Filtering Sold On-Off-Market Properties

This analysis mainly focuses on filtering invested properties and breaking those results into flipped properties. The last step is to distinguish between ON and Off markets deals.

1. Invested Properties Function

The purpose of this function is to find out invested properties from assessor records based on the following steps:

- Compare primary addresses and mailing addresses of properties, then keep those rows with primary addresses different from the mailing address.
- Count the frequency of the owner's name. Choosing those that appeared more than n times (n - here is the threshold we can change). In this case, we decided n = 0, which means the owner's name appeared more than once in the dataset.
- Calculate profit percentage and keep those rows having profit percent from 10% to 1000%**.

2. Flipping Properties Function

This function tests whether investors bought properties to flip up or not. The two main conditions used in this function are:

- Calculate the gap year between each property's current and previous sale, and keep those rows with a gap year less than or equal to 2.
- Calculate profit percentage and keep those rows having profit percent from 25% to 1000%**.

3. ON - Off Market Function

This function checks whether a property was listed and sold On MLSers or 1st American Listing. If a property ID is found on either MLSers or 1st American listing, it is considered a sold On-market deal; otherwise, it is named as sold Off-market deal. The function has the following main steps:

- Compare properties ID of assessor records to MLSers' property IDs, keeping those matched and counting them as On_MLS deals.

- Use the unmatched properties IDs from step one to continue comparing with 1st American listing data; if they are matched, counting as On_First_American deals.
- Now we have the Sold-On-Market deals by combining On_MLS and On_First_American. Then, the sold Off-Market properties are those properties that do not match any listing data.

4. Results and Analysis

4.1. Sold On-Off Market Invested Properties

In this part, the Invested Properties Function and ON - Off Market Function are applied for assessor records, MLS, and 1st American datasets for Chicago, Dallas, and Denver.

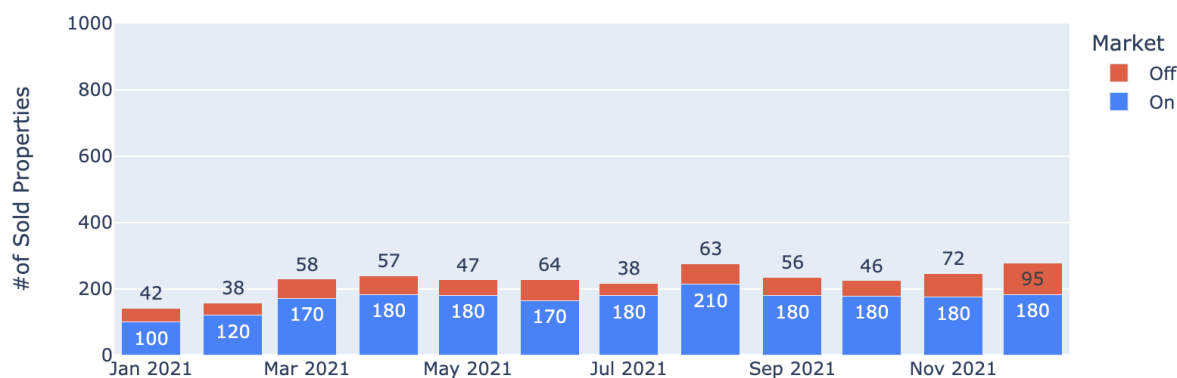Total Sold Invested Properties in Chicago.
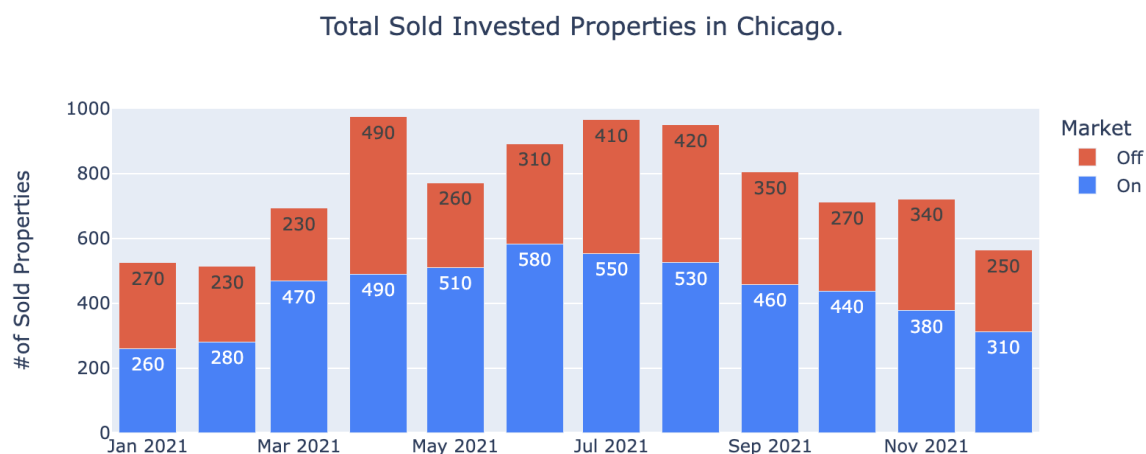
This figure shows the total number of sold invested properties in Chicago from 01/2021 to 12/2021, with red bars assigned to sold Off-Market houses and blue bars appointed to sold On-Market properties. As we can claim, most of the months, the number of sold on market values mainly were higher than that of Off market. June and July archived the highest number of sold properties listed in 2021, 580 and 550, respectively. However, April had the highest sold Off market in 2021, with 490 houses.

Total Sold Invested Properties in Dallas.
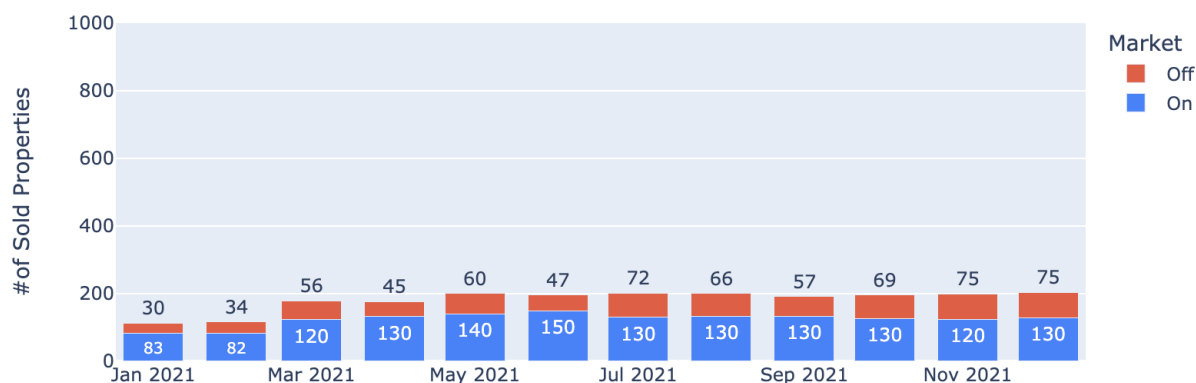
Compared to Chicago's results, fewer sold-invested properties were found in Dallas in 2021. The values of sold On-market houses are almost double sold Off-Market homes.

Total Sold Invested Properties in Denver.

From the Denver figure above, we can observe that sold investment properties in Denver in 2021 are slightly higher than in Dallas but much lower than in Chicago. Besides, the number of sold On-Market values is nearly double that of sold Off-market deals.

4.2. Sold On-Off Market Invested-Flipped Properties

There are three primary steps in this process:

- Finding the invested properties from assessor records by applying Invested Properties Function.
- Breaking down whether an investment property was flipped using the Flipping Properties Function.
- Filtering a flip is sold On or Off-market by applying the step 2 results into the ON - Off Market Function.

Total Sold Flip Properties in Chicago.
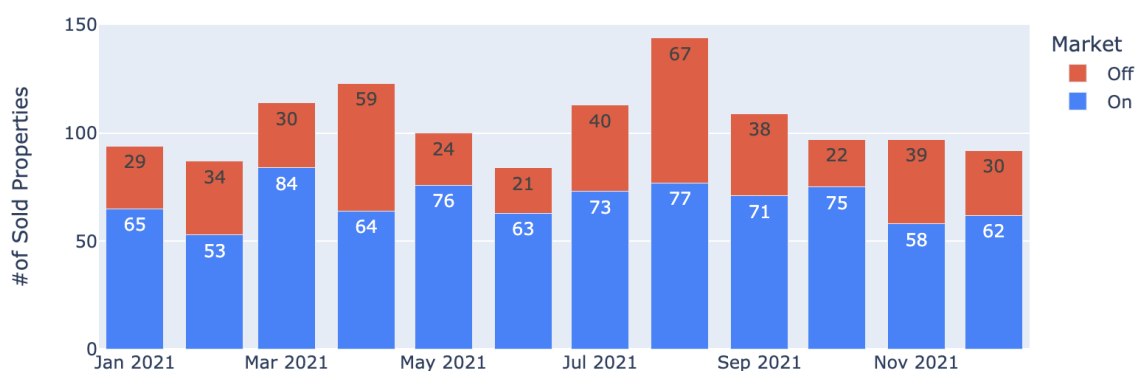
This figure shows that flipped properties sold ON-Market to were higher than those Off-Market properties. August showed the highest number of flipped houses sold On and Off the market, 77 and 67, respectively.

Total Sold Flip Properties in Dallas.
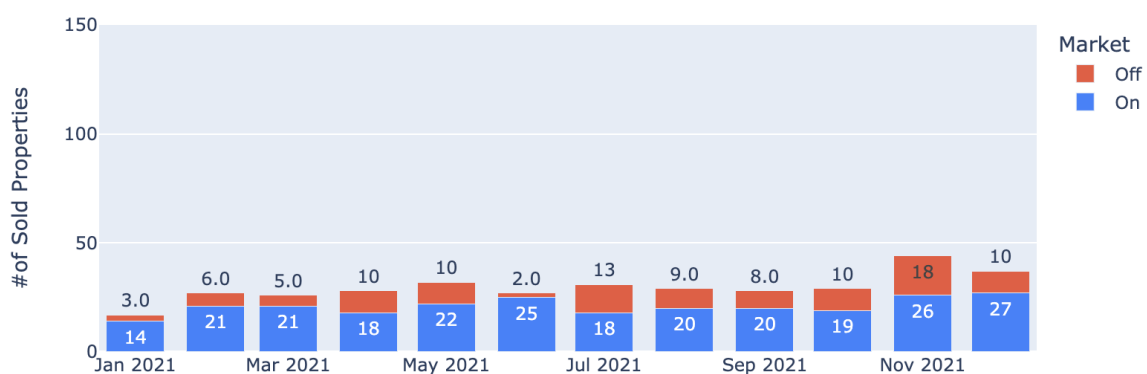
The number of flipped properties sold in Dallas is much lower than in Chicago. However, flipped houses sold On-Market were higher than Off-market in 2021.

Total Sold Flip Properties in Denver.
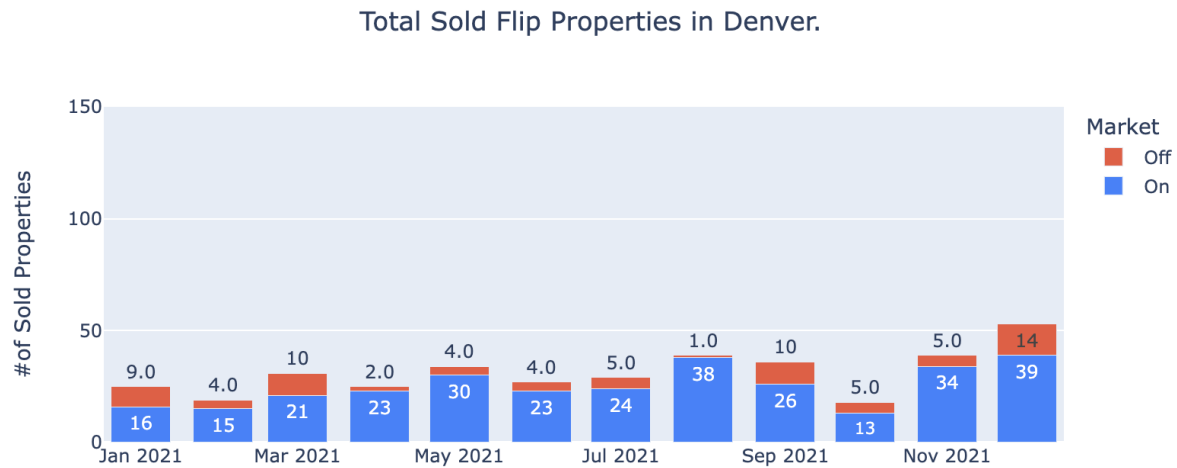
The figure above represents the flipped-invested properties sold in Denver in 2021. In general, it is much lower than the number in Chicago; however, the number of On market-flipped deals was higher than Off-market flipped deals.

5. Conclusion

In conclusion, the number of On-Market properties was higher than that of Off-market deals in 2021 for both cases, investing and flipping. However, these functions can be applied differently depending on the purpose of each analysis; for example, we can apply the Flipping Properties Function directly to assessor records to find the flipped houses without using the Invested Properties Function at first, etc.

**Notice: we can change this range depending on the analysis's purpose.