8.2	8.4	7.8	7.0	6.4	8.1
	Q4	9.4	9.1	10.3	8.3	7.6	8.7	10.0	9.4	11.7
2016	Q1	8.5	7.3	9.9	8.3	7.5	8.3	8.8	7.3	12.1
	Q2	9.5	8.9	10.4	8.5	6.8	9.6	10.3	9.6	11.5
	Q3	7.6	7.1	8.3	6.8	3.9	9.2	8.6	8.3	9.1
	Q4	7.8	6.4	9.4	9.0	6.6	11.1	7.2	6.4	8.7

#### Table 5: The RTB Rent Index - Regional and Accommodation Type Breakdown (Previous Model), Annual % change

		National	National Houses	National Apts	Dublin	Dublin house	Dublin Apt	Outside Dublin	Outside Dublin house	Outside Dublin Apt
2007	Q3	988	1017	980	1269	1450	1231	820	859	780
	Q4	1013	1024	1024	1313	1449	1289	832	867	801
2008	Q1	1005	1009	1021	1297	1433	1273	831	855	811
	Q2	999	1013	1007	1283	1452	1249	828	854	804
	Q3	950	967	966	1206	1365	1195	790	820	767
	Q4	944	957	952	1203	1350	1171	784	811	759
2009	Q1	901	912	906	1130	1264	1098	756	778	735
	Q2	864	885	856	1078	1237	1034	728	754	698
	Q3	831	863	814	1036	1202	987	698	735	654
	Q4	803	828	795	1001	1149	960	676	706	645
2010	Q1	794	814	788	990	1127	953	668	697	636
	Q2	792	813	787	989	1131	951	665	693	637
	Q3	782	816	766	983	1151	934	657	694	616
	Q4	774	797	769	985	1129	954	647	679	611
2011	Q1	766	786	764	971	1112	939	639	668	611
	Q2	772	791	772	990	1140	958	639	668	606
	Q3	779	801	772	995	1148	958	646	678	608
	Q4	769	781	774	996	1136	968	633	657	607
2012	Q1	758	771	762	982	1125	958	625	647	598
	Q2	770	780	775	1008	1143	982	627	654	595
	Q3	777	778	796	1020	1151	1006	628	647	607
	Q4	770	766	788	1032	1153	1020	616	634	594
2013	Q1	765	769	774	1012	1152	984	621	639	600
	Q2	776	775	792	1045	1181	1026	621	638	599
	Q3	790	790	802	1076	1220	1049	627	648	600
	Q4	789	780	815	1096	1231	1077	621	636	608
2014	Q1	792	781	819	1097	1229	1085	625	638	613
	Q2	816	803	848	1151	1280	1144	637	653	620
	Q3	834	824	861	1185	1308	1181	648	671	623
	Q4	835	817	867	1205	1327	1199	643	662	622
2015	Q1	843	829	877	1202	1331	1202	654	673	635
	Q2	865	846	903	1253	1382	1249	664	684	644
	Q3	897	881	931	1283	1419	1273	694	714	674
	Q4	914	892	957	1305	1428	1303	708	724	694
2016	Q1	915	889	964	1302	1431	1301	712	722	712
	Q2	948	922	997	1359	1476	1370	732	749	718
	Q3	965	944	1008	1371	1474	1390	754	773	736
	0/	986	9/.9	10/.7	1/.22	1522	1/./.8	759	771	75/

#### Table 6: RTB Standardised Rents (Previous Model), based on RTB Rent Index

**Note:** The standardised rent is based on the average rent in the base period, which is then updated using the values contained in Rent Index table. The data in this table may be revised due to retrospective registrations.

# Differences between the old and new methodologies

Although there are some differences in the estimation approach between the previously published model, and the new version which incorporates more detailed location information, the overall path of the national rental index for both approaches are very similar.

Figure 9 plots the national index of rents with the two different approaches. While the index generated with the new model shows a slightly more rapid decline in rents at the start of 2008, from 2012 onwards the two indices overlap almost completely. Other key statistics in the two different rent indicators are very similar. For example, both indicators had a peak value in 2007 Q4, while the trough or lowest point was in 2012 Q1. The percentage fall from peak to trough in the case of the new (LEA) and the older models was 33 and 34 per cent respectively. In the appendix to the report we compare the results of the model parameters in both cases.



Figure 9: Comparison of Models (National Index Q3 2007 = 100)

In Table 7 we summarise the results of the index for both the new (LEA) and older approaches, along with the corresponding year-on-year and quarter-on-quarter growth rates. According to the new index, overall rents increased by 7.8 per cent year-on-year for 2016 Q4, which was up marginally on the 2016 Q3 year-on-year growth rate. On a quarterly basis, the index was up 2.78 per cent on its 2016 Q3 level.

		New Rent	Index Mode	el	Previous Rent Index Model				
Period	Index	€	Year-	Quarter-	Index	€	Year-	Quarter-	
			on-Year	on- Quarter			on-Year	on- Quarter	
2007Q3	100.00	988.09			100.00	988.09			
20007Q4	100.04	988.47		0.04	102.48	1012.63		2.48	
2008Q1	99.67	984.82		-0.37	101.70	1004.88		-0.77	
2008Q2	99.09	979.12		-0.58	101.15	999.44		-0.54	
2008Q3	91.83	907.38	-8.17	-7.33	96.12	949.71	-3.88	-4.98	
2008Q4	92.68	915.76	-7.36	0.92	95.54	944.04	-6.77	-0.60	
2009Q1	88.33	872.76	-11.38	-4.70	91.14	900.58	-10.38	-4.60	
2009Q2	84.54	835.35	-14.68	-4.29	87.40	863.61	-13.59	-4.10	
2009Q3	81.15	801.80	-11.64	-4.02	84.10	830.94	-12.51	-3.78	
2009Q4	79.06	781.22	-14.69	-2.57	81.23	802.61	-14.98	-3.41	
2010Q1	78.12	771.90	-11.56	-1.19	80.35	793.97	-11.84	-1.08	
2010Q2	77.73	768.05	-8.06	-0.50	80.13	791.73	-8.32	-0.28	
2010Q3	76.88	759.65	-5.26	-1.09	79.19	782.48	-5.83	-1.17	
2010Q4	77.50	765.75	-1.98	0.80	78.36	774.31	-3.53	-1.04	
2011Q1	76.12	752.09	-2.57	-1.78	77.54	766.15	-3.50	-1.05	
2011Q2	76.65	757.37	-1.39	0.70	78.12	771.91	-2.50	0.75	
2011Q3	77.11	761.93	0.30	0.60	78.81	778.72	-0.48	0.88	
2011Q4	76.34	754.35	-1.49	-1.00	77.87	769.43	-0.63	-1.19	
2012Q1	75.36	744.61	-1.00	-1.29	76.72	758.04	-1.06	-1.48	
2012Q2	76.27	753.60	-0.50	1.21	77.96	770.32	-0.21	1.62	
2012Q3	77.73	768.05	0.80	1.92	78.69	777.50	-0.16	0.93	
2012Q4	77.11	761.93	1.01	-0.80	77.92	769.89	0.06	-0.98	
2013Q1	77.03	761.17	2.22	-0.10	77.46	765.37	0.97	-0.59	
2013Q2	77.96	770.36	2.22	1.21	78.52	775.85	0.72	1.37	
2013Q3	79.86	789.07	2.74	2.43	79.96	790.06	1.62	1.83	
2013Q4	79.62	786.71	3.25	-0.30	79.90	789.44	2.54	-0.08	
2014Q1	79.78	788.28	3.56	0.20	80.10	791.50	3.41	0.26	
2014Q2	82.46	814.73	5.76	3.36	82.60	816.19	5.20	3.12	
2014Q3	84.29	832.85	5.55	2.22	84.43	834.26	5.59	2.21	
2014Q4	84.80	837.86	6.50	0.60	84.55	835.46	5.83	0.14	
2015Q1	85.73	847.13	7.47	1.11	85.34	843.27	6.54	0.93	
2015Q2	87.92	868.75	6.63	2.55	87.56	865.15	6.00	2.60	
2015Q3	91.11	900.24	8.09	3.62	90.77	896.91	7.51	3.67	
2015Q4	92.62	915.21	9.23	1.66	92.54	914.39	9.45	1.95	
2016Q1	92.79	916.86	8.23	0.18	92.62	915.19	8.53	0.09	
2016Q2	96.12	949.78	9.33	3.59	95.90	947.61	9.53	3.54	
2016Q3	97.15	959.93	6.63	1.07	97.70	965.39	7.63	1.88	
2016Q4	99.85	986.59	7.80	2.78	99.75	985.58	7.78	2.09	

#### Table 7: Summary of National Index for the New and Previous Rent Index Model

Note: The period 2007Q3 through to 2008Q2, in the Year-on-Year column, are empty as year on year data collection began in Q3 2007.

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In Figure 10, we plot the year-on-year growth rates for the new and existing models. It is evident from the graph that both approaches yield very similar results.



Figure 10: Comparison of Models (Year on Year Growth Rate %)



# **Technical Appendix**

# In this appendix we provide a more technical description of both the new model and how it compares with the older approach.

The older RTB index is constructed following the practice of the Central Statistics Office when constructing the Residential Property Price Index and uses a "rolling" time dummy hedonic regression model. The rent index is constructed using quarterly time dummies. In each regression a dummy variable is added for the most recent quarter and the "oldest" time dummy is dropped. This is a variant of the time-dummy method and has the advantage of keeping the coefficients relatively up-to-date while still using pooled data. This approach has the advantage of allowing the implicit price for each characteristic to vary over time. However, the approach requires large amounts of data and so may become unreliable if the volume of transactions becomes very low. In addition the need to run a regression for each time period is time-consuming, particularly if data is to be revised over a long time series. At present the model is run separately for three regions; the overall national market, the Dublin market and the non-Dublin national market. Accordingly, there are enough observations to run the model on this basis.

For the new index, on the other hand, an alternative approach is required whereby the model is estimated over the entire time period (2007Q3 to 2016Q4), and time dummy variables are then included in the hedonic regression to capture the change in the index for each LEA. It is necessary to conduct the estimation in this manner as there are not enough observations for each LEA to run the model in the rolling manner as per the existing index. In the case of both models the reference property type is a 2-bedroom apartment, 1 tenant, 10 to 12 month lease, rent paid monthly in a region without a third-level institution.

With the new model, the characteristic variables capture the changing mix of properties between time periods while the time dummies capture changes in the price or rent of a constant quality representative dwelling.

A mix adjusted index is then calculated based on the time dummy coefficients. An assumption of this approach is that the implicit price of characteristics remains constant over time. Given that a separate dummy for each LEA for each quarter is estimated this necessitates an additional (38 \* 137 = 5,206) variables in the model. However, the model can cope with this as using the entire sample results in approximately 950,000 observations. Other than these LEA dummies, the new model has all of the other variables currently in the existing model. Consequently, the new model also includes controls for the size and type of house/apartment, length of tenancy, number of tenants, frequency of rent payment and presence of a third-level institution.

The methodology generates an index of rent growth. To estimate current standardised rent levels in each LEA (i.e. rent levels that take into account the different composition of rental properties), we apply the growth rate generated by the model to an initial average value of rents in each LEA. These are compared to a national average rent generated on the same basis.

Table A1 compares the model output relating to property characteristics from the new model and an example from the previous rent index model which is described in detail in PRTB (2013)<sup>1</sup>. Apart from the differences in the level of detail on locations and time effects, the property level characteristics used to generate the results are the same in both versions of the model.

<sup>1</sup> PRTB (2013). The PRTB rent index, April.

The sizes of the estimated effects for each characteristic are quite comparable overall. One exception is that the previous model did not find that rents were systematically higher for detached or semi-detached houses, compared to apartments once the size of the property was controlled for, whereas the new model finds that there are higher rents for houses compared to apartments over and above property size. The property characteristics have the expected effect signs, with larger properties and more tenants associated with higher rents.

Non-standard lease lengths (i.e. different from one-year agreements) tend to be associated with lower rents.

As described above, the new version of the model uses a considerable amount of additional information in relation to location detail by using LEAs rather than broad region and allows for different time trends for each LEA. As a result, we note that the explanatory power of the new model is quite substantially higher than the previous version, with 68 per cent of the variation in rents being explained according to the R-squared statistic.

	Original model	(2009 Q1)	LEA mod	lel	
	Coefficient	t value	Coefficient	t value	
Intercept	6.689	1711.6	6.474	409.1	
1 Bedroom	-0.219	-79.9	-0.214	-248.4	
3 Bedrooms	0.089	33.7	0.113	138.6	
4 Bedrooms	0.174	49.5	0.216	199.1	
5 bedrooms	0.191	29.9	0.268	138.7	
Detached	-0.047	-16.5	0.023	19.2	
Semi-Det.	-0.056	-14.1	0.004	4.5	
Terrace	-0.043	-14.2	-0.021	-22.9	
Other Property	-0.346	-88.1	-0.321	-255.2	
Part House	-0.155	-17.1	-0.211	-88.7	
2 Tenants	0.052	26.8	0.044	74.2	
3 Tenants	0.092	26	0.065	60.2	
4+ Tenants	0.084	18.9	0.073	61.4	
1-6 months tenancy	-0.036	-13.2	-0.027	-28.4	
7-9 months tenancy	-0.064	-12.2	-0.072	-46.4	
Over 1 year tenancy	-0.1	-37	-0.054	-73.1	
Fortnightly rent	-0.09	-7.1	-0.027	-5.3	
Yearly rent	-0.632	-13.2	-0.112	-41.5	
Quarterly rent	1.063	114.5	0.344	38.0	
Third level	0.432	135	0.039	26.7	
Time dummy	Yes				
Region control	Yes				
Time * LEA			Yes		
Adjusted R-squared	0.524		0.679		

#### Table A1: Comparison of Model Estimates







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The RTB Rent Index is produced by the ESRI based on anonymised data supplied by the RTB. It is produced using a hedonic regression. Details on the methodology are available from www.RTB.ie and www.esri.ie . There may be revisions to earlier quarters due to retrospective registrations. Historic time series for the index and the rent values are also available at the websites.

Average rents for different property types, sizes and locations are available on the RTB website. Produced in conjunction with the ESRI.