



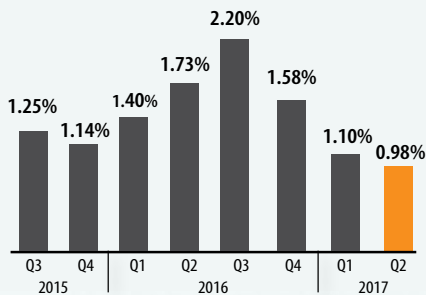
HOUSING PRICE INDEX

JULY 2017

ISSUE 11

Further Residential House Price Softening in Quarter two of 2017

Figure 1: Overall Price Change (%)



House prices increased by 0.98 percent during the second quarter of 2017 compared to a 1.10 percent rise during the first quarter of 2017 (Figure 1). This is the slowest price increase since the third quarter of 2016.

While the Kenya Bankers Association-Housing Price Index (KBA-HPI) depicts a sense of overall price stability, the trend over the past four quarters points

to the underlying demand and supply characteristics. In particular it depicts a demand slow-down on the back of the broader economic environment characterised by a general sense of softening growth.

The economy's real growth during the first quarter of 2017 was the slowest performance compared to the corresponding quarters since 2013

Continued on page 2...



Highlights

1 House prices rose by 0.98 percent during the second quarter of 2017 compared to the 1.10 percent rise during the first quarter of 2017. Though the house prices were broadly stable, the rise was the slowest since the third quarter of 2016.

2 The inter-play between demand and supply side largely explains price movements in quarter 2 with the sustained decline in credit growth to the private sector constraining both the demand and supply side of the housing market as well as the entire economy at large as evidenced by slowed real economic growth rate in quarter one of 2017.

3 During quarter 2 the house price drivers remained largely unchanged as compared to previous quarters. The attributes linked to size of the house were among the core drivers of house prices. However, presence of swimming pool, elevator and gated community posed a drag on prices on the backdrop of the service charged associated with them.

Further Residential House Price Softening

...From page 1

and is a pointer to the plausibility of the downward revisions of the economy's growth outlook for the year. The overall economic performance therefore has an obvious influence on demand in the housing market as it has on other markets.

The demand attributes of the housing market have largely been influenced by the sustained decline in the pace of credit growth the private sector. Private sector credit expanded at a paltry 2.1 percent in May 2017 compared to 4.7 percent in September 2016. This decline was against the background of the amended banking act that introduced the capping of interest rates.

The market demand attributes have continued to influence the supply side of the housing market. They point to the fact that a number of developed units remain unsold for a longer period. This necessitates the adjustments on the part of the suppliers going forward. At the same time, the credit conditions that affect the demand side are binding on the supply side, thus having a bearing on new house developments that will be put to market in the year ahead.

The inter-play between the demand and supply side of the market has had to contend with the environment of political sentiments around the forthcoming general elections that has engendered a wait-and-see attitude on both the developers and potential home owners.

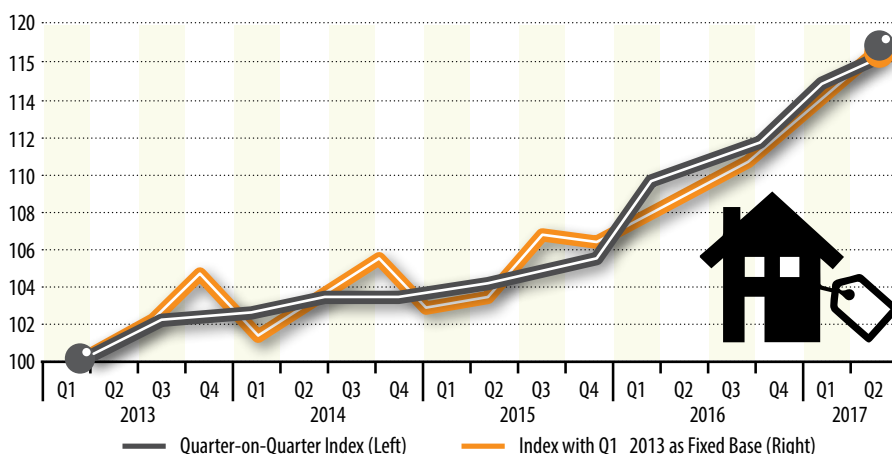
Since the first quarter of 2013, house prices have risen by 16.67 percent as at end of the second quarter two of 2017 based on the fixed base index (Figure 2).

Table 1: Price Movement Series

Period	Index with a fixed base*	Index with a moving base
Q3_2015	107.34	106.27
Q4_2015	108.19	107.48
Q1_2016	109.08	108.99
Q2_2016	111.28	110.87
Q3_2016	113.05	113.31
Q4_2016	114.91	115.10
Q1_2017	115.92	116.37
Q2_2017	116.67	117.52

* Based on Base period Q1_2013

Figure 2: KBA-HPI Evolution



Technical Note

The index follows a Laspeyres index method. In this method, the index is computed by getting the ratio the estimated current quarter price from the hedonic method multiplied the weights of the preceding quarter to the price of the preceding quarter multiplied by the respective weights of that quarter.

The weights of the quantitative variables are obtained by getting their respective mean values. For the dummy variables however, their weights are computed as the proportions of the number of houses possessing a certain attribute to the total number of houses. Thus the index is computed by the formula:

$$Index = \sum_{i=1}^n w_i \frac{\hat{P}_i}{\hat{P}_0} = \frac{\sum_{i=1}^n w_i \hat{P}_i}{\sum_{i=1}^n w_i \hat{P}_0}$$

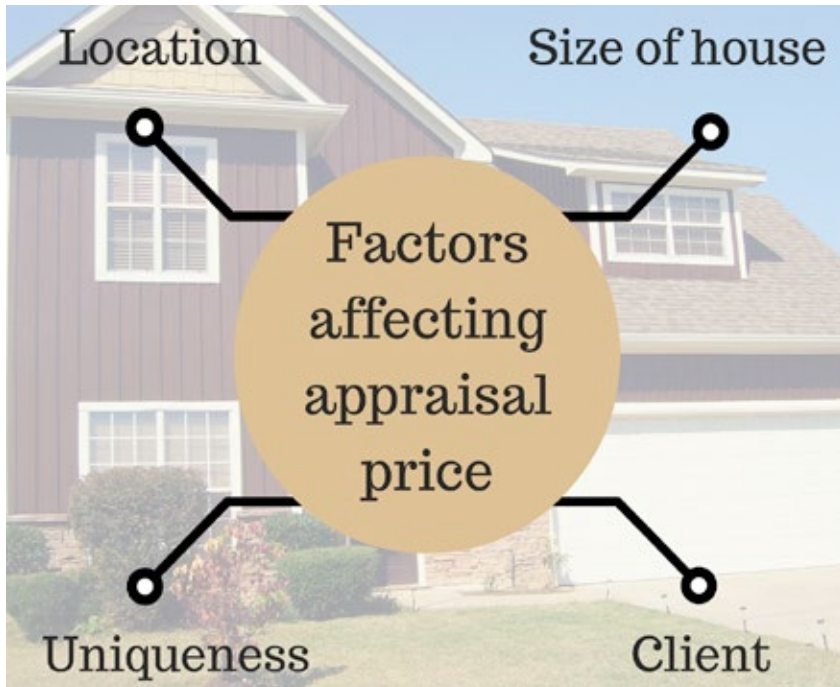
Where; \hat{P}_i is the shadow price from the estimated hedonic function for the current quarter;

\hat{P}_0 is the shadow prices from the estimated hedonic function for the preceding quarter;

and w_0 are the weights of the respective variables for the preceding quarter.



Home Buyers' Tastes Remain Consistent



- Number of bedrooms
- Number of bathrooms
- Type of the house
- Number of floors
- Location of the house
- Presence of DSq
- Swimming pool
- Age of the house
- Presence of garage
- Proximity to a mall
- Presence of parking bay(s)
- Presence of a balcony(s)
- Presence of a gymnasium
- Master ensuite

The house price drivers in quarter 2 of 2017 remained unchanged compared the previous quarters. The size of the house as captured by plinth area house, number of bedrooms, bathrooms, presence of backyard, garage/ parking lot, master ensuite, balcony and separate dining area were among the core drivers of house prices during the quarter.

Presence of Domestic Staff Quarters (DSQ) seems to have been insignificant in determining the price implying that potential home owners are inclined to utilising the area set for DSQ as an additional bedroom rather than space for letting out. Similarly attributes such as presence of swimming pool also seem to have had an insignificant effect on the prices during the quarter.

Presence of elevator in apartments buildings was seen to be a drag on prices given that it is associated with additional service charges; similar drag on prices, linked to the price sensitivity of buyers in the back of the tough demand conditions, is seen in gated areas that tend to come with higher service charges.

Sub-regional Indices

On the sub regional indices, apartments took the upper hand in terms of the total number of units offered in the market. Apartments accounted for 82.66 percent of the total number of units sold in Q2 of 2017 with maisonettes and bungalows accounting for 10.70 percent and 6.64 percent respectively.

Across all the market segments (Lower market segment, middle and upper

market segments) prices of apartments registered the highest rise compared to prices of bungalows and maisonettes, with the rise in prices in the latter two segments being more or less muted.

The rise in the price of apartments compared to bungalows and maisonettes signals an element of the search for affordability by potential home buyers given the lower cost of construction



per unit on the developers' side and therefore relatively lower offer process.

As a consequence, market

activity appears to be skewed towards the lower end compared to the middle and the upper market segment.

Table 2: Housing Price Index Drivers for Quarter 2_2017

Source	SS	df	MS
Model	181.738061	25	7.26952244
Residual	48.809742	505	0.096652954

Prob > F = 0.0000
 # observations = 530
 R-squared = 0.7883
 Adj R-squared = 0.7778

LN VALUE	Coef	Std. Err.	t - stats	P> t	[95% Conf. Interval]	
Plinth area	0.4157	0.0453	9.19	0.000	0.3268272	0.5046411
Number of Bedrooms	0.0904	0.0366	2.47	0.014	0.0183967	0.1623474
Number of Bathrooms	0.0845	0.0378	2.24	0.026	0.0103154	0.1587486
House type	0.5055	0.1046	4.83	0.000	0.3000746	0.7109892
Age	-0.1619	0.1097	-1.48	0.141	-0.3774033	0.0536086
Time dummy (Q2_2017)	0.0212	0.1362	0.16	0.876	0.2464747	0.2888444
Locational Dummy	0.0014	0.0016	0.88	0.380	0.0017551	0.0045973
Number of floors	-0.0014	0.0140	-0.10	0.918	-0.0260627	0.0289512
Presence of Backyard	0.2265	0.1093	2.07	0.039	0.011856	0.4411378
Presence of Balcony	0.8346	0.1281	6.51	0.000	0.5828438	1.086279
Presence of DSQ	0.0160	0.0600	0.27	0.789	-0.1017523	0.1338461
Presence of Gymn	0.2388	0.1131	2.11	0.035	0.0164915	0.4610469
Swimming pool	0.0300	0.0765	0.39	0.695	-0.1203983	0.1803478
Prox. to Social amenities	0.0511	0.0778	0.66	0.512	0.1017768	0.2039063
Prox. of Master ensuite	0.1395	0.0821	1.70	0.090	-0.0217546	0.3006973
Garage/parking	0.0588	0.0931	0.63	0.528	0.1242086	0.2417415
Separate dining	-0.1078	0.1044	-1.03	0.302	-0.3128846	0.0973072
Gated community	0.1457	0.0573	2.54	0.011	0.0331975	0.2582218
Presence of borehole	0.1223	0.0806	1.52	0.130	0.0359885	0.280673
Presence of Guestroom	-0.3258	0.1771	-1.84	0.066	-0.6737706	0.0222039
Presence of Jacuzzi	0.8996	0.2068	4.35	0.000	0.4932141	1.305959
Presence of Elevator	-0.2033	0.3262	-0.62	0.034	-0.8441425	0.4376278
Backup - generator	0.9307	0.1031	9.03	0.000	0.728094	1.133231
Presence of woodedfloor	0.0963	0.0739	1.3	0.193	-0.0489241	0.2414805
Constant	13.6684	0.4489	30.45	0.000	12.78643	14.5504

Housing Price Index
 Quarter 2, 2017

+117.52

Table 3: Housing Price Index Drivers for Quarter 1_2017

Source	SS	df	MS
Model	120.135033	24	5.0056264
Residual	51.094788	341	0.14983809

Prob > F = 0.0000
 # observations = 366
 R-squared = 0.7016
 Adj R-squared = 0.5469

LN VALUE	Coef	Std. Err.	t - stats	P> t	[95% Conf. Interval]	
Plinth area	0.2036	0.0426	4.78	0.000	0.1198816	0.2873931
No. of Bedrooms	0.0575	0.0437	1.32	0.089	-0.143507	0.0284387
No. of Bathrooms	0.2823	0.0463	6.09	0.000	0.1911736	0.3733919
House type	0.4064	0.1221	3.33	0.001	0.06465191	0.1662084
Age	0.4189	0.1102	-3.80	0.000	-0.6356136	-0.2021257
Time dummy Q1_17	0.6734	0.1122	6.00	0.000	0.4527811	0.8939682
Locational Dummy	0.0037	0.0049	0.76	0.051	-0.0132322	0.0058915
Number of floors	-0.0207	0.0245	-0.84	0.400	-0.0688262	0.0275138
Backyard	0.5119	0.1168	4.38	0.000	0.2821203	0.7416686
Presence of Balcony	0.7110	0.1555	4.57	0.000	0.4052001	1.016819
Presence of DSQ	0.0577	0.0752	0.77	0.444	-0.0902376	0.2055608
Presence of Gymn	0.1739	0.1347	-1.29	0.198	-0.438758	0.0910385
Swimming pool	0.0374	0.1183	0.32	0.752	-0.1952183	0.2700741
Prox. to Social amenities	0.2315	0.1026	2.26	0.025	0.0297598	0.4332167
Master ensuite	-0.2245	0.1134	-1.98	0.049	0.0014119	0.4475159
Garage/parking	0.3233	0.1060	3.05	0.002	0.114794	0.5319028
Separate dining	0.3138	0.1062	2.95	0.003	0.1048421	0.522766
Gated community	0.0922	0.1007	0.92	0.361	-1.058562	0.2902172
Borehole	0.0808	0.0931	0.87	0.060	-2.640054	0.1023596
Guestroom	1.0025	0.2281	4.40	0.000	0.553898	1.451102
Jacuzzi	0.7836	0.2574	3.04	0.003	-1.289838	-0.2772664
Elevator	0.4565	0.1188	3.84	0.000	0.2228469	0.69018
Backup - generator	0.0432	0.1064	0.41	0.085	-1.661001	0.2524474
Presence of woodedfloor	0.2787	0.0954	2.92	0.004	0.0911823	0.4663034
Constant	14.8686	0.4046	36.75	0.000	14.07276	15.66438

Housing Price Index
 Quarter 1, 2017 **+116.37**

Table 4: Housing Price Index Drivers for Quarter 4_2016

Source	SS	df	MS
Model	81.0211181	24	3.37587992
Residual	58.0313011	280	0.207254647

Prob > F = 0.0000
observations = 305
R-squared = 0.5827
Adj R-squared = 0.5469

LN VALUE	Coef	Std. Err.	t - stats	P> t	[95% Conf. Interval]	
Plinth area	0.4568	0.0565	8.09	0.000	.3456114	.5680614
No. of Bedrooms	0.0028	0.0420	0.07	0.047	-.0798434	.0853753
No. of Bathrooms	0.3303	0.0484	6.82	0.000	.23493	.4255881
House type	0.0667	0.0710	-0.94	0.348	-.2065292	.0730503
Age	-0.1253	0.1756	-0.71	0.476	-.4709742	.2203887
Time dummy Q4_16	0.1772	0.1621	1.09	0.075	-.141917	.4962836
Locational Dummy	0.0028	0.0063	0.44	0.057	-.0152385	.0096285
No. of floors	-0.1388	0.0286	-4.85	0.000	-.1952339	-.0824444
Backyard	0.0200	0.1014	0.20	0.043	-.2196089	.1795102
Balcony	0.4095	0.1682	2.44	0.015	.0785168	.7405408
DSQ	0.0073	0.1208	0.06	0.052	-.2305085	.2451243
Gymn	0.1873	0.1703	1.10	0.272	-.1480678	.5225743
Swimming pool	0.0955	0.1653	0.58	0.564	-.2298678	.4209067
Social amenities	0.0059	0.1220	0.05	0.061	-.2341202	.2460074
Master ensuite	0.0545	0.1006	0.54	0.088	-.1434468	.2525039
Garage/parking	0.5998	0.4815	1.25	0.014	-1.547648	.3480157
Separate dining	0.1085	0.1249	0.87	0.086	-.1374083	.3543824
Gated community	0.0686	0.0934	0.73	0.063	-.252526	.1152386
Borehole	0.0143	0.1070	0.13	0.014	-.1963922	.2250048
Guest room	0.0874	0.2034	0.43	0.668	-.3130504	.4878135
Jacuzzi	0.4061	0.2580	1.57	0.117	-.9140071	.1018951
Elevator	0.6378	0.1893	3.37	0.001	-1.010351	-.2651601
Backup - generator	0.3131	0.1788	1.75	0.081	-.0389632	.6651159
wooden floor	0.6531	0.1812	3.6	0.000	.2963381	1.009867
Constant	12.5607	0.7191	17.47	0.000	11.14527	13.9762

Housing Price Index
Quarter 4, 2016

+115.10

Table 5: Inter quarter Sub-regional indices (Moving base): 2013 - 2017

	Region 1			Region 2			Region 3		
	Apartments	Bungalows	Maisonettes	Apartments	Bungalows	Maisonettes	Apartments	Bungalows	Maisonettes
Q2-2013	100.063	100.04	100.60	100.05	100.61	100.10	100.01	100.93	100.03
Q3-2013	99.67	100.40	99.40	102.44	100.99	100.49	98.56	105.20	102.09
Q4-2013	100.74	102.82	99.38	101.80	100.82	98.81	103.75	103.95	100.32
Q1-2014	100.45	99.38	99.67	101.63	100.91	100.91	97.70	102.58	102.58
Q2-2014	100.50	99.67	99.54	100.75	101.75	101.27	96.70	102.74	103.32
Q3-2014	99.41	100.31	100.33	100.63	101.27	99.91	98.90	102.98	100.56
Q4-2014	97.48	99.29	105.21	97.82	101.98	99.61	104.54	104.36	100.62
Q1-2015	95.20	101.54	100.95	98.67	102.01	100.25	104.67	104.92	100.71
Q2-2015	102.92	102.78	100.53	101.11	102.05	100.77	105.23	104.91	102.51
Q3-2015	103.54	103.04	101.02	104.81	102.99	101.51	105.54	105.43	104.08
Q4-2015	105.23	104.57	104.66	104.84	103.47	102.43	106.25	105.37	105.26
Q1-2016	105.56	106.49	104.87	104.22	103.30	102.58	107.05	105.96	105.37
Q2-2016	103.48	104.08	102.96	100.19	100.30	100.93	101.23	100.96	100.27
Q3-2016	104.81	104.92	104.02	103.62	101.51	102.62	103.07	102.59	104.29
Q4-2016	106.82	105.05	104.83	105.04	102.61	103.6	105.72	102.94	105.94
Q1-2017	108.63	105.81	104.96	106.75	102.81	104.27	107.49	103.27	106.24
Q2-2017	109.73	105.97	105.22	107.86	102.96	104.79	108.65	103.83	106.7

Table 6: Inter quarter Sub-regional indices (Fixed base): 2013 - 2017

	Region 1			Region 2			Region 3		
	Apartments	Bungalows	Maisonettes	Apartments	Bungalows	Maisonettes	Apartments	Bungalows	Maisonettes
Q2-2013	100.06	100.04	100.60	100.05	100.61	100.11	100.01	100.93	100.03
Q3-2013	99.02	99.67	99.67	100.09	102.44	102.44	99.65	104.13	98.10
Q4-2013	99.86	100.74	100.74	98.88	101.53	101.80	100.32	103.45	103.45
Q1-2014	99.57	100.55	100.55	99.41	101.46	101.01	100.24	102.20	100.11
Q2-2014	99.62	100.34	97.76	100.98	102.07	101.39	100.82	102.18	101.47
Q3-2014	99.94	100.04	97.88	100.51	101.06	104.15	99.19	102.29	99.74
Q4-2014	99.74	100.52	98.93	100.48	100.19	102.15	100.07	104.09	99.41
Q1-2015	95.39	101.32	100.19	100.13	100.741	101.67	100.05	104.52	99.50
Q2-2015	99.41	102.95	101.41	101.90	100.81	100.01	103.23	104.70	100.95
Q3-2015	100.74	102.77	101.30	103.37	101.65	103.03	105.21	106.76	104.87
Q4-2015	100.92	103.01	103.09	105.75	101.98	102.62	109.31	110.61	105.32
Q1-2016	101.85	104.88	103.06	106.29	101.18	104.99	109.99	110.90	105.97
Q2-2016	102.11	105.85	104.21	106.69	101.38	105.12	112.57	110.97	106.82
Q3-2016	103.01	106.21	104.97	105.61	102.6	106.31	114.41	112.06	108.49
Q4-2016	104.29	106.93	105.07	106.73	102.94	106.96	116.23	112.73	108.95
Q1-2017	106.4	107.04	105.79	108.64	102.99	107.29	118.69	113.48	109.05
Q2-2017	107.2	107.85	106.03	110.41	103.39	107.51	119.79	113.74	109.79

* Definition of the Sub-regions listed overleaf ** Based on Base period Q1_2013

THE DEFINITION OF THE SUB-REGIONS



REGION 1

Athi River, Mlolongo, Mavoko, Nakuru, Ngong, Ruaka, Syokimau, Embakasi, Kahawa Wendani, Thika, Mtwapa, Utange, Kitengela, Kiembeni, Nyeri, Likoni, Eldoret, Ruiru, Kilifi, Thika road (Kasarani, Roysambu, Ruaraka), Meru, Bungoma.



REGION 2

Thindigua (Kiambu Road), Kiambu, South B, South C, Kabete, Komarock, Imara Daima, Membley, Buruburu, Rongai, Waiyaki Way (Uthiru, Regen, Kinoo, Kikuyu), Mbagathi road, Ngong Road, Langata.



REGION 3

Kileleshwa, Kilimani, Lavington, Westlands, Spring Valley, Riverside, Milimani (Kisumu), Milimani (Nakuru), Runda, Karen, Garden Estate, Parklands, Ridgeways, Muthaiga, Loresho, Kitisuru, Adams Arcade, Nyali, Mountain View, Nyari.

© Kenya Bankers Association Centre for Research on Financial Markets and Policy®

Kenya Bankers Association

13th Floor, International House, Mama Ngina Street
 P.O. Box 73100– 00200 NAIROBI
 Telephone: 254 20 2221704/2217757/2224014/5
 Cell: 0733 812770/0711 562910
 Fax: 254 20 2221792
 Email: research@kba.co.ke
 Website: www.kba.co.ke



KENYA BANKERS
 ASSOCIATION

One Industry. Transforming Kenya.