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MARKET ANALYTICS AND  
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## PROPERTY BAROMETER

### FNB House Price Index

*Some acceleration in August nominal house price growth, but the real price “correction” continues slowly*

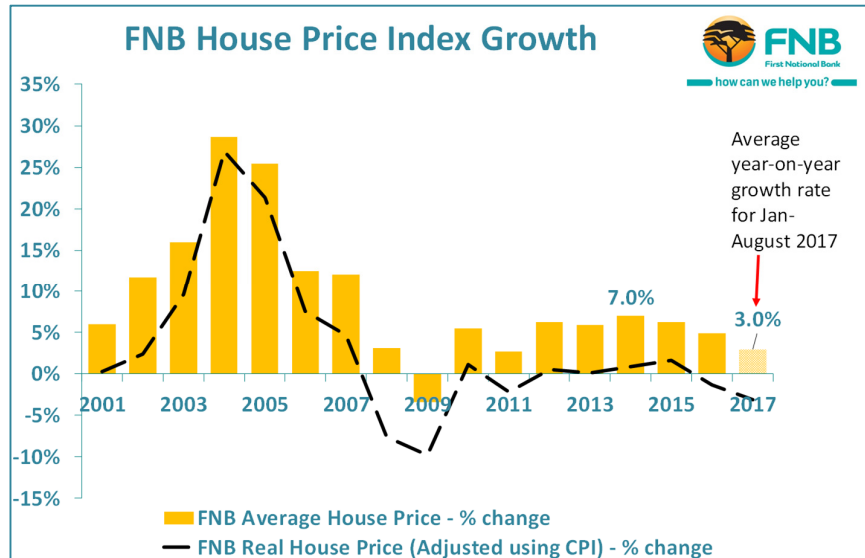
In August 2017, the FNB House Price Index showed a mild acceleration in year-on-year growth compared with revised July growth. However, at 4% year-on-year the rate of increase remains in lower single-digit territory, as we have expected it to do through 2017, and this implies that the slow real house price correction (“real” referring to after deflating the average house price with the Consumer Price Index) continues.

#### FNB HOUSE PRICE INDEX 2017 TO DATE

8 months into this year, it still appears increasingly likely that 2017 will represent the 3<sup>rd</sup> consecutive year of slowing average annual house price growth, and the 2<sup>nd</sup> consecutive year of house price decline in consumer inflation-adjusted real terms.

For the period January to August 2017, the average year-on-year growth rate in the FNB House Price Index was 3%. This is in line with our 3% average price growth forecast for the entire 2017. It is lower than the revised 4.9% recorded for 2016, and well down on the post-2008/9 recession high of 7% reached in 2014.

In real terms (CPI inflation-adjusted), the average year-on-year rate of decline was -3.1% for the period January to July 2017, a weakening from the -1.3% average rate of decline for 2016 as a whole.



## AUGUST FNB HOUSE PRICE INDEX FINDINGS

### AUGUST AVERAGE HOUSE PRICE GROWTH

The FNB House Price Index for August 2017 rose by 4.0% year-on-year. This is a mild acceleration from the revised 3.5% for July.

Backward revisions in recent months' data points occur regularly, partly due to some raw data additions periodically, but mostly due to our application of light smoothing using a statistical smoothing function.

In real terms, when adjusting for CPI (Consumer Price Index) inflation, the house price correction gradually continued, with the real rate of house price growth remaining in negative territory to the tune of -1.0% year-on-year decline in July (August CPI data not yet available). This is a diminished real house price deflation rate, however, from -1.7% year-on-year in June and from a low of -4.8% reached in December 2016.

This diminished real price decline in July was the combination of slight acceleration in the house price inflation rate of that month from 3.3% in the prior month to 3.5%, along with a deceleration in CPI inflation from 5.1% in June to 4.6% in July.

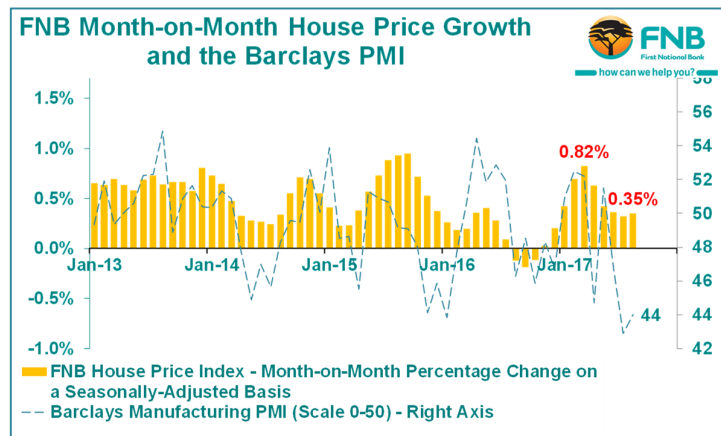
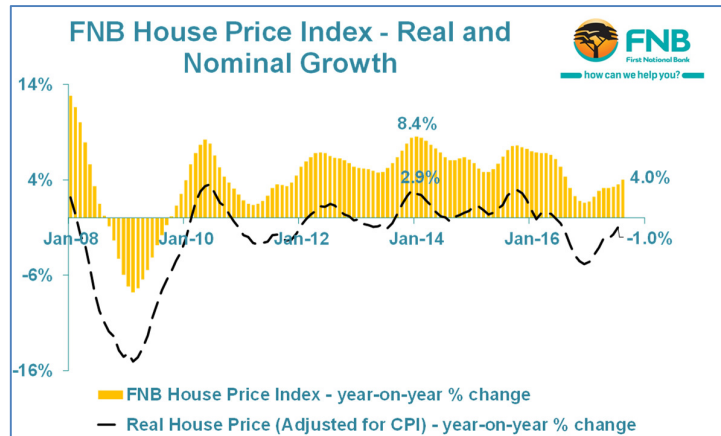
This diminished real price decline in July was the combination of slight acceleration in the house price inflation rate of that month from 3.3% in the prior month to 3.5%, along with a deceleration in CPI inflation from 5.1% in June to 4.6% in July.

The average price of homes transacted in August was R1,103,322.

### A RECENT MONTH-ON-MONTH HOUSE PRICE GROWTH DIP APPEARS TO HAVE BEEN REFLECTIVE OF A RECENT ECONOMIC WEAK PERIOD, BUT THE AUGUST RATE IMPROVED SLIGHTLY

House price growth on a month-on-month seasonally-adjusted basis (a better momentum indicator than the year-on-year calculation) has suggested that we have recently had a period of greater economic weakness, with the month-on-month seasonally-adjusted house price growth rate slowing from a 0.82% high in March to 0.32% in July. In August, however, there was a slight increase to 0.35%. An accelerating trend in month-on-month growth can often mean a slightly better period for the economy emerging, although we would not conclude this from only a 1 month acceleration to date.

The housing market can often be a good leading indicator of economic conditions, and indeed we often find that dips in month-on-month house price growth more-or-less co-incident with dips in the Absa Manufacturing PMI (Purchasing Managers' Index). The large Manufacturing Sector is very often a good indicator of broader economy-wide direction, and thus the PMI can be a good up to date indicator of the economy's direction. In recent months, the Absa PMI recorded very weak readings, including a 42.9 reading in July and 44 in August. A below-50 reading points to possible Manufacturing Sector contraction.



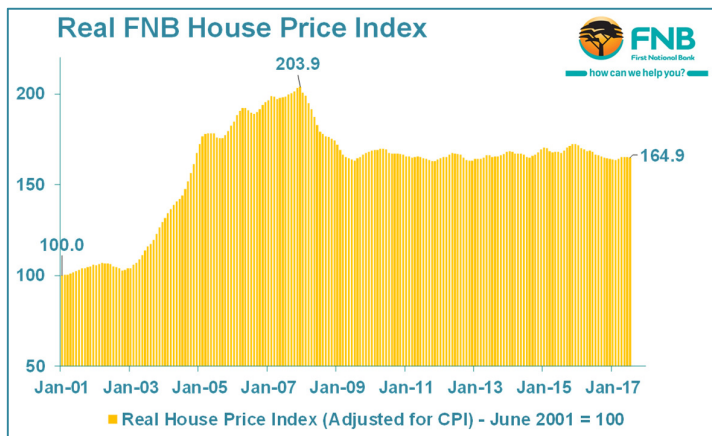
Hopefully, the slight August rise in this growth rate is a sign of slightly better economic times to come, but a few more months of house price data will be required before we would conclude that this is the case.

### REAL HOUSE PRICE LEVELS

Examining the longer term real house price trends (house prices adjusted for CPI inflation), we see that the level as at July 2017 had lost -4.4% since a post-2008/9 recession high in December 2015.

Looking a bit further back to the all-time real house price peak at the end of 2007 (at the end of the pre-2008 housing boom period), on a cumulative basis real house prices were -19.2% down on that high as at June 2017.

However, looking back further, despite a mediocre performance in recent years, the average real price currently remains a massive 64.0% above the end-2000 level, around 16.5 years ago, and a time back just before boom-time price inflation started to accelerate rapidly.



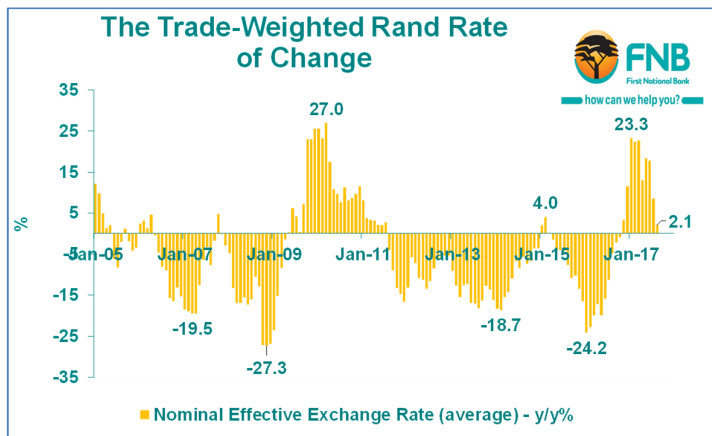
In nominal terms, when not adjusting for CPI inflation, the average house price in August 2017 was 318.3% above the end-2000 level. By comparison, consumer goods and services prices, as measured by the CPI, were only 154.5% higher over virtually the same period (up to July 2017 due to August CPI data not yet available).

### FNB HOUSE PRICE GROWTH IN FOREIGN CURRENCY TERMS

#### RELATIVELY STABLE RAND CAUSES SLOWING IN DOMESTIC HOUSE PRICE GROWTH IN FOREIGN CURRENCY TERMS

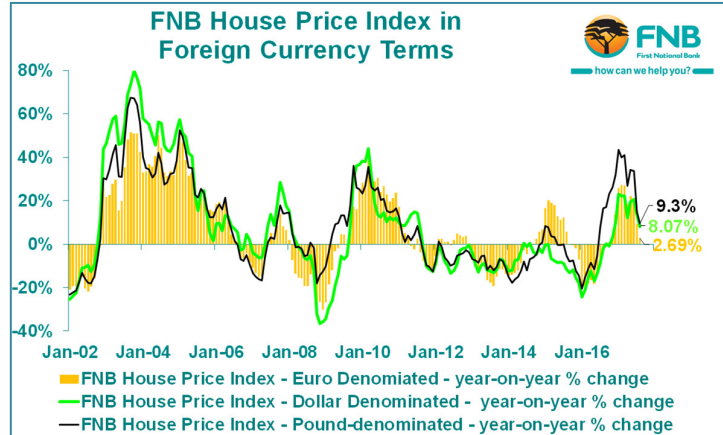
Following the late-2015 “Nenegate”-related Rand slump, we saw a significant recovery in the local currency through much of 2016. The year-on-year rate of strengthening in the Trade-Weighted Effective Exchange Rate Index for the Rand accelerated to a high of 23.3% by January 2017.

This translated into a major year-on-year FNB House Price Index growth surge when denominating it in certain major foreign currencies, pointing to significant affordability deteriorations for foreigners aspiring to purchase property locally.



However, that impact from the currency strengthening early last year has for the most part passed through, and in recent months the foreign currency denominated FNB House Price Indices have once more seen their year-on-year growth rates broadly slowing.

In August, the index showed an 8.07% year-on-year rise in US Dollar terms (down from 20.6% in June), and a 2.68% rise in Euro terms (from 20.6% in June). In UK Pound terms, the rate was a higher 9.3%, due to the additional impact of a significant Brexit-driven Pound weakening last year, but this rate too is sharply slower than a 34.1% year-on-year high in May.



## THE EXTENT OF HOUSE PRICE DEFLATION IN THE MARKET

### HOW PREVALENT IS HOME RE-SALES PRICE DEFLATION?

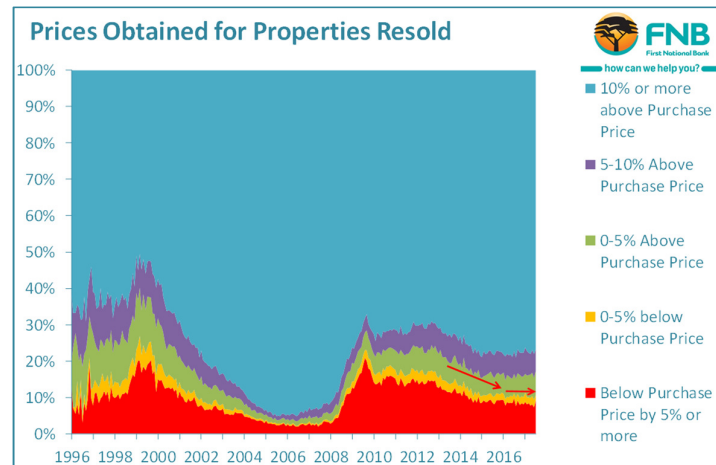
We analyse house prices in order to view the magnitude of house price deflation vs inflation in the housing market. At any given time, there is always a certain amount of house price deflation within the overall market. By this we mean homes being resold at prices below that which they were previously purchased for.

In such times like the present when the market is weak and average house price inflation is low, it would be realistic perhaps to expect a higher percentage of homes being resold at deflated prices, and vice versa in stronger market times.

The causes of price deflation when reselling can vary:

- Genuine market price deflation can be the cause in weak economic or rising interest rate times, such as in 2008/9, or a specific area can fall from favour and even go into decay.
- A home may have originally been purchased at an “incorrectly” high price which was above the true market value at the time. Establishing the true market price is tough in a market where each home’s characteristics differs in some way from the next.
- Financial stress of the owner can lead to a deterioration in the property due to lack of maintenance and upkeep., or can cause a very hasty sale at below “market value”.

We use deeds data for properties purchased and sold by individuals (“Natural persons”) for these estimates.

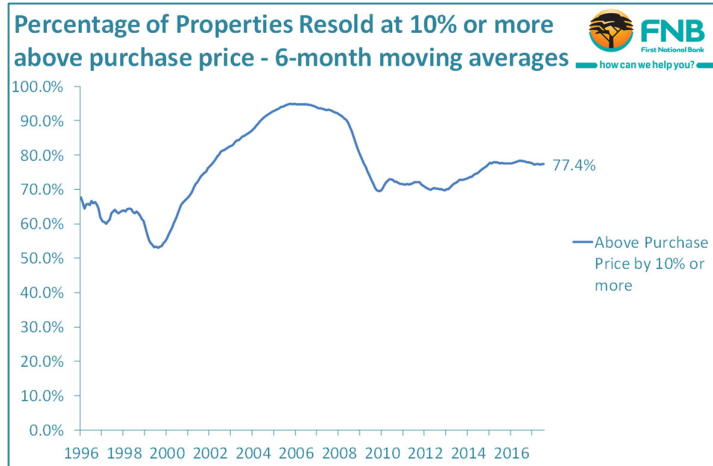


Of late, the incidence of re-sales price deflation remains moderate, and the overall incidence of such price deflation has not risen noticeably as a percentage of total sales.

In July, the estimated level of resale price deflation was 10.7% of total sales, which is only slightly higher than the 10.1% estimate as at the end of 2016, and far below the revised estimated 23% “peak-of-crisis” level of August 2009.

However, delving a bit deeper, we may have been seeing some very slight hints that seller

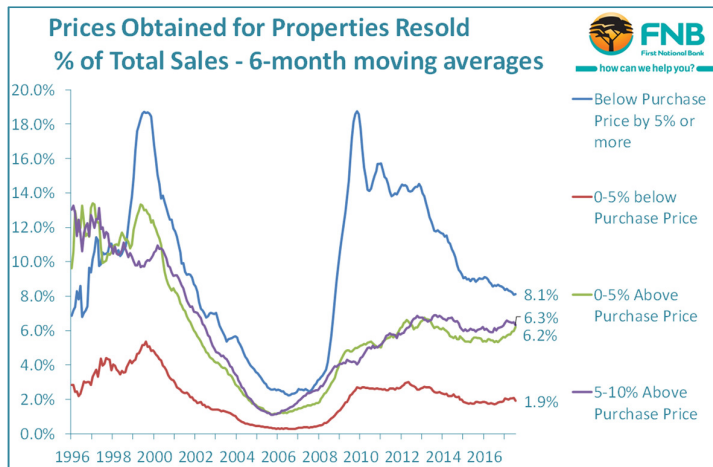
“pricing power” has diminishing, but nothing more than hints yet.



In order to do this, we smooth the individual price inflation/deflation “bands” that we have created, by using 6-month moving averages.

Firstly, what we see is that the percentage of homes being resold for “10% or more” above purchase price is slightly off its post-2008/9 recession high of 78.4% for the 6 months to June 2016, recording 77.4% for the 6 months to July 2017.

As the level of 10%-or-more resales diminishes slightly, there has been an increase in the estimated percentage of homes being resold at values nearer to their previous purchase price.



Homes resold at 5-10% above purchase price have seen a mild increase from 5.9% of total sales for the 1<sup>st</sup> 6 months of 2016 to 6.3% for the 6 months to July 2017.

Homes resold at 0-5% of original purchase price have risen from 5.3% of total sales for the 6 months to September 2016, to 6.2% for the 6 months to July 2017.

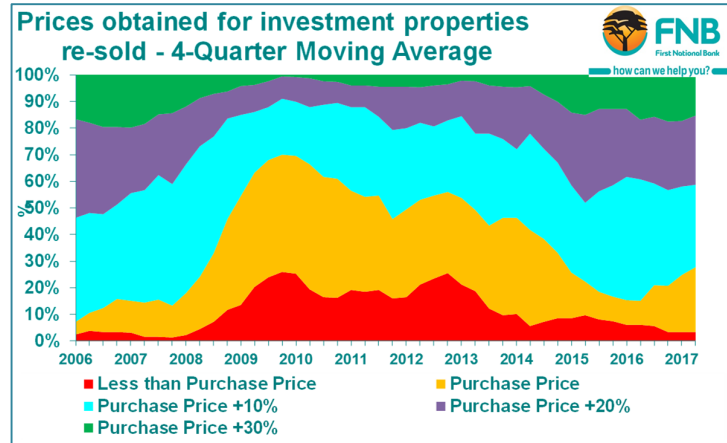
There was some increase in the incidence of price deflation in the “homes resold at 0-5% below purchase price” band. From 1.7% of total resales for the 6 months to July 2017, the percentage of homes falling into this deflation category rose mildly to 2.1% of total sales for the

6 months to June 2017. However, for the 6 months to July 2017 this receded slightly to 1.9%.

In the category “homes resold at more than 5% below purchase price”, there has not yet been a noteworthy rise in the percentage of total resales. The estimated percentage for this category was 8.1% for the 6-months to July, still lower than the 8.6% for the 1<sup>st</sup> half of 2016.

**Therefore, while there has not yet been any noticeable rise in all out home resales deflation, we have seen a slight rise in the estimated percentages in those price inflation/deflation categories nearer to original purchase price level, and a slight decline in the estimated percentage of homes being resold at 10% or more than purchase price.**

## WHAT DO ESTATE AGENTS PERCEIVE REGARDING RESALE PRICE MOVEMENTS



From a separate source, the sample of agents surveyed in the FNB Estate Agent Survey point to some decline in “pricing power” of investment property sellers, but not yet leading to greater levels of resale price deflation.

We ask agents for their perceptions regarding prices obtained for investment properties put back on the market. Using a 4-quarter moving average for smoothing purposes, we find that those properties where a resale price of less than the original purchase price is achieved amount to a lowly estimated 3.25% of total properties for the 4 quarters to the 2<sup>nd</sup> quarter of 2017. This remains at the lowest 4 quarter average estimate since early-2008, so no sign yet of agents perceiving an increase in the prevalence of resale price deflation.

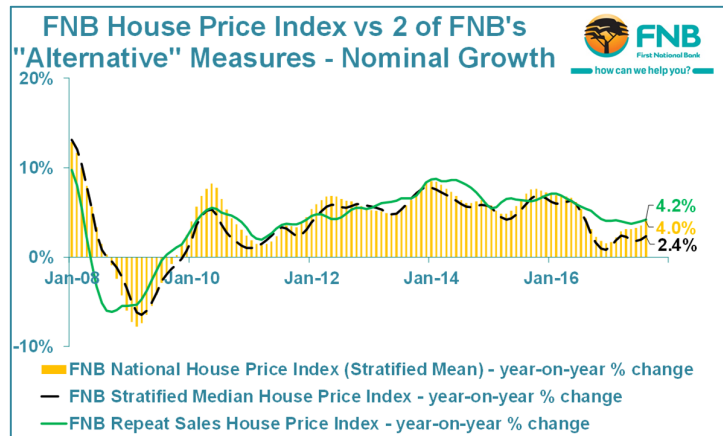
However, where one sees the perception of diminishing pricing power is in a noticeable increase in the percentage of properties sold at the original purchase price. From 9.25% of total investment properties sold for the 4 quarters up to the 2<sup>nd</sup> quarter of 2016, the percentage of resales equal to original purchase price has risen to 24% for the 4 quarters to the 2<sup>nd</sup> quarter of 2017. That is a marked rise, and translates into declines in the percentages of those homes being resold at above purchase price.

## WHAT FNB’S ALTERNATIVE HOUSE PRICE INDEX MEASURES SAY

Given that house price statistics and indices are never an exact science, we often like to test our main house price index against our alternative house price index methodologies. Recently, all of them point to market weakness, moving in a narrow range in lower single-digit territory. Whereas we term our main house price index a “stratified mean”, where sub-segments of the index are averages with their weights fixed in the overall index, our FNB Stratified Median House Price Index is the average of the sub-segments’ median prices.

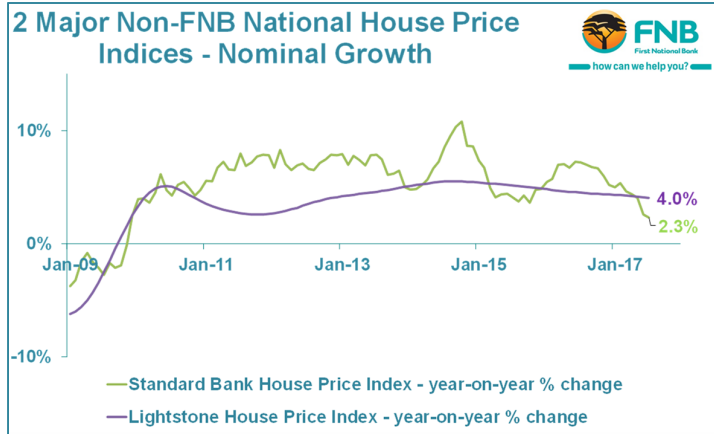
The Stratified Median House Price Index showed slightly slower (than the “official” index) house price growth of 2.4% in August, while our FNB Repeat Sales House Price Index showed 4.2% growth for August. All 3 have shown a slight acceleration in growth on the previous month, but all remain in negative territory in real terms (adjusted for CPI inflation).

All 3 thus continue to move in low single digits, supportive of the notion a weak national housing market with a real house price correction still under way.



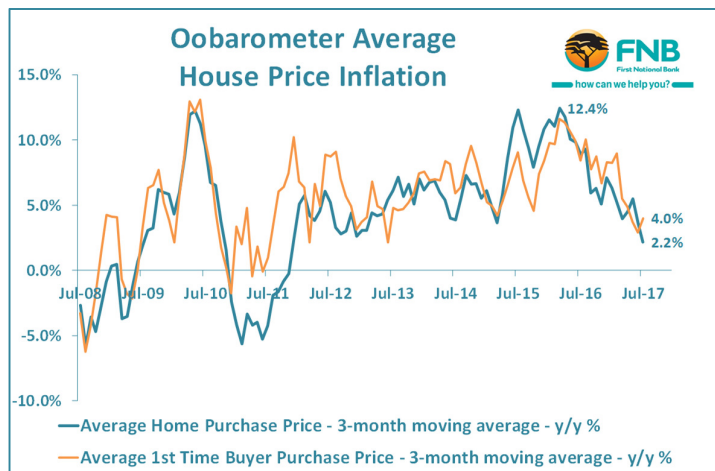


## WHAT OTHER ALTERNATIVE HOUSE PRICE INDEX MEASURES SAY



2 key non-FNB house price indices also point to slowing year-on-year growth. The Standard Bank House Price Index for July (August not yet released) showed 2.3% year-on-year growth and slowing in recent months.

The Lightstone Index, too, showed slowing year-on-year growth, to the tune of 4.0% as at July (August not yet released). This index is more heavily smoothed with a statistical smoothing function, thus not showing the very short term fluctuations, but nevertheless also pointed to slowing growth in recent times.



Mortgage originator Ooba produces 2 average house price indices, i.e. an overall market average as well as a 1<sup>st</sup> Time Buyer House Price Index. The 2 have moved closely together of late, both seeing broadly slowing year-on-year growth since around mid-2016.

Using a 3-month moving average for smoothing purposes, the Ooba House Price Index's year-on-year growth was 2.2% for the 3 months to July 2017, while the 1<sup>st</sup> Time Buyer House Price Index was a slightly faster 4.0% over the same period.

## OUTLOOK

Where too from here for house prices? Based on FNB Macroeconomic forecasts, we would expect some mild lift in average house price inflation in 2018 and again in 2019. After a forecast average of 3% for 2017, we project a mild acceleration to an average of 4.7% in 2018 and 5.2% in 2019.

The FNB macroeconomic forecasts, underpinning this house price forecast, project a mild acceleration in real economic growth in 2018 to 0.9%, from an expected 0.5% for 2017, and a further rise to 1.3% in 2019. This small growth acceleration in 2018 is expected to be driven by some strengthening in the global economy's growth rate.

On top of this, we have had one 25 basis point interest rate cut in 2017 to date, and expect one further 25 basis point cut before 2017 is out. This could provide some further mild stimulus to housing demand heading towards 2018.

However, despite an expectation of a small nominal house price growth acceleration, these forecasts translate into ongoing decline in average house prices in real terms, when the house price index is deflated using the CPI. We believe it realistic to expect an ongoing real house price correction through the forecast period, because the small economic growth improvement to 1.3% by 2019 would still be a very weak growth outcome.

<b>FORECAST SUMMARY TABLE</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Real GDP Growth (%)</b>	0.3	0.5	0.9	1.3
<b>Prime Rate (End of Period) (%)</b>	10.5	10.0	10.0	10.5
<b>Consumer Price Inflation (Average) (%)</b>	6.3	5.3	5.0	5.5
<b>Dollar/Rand (End of Period)</b>	13.8	14.0	14.2	14.7
<b>Real Household Disposable Income Growth (%)</b>	1.2	0.8	1.1	1.3
<b>Average House Price Growth (%)</b>	4.9	3.0	4.7	5.2
<b>Real Average House Price Growth (%) CPI Adjusted</b>	-1.3	-1.3	-0.3	-0.3



# Monthly FNB House Price Index (Jan 2001 = 100)



how can we help you?

Date	Index	y/y % change	Date	Index	y/y % change	Date	Index	y/y % change	Date	Index	y/y % change
Jan-01	100.0		Jul-05	218.0	26.3%	Jan-10	284.6	4.0%	Jul-14	356.74	6.4%
Feb-01	100.7		Aug-05	218.1	23.5%	Feb-10	287.2	5.6%	Aug-14	357.22	6.1%
Mar-01	101.4		Sep-05	219.1	20.6%	Mar-10	289.6	6.8%	Sep-14	359.09	6.1%
Apr-01	102.4		Oct-05	221.3	17.9%	Apr-10	291.2	7.7%	Oct-14	361.79	6.2%
May-01	103.6		Nov-05	224.1	15.1%	May-10	292.0	8.2%	Nov-14	364.63	6.4%
Jun-01	104.7		Dec-05	227.8	13.0%	Jun-10	291.4	7.8%	Dec-14	366.99	6.1%
Jul-01	105.4		Jan-06	232.0	11.4%	Jul-10	290.0	6.5%	Jan-15	368.98	5.8%
Aug-01	106.0	9.2%	Feb-06	236.6	10.7%	Aug-10	289.3	5.3%	Feb-15	370.55	5.2%
Sep-01	106.5	8.9%	Mar-06	240.8	10.8%	Sep-10	289.6	4.3%	Mar-15	372.12	4.8%
Oct-01	107.1	8.9%	Apr-06	244.0	11.4%	Oct-10	290.0	3.7%	Apr-15	373.71	4.8%
Nov-01	107.9	9.3%	May-06	245.5	12.0%	Nov-10	289.9	3.1%	May-15	375.41	5.2%
Dec-01	109.3	10.1%	Jun-06	245.9	12.5%	Dec-10	289.7	2.4%	Jun-15	377.27	5.7%
Jan-02	110.9	10.9%	Jul-06	246.4	13.0%	Jan-11	289.9	1.9%	Jul-15	379.64	6.4%
Feb-02	112.9	12.1%	Aug-06	247.6	13.5%	Feb-11	291.5	1.5%	Aug-15	382.53	7.1%
Mar-02	114.8	13.2%	Sep-06	249.6	13.9%	Mar-11	293.6	1.4%	Sep-15	386.23	7.6%
Apr-02	116.2	13.6%	Oct-06	252.0	13.8%	Apr-11	295.5	1.5%	Oct-15	389.36	7.6%
May-02	117.1	13.1%	Nov-06	254.8	13.7%	May-11	297.2	1.8%	Nov-15	391.74	7.4%
Jun-02	117.5	12.2%	Dec-06	258.2	13.3%	Jun-11	298.3	2.4%	Dec-15	393.48	7.2%
Jul-02	117.7	11.7%	Jan-07	261.4	12.7%	Jul-11	299.1	3.1%	Jan-16	394.86	7.0%
Aug-02	117.9	11.3%	Feb-07	264.1	11.6%	Aug-11	299.5	3.5%	Feb-16	396.10	6.9%
Sep-02	118.2	11.0%	Mar-07	266.1	10.5%	Sep-11	299.7	3.5%	Mar-16	397.48	6.8%
Oct-02	118.8	10.9%	Apr-07	267.9	9.8%	Oct-11	299.8	3.4%	Apr-16	399.08	6.8%
Nov-02	119.5	10.7%	May-07	270.1	10.0%	Nov-11	300.7	3.7%	May-16	400.35	6.6%
Dec-02	120.5	10.3%	Jun-07	273.1	11.1%	Dec-11	302.6	4.5%	Jun-16	400.69	6.2%
Jan-03	121.9	9.9%	Jul-07	276.1	12.0%	Jan-12	305.5	5.4%	Jul-16	400.19	5.4%
Feb-03	123.9	9.7%	Aug-07	279.0	12.7%	Feb-12	308.8	5.9%	Aug-16	399.16	4.3%
Mar-03	126.3	10.0%	Sep-07	282.2	13.1%	Mar-12	312.4	6.4%	Sep-16	398.43	3.2%
Apr-03	129.0	11.0%	Oct-07	285.9	13.5%	Apr-12	315.6	6.8%	Oct-16	398.36	2.3%
May-03	131.6	12.3%	Nov-07	290.0	13.8%	May-12	317.6	6.9%	Nov-16	398.74	1.8%
Jun-03	134.1	14.2%	Dec-07	293.3	13.6%	Jun-12	318.6	6.8%	Dec-16	399.70	1.6%
Jul-03	136.8	16.2%	Jan-08	295.0	12.8%	Jul-12	318.6	6.5%	Jan-17	401.62	1.7%
Aug-03	139.1	17.9%	Feb-08	294.9	11.6%	Aug-12	318.5	6.3%	Feb-17	404.84	2.2%
Sep-03	141.3	19.6%	Mar-08	292.7	10.0%	Sep-12	318.3	6.2%	Mar-17	408.85	2.9%
Oct-03	144.0	21.3%	Apr-08	289.2	7.9%	Oct-12	318.0	6.1%	Apr-17	411.63	3.1%
Nov-03	147.1	23.1%	May-08	285.3	5.6%	Nov-12	318.0	5.7%	May-17	413.04	3.2%
Dec-03	150.7	25.0%	Jun-08	282.1	3.3%	Dec-12	318.9	5.4%	Jun-17	413.80	3.3%
Jan-04	154.4	26.7%	Jul-08	280.1	1.5%	Jan-13	321.5	5.3%	Jul-17	414.29	3.5%
Feb-04	158.3	27.8%	Aug-08	279.8	0.3%	Feb-13	324.8	5.2%	Aug-17	415.28	4.0%
Mar-04	162.0	28.3%	Sep-08	279.7	-0.9%	Mar-13	328.4	5.1%			
Apr-04	165.1	27.9%	Oct-08	279.1	-2.4%	Apr-13	331.1	4.9%			
May-04	167.5	27.3%	Nov-08	277.7	-4.3%	May-13	332.7	4.8%			
Jun-04	169.8	26.6%	Dec-08	275.8	-6.0%	Jun-13	334.0	4.8%			
Jul-04	172.5	26.2%	Jan-09	273.7	-7.2%	Jul-13	335.3	5.2%			
Aug-04	176.6	27.0%	Feb-09	271.9	-7.8%	Aug-13	336.8	5.8%			
Sep-04	181.7	28.6%	Mar-09	271.1	-7.4%	Sep-13	338.6	6.4%			
Oct-04	187.8	30.4%	Apr-09	270.5	-6.5%	Oct-13	340.5	7.1%			
Nov-04	194.7	32.3%	May-09	269.8	-5.4%	Nov-13	342.7	7.8%			
Dec-04	201.7	33.9%	Jun-09	270.4	-4.2%	Dec-13	345.8	8.4%			
Jan-05	208.2	34.9%	Jul-09	272.2	-2.9%	Jan-14	348.9	8.5%			
Feb-05	213.7	34.9%	Aug-09	274.8	-1.8%	Feb-14	352.2	8.4%			
Mar-05	217.4	34.2%	Sep-09	277.5	-0.8%	Mar-14	354.9	8.1%			
Apr-05	219.1	32.7%	Oct-09	279.7	0.2%	Apr-14	356.4	7.7%			
May-05	219.2	30.8%	Nov-09	281.3	1.3%	May-14	357.0	7.3%			
Jun-05	218.6	28.8%	Dec-09	282.8	2.5%	Jun-14	356.9	6.9%			

## ADDENDUM - NOTES:

**Note on The FNB Average House Price Index:** Although also working on the average price principle (as opposed to median or repeat sales), the FNB House Price Index differs from a simple average house price index in that it could probably be termed a “fixed weight” average house price index.

One of the practical problems we have found with house price indices is that relative short term activity shifts up and down the price ladder can lead to an average or median price index rising or declining where there was not necessarily “genuine” capital growth on homes. For example, if “Full Title 3 Bedroom volumes remain unchanged from one month to the next, but Sectional Title 1 Bedroom and Less (the cheapest segment on average) transaction volumes hypothetically double, the overall national average price could conceivably decline due to this relative activity shift.

This challenge of activity shifts between segments is faced by all constructors of house price indices. In an attempt to reduce this effect, we decided to fix the weightings of the FNB House Price Index’s sub-segments in the overall national index. This, at best, can only be a partial solution, as activity shifts can still take place between smaller segments within the sub-segments. However, it does improve the situation.

With our 2013 re-weighting exercise, we have begun to segment not only according to room number, but also to segment according to building size within the normal segments by room number, in order to further reduce the impact of activity shifts on average price estimates.

The FNB House Price Index’s main segments are now as follows:

- The weightings of the sub-segments are determined by their relative transaction volumes over the past 5 years, and will now change very slowly over time by applying a 5-year moving average to each new price data point. The sub-segments are:
  - Sectional Title:
    - Less than 2 bedroom – Large
    - Less than 2 bedroom – Medium
    - Less than 2 bedroom – Small
  
    - 2 Bedroom – Large
    - 2 bedroom – Medium
    - 2 bedroom – Small
  
    - 3 Bedroom and More - Large
    - 3 Bedroom and More - Medium
    - 3 Bedroom and More - Small
  - Full Title:
    - 2 Bedrooms and Less - Large
    - 2 Bedrooms and Less - Medium
    - 2 Bedrooms and Less - Small
  
    - 3 Bedroom - Large
    - 3 Bedroom - Medium
    - 3 Bedroom - Small
  
    - 4 Bedrooms and More - Large
    - 4 Bedrooms and More - Medium
    - 4 Bedrooms and More – Small

The size cut-offs for “small”, medium” and “large” differ per room number sub-segment. “Large” would refer to the largest one-third of homes within a particular room number segment over the past 5 year period, “Medium” to the middle one-third, and “Small” to the smallest one-third of homes within that segment.

- The Index is constructed using transaction price data from homes financed by FNB.
- The minimum size cut-off for full title stands is 200 square metres, and the maximum size is 4000 square metres
- The maximum price cut-off is R10m, and the lower price cut-off is R20,000 (largely to eliminate major outliers and glaring inputting errors).
- The index is very lightly smoothed using a Hodrick-Prescott smoothing function with a Lambda of 5.