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## The Role of Race in Home Value Appreciation: Evidence From New York

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## The Role of Race in Home Value Appreciation: Evidence From New York

### Keywords

race, home owner, united states, america, real estate

### Disciplines

Business | Race, Ethnicity and Post-Colonial Studies | Real Estate

# **The Role of Race in Home Value Appreciation: Evidence From New York**

**By:**

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**An Undergraduate Thesis submitted in partial fulfillment of the requirements for**

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**The Wharton School, University of Pennsylvania**

**May 2020**

## I) Introduction

Within the past century in America, homeownership levels have varied and changed throughout time. One thing that has maintained constant, however, is the homeownership gap between black homeowners and white homeowners. Dating back to the turn of the 20<sup>th</sup> century to present day, black homeownership has consistently remained at a substantial level below that of white homeownership<sup>1</sup>. Scholars attribute various factors to why this is the case; and some factors depend on what time period you are looking at. For example, majority of scholars can agree that redlining, a 20<sup>th</sup> century practice brought about by the Federal Government, put blacks at a disadvantage from receiving loans to buy a home. This practice, however, was later banned with the legislation of the Community Reinvestment Act in 1977. Other factors to explain this gap in homeownership may include labor market conditions, family endowments, and capital gains on homeownership. One scholar noted, however, that even when controlling for income, education, and immigration status, the precise causal mechanism for the gap in homeownership *choice* between blacks and whites still remains a topic for future research (Painter, et al, 2001).

My research aims to assist in finding this causal mechanism, or significant attributable factors, by looking at how home values change over time when the home is in a predominately black neighborhood compared to a predominately white neighborhood. Understanding this observation can be seen as an attributable factor to why a potential black homeowner may *choose* not to purchase a home, assuming that my hypothesis holds. My hypothesis then is that a

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<sup>1</sup> U.S. Census Bureau reports on Homeownership Rates

home appreciates slower when it is in a neighborhood with a higher percentage black population, in contrast to one that is in a predominately white neighborhood.

This black-white difference in housing appreciation is significant because it has been argued that differences in housing appreciation contribute significantly to differences in black-white homeownership rates and to the black-white wealth gap (Blau and Graham, 1990; Long and Caudill, 1992; Oliver and Shapiro, 1995; Wolff, 1998; Flippen, 2004)<sup>2</sup>. Thus, understanding this phenomenon is essential in the interest of social equality. Additionally, it is crucial for an individual to be conscious of how his/her assets are affected by the area that it resides in. Knowing how your home value changes relative to others may also grant one more insight and a better bargaining advantage based on real property rather than an unexplained difference.

Furthermore, understanding the larger phenomenon of the black-white homeownership gap and why there has been a stagnation of black homeownership in America is important for various reasons. For one, it is crucial to fight against discriminatory practices, even if they are done unknowingly or unintentionally. For example, redlining in the 20<sup>th</sup> century, while at first may have had good intentions, quickly became discriminatory against black neighborhoods. It is important to recognize these unintended biases and to correct them. It is also worthwhile to note that owning a home often takes up a large percentage of an individual's net worth. As of 2009, for both Blacks and Hispanics, 55% of their net worth was in the value of their owned home<sup>3</sup>. Understanding and attempting to correct the large homeownership differential is crucial for reaching full equality in America.

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<sup>2</sup> Coate, Douglas, and Richard W. Schweser. "Black-White Appreciation of Owner-Occupied Homes in Upper Income Suburban Integrated Communities: The Cases of Maplewood and Montclair, New Jersey." *Journal of Housing Research* 20, no. 2 (2011): 127–39.

<sup>3</sup> Moye, Richard. "Neighborhood Racial–Ethnic Change and Home Value Appreciation: Evidence from Philadelphia." *Urban Geography* 35, no. 2 (2013): 236–63. <https://doi.org/10.1080/02723638.2013.856194>.

## II) Background & Past Literature

Most scholars have agreed that there were specific government actions that were discriminatory towards blacks' access to homeownership starting in the early 20<sup>th</sup> century. In a 2014 paper analyzing emerging forms of racial inequality in homeownership from 1968-2009, Sharp and Hall both acknowledge the Federal Government's role in homeownership which first started in 1933 with the creation of the Home Owners' Loan Corporation (HOLC) to combat foreclosures. HOLC designed a system to assess whether particular individuals and neighborhoods in urban areas were fit to receive loans (Sharp & Hall, 2014). Each neighborhood received a rating of perceived credit risk on a grading of A through D, corresponding with the colors of green, blue, yellow, and red being highest risk (Krimmel, 2017).

Sharp and Hall both note that this "redlining" practice quickly became discriminatory, as ethnic neighborhoods were often marked as unacceptable areas of investment. Jacob Krimmel, in his working paper on estimating the long-term effects of redlining, agrees with this view and expands upon it based on recently digitized maps which show precisely which neighborhoods were "redlined" or "yellow lined" (slightly lower risk). Krimmel documents that neighborhoods with black residents were disproportionately assigned the most restrictive credit rating, with close to 90% of African Americans in 1940 living in an area designated for credit redlining.

Redlining remained a legal practice up until the passage of the Community Reinvestment Act in 1977. Once discriminatory lending was banned, there was a moderate convergence in homeownership rates and racial composition (Krimmel, 2017). Sharp and Hall state that government programs, housing policies, reductions in racial residential segregation, and the growth of the middle class helped raise homeownership rates for minority and low-income

households but at the same time white households continued to hold a substantial homeownership advantage over blacks. Krimmel agrees and expands upon Sharp and Hall's view, holding that there are still long-term effects that persist that put blacks at a disadvantage despite this act being passed. He claims that housing supply and population density continue to be lower in areas that were formerly credit-restricted (redlined) compared to neighbors in credit-favored areas. Raphael W. Bostic and Richard W. Martin in their analysis of anti-discrimination housing laws focus solely on the positives brought out from housing-related civil rights legislation passed during the 1960s and 1970s and claim that this has helped to alter and reduce the role that race played in the housing markets.

Collins and Margo agree with Bostic and Martin, stating that after 1960 the homeownership gap began to close through to 1980, which at this point the racial difference was the smallest of any census year in the 20<sup>th</sup> century (Collins & Margo, 2010). However, they also note that from 1980 to 1990 this trend reversed and the gap actually drifted upwards. Earlier studies argue that a portion of this gap may be due to differences in access to housing finance (Wachet & Megbolugbe, 1992; Yinger, 1996). Christian A.L. Hilber (2008) pushes back against this argument and claims that it is unlikely that access differentials to housing finance between blacks and whites have worsened over time. Furthermore, a 2005 study suggested that credit barriers account for no more than 5 percentage points of the approximately 25+ percentage point differential in homeownership between blacks and whites (Gabriel & Rosenthal, 2005).

Scholars William J. Collins and Robert A. Margo also point out that the majority of the racial homeownership gap declined before World War 1, which was prior to the organized system of redlining. From 1870-2007 the racial gap in homeownership declined by 26 percentage points, however 25 points in this decline occurred before 1914 (Collins & Margo, 2010). Collins and

Margo note that interpretation of this requires knowledge of how shift of labor from agriculture factors into trends of home ownership. As such, whites left farms in the late 19<sup>th</sup> century which decreased the aggregate rate of white homeownership because farm ownership was much higher than non-farm ownership among whites. Additionally, blacks did not inherit anything substantial from slavery but were able to increase their homeownership rates during the post bellum period.

A dissertation by Rebecca Tesfai (2013) on the economic lives of black immigrants adds to the debate by highlighting the fact that even though U.S.-born blacks earn significantly higher wages than black immigrants, they are less likely to own their own homes than foreign-born blacks. While Bostic and Martin claim that black homeowners gained access to more diverse and higher-income neighborhoods over time, Tesfai holds that U.S.-born blacks are more segregated from U.S.-born whites than foreign born. On a similar note, Painter, et al (2001) found that even when controlling for income, education, and immigration status, the unexplained portion of homeownership choice that was small in 1980 doubled to 11 percentage points by 1990. They suggest that the precise causal mechanism for homeownership *choice* still remains a topic for future research.

According to Kurz (2004), homeownership is an important characteristic in the interest of social inequality because assets can be transferred from one generation to the next, suggesting that a household's standard of living doesn't always match their labor market position. However, some scholars have argued that intergenerational transfers have little impact on first homeownership and living standards due to the age of the recipient (generally 40+). Kurz argues that inheritances are important because they can be used in a variety of ways to improve a household's economic and social status and thus, family resources can ease the ability to access owning a home. Saunders (1978, 1990) adds to this and suggests that homeownership in it of



itself can affect a household's standard of living and wealth. This is because real property tends to gain or lose value over time. There has been conflicting information on how capital gains are realized across groups and social classes.

A few scholars have investigated how home value appreciates relative to black population, however there is still a lack of research. Furthermore, for each report it is often based on a precise location rather than proposing a broad conclusion of the U.S. at large. Scholars Coate and Schwester investigated black-white differences in housing appreciation in northern New Jersey, particularly in Montclair and Maplewood. Their findings indicated that home appreciation was inversely related to changes in the black population for Montclair, Maplewood, and generally northern New Jersey as a whole (Coate & Schwester, 2001). Another scholar's findings held that minority composition within a neighborhood has a significant effect on home appreciation net of socioeconomic factors (Flippen, 2004). A different group of scholars also investigated how *quickly* predominately black neighborhoods recovered from price declines as a result of the financial crisis of 2008. They found that many black neighborhoods showed steep rates of price decline with very little recovery following the crisis, while on the other hand predominately white neighborhoods recovered significantly from any housing price declines (Raymond & Wang & Immergluck, 2015).

### III) Methodology

Through my research, I am aiming to understand how home values change over time with respect to neighborhood demographics. The information that I gathered largely came from archival data.

I first started out by investigating the current rates of homeownership with respect to racial demographics. I provided a time trend graph within my analysis and I highlighted the significant difference over time between black and white homeownership rates. Additionally, I collected information on home prices and demographics over time within different geographical regions of New York. I chose to focus on single-family homes in New York in order to mitigate housing differences among locations.

I chose to focus on various cities with their respective zip codes within Westchester County, New York. Aside from being the location that I was born and raised in; I hold personal sentiment that Westchester is a very dynamic county. Westchester County is very diverse overall, however many towns within the county are still largely segregated. It is also one of the closest suburban areas to New York City, with most towns being under a 1hr commute to Manhattan. In addition, Westchester is home to some of the most “blackest” (meaning highest proportion of African Americans) communities as well as some of the most “whitest” (meaning highest proportion of Caucasians) communities in New York State. As such, I hypothesized that taking Westchester County and dividing it into its racial subgroups should prove to be rather interesting.

For home prices, I utilized Zillow’s zip-code-level home value index data. The Zillow index is a constant-quality measure of home values in the zip code that takes into account estimated values of *all* homes in the zip code rather than just those that sell during a certain period of time. Unlike other small-area housing indices, the Zillow index does not rely on homes selling repeatedly within a zip code and provides a more representative indicator of small-area home values compared to repeat-sales indicators (Raymond, Wang & Immergluck, 2016). As a small added bonus, the Zillow index also provides 1-year % changes and 1-year % forecasts. For the forecast period, this takes all homes into account rather than just single-family.

For demographic information, I utilized decennial census data that was available in the Year 2010 U.S. Census. In addition to this, I also used the latest information available from the 2018 5 Year U.S. Census American Community Survey. Additionally, I utilized CDX Technologies, a free demographic data site, to generate zip-code-level reports which pulled information from both the 2018 American Community Survey as well as the 2010 decennial census.

I split my data into three sections: “Black” neighborhoods which have 15% or more African American population and average household income of \$75,000 or less; “White” neighborhoods which have 5% or less African American population or over 80% of a white population; “Diverse” neighborhoods which fall in between these two divisions. Diverse neighborhoods take into account higher proportion of African American areas that have a household income of greater than \$75,000. In total, I analyzed 33 different zip codes within Westchester County which encompassed 21 different cities. Cities in the “Black” neighborhood section included Mount Vernon, Peekskill, parts of New Rochelle, parts of White Plains, parts of Yonkers, and Ossining. Cities in the “White” neighborhood section included parts of New Rochelle, Bronxville, Larchmont, Rye, Briarcliff Manor, Pelham Manor, Scarsdale, Bedford, Chappaqua, Yorktown Heights, Hastings-On-Hudson, Somers, and Pound Ridge. Cities in the “Diverse” neighborhood section included Tarrytown, Elmsford, parts of White Plains, parts of Yonkers, and Bedford Hills. Within my charts, the ending number of each city corresponds to the ending zip code for that city. For example, “White Plains 7” corresponds to 10607 while “White Plains 3” compares to 10603 and so on.

As far as timing, I created four different time horizons and looked at home value appreciation within each period. Period 1 consisted of April 2010 to April 2013. Period 2 consisted of April

2013 to April 2016. Period 3 consisted of April 2016 to April 2019. Period 4 consisted of April 2019 to April 2020.

In order to analyze the data, I compared the percentage changes in home values over each of the periods and looked at how each cluster's median house prices appreciated or depreciated over certain periods. I looked at this with respect to the demographics in the geographical area and investigated if there is a connection between the home value changes to the percentage of blacks living in that area. I also looked at the percentage of mortgages that were "underwater" within each zip code as well as mortgage delinquency rates.

## IV) Data

### Homeownership

The US Census Bureau defines the homeownership rate as the proportion of households that is owner-occupied divided by the total number of occupied households.

$$\text{Homeownership Rate (\%)} = \left[ \frac{\text{Owner occupied housing units}}{\text{Total occupied housing units}} \right] * 100$$

In Census 2000, the national average rate of homeownership was 66 percent. Homeownership among White householders was 71 percent, a 5-percentage point differential above the national average. In contrast, householders who were Black were well below the national average rate at an average of 46 percent, a 20-percentage point differential below the national average. Among the states, most states in the South show Black homeownership at rates above 50% but still below the national average rate. South Carolina and Mississippi both recorded the highest Black homeownership rate in 2000 at 61%, however this rate is still below the national average and significantly below the *average* rate of White homeownership. The

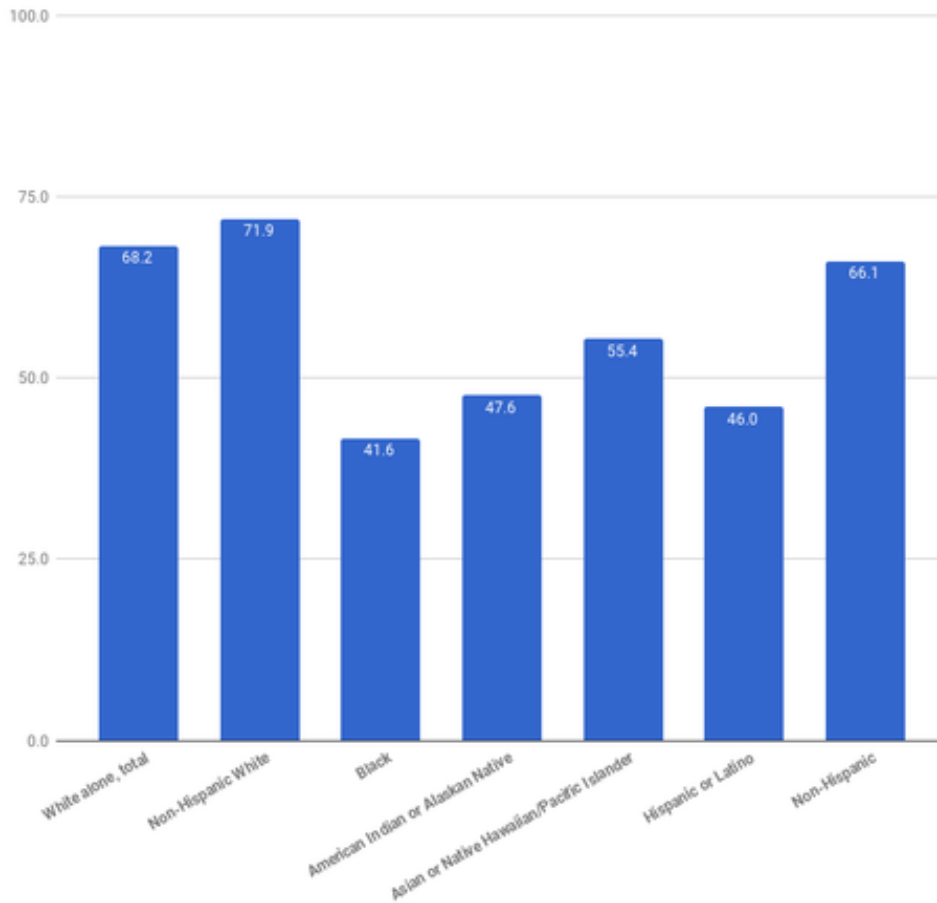
states that recorded the lowest rates of Black homeownership included Hawaii, North Dakota, and New York reporting 15.7%, 17.8% and 29.1% respectively.<sup>4</sup>

The following bar graph represents homeownership rates by race for the United States as of 2016. From this graph, we can see that blacks hold the smallest rate of homeownership behind every single race. The differential between black and white homeownership within this graph is approximately ~27%.

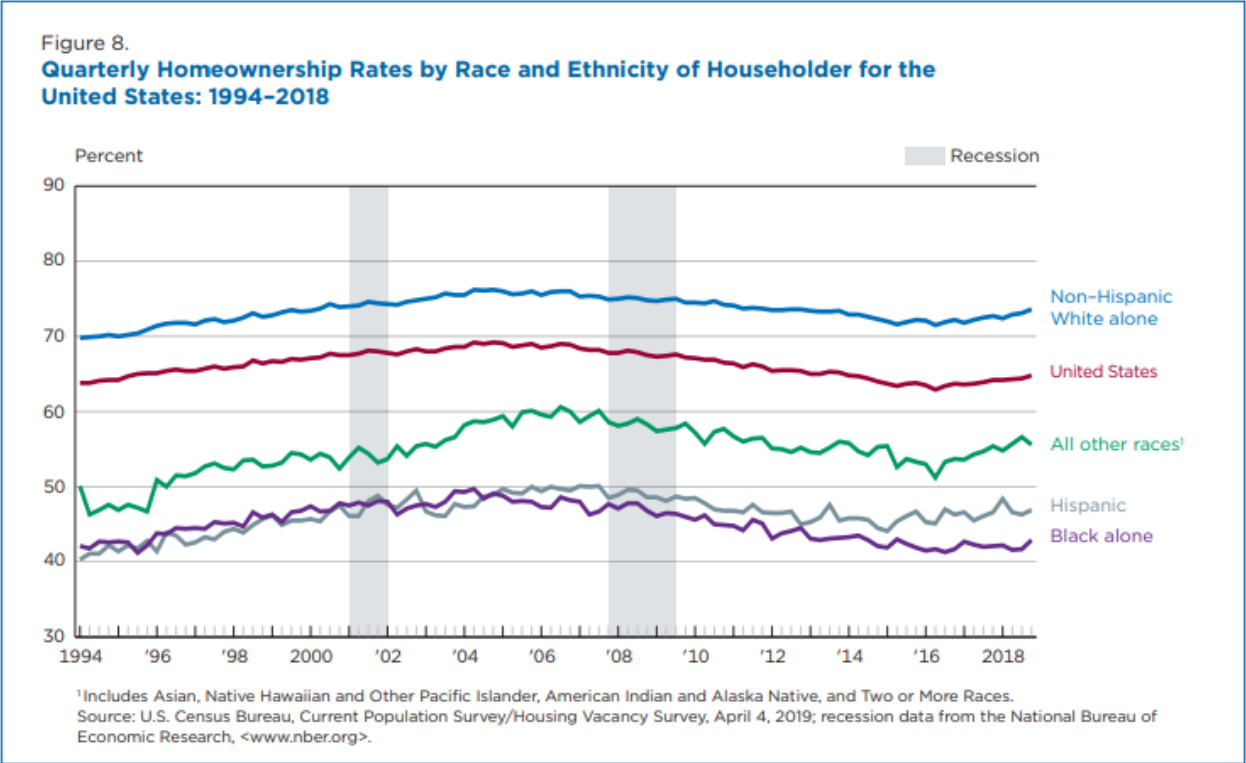
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<sup>4</sup> <https://www.census.gov/data/tables/2000/dec/coh-ownershipbyrace.html>

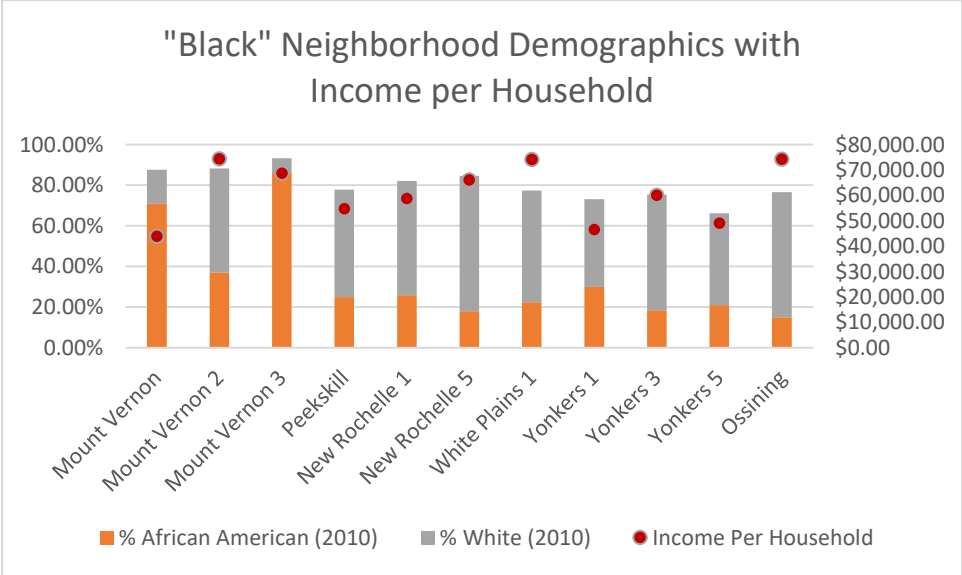
Homeownership Rates by Race & Ethnicity (2016)



Below is another graph depicting the homeownership rates by race for the United States at a longer time frame. We can see that from 1994 to 2018, blacks have consistently maintained the lowest, or 2<sup>nd</sup> lowest when homeownership has temporarily risen to a miniscule amount above Hispanics, for the entire time frame. We also see that there has been no percentage gain over time of homeownership among blacks from 1994 to 2018. Compared to all other races, including Hispanic, blacks had the smallest gain of homeownership.

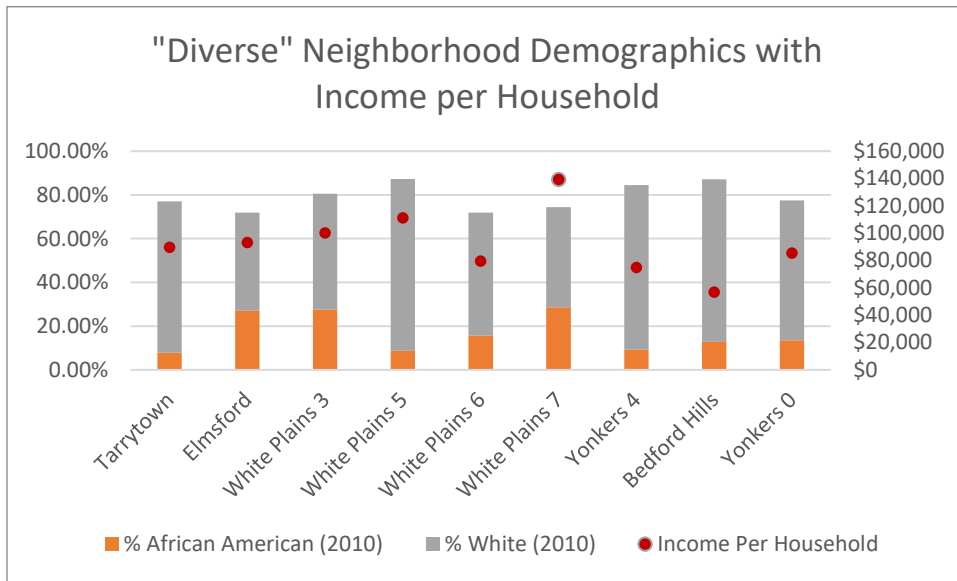


Demographics



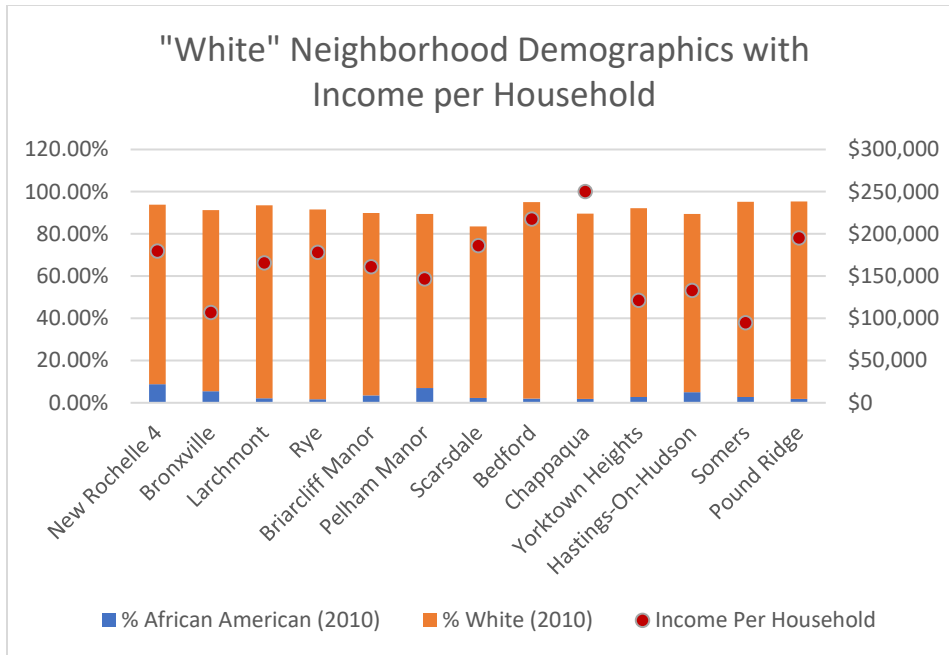
The graph above depicts the demographic breakdown of “Black” neighborhoods which includes Mount Vernon (10550, 10552, 10553), Peekskill, New Rochelle (10801, 10805), White Plains (10601), Yonkers (10701, 10703, 10705), and Ossining (10562). These neighborhoods

have a greater than 15% African-American population combined with an average household income of \$75,000 or less. The average % of African Americans living in “Black” neighborhoods are 33.63%. The average % of Whites living in “Black” neighborhoods are 46.58%. The average income per household in “Black” neighborhoods is \$60,953.

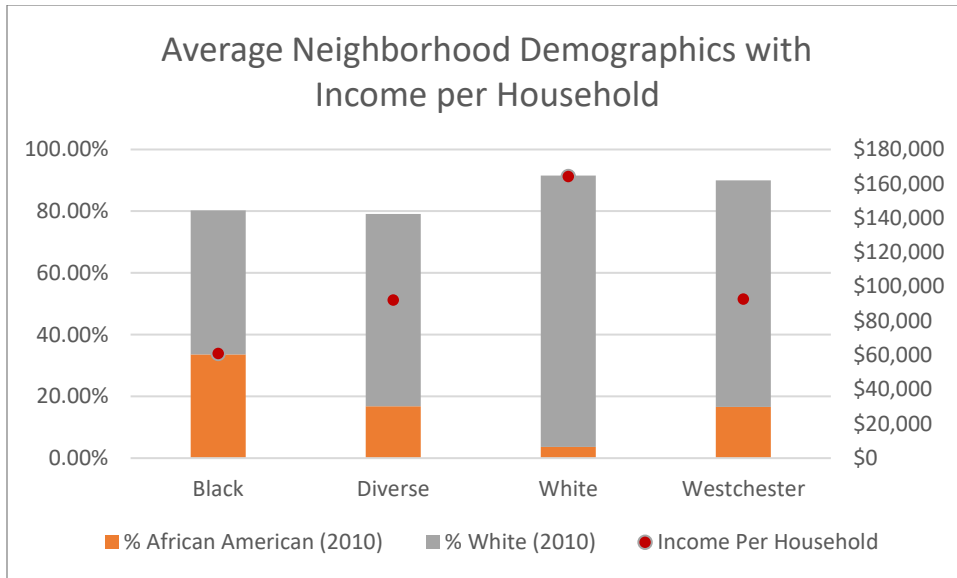


The above graph depicts the demographic breakdown of “Diverse” neighborhoods in Westchester County and include Tarrytown, Elmsford, White Plains (10603, 10605, 10606, 10607), Yonkers (10704, 10710), and Bedford Hills (10507). These neighborhoods have less than an 80% white population and include African-American communities that have an average income per household of greater than \$75,000. The average % of African-Americans living in “Diverse” neighborhoods is 16.79%. The average % of Whites living in “Diverse” neighborhoods is 62.34%. The average income per household in “Diverse” neighborhoods is \$92,144.



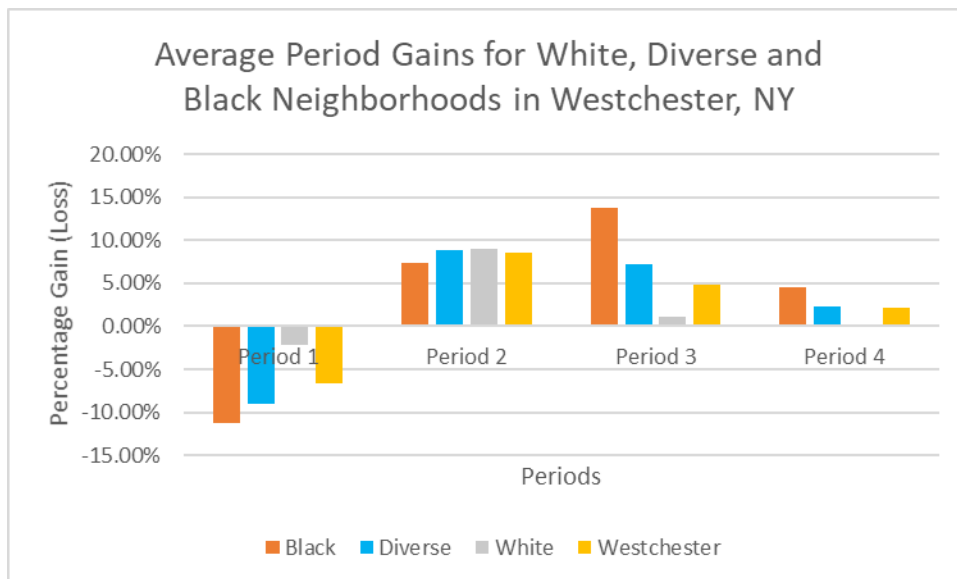


The above graph depicts the demographic breakdown of “White” neighborhoods in Westchester County and include New Rochelle (10804), Bronxville, Larchmont, Rye, Briarcliff Manor, Pelham Manor, Scarsdale, Bedford, Chappaqua, Yorktown Heights, Hastings-On-Hudson, Somers, and Pound Ridge. Neighborhoods that were included in this sect had a White population of greater than 80%. The average % of African-Americans living in “White” neighborhoods is 3.62%. The average % of Whites living in “White” neighborhoods is 87.93%. The average income per household in “White” neighborhoods is \$164,318.



The above graph depicts the average neighborhood demographics of “Black”, “White”, and “Diverse” neighborhoods. For comparison purposes, I included Westchester County as reported by the U.S. census. Across all of Westchester, the average % of African-Americans living in Westchester is 16.60%. The average % of Whites living in Westchester is 73.40%. The average income per household in Westchester is \$92,758.

### Period Gains

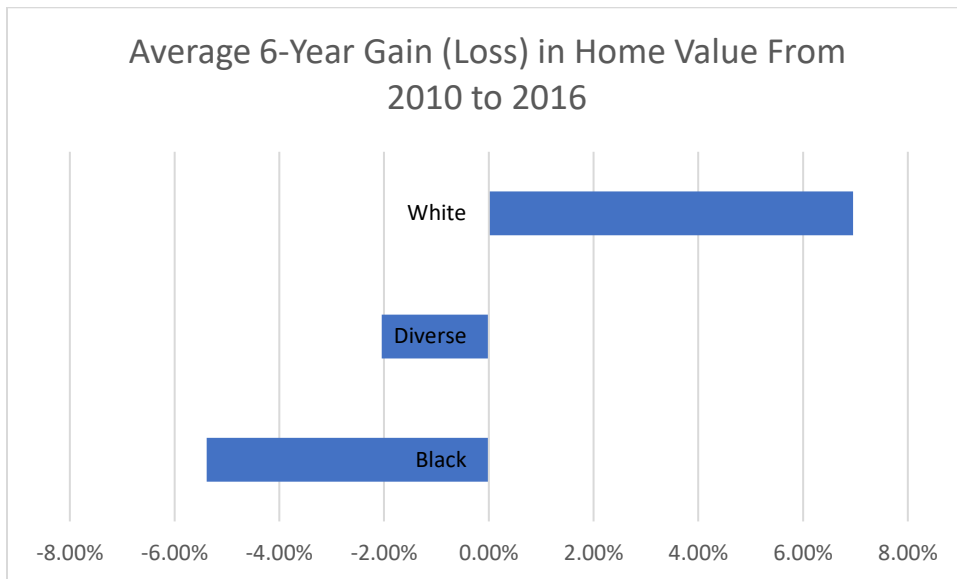


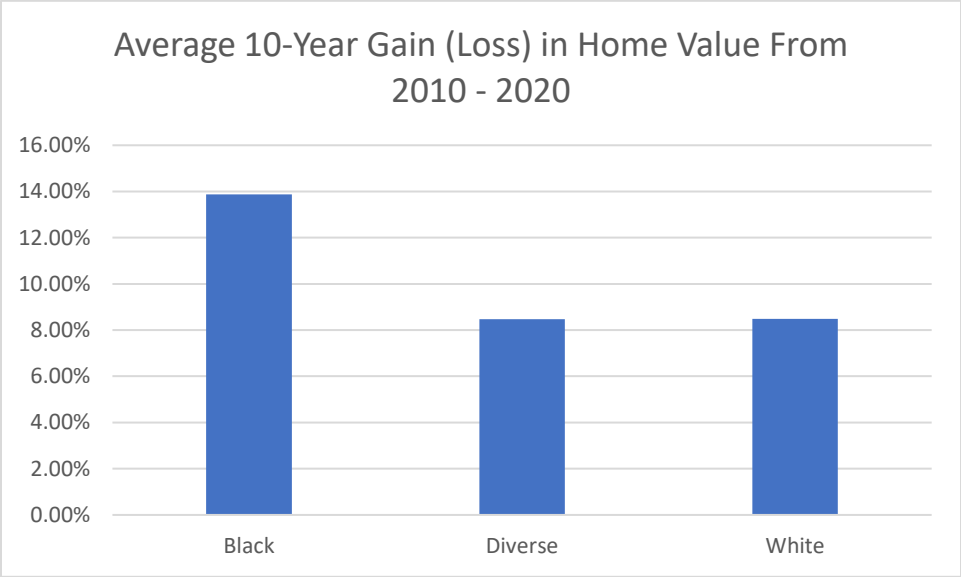
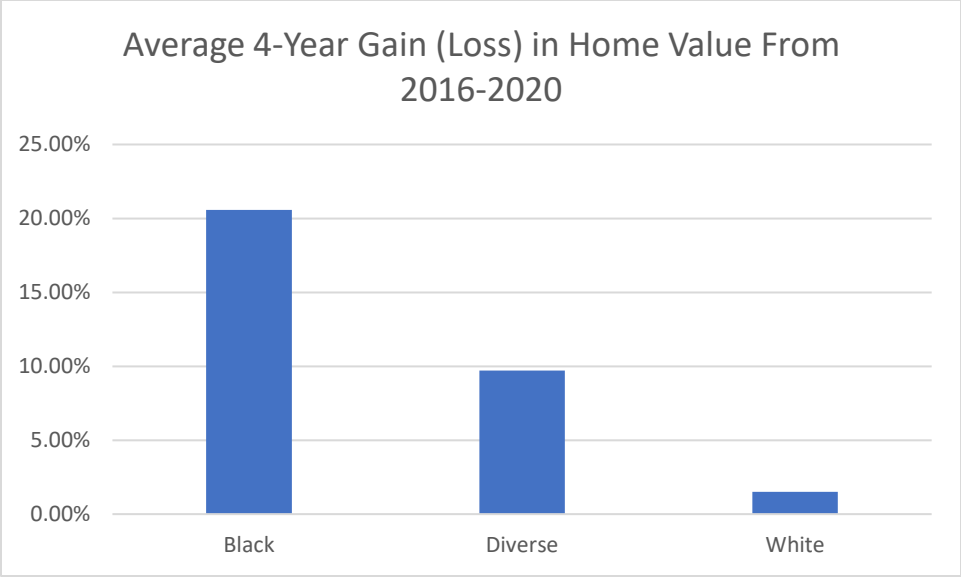
For period 1 (2010-2013), black neighborhoods suffered the highest average loss with -11.24%. Diverse neighborhoods were not too far behind at -9.06%. While White neighborhoods incurred a loss, it was significantly less than that of Diverse or Black neighborhoods, at an average of -2.09%. The average loss across Westchester County for period 1 was -6.70%. The highest loser for Black neighborhoods was Mount Vernon (10550) at -16%. The highest loser for Diverse neighborhoods was Elmsford at -15.66%. The highest loser for White neighborhoods was Pound Ridge at -9.91%. It is also important to note that across all neighborhood types, White neighborhoods were the only to post a gain in certain cities. The cities of Larchmont, Rye, and Scarsdale posted a period 1 gain of 9.73%, 11.33%, and 2.83% respectively.

For period 2 (2013-2016), Black neighborhoods gained the least at an average of 7.31%. Westchester County gained the 2<sup>nd</sup> lowest at an average of 8.55%, Diverse neighborhoods were the 2<sup>nd</sup> highest at 8.86% and White neighborhoods gained the highest in period 2 at 9.09%. The highest gainers were White Plains (Black neighborhood; 10601) at 11.74%; Tarrytown and White Plains (Diverse neighborhood; 10607) at 13.24% and 13.38%; and Scarsdale and Hastings-On-Hudson (White neighborhood) at 17.43% and 18.30% respectively.

For period 3 (2016-2019), black neighborhoods gained the highest at an average of 13.76%. Diverse neighborhoods gained the 2<sup>nd</sup> highest at 7.16%. Westchester County gained the 3<sup>rd</sup> highest at 4.88%. White neighborhoods had the lowest gain at an average of 1.19%. The highest gainers in Black neighborhoods were Mount Vernon (10550) at 23.08%; Yonkers (10704) at 16.19% in Diverse neighborhoods; and Yorktown Heights (9.71%) in White neighborhoods. It is worthwhile to note that in period 3 White neighborhoods were the only neighborhoods to post a decline in certain cities. The highest losers in period 3 for White neighborhoods were Bedford and Scarsdale at -5.29% and -4.69% respectively.

For period 4 (2019 to 2020), black neighborhoods had the highest gain at 4.59%. Diverse neighborhoods recorded the 2<sup>nd</sup> highest gain at 2.32%. Westchester County gained the 3<sup>rd</sup> highest at 2.10%. White neighborhoods recorded the lowest gain at 0.28%. The highest gainers were Mount Vernon (10550) at 10.50% in Black neighborhoods; Yonkers (10710) at 4.46% in Diverse neighborhoods; and Pelham Manor at 3.54% in White neighborhoods.

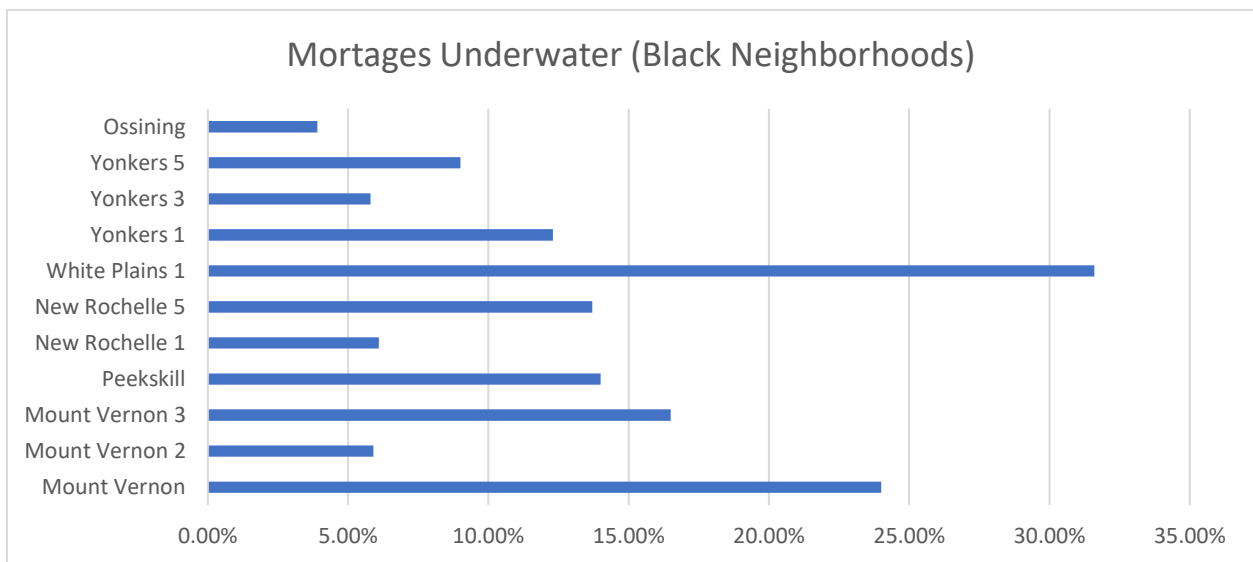




From 2010 to 2016, White neighborhoods experienced a 6.96% gain; Black neighborhoods experienced a -5.38% loss; and Diverse neighborhoods experienced a -1.71% loss. From 2016 to 2020, White neighborhoods experienced a 1.51% gain; Black neighborhoods experienced a massive 20.58% gain; and Diverse Neighborhoods experienced a 9.70% gain. For the decade covering 2010 to 2020, White neighborhoods saw prior appreciation of 8.49%, Black neighborhoods experienced a 13.88% gain, and Diverse neighborhoods experienced a 8.47% gain.

## Mortgages Underwater & Delinquencies

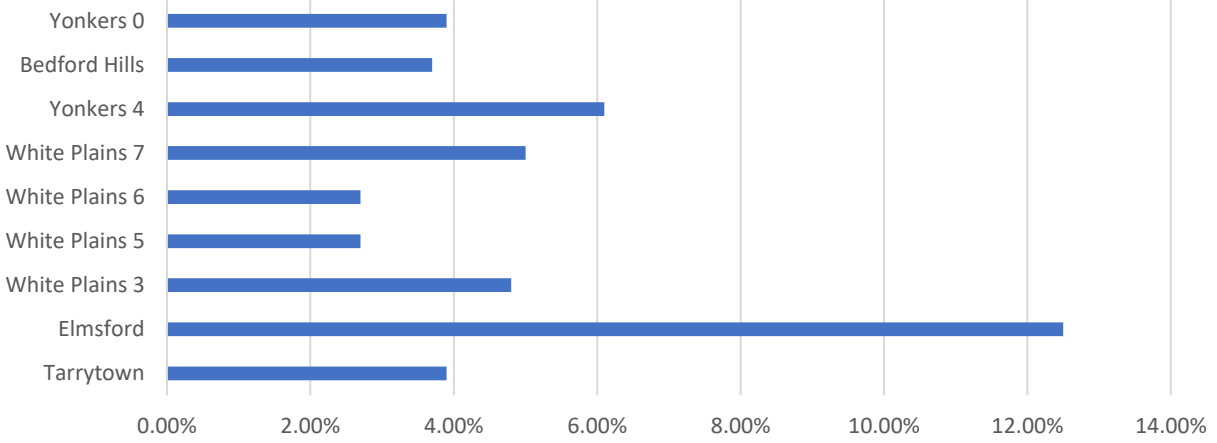
Mortgage delinquency is the first step in the foreclosure process. This is when a homeowner fails to make a mortgage payment. The national value of mortgage delinquencies is 1.1%. A homeowner may go “underwater” with their mortgage when they owe more than their home is worth. For example, with U.S. home values having fallen by more than 20% nationally from their 2007 peak, many homeowners were underwater on their mortgages<sup>5</sup>. The average mortgage delinquency rate of Westchester was 1.4% while the homeowner mortgage underwater rate was 5%, significantly below that of the average 8.5% underwater rate of the New York-Newark-Jersey City metropolitan area. The following graphs depict homeowners who are underwater on their mortgages as well as mortgage delinquency rates for each neighborhood and city.



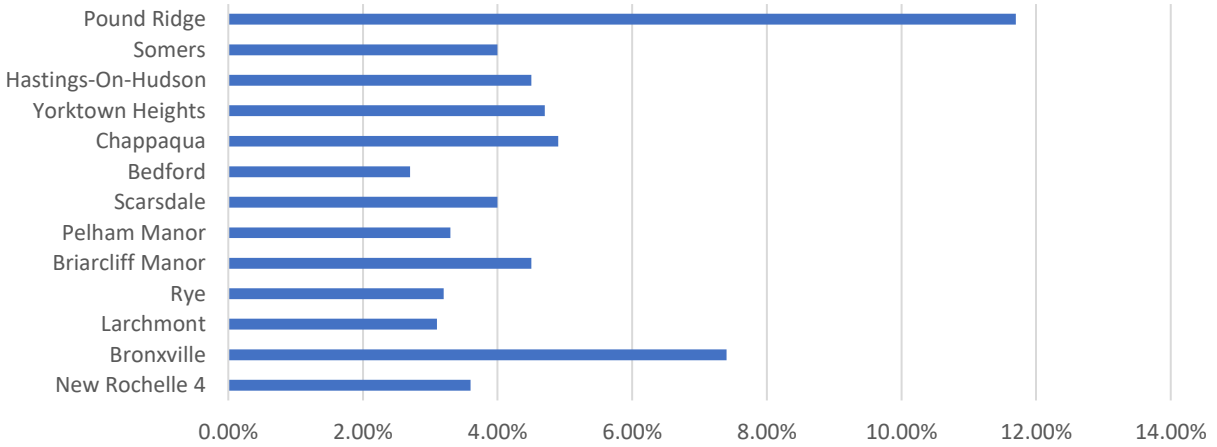
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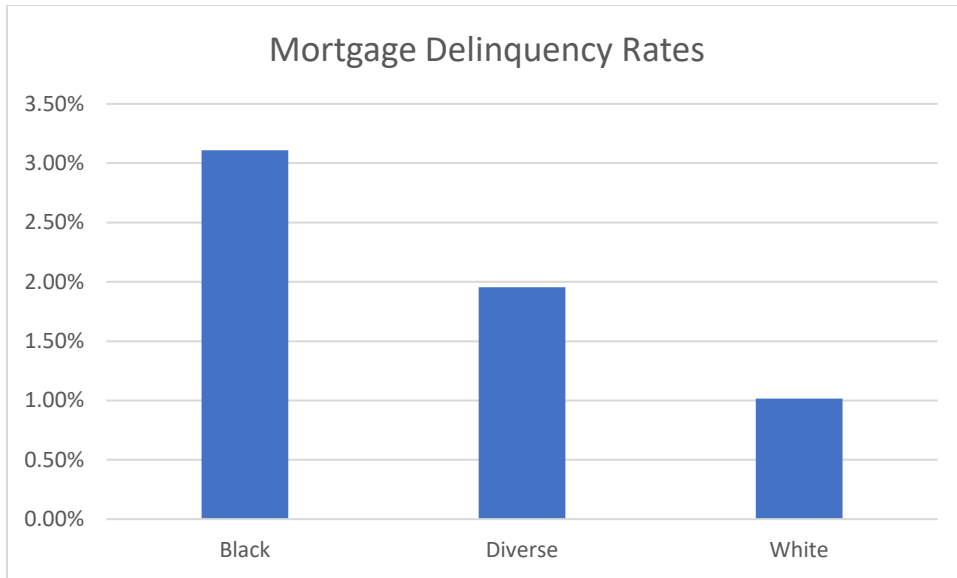
<sup>5</sup> Zillow housing data

### Mortgages Underwater (Diverse)



### Mortgages Underwater (White)





## V) Discussion and Implications

My findings indicate that home value appreciation was inversely related to changes in the black population from 2010 to 2016. From 2016 to 2020, however, this relationship seems to have flipped with Black neighborhoods increasing the highest percentage-wise and White neighborhoods having the smallest gain during this same period. Over the course of the 10-year period, Black neighborhoods gained 13.88%, White neighborhoods gained 8.49%, and Diverse neighborhoods gained 8.47%.

An interesting point is that Mount Vernon (10550) recorded *both* the largest loss in period 1 and largest gain in periods 3 and 4. This, combined with the fact that this same zip code has one of the highest homeowner underwater percentages (24%) and mortgage delinquencies (4.20%) in the county, seems to be a bit paradoxical. Within Mount Vernon, there is also a huge difference in mortgages underwater by zip code. Zip code 10552 (still Mount Vernon) recorded a homeowner mortgage underwater rate of 6%, less than  $\frac{1}{4}$  despite it being in the same city.



Coincidentally, zip code 10552 is the zip code with the highest white population and lowest black population within Mount Vernon (51.16% and 37.09% respectively).

A similar story can be found if one looks at New Rochelle. New Rochelle 1 and 5 (10801, 10805) are characterized as a “Black” neighborhood while New Rochelle 4 (10804) is characterized as a “White” neighborhood; this is a very distinct difference. Similarly, New Rochelle 4 has only 8.74% of African Americans and an average income per household of \$179,527 compared to New Rochelle 1 and 5 with 25.85% and 18% of African Americans respectively and average income per household around \$70,000. Homeowner underwater rates were also significantly lower in New Rochelle 4 compared to both New Rochelle 1 and 5 (3.60% compared to 6.10% and 13.70%). Mortgage delinquency rates in New Rochelle 4 was also lower than both 4 and 5.

Combining all of this, it seems that despite the gains within the Black neighborhood in periods 3 and 4, it is likely to be overvalued given the extremely high homeowner underwater rates compared to White neighborhoods. Black neighborhoods are also apparent to have the highest variance compared to White neighborhoods.

## VI) Conclusion

While Black neighborhoods had the best average overall gain from 2010 to 2020, majority of these gains were in the later part of the decade from 2016-2020. In addition to this, Black neighborhoods held the highest homeowner mortgage delinquency and underwater rates which were several times higher than both Diverse and White neighborhoods. This leads me to believe that these large spikes in home appreciation in Black neighborhoods toward the end of this decade may very well be rescinded in the near future, especially given the onset of COVID-19 and its potential future economic implications. From 2010 to 2016, White neighborhoods

experienced the highest gain and were the only neighborhood category that did not suffer a loss. It is also apparent that White neighborhoods had significantly lower homeowner mortgage underwater and delinquency rates, despite them being at a much higher price point.

Unequal housing appreciation has a significant negative impact on the overall wealth gap among racial groups and has important implications for stratification. While this was a small study within Westchester, more research is needed to have a conclusive outcome. For future research, it may be interesting to see how COVID-19 has impacted the housing market with respect to demographics.

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