



The Impact of Aircraft Noise on Brisbane Residential Property Sectors: 1988-2017

2017 BRISBANE RESIDENTIAL PROPERTY
INVESTMENT PERFORMANCE UPDATE

FULL SUBURB SUMMARY

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1. Introduction

The following Tables represent the investment performance of 53 geographically diverse suburbs across Brisbane. These 53 suburbs are subject to varying exposures to the flight paths for the existing runway at Brisbane Airport, as well as the new flight paths when the second runway at Brisbane Airport commences operations.

A review of the suburb selection shown in the following tables, shows that these suburbs have been grouped based on geographic location in Brisbane and subject to a range of exposure to aircraft noise from the existing and proposed runway operations at Brisbane Airport:

- » Brisbane Northern Suburbs
- » Brisbane Southern suburbs
- » Brisbane Eastern Suburbs
- » Brisbane Western suburbs
- » Brisbane Inner City suburbs

For reporting purposes the suburbs are grouped by geographic location, but each of these groupings contain a range of suburbs based on socio-economic status and current impact from the existing runway flight paths from high exposure, moderate exposure and limited (no) exposure to aircraft noise. With the start of operations on the new runway, several of the suburbs that are currently defined as limited or no exposure will be subject to increased exposure to aircraft noise.

With the addition of the 2017 residential property sales transactions, the investment performance analysis now covers the years 1988 to 2017, a 30-year period. Over these thirty years, the Brisbane residential property sector has been subject to periods of housing booms and recessions; therefore, the results reflect an accurate overview of the investment performance of each of the suburbs in the study. The analysis over the period 2016 and 2017 has also covered the period of oversupply of residential units in Brisbane, particularly in the inner city suburbs of Brisbane.

This summary report now covers a total of 53 Brisbane suburbs. These 53 suburbs represent:

- » 33% of the Brisbane Inner City suburbs
- » 26% of Northern Brisbane suburbs
- » 20% of Southern Brisbane suburbs
- » 52% of Eastern Brisbane suburbs
- » 24% of Western Brisbane suburbs

Overall these 53 suburbs represent most of the Brisbane suburbs that are currently exposed to aircraft noise from the existing runway operations and a considerable number of suburbs that could be exposed to aircraft noise when the proposed runway commences operations.

These groupings allow the investment performance for Brisbane suburbs to be compared on both a geographic and socio-economic basis.

In addition to the investment performance analysis based on suburb exposure to aircraft noise, the update also compares the investment performance for individual suburbs located under the current existing and proposed flight paths, suburbs that will be potentially subject to flight paths when the existing and proposed runway operations commence in tandem and suburbs that are currently not affected by aircraft noise and will remain so when the proposed runway opens. Fourteen additional suburbs have been added to the previous analysis that was undertaken in the original report in 2013. This summary report also includes Highgate Hill, East Brisbane, Woolloongabba, Teneriffe, Toowong, Kangaroo Pt, Moorooka, Fairfield, Pinkenba, Nudgee Beach, Dutton Park, Rocklea, The Gap and Tingalpa for the period 1988 to 2017.

In total 53 suburbs of Brisbane have now been analysed to determine their average annual capital returns and investment performance based on median and average house prices. An alphabetical listing of these suburbs and their investment performance is also included as appendices 1 and 2 of the report.

In all cases, the analysis is based on both the annual median house price and the annual average house price for each of the suburbs analysed. The investment performance analysis comprises:

- » 2017 capital return (median house price)
- » 2017 capital return (average house price)
- » 1988-2017 capital return (median house price)
- » 1988-2017 capital return (average house price)
- » 2017 capital return (inner city unit median price)
- » Average annual volatility (median and average house and unit price)
- » Risk/Return Ratio

2. Major Findings 2017

The most significant result from the 2017 data is the fact for the first time in many years the median and average house investment return for the full Brisbane region has been higher than the investment return for a range of suburbs across the study area. In 2017 the capital return for 66% of the inner-city suburbs showed a return less than the Brisbane median house price return of 6.19%, this is the first time in the study period that this has occurred. A similar result also occurred across the other geographic locations in the study. For the study suburbs in the Western location 80% recorded 2017 capital returns less than the Brisbane average. For the other locations 60% of the Southern suburbs recorded returns less than the Brisbane median capital return, Northern suburbs 38% and Eastern suburbs 42%. This has been due to the very high returns for suburbs in the lower, outer socio-economic suburbs of Brisbane compared to the middle to high middle inner and middle ring suburbs. In many cases the outer suburbs of Brisbane had investment returns in 2017 nearly twice the return of many middle and inner ring housing suburbs. This is also evidenced by the high 2017 capital return of 11.99% in Mt Gravatt East, Mansfield 7.37% and Moorooka 6.72%.

2017 also saw a continuing decline in the investment performance of units and apartments across Brisbane. The oversupply of inner city apartments has again resulted in negative returns for the majority of suburbs in 2017.

Again another major finding in the 2017 suburb performance was the strong capital growth in a number of suburbs that are directly impacted by aircraft noise. Suburbs subject to high levels of aircraft noise such as Seven Hills, Cannon Hill, Camp Hill, and Tarragindi recorded 2017 returns of 23.07%, 8.13%, 9.65% and 7.60% respectively, well above the Brisbane average of 6.19%.

These 2017 results support the previous analysis for 1988-2016, that exposure to aircraft noise is not the only factor that influences buyer choice and subsequent impacts on the investment return for residential property in Brisbane and that even on an annual basis, suburbs subject to aircraft noise can still outperform suburbs with minimal or no aircraft noise affect due to overriding value factors such as services, proximity to CBD, good transport and recreation facilities.

The full 30-year analysis also confirms that the suburbs under the existing runway flight paths and within the inner city and middle ring locations of Brisbane are still showing higher average annual capital returns compared to other less well-located suburbs of Brisbane. This is still evidenced by the 30-year average annual returns for Brisbane suburbs under existing flight paths showing average annual returns over 30 years in excess of 8% per annum, well above the Brisbane average of 6.19%. If aircraft noise was the main driver of values in these suburbs it would be expected that the average annual returns would be lower than the Brisbane median house price average capital return.

The base data for the years 1988 to 2013 can be found in the full QUT/BAC report released in 2013, with the 2014, 2015 and 2016 data update available in separate reports.

3. Individual Suburb Performance

Median and Average House Prices 1988-2017

This suburb comparison has been initially broken down on the basis of geographic location in Brisbane. The classifications are:

- » Inner city suburbs
- » Northern suburbs
- » Southern suburbs
- » Eastern suburbs and
- » Western suburbs.

For each of these suburbs the investment performance is recorded in respect to the capital return for 2017, based on the change in median and average house prices from 2016 to 2017, as well as the long term investment performance of houses in these suburbs over the period 1988 to 2017. In addition to the capital returns, the volatility and risk return ratios for these suburbs are analysed.

4. Individual Suburb Performance: Inner City

Table 1: Inner City Houses: Median Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
East Brisbane	-3.93	9.47	13.99	1.48
Highgate Hill	-18.84	9.17	12.85	1.40
Kangaroo Point	34.47	11.21	24.01	2.14
New Farm	-3.73	12.04	15.66	1.30
Teneriffe	47.76	14.92	24.88	1.67
Woolloongabba	5.63	9.41	12.27	1.30
Greater Brisbane	6.19	7.20	7.89	1.10

During 2017 there was significant variations in the capital returns and price increases for houses in the Brisbane inner city suburbs. In 2017 this ranged from a decrease in returns, based on median house prices, in East Brisbane, Highgate Hill and New Farm. The highest 2017 return was in Kangaroo Point, but based on a small number of high end property sales compared to the same suburb in 2016. A major factor in this variation is the small number of house sales that occur in these suburbs, as the major property type is home units/apartments. This low sales volume can also result in significant price differences from year to year

and this is reflected in the high levels of volatility ranging from 12.27% (Woolloongabba) to 24.88% (Teneriffe). The more constant factor in these inner-city suburbs is the overall high average annual returns across the longer investment period. From 1988 to 2017, these suburbs have recorded some of the highest capital investment returns, with all suburbs recording average annual capital returns over 30 years in excess of 9%. Despite the relatively higher levels of risk, the higher returns for these suburbs off set the volatility to show similar risk return ratios compared to outer Brisbane suburbs with lower returns and less risk.

Table 2: Inner City Houses: Average Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
East Brisbane	6.80	10.72	17.75	1.66
Highgate Hill	-10.25	9.22	16.81	1.82
Kangaroo Point	30.19	13.19	38.85	2.94
New Farm	2.37	12.11	14.71	1.21
Teneriffe	47.49	15.79	31.37	1.99
Woolloongabba	2.82	9.56	12.63	1.32

Based on average house prices for these suburbs, the investment performance over the period 1988-2017 has been more significant compared to the same returns based on median house prices.

Table 2 shows that four of these inner-city suburbs have shown a long term average annual capital return in excess of 10% per annum, with Teneriffe houses returning an annual return of 15.79% per year for the last 30 years.

5. Individual Suburb Performance: Northern Suburbs

Table 3: Northern Brisbane Suburbs: Median Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Albion	8.43	9.93	19.81	1.99
Ascot	17.46	9.36	15.58	1.66
Chermside West	6.27	6.26	11.14	1.78
Clayfield	11.50	8.64	12.17	1.41
Gordon Park	7.19	9.00	10.49	1.17
Hamilton	5.01	10.73	21.86	2.04
Mitchelton	4.58	8.23	9.58	1.16
Northgate	3.70	8.89	11.81	1.33
Nudgee Beach	10.55	15.97	41.52	2.60
Pinkenba	-8.29	9.96	26.00	2.64
Stafford	4.79	8.10	9.91	1.21
Virginia	12.18	8.54	10.95	1.28
Wooloowin	7.64	9.10	14.45	1.59
Greater Brisbane	6.19	7.20	7.89	1.10

Tables 3 and 4 show the capital returns and investment performance for a range of suburbs located in areas north of the Brisbane CBD.

In 2017 the capital growth across these 13 northern Brisbane suburbs has been very varied ranging from a low of -8.29% for Pinkenba to a high of 17.46% for Ascot. Returns for the lower value suburbs located further from the Brisbane CBD tended to be below 5% in 2017 based

on median house prices, with suburbs closer to the CBD generally recording higher returns in 2017.

Although these suburbs are subject to varying levels of aircraft noise due to their locations under, adjoining or away from flight paths, the long term investment performance based on capital returns is very similar, especially when distance from the CBD and socio-economic status of the suburbs are compared.

The average annual capital return for Nudgee Beach at 15.97%, is one of the highest long term returns across the 54 suburbs analysed but this is more to do with the small number of sales transactions per year and the varied range of house types in the area and is reflected in the very high volatility of over 40%. This indicates that the change in price from year to year can be very significant with years where the median house price increases or falls

significantly. The small number of houses in the suburb of Pinkenba, with the subsequent low sales volume per year, results in a similar high average annual capital return and high volatility compared to other lower value suburbs analysed such as Chermside West, Mansfield and Mt Gravatt East. This is more pronounced when the investment performance is based on average house prices in Pinkenba.

Table 4: Northern Brisbane Suburbs: Average Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%)1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Albion	3.58	9.72	17.80	1.83
Ascot	16.85	8.84	12.31	1.39
Chermside West	7.55	6.33	10.50	1.66
Clayfield	11.02	8.31	12.67	1.52
Gordon Park	9.31	8.99	9.49	1.05
Hamilton	5.58	9.43	17.70	1.88
Mitchelton	6.33	8.58	11.05	1.29
Northgate	1.62	9.04	11.93	1.02
Nudgee Beach	15.38	15.69	35.77	2.28
Pinkenba	17.11	15.67	46.35	2.96
Stafford	6.95	8.35	11.06	1.33
Virginia	4.80	8.48	10.51	1.24
Wooloowin	6.81	7.55	11.94	1.51

Northgate, Albion and Virginia were the only northern suburbs in the study that had significantly lower returns in 2017 when average house prices are compared to median house prices in 2017. Based on average house price changes from 2016 to 2017, the highest returns were recorded in Nudgee Beach and Pinkenba (15.38% and 17.11% respectively). These differences between the median and average house price returns in these two small suburbs are again due to the small number of sales and several high value sales in 2017 reflected in the results.

Overall across these suburbs, location to the CBD appears to be the major driver of house prices and returns. Over the period 1988 to 2017 the average annual capital returns, based on average house prices, across the majority of these suburbs (excluding Pinkenba and Nudgee Beach) has been within a relatively small range from 6.33% (Chermside West) and 9.72% (Albion).

6. Individual Suburb Performance: Southern Suburbs

Table 5 shows the 10 suburbs classified as southern Brisbane suburbs in the study. All these suburbs are currently located under or adjacent to the southern flight paths.

Table 5: Southern Brisbane Suburbs: Median Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Annerley	2.27	8.17	9.91	1.21
Dutton Park	-7.85	8.96	12.12	1.35
Fairfield	2.95	8.54	10.94	1.28
Forest Lake	0.00	4.56	12.97	2.84
Holland Park West	0.72	8.02	10.01	1.25
Mansfield	7.37	7.28	9.49	1.30
Moorooka	6.72	8.03	9.26	1.15
Mt Gravatt East	11.99	8.03	9.20	1.15
Rocklea	4.30	8.30	13.88	1.67
Tarragindi	7.60	8.56	9.84	1.15
Greater Brisbane	6.19	7.20	7.89	1.10

The 2017 capital return for these suburbs based on median house price changes from 2016 were varied, with the suburbs closer to the Brisbane CBD actually performing at much lower rates compared to southern suburbs located further from the Brisbane CBD. Dutton Park recorded a negative return in 2017 of -7.85%, based on a relatively small sales volume. In contrast the more affordable suburb of Mt Gravatt East recorded a capital return of 11.99% in 2017.

As was the case with the Northern Suburbs analysis, suburbs tended to have a greater capital return for 2017 based on average house prices.

When the investment performance of these suburbs is analysed across the period 1988 to 2017, the capital returns (both median house price and average house price) are very consistent and well above the overall Brisbane median house price return of 7.20% for the 30-year period.

When the outer suburbs of Mansfield and Forest Lake are excluded from this suburb grouping, the 30-year capital returns range from 8.02% (Holland Park West), 8.03% (Moorooka and Mt Gravatt East) to 8.96% (Dutton Park).

Table 6: Southern Brisbane Suburbs: Average Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Annerley	1.47	8.48	12.32	1.45
Dutton Park	-2.64	9.88	22.04	2.23
Fairfield	13.19	8.65	13.59	1.57
Forest Lake	0.22	4.61	12.40	2.69
Holland Park West	-0.77	7.95	9.97	1.25
Mansfield	6.81	7.55	11.44	1.52
Moorooka	6.59	8.08	10.65	1.32
Mt Gravatt East	9.53	7.89	9.89	1.25
Rocklea	0.76	9.03	18.35	2.03
Tarragindi	2.92	8.56	10.10	1.18

During 2017, the middle and upper middle suburbs in the southern suburbs of Brisbane had lower capital returns based on average house prices compared to the lower middle suburbs further south of the Brisbane CBD, with Dutton Park and Holland Park West having a negative return in 2017 and Tarragindi and Annerley having very low capital returns in 2017 2.92% and 1.47% respectively.

7. Individual Suburb Performance: Eastern Suburbs

The eastern suburbs of Brisbane analysed comprise a range in socio-economic status from high value suburbs such as Bulimba, Hawthorne and Balmoral, through to some lower value suburbs including Murarrie and Tingalpa. Table 7 shows that the 2017 capital returns based on median house ranged from a negative -1.56 for Balmoral to a high of 23.07% for Seven Hills. The significant increase in capital returns for Seven Hills, compared to the long-term average and 2016, was due to 38% of 2017 house sales being greater than \$1 million.

The lower value suburbs located further from the Brisbane CBD tended to have higher capital returns in 2017 compared to other suburbs that were also south of Brisbane but closer to the CBD (Hawthorne 0.00%; Norman Park 0.35% and Coorparoo 1.53%), a similar result to the southern suburbs in the study.

Based on the full 30-year analysis the trends based on location to the CBD and socio-economic status of the suburbs is providing similar results to the other suburb locations. The suburbs considered to be higher value and closer to the Brisbane CBD are showing long term capital growth in the range from 9.6% (Balmoral) to 12.14% (Bulimba). The middle to high middle socio-economic suburbs have long term average annual capital gains from the low 8% through to low 9%, with the lower value suburbs ranging from 7 to 8%. The only suburb in this grouping to be below the Brisbane median house price average is Belmont at 7.15%.

Table 7: Eastern Brisbane Suburbs: Median Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Balmoral	-1.56	9.59	12.51	1.31
Belmont	8.45	7.15	10.40	1.45
Bulimba	12.17	12.14	19.89	1.64
Camp Hill	9.65	9.56	13.16	1.39
Cannon Hill	8.13	9.33	11.13	1.19
Carindale	4.24	6.83	11.60	1.70
Coorparoo	1.53	9.09	12.74	1.40
Hawthorne	0.00	10.44	10.53	1.01
Morningside	8.05	9.41	10.35	1.10
Murarrie	7.08	8.75	11.45	1.31

Norman Park	0.35	9.06	10.08	1.11
Seven Hills	23.07	9.59	13.11	1.37
Tingalpa	4.13	7.23	11.16	1.52
Wynnum	7.56	8.49	11.38	1.19
Greater Brisbane	6.19	7.20	7.89	1.10

When the analysis of the eastern suburbs is carried out on the basis of average house prices, most suburbs recorded an increase in both the 2017 return and the 30 year period returns. Hawthorn showed a 2017 return of 0.00% based on median house prices but a positive return of 20.08% based on average house prices.

Table 8: Eastern Brisbane Suburbs: Average Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Balmoral	-2.85	9.83	11.74	1.19
Belmont	9.49	7.48	13.11	1.75
Bulimba	7.73	11.44	18.44	1.61
Camp Hill	2.06	9.36	12.48	1.33
Cannon Hill	27.64	10.06	12.56	1.25
Carindale	5.24	7.09	11.88	1.67
Coorparoo	7.41	9.75	13.81	1.42
Hawthorne	20.08	11.38	13.81	1.21
Morningside	8.88	9.46	10.67	1.13
Murarie	13.91	9.35	13.74	1.45
Norman Park	-0.52	9.66	14.07	1.45
Seven Hills	22.00	9.70	12.90	1.37
Tingalpa	5.76	8.08	14.38	1.78
Wynnum	6.93	8.43	11.48	1.36

A review of the data for Hawthorne shows that in 2017 there were 15% of house sales with a price greater than \$2.5 million, well above the median price in 2017 of \$1.2 million. Although the majority of these suburbs are located under existing flight paths the returns based on both median and average house prices are still significantly

higher to the Brisbane median house price and similar socio-economic suburbs with no or limited exposure to aircraft noise. Volatility of house price change across the eastern suburbs has been consistent across all suburbs, with the high value suburbs showing higher levels of return risk compared to lower value suburbs.

8. Individual Suburb Performance: Western Suburbs

Like the previous suburbs east of Brisbane CBD, the suburbs located west of the Brisbane CBD comprise a range in socio-economic status from high value suburbs such as Toowong to lower value suburbs such as Jindalee and Kenmore.

Table 9: Western Brisbane Suburbs: Median Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Ashgrove	7.47	8.39	9.27	1.10
Bardon	2.13	8.41	10.73	1.28
Chapel Hill	12.97	7.98	11.52	1.44
Chelmer	-1.48	9.55	16.68	1.75
Graceville	-3.60	8.73	10.73	1.23
Jindalee	2.33	7.20	15.94	2.21
Kenmore	-0.75	6.72	9.21	1.46
Sherwood	-4.89	8.68	9.40	1.08
The Gap	5.26	7.46	10.27	1.38
Toowong	5.94	7.93	12.26	1.55
Greater Brisbane	6.19	7.20	7.89	1.10

In 2017 there were four western suburbs in the study that recorded negative growth in median house prices (Chelmer, Graceville, Kenmore and Sherwood) and two suburbs based on the average house prices (Kenmore and Sherwood).

In 2017 the highest capital return based on median house prices was Chapel Hill 12.07% and Ashgrove 7.47%. Based on average house prices the better performing suburbs in this grouping were Toowong 16.34% and Jindalee 9.35%. In 2017 there were only two suburbs in this grouping that outperformed the Brisbane median house price return of

6.19% (Chapel Hill and Ashgrove). However, based on the 30-year study period only Kenmore (6.72%) is below the average annual capital return of Brisbane, with Jindalee equivalent to the Brisbane average at 7.20%. Jindalee has one of the lower average annual capital returns in the full 54 suburb analysis but also one of the highest volatility levels (15.94%) resulting in a high risk/return ratio of 2.21, despite being a low return lower value suburb. The middle value western suburbs have recorded similar long-term capital returns (low 8% to low 9%) to similar value suburbs in the north, south and eastern groupings.

When the investment performance is carried out based on average house prices, Table 10 shows that six (Bardon, Chelmer, Graceville, Jindalee, The Gap and Toowong) of the 10 suburbs have a higher capital return 2017 compared to their performance based on median house prices.

Kenmore and Jindalee have recorded the lowest long term capital returns (average price) of 6.85% and 6.14% respectively.

Again the risk levels for these suburbs are in line with the results for the other locational areas.

Table 10: Western Brisbane Suburbs: Average Price 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%)1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Ashgrove	2.55	8.27	9.74	1.18
Bardon	7.11	8.62	10.51	1.22
Chapel Hill	1.95	7.95	10.57	1.33
Chelmer	3.04	8.30	14.09	1.70
Graceville	7.76	9.03	11.13	1.21
Jindalee	9.35	6.14	8.99	1.46
Kenmore	-2.68	6.85	10.69	1.53
Sherwood	-9.07	8.02	9.40	1.17
The Gap	8.65	7.75	10.90	1.41
Toowong	16.34	9.28	21.75	2.34

9. Individual Suburb Performance: Inner City Units

The inner city unit market in Brisbane has been in oversupply for the past three years. Again in 2017, most inner suburbs with high unit percentages have suffered a negative return. In 2017 the only inner city suburb recording a positive capital return was Kangaroo Pt at 0.98%, well below the housing returns for the same suburb. Highgate Hill had the most significant decrease of -14.87% in 2017.

Table 11: Inner City Suburbs: Median Unit Price Analysis 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
East Brisbane	-1.85	6.32	12.23	1.94
Highgate Hill	-14.87	6.01	13.10	2.18
Kangaroo Point	0.98	6.03	16.07	2.66
Teneriffe	-6.05	8.20	9.50	1.67
Woolloongabba	-7.42	8.28	26.96	3.26

Table 11 shows that over the period 1988-2017, only Teneriffe and Woolloongabba have had unit capital returns similar to the level of returns recorded by houses in the middle socio-economic and middle ring suburbs of Brisbane. In both these cases the return from units has been considerably less than the return from houses for the same high value locations. East Brisbane, Highgate Hill and Kangaroo Pt have recorded capital growth on 6.32%,

6.01% and 6.03% respectively, well below the Brisbane median house price for the same period. These returns, lower than houses, have also been at very high levels of volatility, resulting in risk/return ratios significantly higher than the housing markets in the other suburbs analysed in this study.

Table 12: Median Unit Price Analysis: Sub period analysis: Predominant housing type

Suburb	Capital Return: Last 3 Years (%)	Capital Return: Last 5 Years (%)	Capital Return: Last 10 Years (%)
East Brisbane	-1.87	0.04	2.28
Highgate Hill	-4.91	-0.32	0.75
Kangaroo Point	0.64	0.10	1.92
Teneriffe	1.29	2.03	2.20
Toowong	0.75	2.76	2.10
Woolloongabba	3.01	1.88	0.72

The suburbs in Table 12 are inner city suburbs where the predominant residential property type is unit developments ranging from medium density to high rise complexes. This table shows that the older established unit locations of Woolloongabba, Teneriffe and Kangaroo Pt have achieved positive capital returns for each of the sub period analysis.

The last 10-year period analysis shows that over this period the unit markets have been more consistent but also at low rates of capital return ranging from a low of 0.72% for Woolloongabba to a high of only 2.28% for East Brisbane. All these capital returns are significantly lower than houses in the same suburbs recorded over the same period.

10. Summary

When the capital returns for a range of suburbs are analysed on a single year basis, there is always greater variation in the annual returns. This has again been the case with the change in price and the capital return from 2016 to 2017. The results for 2017 year show a range in capital returns with less variation in 2017 compared to 2016.

Camp Hill and Mt Gravatt East recorded the highest capital growth for all the suburbs in the study in 2017 (9.65% and 11.98% respectively). For the 30-year period the high value suburbs of Hamilton (10.73%), Bulimba (12.14%) and New Farm (12.04%) continue to record the highest average annual capital returns across the study area (disregarding the small housing sectors of Pinkenba and Nudgee Beach). These returns are well above the Brisbane average for the same period.

The most prominent value driver in 2017 appears to be location in the outer middle ring suburbs of Brisbane that are further from the CBD, with returns generally increasing as distance from Brisbane CBD increases. These suburbs are considered to be more affordable and more in current demand. This is also similar to the housing markets in the other capital cities of Australia.

Appendicies



Appendix 1: Alphabetical Suburb Listing: Median House Price Capital Returns (%): 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Albion	8.43	9.93	19.81	1.99
Annerley	2.27	8.17	9.91	1.21
Ascot	17.46	9.36	15.58	1.66
Ashgrove	7.47	8.39	9.27	1.10
Balmoral	-1.56	9.59	12.51	1.31
Bardon	2.13	8.41	10.73	1.28
Belmont	8.45	7.15	10.4	1.45
Bulimba	12.17	12.14	19.89	1.64
Camp Hill	9.65	9.56	13.16	1.39
Cannon Hill	8.13	9.33	11.13	1.19
Carindale	4.24	6.83	11.6	1.70
Chapel Hill	12.97	7.98	11.52	1.44
Chelmer	-1.48	9.55	16.68	1.75
Chermside West	6.27	6.26	11.14	1.78
Clayfield	11.5	8.64	12.17	1.41
Coorparoo	1.53	9.09	12.74	1.40
Dutton Park	-7.85	8.96	12.12	1.35
East Brisbane	-3.93	9.47	13.99	1.48
Fairfield	2.95	8.54	10.94	1.28
Forest Lake	0.00	4.56	12.97	2.84
Gordon Park	7.19	9.00	10.49	1.17
Graceville	-3.60	8.73	10.73	1.23
Hamilton	5.01	10.73	21.86	2.04
Hawthorne	0.00	10.44	10.53	1.01
Highgate Hill	-18.84	9.17	12.85	1.40
Holland Park West	0.72	8.02	10.01	1.25
Jindalee	2.33	7.2	15.94	2.21
Kangaroo Point	34.47	11.21	24.01	2.14
Kenmore	-0.75	6.72	9.21	1.46
Mansfield	7.37	7.28	9.49	1.30
Mitchelton	4.58	8.23	9.58	1.16
Moorooka	6.72	8.03	9.26	1.15
Morningside	8.05	9.41	10.35	1.10
Mt Gravatt East	11.99	8.03	9.2	1.15
Murrarie	7.08	8.75	11.45	1.31
New Farm	-3.73	12.04	15.66	1.30
Norman Park	0.35	9.06	10.08	1.11
Northgate	3.70	8.89	11.81	1.33
Nudgee Beach	10.55	15.97	41.52	2.60
Pinkenba	-8.29	9.96	26.00	2.64
Rocklea	4.30	8.3	13.88	1.67
Seven Hills	23.07	9.59	13.11	1.37
Sherwood	-4.89	8.68	9.40	1.08
Stafford	4.79	8.1	9.91	1.21
Tarragindi	7.60	8.56	9.84	1.15
Teneriffe	47.76	14.92	24.88	1.67
The Gap	5.26	7.46	10.27	1.38
Tingalpa	4.13	7.23	11.16	1.52
Toowong	5.94	7.93	12.26	1.55
Virginia	12.18	8.54	10.95	1.28
Woolloongabba	5.63	9.41	12.27	1.30
Woollowin	7.64	9.1	14.45	1.59
Wynnum	7.56	8.49	11.38	1.19
Greater Brisbane	6.19	7.2	7.89	1.10

Appendix 2: Alphabetical Suburb Listing: Average House Price Capital Returns (%): 1988-2017

Suburb	2017 Capital Return (%)	Average Annual Capital Return (%) 1988-2017	Average Annual Volatility (%)	Risk Return Ratio
Albion	3.58	9.72	17.80	1.83
Annerley	1.47	8.48	12.32	1.45
Ascot	16.85	8.84	12.31	1.39
Ashgrove	2.55	8.27	9.74	1.18
Balmoral	-2.85	9.83	11.74	1.19
Bardon	7.11	8.62	10.51	1.22
Belmont	9.49	7.48	13.11	1.75
Bulimba	7.73	11.44	18.44	1.61
Camp Hill	2.06	9.36	12.48	1.33
Cannon Hill	27.64	10.06	12.56	1.25
Carindale	5.24	7.09	11.88	1.67
Chapel Hill	1.95	7.95	10.57	1.33
Chelmer	3.04	8.3	14.09	1.70
Chermside West	7.55	6.33	10.5	1.66
Clayfield	11.02	8.31	12.67	1.52
Coorparoo	7.41	9.75	13.81	1.42
Dutton Park	-2.64	9.88	22.04	2.23
East Brisbane	6.80	10.72	17.75	1.66
Fairfield	13.19	8.65	13.59	1.57
Forest Lake	0.22	4.61	12.4	2.69
Gordon Park	9.31	8.99	9.49	1.05
Graceville	7.76	9.03	11.13	1.21
Hamilton	5.58	9.43	17.70	1.88
Hawthorne	20.08	11.38	13.81	1.21
Highgate Hill	-10.25	9.22	16.81	1.82
Holland Park West	-0.77	7.95	9.97	1.25
Jindalee	9.35	6.14	8.99	1.46
Kangaroo Point	30.19	13.19	38.85	2.94
Kenmore	-2.68	6.85	10.69	1.53
Mansfield	6.81	7.55	11.44	1.52
Mitchelton	6.33	8.58	11.05	1.29
Moorooka	6.59	8.08	10.65	1.32
Morningside	8.88	9.46	10.67	1.13
Mt Gravatt East	9.53	7.89	9.89	1.25
Murrarie	13.91	9.35	13.74	1.45
New Farm	2.37	12.11	14.71	1.21
Norman Park	-0.52	9.66	14.07	1.45
Northgate	1.62	9.04	11.93	1.02
Nudgee Beach	15.38	15.69	35.77	2.28
Pinkenba	17.11	15.67	46.35	2.96
Rocklea	0.76	9.03	18.35	2.03
Seven Hills	22.00	9.70	12.90	1.37
Sherwood	-9.07	8.02	9.40	1.17
Stafford	6.95	8.35	11.06	1.33
Tarragindi	2.92	8.56	10.10	1.18
Teneriffe	47.49	15.79	31.37	1.99
The Gap	8.65	7.75	10.90	1.41
Tingalpa	5.76	8.08	14.38	1.78
Toowong	16.34	9.28	21.75	2.34
Virginia	4.80	8.48	10.51	1.24
Woolloongabba	2.82	9.56	12.63	1.32
Woolloowin	6.81	7.55	11.94	1.51
Wynnum	6.93	8.43	11.48	1.36

