

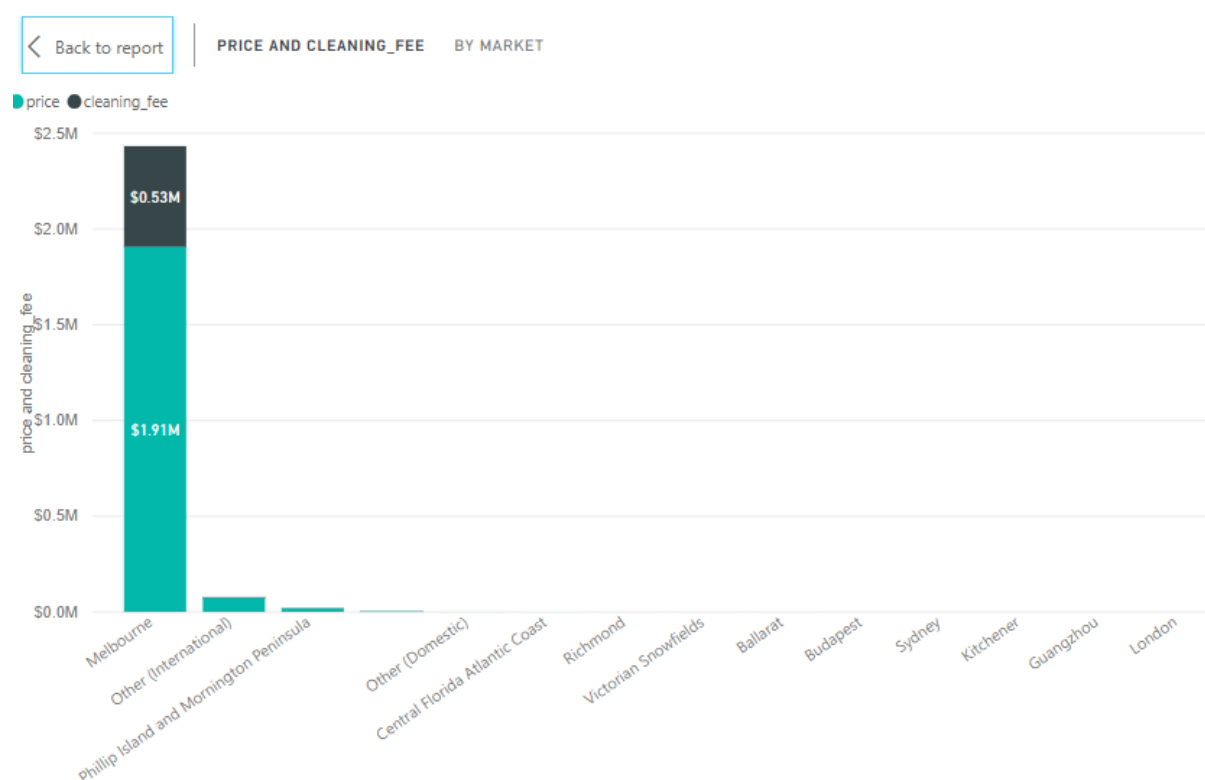
Visualization With PowerBi

This Analysis of the Airbnb provides information to Rachel about investing in Airbnb in greater Melbourne area. Also, it shows which suburbs has more profits and which properties are better to invest. This analysis is made by using Power BI tool with visualizations to get better understanding.

Is Investment on Airbnb worthwhile?

Prices according to Market

The last 10 years Market price history of Air BNB is visualized below.



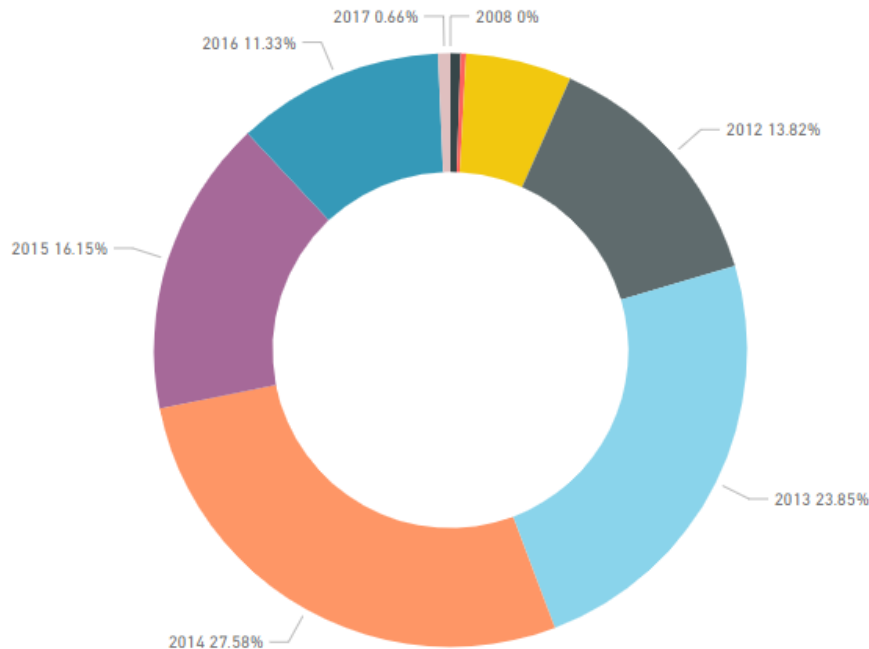
From the above Stacked column chart, it illustrates Melbourne market price (\$1.91 million) which is highest in last 10 years. This shows that Rachel will get her investments back (excluding Cleaning fee) in approximately 2 years.

Yearly count of Host listings:

The below donut chart shows the yearly (2008-2017) count of host listings.

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HOST LISTINGS COUNT BY YEAR



From the above chart it is clear that host listings vary from 2008 to 2014 which is increasing yearly because of the high demand by customers. There was a sudden drop in host listings for the past 20 years because the properties are less compared to customer demand. From the above analysis we figured out that Airbnb properties has huge demand and gets more profit whoever invests. Rachel can invest in Airbnb properties in Melbourne area and she can get profit from her investments (including cleaning fee).

High profitable Areas:

Below table shows the listing of neighborhood with prices and profits:

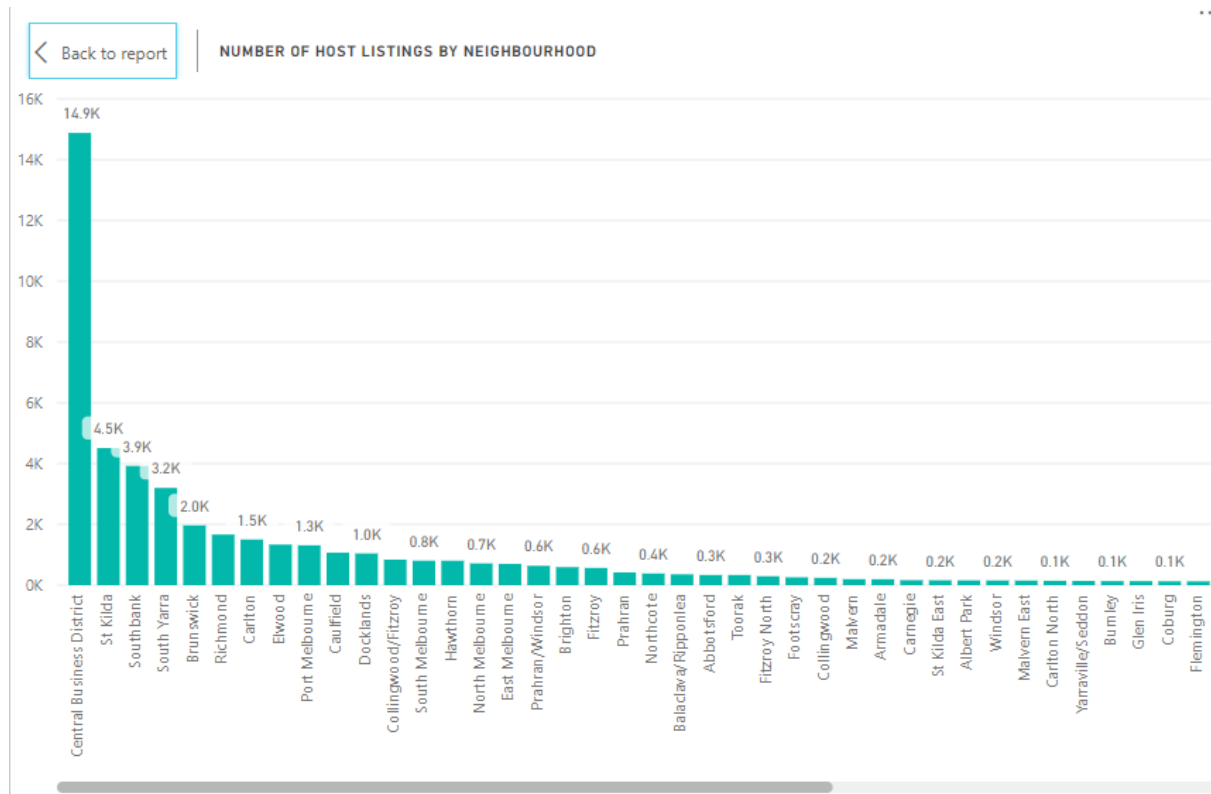
neighbourhood	price	cleaning_fee	Profit	Profit per year
Central Business District	\$205,265	\$64,679	\$160,037	\$16,003.7
St Kilda	\$95,937	\$33,561	\$70,095	\$7,009.5
Southbank	\$95,641	\$26,651	\$76,477	\$7,647.7
South Yarra	\$76,385	\$27,274	\$54,614	\$5,461.4
Richmond	\$59,508	\$15,059	\$48,931	\$4,893.1
Brunswick	\$48,807	\$18,193	\$35,063	\$3,506.3
Port Melbourne	\$44,221	\$10,084	\$35,494	\$3,549.4
Carlton	\$34,843	\$9,792	\$27,928	\$2,792.8
Elwood	\$32,707	\$9,340	\$25,623	\$2,562.3
South Melbourne	\$32,180	\$8,549	\$25,276	\$2,527.6
Docklands	\$28,607	\$7,964	\$23,822	\$2,382.2
Hawthorn	\$28,093	\$8,091	\$21,085	\$2,108.5
East Melbourne	\$27,648	\$6,936	\$22,563	\$2,256.3
Collingwood/Fitzroy	\$25,319	\$8,556	\$18,831	\$1,883.1
Prahran/Windsor	\$24,313	\$7,234	\$18,918	\$1,891.8
Brighton	\$23,907	\$5,208	\$19,778	\$1,977.8
Caulfield	\$22,558	\$7,566	\$16,557	\$1,655.7
Fitzroy	\$22,507	\$6,837	\$16,730	\$1,673
North Melbourne	\$21,938	\$6,976	\$17,167	\$1,716.7
Northcote	\$20,393	\$6,292	\$15,239	\$1,523.9
Fitzroy North	\$19,693	\$5,732	\$15,477	\$1,547.7
Toorak	\$16,577	\$4,926	\$12,236	\$1,223.6
Albert Park	\$16,567	\$3,342	\$14,418	\$1,441.8
Prahran	\$16,178	\$4,453	\$12,458	\$1,245.8
Abbotsford	\$14,393	\$4,743	\$10,372	\$1,037.2
Footscray	\$13,042	\$3,657	\$10,402	\$1,040.2
Collingwood	\$12,668	\$4,414	\$9,168	\$916.8
St Kilda East	\$12,385	\$4,531	\$8,797	\$879.7
Balaclava/Ripponlea	\$11,817	\$4,845	\$7,700	\$770
Yarraville/Seddon	\$10,957	\$3,070	\$8,570	\$857
Middle Park	\$10,817	\$2,723	\$8,749	\$874.9
Windsor	\$9,799	\$1,992	\$8,115	\$811.5
Carlton North	\$9,608	\$2,868	\$7,437	\$743.7
Thornbury	\$9,569	\$1,547	\$8,595	\$859.5
West Melbourne	\$7,699	\$2,392	\$6,018	\$601.8
Colburg	\$7,448	\$2,352	\$5,945	\$594.5
Flemington	\$7,032	\$1,361	\$5,989	\$598.9
Kensington	\$6,910	\$1,791	\$5,920	\$592
Total	\$1,277,073	\$380,763	\$992,021	\$99,202.1

To get more profit on investments one has to make sure that which suburb has more demand and worth investing. From the above table it is showing that “Central business District” has more profit compared to other neighborhoods and it followed by St Kilda and Southbank. The profit is calculated according to the total price and total cleaning. Also, while investing one should consider revenue of each suburb and has to invest according to that. The revenue will increase depending on the extra guests. From the visualizations and as per the calculations it states that investing in top 5 suburbs can get \$50,000 per year as a profit, so, that Rachel get her returns approximately in 8 years.

Profit = [Total price – Total cleaning].

Host listings count according to suburb:

From the below Line and stacked column chart it explains that it is better to invest on Airbnb by looking suburb host listings and how frequently they are listing with maximum number of properties.

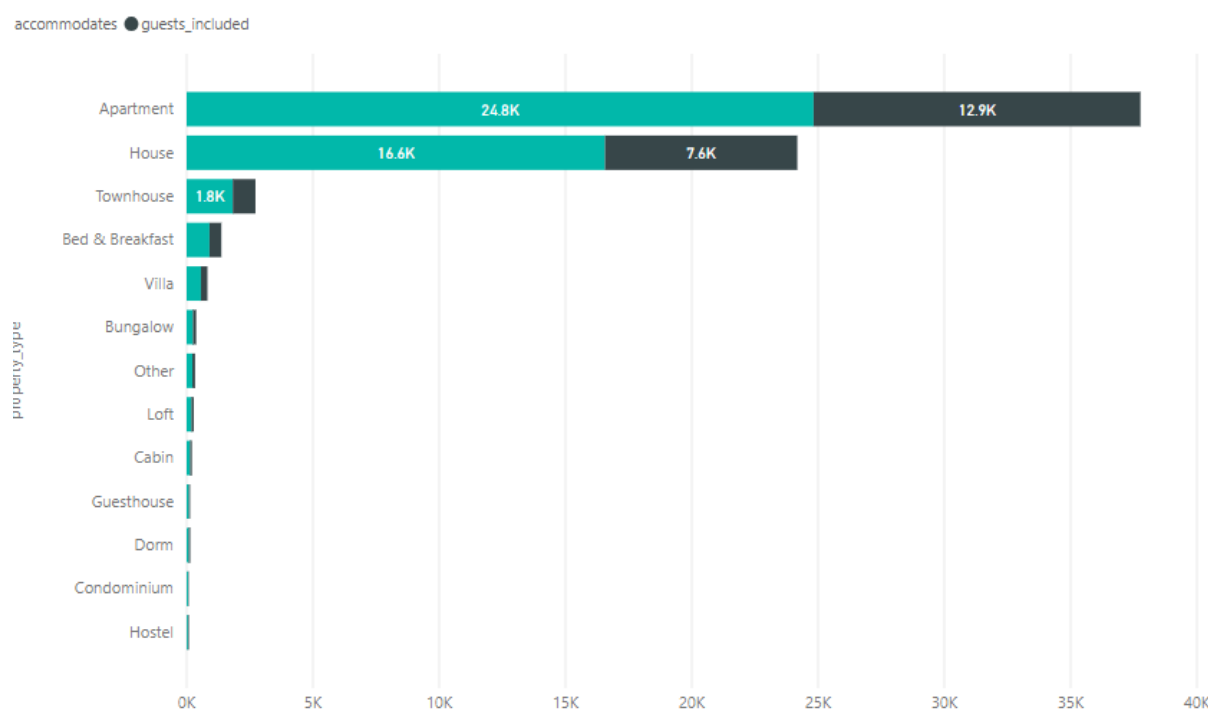


The suburbs Central business district and St. Kilda has more host listings. There are also suburbs like south bank, South Yarra, Brunswick and Richmond which has good number of host listings. Thus, guests are available in more numbers which is why there are more properties available.

Properties which generates greatest return on Investment:

Property type based on guests and accommodates: According to my perspective, property type rely on accommodates and guests who are choosing the property. Based on the properties chosen by accommodates and people, Rachel can easily invest in profitable property.

The below stacked bar chart shows the number of accommodates and guest's property wise:

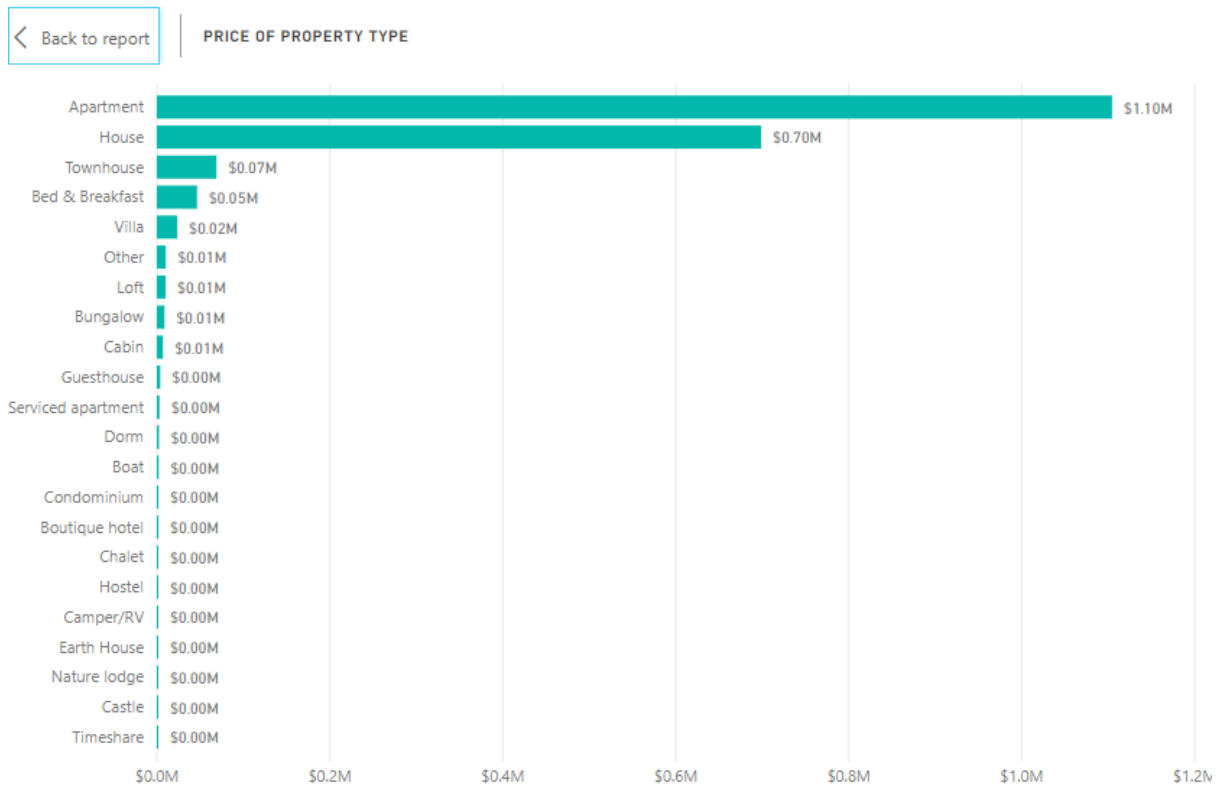


According the chart, Apartment has more accommodates (24.8k) and guests (12.9k) compared to houses which is 16.6k accommodates and 7.6k guests.

Property types and its prices:

While analyzing the Airbnb data we came across that price plays a major role in choosing the property type. Return of investment is dependent on price. If the property has more price can get more returns.

The below stacked bar chart represents the price of different properties.

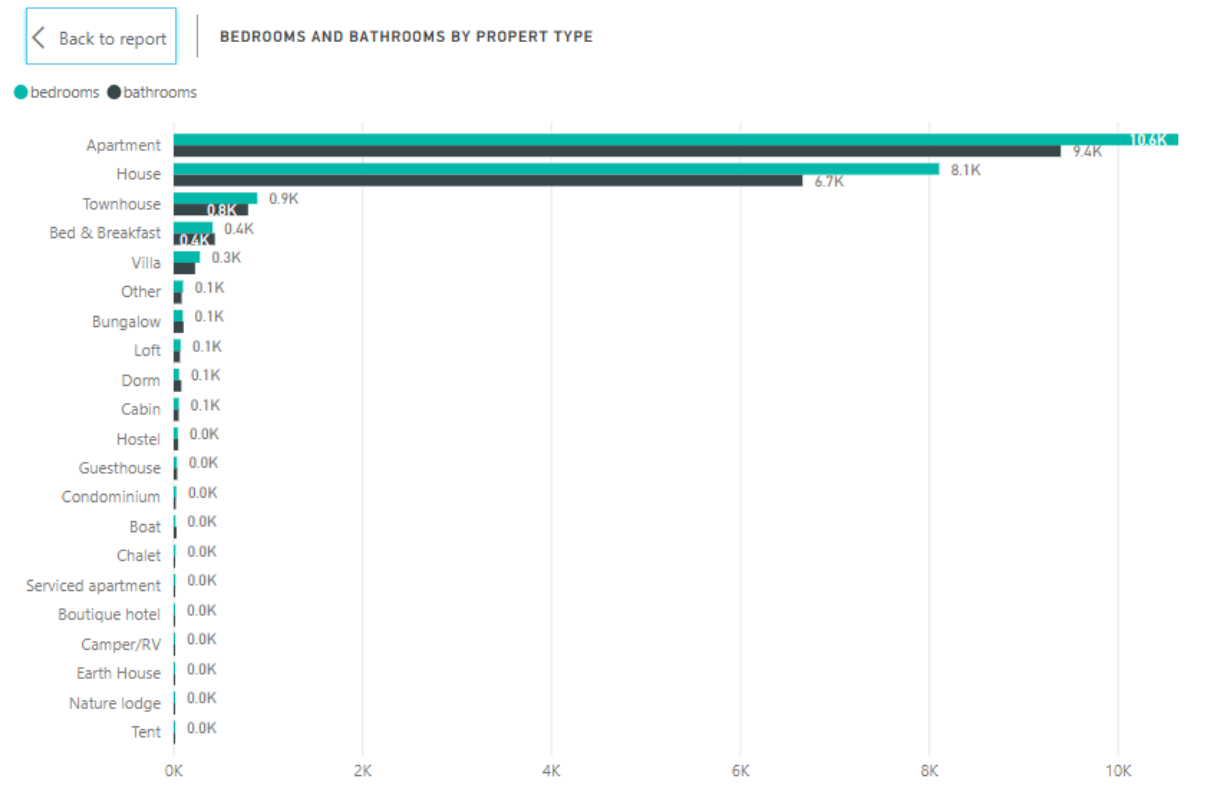


From the above chart, the apartments are in leading position which is \$1.10M followed by house which is \$0.7M. Hence, apartments can get more returns than houses.

Types of properties with bedrooms and bathrooms:

While booking or buying the property, the buyer will think about the bedrooms and bathrooms. If the property has more bathrooms and bedrooms the customers are eager to buy. Hence, the revenue of the property increases and thereby the profit of the certain property increases.

The below clustered bar chart showing the types of properties including bedrooms and bathrooms:



From the visualization we figured out that the apartments have 10.6k bedrooms and 9.4k bathrooms which is higher compared to houses. Houses have 8.1k bedrooms and 6.7k bathrooms.

Analysis of the property type based on reviews:

While buying a property one has to check the reviews. If the property has more positive reviews than it is considered as best property for buying. Based on these reviews' investments can be made and can get good returns on investment.

The below table shows the property type and reviews with average scores, accuracy and cleanliness.

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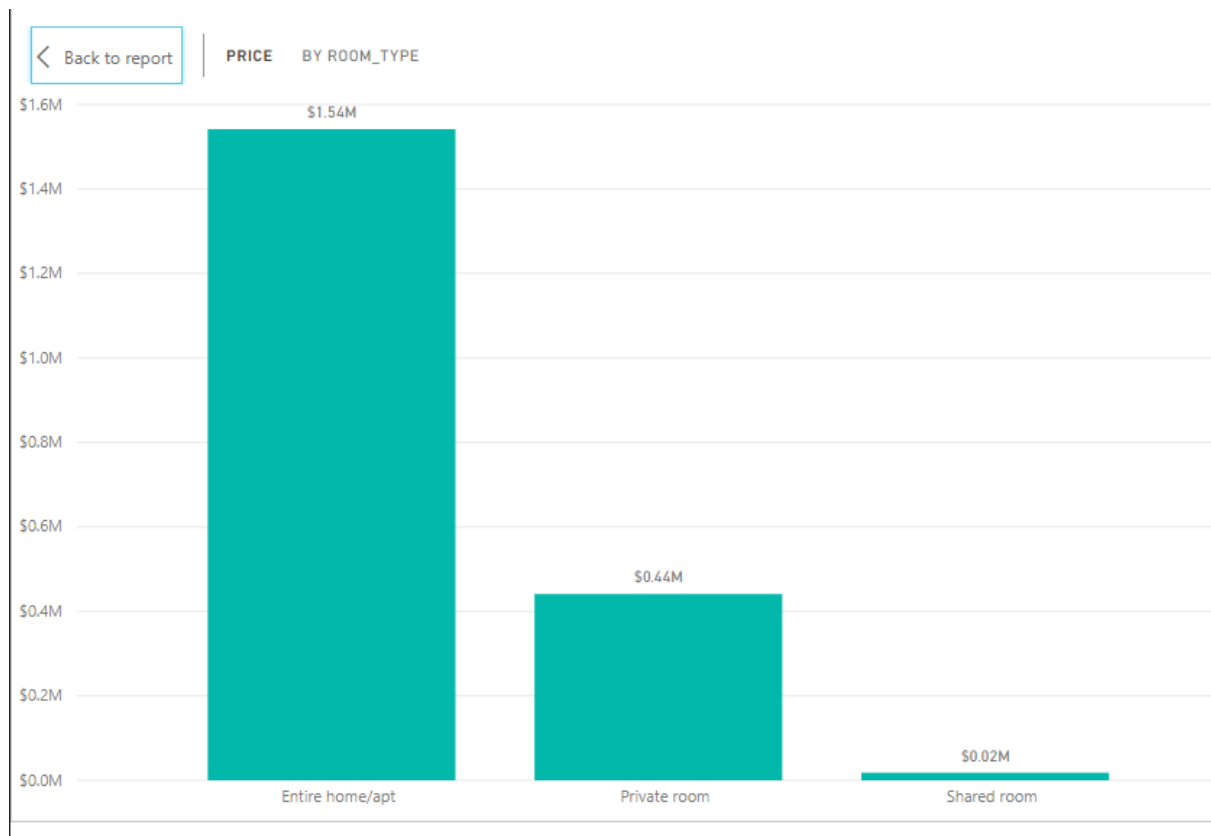
property_type	number_of_reviews	Average of review_scores_accuracy	Average of review_scores_rating	Average of review_scores_cleanliness
Apartment	160507	9.62	93.97	9.46
House	51138	9.60	94.08	9.39
Townhouse	5302	9.66	95.13	9.52
Bed & Breakfast	4817	9.57	94.47	9.61
Bungalow	2428	9.77	95.47	9.65
Other	1840	9.70	95.45	9.51
Loft	1839	9.83	96.69	9.75
Cabin	1723	9.64	94.91	9.59
Villa	1124	9.41	93.15	9.30
Guesthouse	327	9.80	97.76	9.88
Boat	299	9.76	96.18	9.59
Condominium	225	9.38	95.63	9.19
Dorm	221	8.08	77.15	7.34
Treehouse	213	9.50	92.50	9.25
Chalet	211	9.63	96.25	9.88
Camper/RV	185	9.67	92.44	9.44
Hostel	146	9.27	87.47	9.00
Earth House	77	10.00	97.17	10.00
Tipi	25	9.00	88.00	7.00
Tent	23	9.67	94.00	9.67
Boutique hotel	19	10.00	99.50	10.00
Serviced apartment	18	7.80	79.20	7.80
Nature lodge	13	9.50	99.00	10.00
Castle	6	9.00	86.00	9.00
Timeshare	1	10.00	100.00	10.00
Total	232727	9.61	94.02	9.44

From the above table it is clear that apartment (160507) has more reviews compared to houses (51138). Hence it is better to invest in apartments rather than houses.

Types of rooms with prices:

Investments can be made based on the calculations on room types. If there is higher price for certain room, then it is ideal option to invest on that room type.

The below clustered column chart explains the price of each room type based on the price.



From the above visualization it is clear that entire home/apartments costs \$1.54M which is in the top place, private room costs \$0.44M and shared room costs \$0.02M which is lower in the position. Hence, Rachel can invest on entire home/apartments so that she can get more returns on the investment.

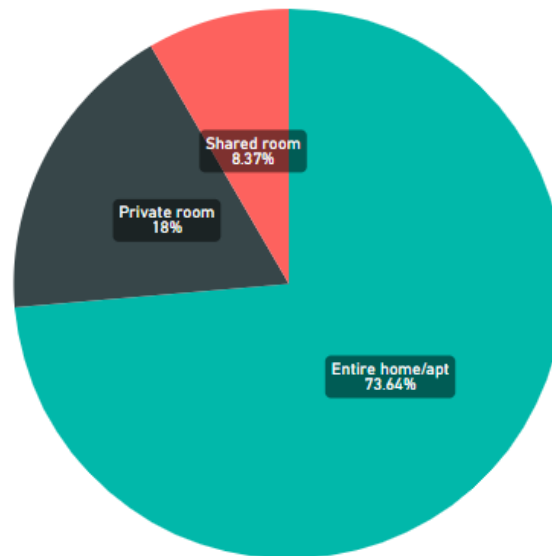
Room types based on Host listings:

The below pie chart illustrates the room types based on host listings.

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HOST LISTINGS BY ROOM TYPE

room_type ● Entire home/apt ● Private room ● Shared room



From the above pie chart, Entire home/apartment has more percentage which is 73.64%, private room occupied second position which is 18% and shared room was in last position in host listings which is 8.37%. Hence, the investment can be made on entire home/apartments by Rachel.

Conclusion:

The suburb “Central business district” is highly recommended to Rachel for investing because the revenue is more for that suburb. Also, St.Kilda, South Yarra and Richmond are also best for investing. In this suburbs the investment can be made on apartment and entire because the return on investment is guarantee.

