

HOUSING PRICE INDEX

FEBRUARY 2014

Highlights

1 There are noticeable house price changes on a quarterly basis; but annual changes are mild.

2There is evident popularity of bungalows and apartments; the older types of bungalows are in demand primarily for the fact that they were developed on large pieces of land that can now be re-developed into apartment.

3 The size of the house (total area covered by the house) and the neighborhood where the house is located are key drivers of housing price changes; so is access to social amenities, an attribute that speaks to the importance of location. These factors point to speculation on land in areas where social amenities and infrastructure development are planned.



Overall House Price Changes

he Kenya Bankers Association (KBA) today unveils the KBA Housing Price Index, subsequently KBA-HPI, which shows the quarterly changes in housing prices in the country with the first quarter of 2013 being the base.

The KBA-HPI is a tool that tracks the movement in house prices in the country and is based on the hedonic function as elaborated in the framework developed by the Kenya Bankers Association Centre for Research on Financial Markets and Policy^{®1}.

The dataset sample upon which the price changes is representative the houses in the market across key urban areas in the country, with a bulk of the data being from Nairobi and its environs — this being an indication of the housing market being concentrated in Nairobi and its environs.

As **Figure 1** shows, the change in the house prices in Quarter 2 from Quarter 1 was about 45 percent, before that rate of growth declining to about 29 percent and 22 percent in the

1 Osoro, J. and Murithi D. (2015), *Kenya Bankers Association* Housing Price Index Conceptual Framework, February. subsequent two quarters of 2013. The rate of price changes was evidently stable from the fourth quarter of 2013 to the second quarter of 2014 before rising to 29 percent in the third quarter, the same level as it was in the corresponding quarter of the previous year.



While the quarterly house prince changes are clearly substantial, the annual changes are much modest (**Figure 2**). The overall change in house prices for the year from the second quarter of 2013 to the second quarter of 2014 was an increase of 3 percent, subsequently declining during the Quarter 3 of 2013 – Quarter 3 of 2014 period.

Figure 1: Overall Change in House Prices





Decomposition of Price Changes by House Type

nce the overall house price changes are decomposed by house type, the picture of price evolution is mixed as can be seen in **Figure 3**.

Whereas the rate price changes of Bungalows and Apartments (except for the first quarter of 2014) has remained positive during the six quarters, that of Maisonettes has been mixed – declining consistently for the three quarters from Quarter 2 of 2013 to Quarter 4 of 203, before taking a positive albeit unsteady trend. The price of other types of houses (town houses, penthouses), a type that is almost exclusively targeting the upper income bracket, was stagnant during the first quarter of 2014, subsequently assuming a declining trend.

It can be inferred from the decomposition that:

- Apartments and Bungalows are the popular types of houses, with the underlying demand sustaining positive changes;
- If the trend of the price changes for town houses is sustained, then it is a pointer to price softening in this segment. Besides, there is a tendency for townhouse owners preferring own-construction as opposed to buying completed units. This is an indication that the price softening is a correction of the demand-supply mismatch, the former being the constraining factor.



Drivers of the Price Changes

The estimates of the hedonic function (**Annexes 2 to 7**) enable the determination of the relative importance of the various parameters – house characteristics and other factors such as location and social amenities – to the price changes.

- The house price changes for from Quarter 1 of 2013 to Quarter 3 of 2014 were influenced largely by the size of the house (total area covered by the house) and the neighborhood where it is located. It can be inferred that access to social amenities, an attribute that speaks to the importance of location, was equally important in influencing price changes.
- Associated with location is the observation that speculative pricing of land enters the price changes determination equation prominently. That is why the age of the house has positive on the house prices; the older the house the higher the value considering that old houses are more spacious and occupied a large area — in essence the demand for this houses is not necessary for

occupation but for redevelopment, hence a pointer to this secondary demand as being underpinned by speculation around land.

- The popularity of bungalows that we earlier indicated is partly attributable to the fact that this is the type of houses that dominate the 'old' house category, hence they demand is secondary demand — the true intention of their demand is the land that they occupy that makes them attractive for redevelopment.
- Further, the while the lower end of the market simply enters the market to fulfill the basic need of housing, the more discerning segment is keen on house specifications that suits their tastes and are willing to pay for such specifications. That is why the number of bathroom, number of floors, presence of a balcony, master ensuite, presence of a separate dining and the gated community environment positively impact on the house prices.

+10.25% Bungalow: Ave. Price Change (From Q2 2013 to Q3 2014)



+5.67% Maisonettes: Ave. Price Change (From Q2 2013 to Q3 2014)



+12.22% Apartments: Ave. Price Change (From Q2 2013 to Q3 2014)





Annex 1: Decomposition of Price Changes by House Type

	Q2_13	Q3_13	Q4_13	Q1_14	Q2_14	Q3_14
Bungalows	32.27%	23.07%	11.21%	-26.26%	0.07%	21.15%
Maisonettes	51.46%	-13.54%	-26.50%	3.64%	17.84%	1.12%
Apartments	6.36%	9.37%	25.44%	17.35%	9.37%	4.24%
Others (penthouses etc)		-	-	-	23.82%	-32.46%

Annex 2: Quarter 2 _2013

Number of obs = 316	Prob > F = 0.0000	Adj R-squared = 0.7037
F(19, 296) = 40.38	R-squared = 0.7216	Root MSE = .23497

LN VALUE	Coef	Std. Err.	t - stats	P> t [95% Conf. Interval]
Ln Area	0.3632	0.0459	7.92	0.000 .2729258 .4534107
No f Bedrooms	0.0801	0.0593	1.35	0.1780365255 .196713
No of Bathrooms	0.3952	0.0607	6.51	0.000 .2758157 .5145782
House Type	0.0407	0.0372	1.09	0.2750325401 .1139157
Age of House	0.1649	0.0306	5.39	0.000 .1046566 .2251082
Dummy Q2_13	0.3719	0.0654	5.69	0.000 .243248 .5006348
Location of House	0.0075	0.0067	1.13	0.2600055917 .0206227
No of Floors	0.0915	0.0177	5.18	0.000 .0566838 .126228
Balcony	0.6548	0.1739	3.77	0.000 .3126976 .9969807
Dsq	0.0038	0.0722	0.05	0.9581382647 .1459644
Gym	0.2672	0.2030	1.32	0.1891321703 .6666693
Swimming Pool	-0.1753	0.2159	-0.81	0.4176002115 .2495944
Social Amenities	0.4797	0.1517	3.16	0.002 .7782775 .1810995
Garage / Parking	-0.3245	0.6984	-4.65	0.00046193561870323
Master en Suite	0.4632	0.0916	5.06	0.000 .6434929 .2828587
Separate Dining	0.7148	0.2631	2.72	0.007 .1971162 1.232550
Gated Community	0.4482	0.0956	4.69	0.000 .2601246 .6363193
Guest Room	-0.2634	0.2855	-0.92	0.3578253011 .2985134
Geyser Closet	.3304916	0.0810	-4.08	0.000 -0.4899672 -0.17102
Constant	0.000	0.3909	29.64	0.000 10.81511 12.35356

Housing Price Index Quarter 2, 2013





Annex 3: Housing Price Index Quarter 3 _2013

Number of $obs = 6$ F(18, 653) = 5	672 508.52	Prob > F = R-squared =	0.0000 = 0.9334	Adj R-squa Root MSE	ared = =	0.9316 0.14118		
LN VALUE	Ca	oef Std.	Err. t-sta	ats	P> t	[95% Cont	i. Interval]	
LNAREA	0.18	.01	46 12.8	2	0.000	.1580771	.2152537	
No of bedrooms	0.20	0.01	73 12.0	7	0.000	.1744391	.2422063	
No of bathrooms	0.36	597 0.01	98 18.6	7	0.000	.330836	.4085884	
House type	-0.04	494 0.01	43 -3.4	5	0.001	0774617	0213172	
Age of house	0.09	977 0.01	19 8.24	1	0.000	.0743711	.1209371	
Dummy Q3_13	0.25	548 0.05	38 4.83	3	0.000	.153929	.3650292	
Location of house	0.02	.00	9.13	3	0.000	.018379	.0284478	
No of floors	0.12	.01	75 7.34	1	0.000	.0940127	.1627423	
Balcony	1.11	80 0.15	532 7.3		0.000	.8172215	1.418746	
DSQ	0.25	512 0.03	6.74	1	0.000	.1780001	.324383	
Swimming pool	-0.22	218 0.12	.73 -1.7	4	0.082	4716964	.028094	
Social Amenities	0.46	538 0.10	129 4.5°		0.000	.6659063	.2617305	
Garage / Parking	-0.02	210 0.07	/90 -0.2	7	0.790	1761694	.1341556	
Master en suite	0.33	357 0.08	30 4.05	-)	0.000	.4986135	.1727935	
Gated community	0.29	971 0.10	63 2.8		0.005	.0884228	.5057417	
Bore-hole	-0.42	280 0.13	-3.2	4	0.001	6875313	1685014	
Guest room	-0.0	193 0.10	-0.1	9	0.848	2168666	.1781671	
Geyser closet	-0.2	137 0.05	-3.8	}	0.000	3241766	103165	
Constant	12.6	825 0.12	.86 98.6	2	0.000	12.42994	12.93496	

Housing Price Index Quarter 2, 2013



Natural logarithm value of the house



Size of House

(Plinth area, number of bedrooms, bathrooms, separate dining, en-suite bedrooms)



Location (Gated community, neighbourhood proximity to social amenities etc)



Annex 4: Housing Price Index Quarter 4 _2013

Number of obs = 941 F(18, 922) = 465.20	Prob : R-squ	> F = 0.0000 ared = 0.900	8	Adj R-squared = 0.8989 Root MSE = .16792
LN VALUE	Coef	Std. Err.	t - stats	P> t [95% Conf. Interval]
LNAREA	0.0283	0.0174	1.63	0.1040058002 .0624505
No of bedrooms	0.1573	0.0166	9.45	0.000 .1246038 .1899299
No of bathrooms	0.3349	0.0146	22.89	0.000 .3061697 .363593
House type	0.0864	0.0099	8.72	0.000 .0669147 .10581
Age of house	0.0517	0.0111	4.65	0.000 .0298798 .0735536
Dummy Q4_13	0.1912	0.0307	6.23	0.000 .1309966 .251374
Location of house	0.0211	0.0024	8.73	0.000 .016384 .0258924
No of floors	-0.0654	0.0058	-11.23	0.00007688770540087
Balcony	0.3115	0.0323	9.64	0.000 .2480847 .3749498
DSQ	0.7688	0.1105	6.95	0.000 .5518156 .9857284
Swimming pool	-0.0173	0.0759	-0.23	0.8201661919 .1316794
Social Amenities	0.5253	0.0796	6.6	0.000 .3690322 .6816489
Garage / Parking	0.2703	0.0305	8.87	0.000 .2105425 .3301513
Master en suite	0.0968	0.0477	2.03	0.043 .0030544 .1904545
Separate dining	0.0960	0.0344	2.79	0.005 .0285053 .1635435
Gated community	0.2192	0.0510	4.3	0.000 .1191374 .3193624
Bore-hole	-0.0673	0.0895	-0.75	0.4522429757 .1083652
Guest room	0.1627	0.0925	1.76	0.0790189007 .3442067
Constant	14.0155	0.1238	113.17	0.000 13.77242 14.2585

Housing Price Index Quarter 4, 2013 +21.07%

Natural logarithm value of the house



Number of floors

(Multiple storied houses, lofts , attics and basements)



Gymnasium (In-house physical health facilities)



Annex 5: Housing Price Index Quarter 1 2014 Number of obs = 497Prob > F = 0.0000Adj R-squared = 0.8223F(19, 477) = 121.81**R-squared** = 0.8291 **Root MSE** = 0.27542 **LN VALUE** Coef Std. Err. t - stats P>|t| [95% Conf. Interval] LNAREA 0.1439 0.0293 4.91 0.000 .0863565 .2014991 0.0232 No of bedrooms 0.2644 11.39 0.000 .2187669 .3099809 No of bathrooms 0.0873 0.0222 3.93 0.000 .0436551 .1308959 House type 0.2192 0.0245 8.04 0.000 .1709726 .2673486 0.936 -.0375925 .0346394 Age of house -0.0015 0.0184 -0.08 Dummy Q1_14 0.2149 0.0386 0.13 0.898 -.0709594 .0808241 Location of house 0.0036 1.92 0.056 -.0001637 .0139748 0.0069 No of floors 0.0088 1.49 0.137 -.0041821 .0302645 0.0130 Backyard -0.7459 0.3195 -2.33 0.020 -1.373704 -.1180134 Balcony -0.3180 0.0890 -3.57 0.000 -.4928037 -.1432035 DSO 0.3977 0.0484 8.22 0.000 .3026886 .492719 Gym 0.5943 0.0559 10.63 0.000 .4844809 .7041711 Swimming pool 0.4069 0.0516 7.88 0.000 .3054024 .5083565 **Social Amenities** 0.1817 0.0797 -2.28 0.023 .3383243 .0250914 **Garage / Parking** 0.0700 0.0522 1.34 0.180 -.0324526 .1725012 Separate dining 0.2006 0.0534 -3.75 0.000 .3056162 .0955824 **Gated Community** 0.3077 0.0533 -5.77 0.000 .4123919 .2029912 -3.67 Bore hole -0.3571 0.0974 0.000 -.5485322 -.1657278 Guest room -0.1189 0.1536 -0.77 0.439 -.42065 .182945 58.24 Constant 13.3791 0.2297 0.000 12.92762 13.83048

Housing Price Index Quarter 1, 2014

+23.93%

Natural logarithm value of the house



Size of House

(Plinth area, number of bedrooms, bathrooms, separate dining, en-suite bedrooms)



Location (Gated community, neighbourhood proximity to social amenities etc)



Aumber of obs = 471 Prob > F = 0.000 Adj R-squared = 0.7478 Point Point <t< th=""><th>Annex 6: Hous</th><th>ing Price</th><th>Index Qu</th><th>larter 2</th><th>_2014</th></t<>	Annex 6: Hous	ing Price	Index Qu	larter 2	_2014
LN VALUECoefStd. Err.t - statsP>[t][95% Conf. Interval]LNAREA0.02680.02860.940.349.0293779.0828848No of bedrooms0.23610.02778.510.000.1815568.2905701No of bathrooms0.16930.02287.430.000.1245227.2141346House type0.11560.02943.930.000.057733.173385Age of house-0.09560.0296-3.230.001.158071-0.374708Dummy Q2_140.20730.06193.350.001.0855933.3289404Location of house-0.00370.0034-1.080.2800103609.003038No of floors0.04660.01084.310.000.0253143.0677863Bakcyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694<	Number of obs $= 471$ F(21, 449) $= 67.36$	Prob > R-squ	> F = 0. ared = 0.7	0000 7591	Adj R-squared= 0.7478Root MSE= 0.3084
LNAREA 0.0268 0.0286 0.94 0.349 0.023779 .0828848 No of bedrooms 0.2361 0.0277 8.51 0.000 .1815568 .2905701 No of bathrooms 0.1693 0.0228 7.43 0.000 .1245227 .2141346 House type 0.1156 0.0294 3.93 0.000 .057733 .173385 Age of house -0.0956 0.0296 -3.23 0.001 -1538071 -0.374708 Dummy Q2_14 0.2073 0.0619 3.35 0.001 .0855933 .3289404 Location of house -0.0037 0.0034 -1.08 0.280 -013609 .03038 No of floors 0.0466 0.0108 4.31 0.000 .0251143 .0677863 Backyard -0.2498 0.3390 -0.74 0.462 915976 .4163493 Symming pool 0.3384 0.0533 6.34 0.000 .175617 .5162293 Social Amenities -0.1094 0.0722 -1	LN VALUE	Coef	Std. Err.	t - stats	P> t [95% Conf. Interval]
No of bedrooms 0.2361 0.0277 8.51 0.000 .1815568 .2905701 No of bathrooms 0.1693 0.0228 7.43 0.000 .124227 .2141346 House type 0.1156 0.0294 3.93 0.000 .057733 .173385 Age of house -0.0956 0.0296 -3.23 0.001 1538071 0374708 Dummy Q2_14 0.2073 0.0619 3.35 0.001 .0855933 3289404 Location of house -0.0037 0.0034 -1.08 0.280 -0103609 .003038 No of floors 0.466 0.0108 4.31 0.000 .0253143 .0677863 Backyard -0.2498 0.3390 -0.74 0.462 915976 .4163493 DSQ 0.2508 0.0436 5.75 0.000 .1650288 .380384 Swimming pool 0.3384 0.0533 6.34 0.000 .2335681 .4432265 Social Amenities 0.1094 0.0782 -1.4<	LNAREA	0.0268	0.0286	0.94	0.349 .0293779 .0828848
No of bathrooms 0.1693 0.0228 7.43 0.000 .1245227 .2141346 House type 0.1156 0.0294 3.93 0.000 .057733 .173385 Age of house -0.0956 0.0296 -3.23 0.001 1538071 0374708 Dummy Q2_14 0.2073 0.0619 3.35 0.001 .0855933 .3289404 Location of house -0.0037 0.0034 -1.08 0.280 0103609 .003038 No of floors 0.0466 0.0108 4.31 0.000 .0253143 .0677863 Backyard -0.2498 0.3390 -0.74 0.462 915976 .4163493 Balcony 0.3469 0.0861 4.03 0.000 .1776171 .5162293 DSQ 0.2508 0.0436 5.75 0.000 .1650288 .380384 Swimming pool 0.3384 0.0533 6.34 0.000 .235681 .4432265 Social Amenities -0.1094 0.0782 -1.4 <th>No of bedrooms</th> <th>0.2361</th> <th>0.0277</th> <th>8.51</th> <th>0.000 .1815568 .2905701</th>	No of bedrooms	0.2361	0.0277	8.51	0.000 .1815568 .2905701
House type0.11560.02943.930.000.057733.173385Age of house-0.09560.0296-3.230.00115380710374708Dummy Q2_140.20730.06193.350.001.0855933.3289404Location of house-0.00370.0034-1.080.280-1013609.003038No of floors0.04660.01084.310.000.0253143.0677863Bakkyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.011.106366.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.163-2630688.0443171Garage / Parking0.00370.06080.060.952-1159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.217-0411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.536218.0432797Guest room-0.14620.1215-1.20.229.3849437.09248	No of bathrooms	0.1693	0.0228	7.43	0.000 .1245227 .2141346
Age of house-0.09560.0296-3.230.00115380710374708Dummy Q2_140.20730.06193.350.001.0855933.3289404Location of house-0.00370.0034-1.080.280010360.030038No of floors0.04660.01084.310.000.0253143.0677863Backyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063666.380384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.078047Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.67	House type	0.1156	0.0294	3.93	0.000 .057733 .173385
Dummy Q2_140.20730.06193.350.0010.0855933.3289404Location of house-0.00370.0034-1.080.280-01036090.030038No of floors0.04660.01084.310.000.0253143.0677863Backyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.163-2630688.0443171Garage / Parking0.00370.06080.060.952-11590651232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.16250.12542.310.217-0411025.1808418Gated community0.12530.05792.170.031.239016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.209.3849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Gonstant14.90030.215969.010.00014.4759815.2466 <th>Age of house</th> <th>-0.0956</th> <th>0.0296</th> <th>-3.23</th> <th>0.00115380710374708</th>	Age of house	-0.0956	0.0296	-3.23	0.00115380710374708
Location of house-0.00370.0034-1.080.2800103609.003038No of floors0.04660.01084.310.000.0253143.0677863Backyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.229.3849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Dummy Q2_14	0.2073	0.0619	3.35	0.001 .0855933 .3289404
No of floors0.04660.01084.310.000.0253143.0677863Backyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.229.3849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Location of house	-0.0037	0.0034	-1.08	0.2800103609 .0030038
Backyard-0.24980.3390-0.740.462915976.4163493Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.233561.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	No of floors	0.0466	0.0108	4.31	0.000 .0253143 .0677863
Balcony0.34690.08614.030.000.1776171.5162293DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063666.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Backyard	-0.2498	0.3390	-0.74	0.462915976 .4163493
DSQ0.25080.04365.750.000.1650288.3365489Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Balcony	0.3469	0.0861	4.03	0.000 .1776171 .5162293
Gym0.24720.07173.450.001.1063686.3880384Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	DSQ	0.2508	0.0436	5.75	0.000 .1650288 .3365489
Swimming pool0.33840.05336.340.000.2335681.4432265Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Gym	0.2472	0.0717	3.45	0.001 .1063686 .3880384
Social Amenities-0.10940.0782-1.40.1632630688.0443171Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Swimming pool	0.3384	0.0533	6.34	0.000 .2335681 .4432265
Garage / Parking0.00370.06080.060.9521159065.1232533Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Social Amenities	-0.1094	0.0782	-1.4	0.1632630688 .0443171
Master en Suite0.18110.05243.460.001.2840353.0780947Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Garage / Parking	0.0037	0.0608	0.06	0.9521159065 .1232533
Separate dining0.06990.05651.240.2170411025.1808418Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Master en Suite	0.1811	0.0524	3.46	0.001 .2840353 .0780947
Gated community0.12530.05792.170.031.2390016.0115694Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Separate dining	0.0699	0.0565	1.24	0.2170411025 .1808418
Bore-hole0.28980.12542.310.021.5362318.0432797Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Gated community	0.1253	0.0579	2.17	0.031 .2390016 .0115694
Guest room-0.14620.1215-1.20.2293849437.0924853Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Bore-hole	0.2898	0.1254	2.31	0.021 .5362318 .0432797
Jacuzzi0.54970.06348.670.000.4251938.6742778Constant14.90030.215969.010.00014.4759815.32466	Guest room	-0.1462	0.1215	-1.2	0.2293849437 .0924853
Constant 14.9003 0.2159 69.01 0.000 14.47598 15.32466	Jacuzzi	0.5497	0.0634	8.67	0.000 .4251938 .6742778
	Constant	14.9003	0.2159	69.01	0.000 14.47598 15.32466

Housing Price Index Quarter 2, 2014



Natural logarithm value of the house



Type of house

(Maisonette, Apartment, Bungalow, Penthouse etc)



Age of house

(Contemporary, modern vs traditional architecture and functionality of house)

7



Annex 7: Hous	ing Price	Index Qu	uarter 3	_2014
Number of obs = 481 F(20, 460) = 102.49	Pro R-squ	b > F = 0.00 uared = 0.81)00 67	Adj R-squared = 0.8087 Root MSE = .441
LN VALUE	Coef	Std. Err.	t - stats	P> t [95% Conf. Interval]
LNAREA	0.0895	0.0273	3.28	0.001 .0359431 .1430956
No of bedrooms	0.3202	0.0636	5.04	0.000 .1953002 .4451906
No of bathrooms	-0.2413	0.0435	-5.55	0.0003268055155781
House type	-0.0279	0.0375	-0.74	0.4571014998 .0457468
Age of house	-0.0265	0.0134	-1.97	0.04905283110001194
Dummy Q3_14	0.2573	0.0706	6.03	0.000 .2869131 .5645525
Location of house	0.0106	0.0053	1.99	0.047 .0001502 .0209611
No of floors	-0.1913	0.0233	-8.2	0.00023708551454458
Backyard	0.1129	0.2224	0.51	0.6123241946 .5499973
Balcony	0.7728	0.1279	6.04	0.000 .5215257 1.02412
DSQ	-0.0974	0.0658	-1.48	0.139226795 .0319101
Gym	-0.2673	0.1153	-2.32	0.02149391260406373
Swimming pool	0.3369	0.1102	3.06	0.002 .1202881 .553457
Social Amenities	0.4598	0.1238	3.71	0.000 .2164668 .7031666
Garage / Parking	0.7689	0.0822	9.36	0.000 .6073599 .9303566
Master en Suite	0.5664	0.0764	7.41	0.000 .4161693 .7166159
Separate dining	0.2769	0.0739	3.75	0.000 .1316765 .422128
Gated community	0.2081	0.0961	2.17	0.031 .0192237 .3968907
Bore-hole	0.9636	0.3377	2.85	0.005 .2999476 1.627298
Guest room	0.0014	0.1593	0.01	0.9933116845 .3144923
Jacuzzi	-0.4236	0.0983	-4.31	0.00061671112305206
Constant	6.0470	0.1737	34.81	0.000 5.705663 6.388426

Housing Price Index Quarter 3, 2014



Natural logarithm value of the house



Backyard (Presence of Landscaped garden and lawn)



Swimming pool (Presence of in-ground or indoor swimming pool)