



NYU Furman Center / Citi Report on Homeownership & Opportunity in New York City

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Executive Summary

In New York City, the notoriously high costs of rental housing are well documented. But becoming a homeowner in the New York City real estate market is also a considerable challenge for low- to middle-income households. Households earning less than \$114,000 face a severely constrained supply of homeownership opportunities in New York City.

This report seeks to shed light on the extreme variation in homeownership rates among New Yorkers and quantify the homeownership options that exist at different income levels. We do this by analyzing 2014 home sales prices and examining the potential purchasing power of households at various income levels in New York City, as well as in the nearby counties of Nassau, Suffolk, and Westchester.

We use five income categories for this analysis—Low-Income, Moderate-Income, Middle-Income, NYC-Middle-Income, and High-Income. These income bands are based on percent-ages of Area Median Family Income (AMFI) for the New York City metropolitan statistical area established by the Federal Financial Institutions Examination Council (FFIEC) and are based on data from the 2006-2010 American Community Survey. This report includes an additional middle-income band (NYC-Middle-Income), given that affordable housing programs in New York City serve households up to 165 percent of the U.S. Department of Housing and Urban Development (HUD) area median income (AMI).

The five income categories referenced throughout this report include:

“Low-Income” households have an annual income of \$34,000 or less,
or 50 percent of AMFI;

“Moderate-Income” households have an annual income between \$34,001-\$55,000,
or 50 percent to less than 80 percent of AMFI;

“Middle-Income” households have an annual income of \$55,001-\$83,000,
or 80 percent to less than 120 percent of AMFI;

“NYC-Middle-Income” households have an annual income of \$83,001-\$114,000,
or 120 percent to less than 165 of AMFI; and

“High-Income” households have an annual income above \$114,001,
or 165 percent of AMFI or greater.

We find that the purchasing power of most New York City households is limited, largely due to growing housing prices and stagnating incomes since 1990. In addition, while New York City had a relatively low share of homeowners compared to the U.S. in 2014, it was disproportionately low for Low-Income and Moderate-Income households relative to their U.S. counterparts.

The vast majority of home sales in New York City in 2014 were at prices unaffordable to Low-Income and Moderate-Income households, which comprised 51 percent of New York City households. Of the nine percent of sales in the city affordable to these households, three percent were affordable to Low-Income households and an additional six percent were affordable to Moderate-Income households. Home sales with prices that were affordable to Low-Income and Moderate-Income households in 2014 were, for the most part, concentrated outside of Manhattan.

Prospects for homeownership were not much better for Middle-Income households. In 2014, Middle-Income households, which comprise 15 percent of New York City households, could afford an additional 13 percent of sales (based on a total purchase price of up to \$364,000), leaving 78 percent of sales out of reach for households with incomes of less than \$83,000 annually. Less than half of sales in 2014 (42%) were affordable to 77 percent of New York households, including those characterized as NYC-Middle-Income.

Moving outside of New York City does not necessarily improve a New York City household's potential to buy a home. In Westchester County, only two percent of sales were affordable to New York City Low-Income and Moderate-Income homebuyers combined in 2014. In Nassau County, only 24 percent of sales were affordable to New York City Low-Income, Moderate-Income, and Middle-Income homebuyers in 2014. In Suffolk County, 42 percent of sales were affordable to New York City Low-Income, Moderate-Income, and Middle-Income households.

Introduction

Of the largest U.S. cities, New York City had the second-lowest homeownership rate.¹ Less than a third of New York City households (31%) owned a home in 2014—the inverse of the U.S. homeownership rate of almost two-thirds, 63 percent.

New York City's homeownership landscape is also unique because of the striking variation in homeownership rates by geography and demographics. First, the city's five boroughs had dramatically different homeownership rates; Staten Island's homeownership rate, for example, was more than double that of New York City's and higher than the U.S. homeownership rate. Meanwhile, the Bronx had the second-lowest homeownership rate of all counties in the U.S., with Manhattan and Brooklyn ranking third and fourth.

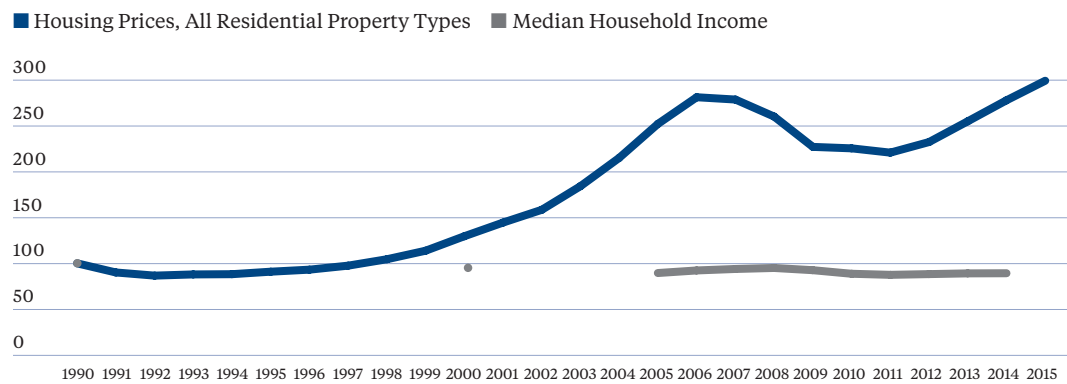
The city's racial and ethnic groups and income groups also had great variation in homeownership rates. In 2014, 26 percent of black households and 15 percent of Hispanic households owned their homes in New York City, compared to 42 percent of white households and 39 percent of Asian households. In addition, New York City's homeownership rates among Low-Income and Moderate-Income households were disproportionately low relative to their U.S. counterparts.

For prospective homebuyers, becoming a homeowner has become even more difficult as incomes have stagnated and the cost of housing continues to rise. Housing prices in New York City increased dramatically between 1990 and 2015, even as median household income stagnated. Between 1990 and 2015, housing prices rose nearly 200 percent for all residential property types, while incomes did not keep pace.² Between 2008 and 2011, median household income fell, and then recovered slightly between 2011 and 2014 when it grew by two percent. Still, real median household income in 2014 (\$53,063) remained 11 percent lower than its 1990 level (\$59,499).

¹ Miami had the highest share of renters, followed by New York City, in our 2016 report *Renting in America's Largest Metropolitan Areas* (<http://furmancenter.org/nationalrentallandscape>).

² The index of housing price appreciation is a measure of relative change in property values over time. We use our New York City sales data to construct the index of housing price appreciation. The repeat sales price indices are created using statistical regression techniques. The repeat sales method controls for housing characteristics by using data on properties that have sold more than once.

**FIGURE 1: HOUSING PRICE INDEX AND MEDIAN HOUSEHOLD INCOME (2015\$)
(INDEX=100 IN 1990), NEW YORK CITY**



Note: All residential property types include multifamily buildings.

Sources: American Community Survey (2005-2014), New York City Department of Finance, US Census (1990, 2000), NYU Furman Center

This report describes the New York City housing market, including the prevalence of homeownership, the incomes of owner-households, and housing costs for homeowners. In addition, we estimate the affordability of the home purchase market for New York City households at different income levels. To do this, we consider the affordability of 2014 home sales in the five boroughs of New York City and in the three nearby New York counties of Nassau, Suffolk, and Westchester. The result is an illustration of the universe of home purchase opportunities for New York City residents at all incomes. We focus on homeownership opportunities for households that annually earn \$114,000 or less, which make up 78 percent of the total households.

Part 1:

Homeownership and Demographics: Comparing New York City and the U.S.

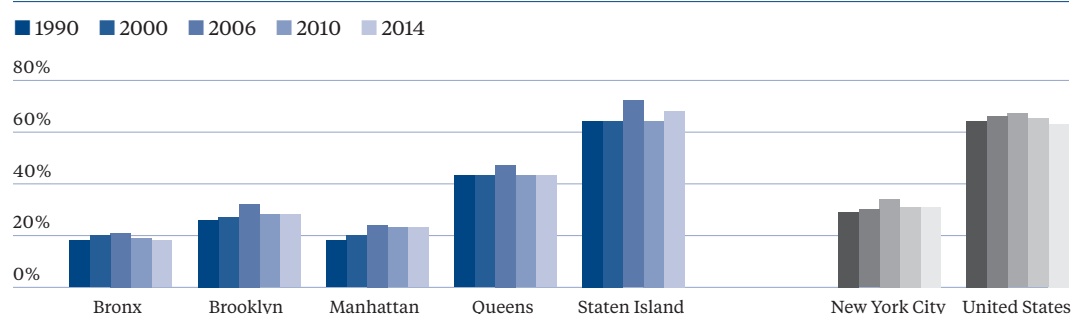
As a high-cost city primarily comprised of renters, New York City's homeownership market is unique in that a minority of households own their homes. New York City's homeownership landscape also varied dramatically by geography and demographics, including racial/ethnic and income groups. In this section, we provide context by comparing characteristics of New York City's homeownership market to those of the U.S.

New York City's homeownership rate is less than half of that of the U.S.

New York City's homeownership rate has been much lower historically than that of the U.S. as a whole, though it has still followed national trends during periods of boom and bust. Between 1990 and 2000, the homeownership rate in New York City and the U.S. remained flat. Between 2000 and 2006—in the lead-up to the Great Recession—New York City's homeownership rate increased by four percentage points while the U.S. homeownership rate grew by just one percentage point. Following the Great Recession, the homeownership rate in New York City declined to 31 percent by 2014, but remained above its 1990 level. By comparison, the U.S. homeownership rate in 2014 (63%) had fallen back below its 1990 level (64%).

Between 2000 and 2006, Brooklyn's homeownership rate increased five percentage points; the homeownership rate in Queens grew by four percentage points; and Staten Island saw its homeownership rate increase eight percentage points. In 2010, following the Great Recession, the homeownership rate in all boroughs but Manhattan receded to near 1990 levels. Since 2010, Brooklyn and Staten Island experienced an uptick in their homeownership rates as of 2014, moving counter to the national trend.

FIGURE 2: HOMEOWNERSHIP RATE, 1990 TO 2014



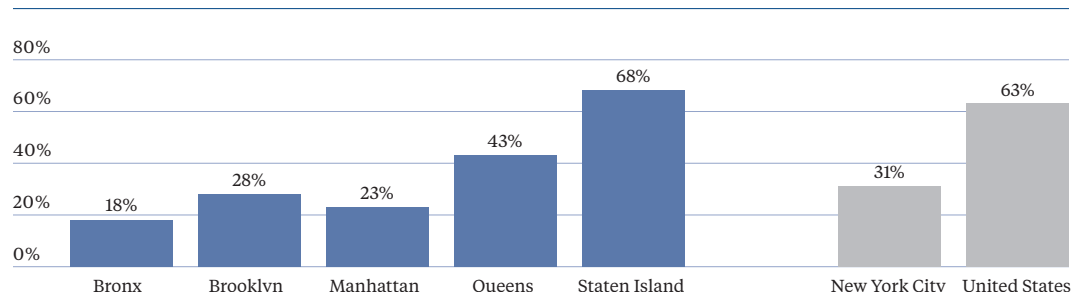
Note: See Appendix A for levels by year.

Sources: American Community Survey (2006, 2014), Neighborhood Change Database (1990, 2000, 2010), NYU Furman Center

The rate of homeownership varied dramatically across New York City's boroughs.

The homeownership rate in Staten Island exceeded that of the U.S. with a rate of 68 percent in 2014—five percentage points higher than the national homeownership rate. However, the homeownership rate in the Bronx was only 18 percent—the second-lowest of any county in the U.S.³

FIGURE 3: HOMEOWNERSHIP RATE, 2014



Sources: American Community Survey, NYU Furman Center

Homeownership rates in New York City varied considerably by race and ethnicity.

In New York City in 2014, 26 percent of black households and 15 percent of Hispanic households owned their homes, compared to 42 percent of white households and 39 percent of Asian households.⁴ Within New York City, homeownership rates varied dramatically for black and Hispanic households across boroughs. Queens had the highest black homeownership rate at 48 percent, nearly as high as that for white households in the borough. In Manhattan, only nine percent of black households and seven percent of Hispanic households owned their homes compared to 33 percent of white households. The racial gap in homeownership was widest in Staten Island, where 78 percent of white households owned their home—a homeownership rate 36 percentage points higher than that of black households in the borough (42%).

TABLE 1: HOMEOWNERSHIP RATE BY RACE AND ETHNICITY, 2010-2014

	Bronx	Brooklyn	Manhattan	Queens	Staten Island	New York City	United States
Asian	29%	39%	21%	47%	74%	39%	57%
Black	21%	25%	9%	48%	42%	26%	42%
Hispanic	10%	15%	7%	25%	45%	15%	45%
White	47%	36%	33%	50%	78%	42%	71%

Sources: American Community Survey, NYU Furman Center

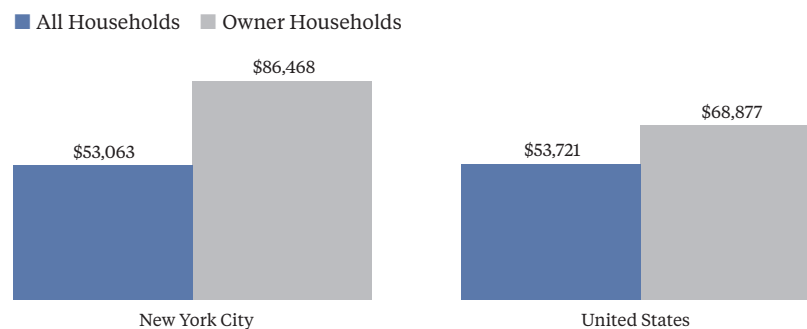
³ This is based on a ranking of counties and county-equivalent geographies in the United States. The county with the lowest homeownership rate in 2010-2014 was Kalawao County, Hawaii with 46 households.

⁴ The Census Bureau's American Community Survey determines the race and ethnicity of the household based on the race and ethnicity of the head householder. In this report, unless otherwise noted, "Hispanic" refers to any race, "Asian" is non-Hispanic Asian, "black" is non-Hispanic black and "white" is non-Hispanic white.

New York City homeowners had higher incomes than the typical New York City household and had higher incomes than homeowners nationwide in 2014.

The median owner household in New York City earned just over \$86,000 in 2014, 63 percent more than the overall median New York City household (\$53,063) and 26 percent more than owner households nationwide. The income gap between homeowner households and all households nationwide was narrower; the median owner household in the US earned \$68,887 in 2014, compared to the median overall household at \$53,721, an amount similar to New York City.

FIGURE 4: MEDIAN HOUSEHOLD INCOME BY OWNER-STATUS, 2014

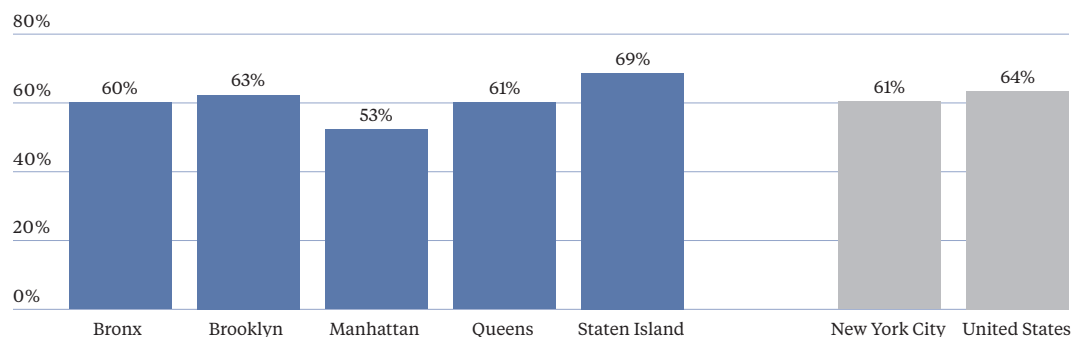


Sources: American Community Survey, NYU Furman Center

Despite higher incomes, New York City homeowners with mortgages face high housing cost-burdens.

Most of New York City's owner households (61%) reported carrying a mortgage in 2014, a rate only slightly lower than the national rate of 64 percent. Manhattan had the lowest share of owner households with a mortgage (53%), and Staten Island had the highest share of owner households with a mortgage (69%). In the Bronx, Brooklyn, and Queens the share of owner households with a mortgage was similar to the national rate.

FIGURE 5: SHARE OF OWNER HOUSEHOLDS WITH A MORTGAGE, 2014

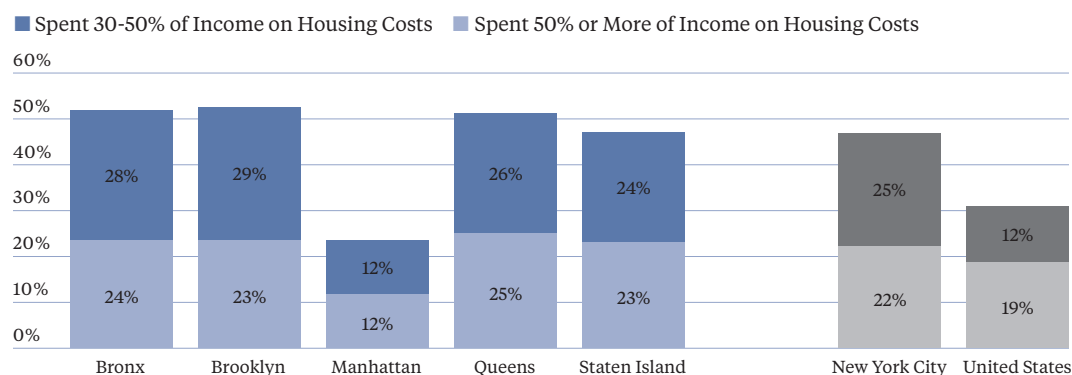


Sources: American Community Survey, NYU Furman Center

New York City households with a mortgage were more likely to be housing cost-burdened than their counterparts nationwide, 47 percent of households compared to 28 percent respectively. We define “housing cost burden” much the same as “rent burden,” meaning the homeowner spent 30 percent or more of household income towards their mortgage and other costs associated with owning a home, such as taxes, flood insurance, utilities (electricity, gas, and water and sewer), and condo fees.⁵ A “severely cost-burdened” household spent 50 percent or more household income towards their mortgage and other housing costs.

Of those New York City households with a mortgage, 25 percent reported being severely housing cost-burdened in 2014, more than twice the national rate of 12 percent. The Bronx and Brooklyn had the highest rate of severely housing cost-burdened, mortgage-holder households, at 28 and 29 percent respectively. In Manhattan, however, just 12 percent of homeowners with a mortgage spent over 50 percent of their income on housing costs.

FIGURE 6: SHARE OF MORTGAGE-HOLDER HOUSEHOLDS BY HOUSING COSTS AS A PERCENT OF HOUSEHOLD INCOME, 2014



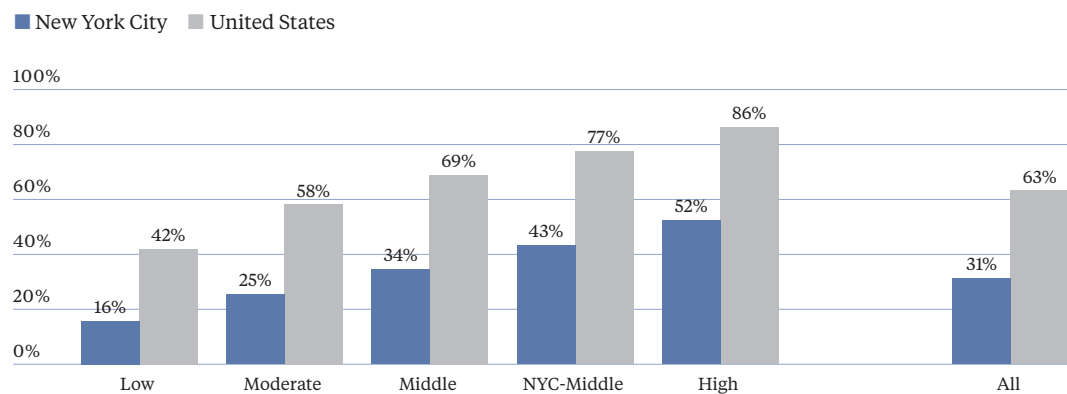
Sources: American Community Survey, NYU Furman Center

⁵ “Housing cost burden” is based on the *American Community Survey/Puerto Rico Community Survey 2014 Subject Definitions*, which uses selected monthly owner costs, which include “the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second mortgages, home equity loans, and other junior mortgages); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, and water and sewer); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (personal property taxes, site rent, registration fees, and license fees).” (http://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2014_ACSSubjectDefinitions.pdf)

New York City had far lower rates of homeownership among Low-Income and Moderate-Income households than the U.S. in 2014.

In 2014, just over half (58%) of Moderate-Income households in the U.S. owned their homes. Among Moderate-Income households in New York City, homeownership rates were far lower; only 25 percent of these households in New York City owned their homes in 2014. Even after when we consider that the overall rate of homeownership in New York City is less than half that of the nation, the homeownership rates for both Low-Income and Moderate-Income households are relatively low compared to the homeownership rates of their national counterparts. For High-Income households, the city's homeownership rate was 52 percent in 2014, short of the national homeownership rate of 86 percent.

FIGURE 7: HOMEOWNERSHIP RATE BY HOUSEHOLD INCOME, 2014



Sources: American Community Survey, NYU Furman Center

Part 2:

Affordability of New York City's Homeownership Market

Given the rising costs of housing in New York City, it is not surprising that homeownership is less attainable for lower-income New York City households than it is for those with higher incomes. In fact, the combination of high housing costs and stagnating incomes has resulted in an extremely constrained supply of homeownership opportunities for households not earning high incomes in New York City.

In this section, we estimate the affordability of the home purchase market for New York City households at different income levels. First, we convert incomes to purchasing power, and then we consider the affordability of 2014 home sales for households in the five boroughs of New York City and in the three nearby New York counties of Westchester, Nassau, and Suffolk.

Converting Incomes into Purchasing Power

The purchase price a homebuyer could potentially afford at different income levels is equal to the mortgage size plus the down-payment. To estimate mortgage size – the amount a homebuyer can potentially borrow – we use the median loan-to-income ratio of actual home purchase mortgage originations for applicants with incomes below about \$114,000 in 2014.⁶ Additionally, we assume a borrower will fund a 20 percent down payment. Table 2 shows how much New York City households at different income levels could potentially spend on a home in New York City as well as the counties of Westchester, Nassau, and Suffolk.

TABLE 2: AFFORDABILITY ASSUMPTIONS BY INCOME BAND AND GEOGRAPHY

<i>Income Band (Maximum Annual Household Income)</i>	<i>Affordability Assumptions</i>	<i>New York City</i>	<i>Westchester</i>	<i>Nassau</i>	<i>Suffolk</i>
Low-Income (\$34,000)	Mortgage Size	\$121,473	\$81,161	\$113,093	\$104,727
	Down payment (20%)	\$30,368	\$20,290	\$28,273	\$26,182
	Total Purchase Amount	\$151,841	\$101,451	\$141,366	\$130,909
Moderate-Income (\$55,000)	Mortgage Size	\$194,357	\$129,858	\$180,949	\$167,563
	Down payment (20%)	\$48,589	\$32,464	\$45,237	\$41,891
	Total Purchase Amount	\$242,946	\$162,322	\$226,186	\$209,454
Middle-Income (\$83,000)	Mortgage Size	\$291,535	\$194,786	\$271,424	\$251,345
	Down payment (20%)	\$72,884	\$48,697	\$67,856	\$62,836
	Total Purchase Amount	\$364,419	\$243,483	\$339,280	\$314,181
NYC-Middle-Income (\$114,000)	Mortgage Size	\$400,861	\$267,831	\$373,208	\$345,599
	Down payment (20%)	\$100,215	\$66,958	\$93,302	\$86,400
	Total Purchase Amount	\$501,076	\$334,789	\$466,509	\$431,999

Sources: Home Mortgage Disclosure Act, NYU Furman Center

⁶ The size of the mortgage a home-buyer is able to borrow varies based on such factors as previous credit history, local property taxes, and savings. The loan-to-income ratio was derived using data from the 2014 Home Mortgage Disclosure Act (HMDA). See Methodology for full description of how the median loan-to-income ratio was calculated.

What kinds of jobs match these income levels?

This table provides examples of occupations New York City residents might hold at different income levels – Low-, Moderate-, Middle-, and NYC-Middle-Income levels. (Note: A household's income includes income for all the persons in that household.)

TABLE 3: OCCUPATIONAL EMPLOYMENT AND WAGE ESTIMATES

<i>Income Band Cut-Off Levels</i>	<i>Mean Annual Income (NYC-Newark-Jersey City Metropolitan Statistical Area, May 2015)</i>
LOW	
Building and Ground Cleaning and Maintenance Operations	\$33,510
Residential Advisors	\$33,520
Nursing Assistants	\$33,560
Bicycle Repairers	\$33,760
Building Cleaning Workers	\$33,960
MODERATE	
Refuse and Recyclable Material Collectors	\$52,650
Community and Social Service Occupations	\$53,470
Hearing Aid Specialists	\$53,980
Teachers and Instructors, non-substitute	\$54,460
Meter Reader, Utilities	\$54,220
MIDDLE	
Insurance Sales Agents	\$80,020
Budget Analysts	\$80,040
Geoscientists	\$81,320
Web Developers	\$81,430
Business Operations Specialists	\$81,440
NYC-MIDDLE	
Software Developers, Applications	\$108,770
Chiropractors	\$110,290
Engineering Teachers, Postsecondary	\$110,590
Management Analysts	\$111,280
Producers and Directors	\$111,900

Sources: Bureau of Labor Statistics, NYU Furman Center

The New York City real estate market is expensive; the median city sales price is only affordable to High-Income households.

In 2014, there were over 33,000 home purchases of one- to three-family properties, condominiums, and co-ops⁷ across New York City with a median sales price of \$575,700 (Table 4).⁸ The median sales price in Manhattan was more than twice as high (\$1,301,600) than the city median (\$575,700). Sales under \$500,000 were concentrated outside of Manhattan. The least expensive borough was the Bronx, where the median sales price was \$360,500, followed by Staten Island at just under \$400,000.

TABLE 4: PROPERTY SALES OF 1-3 FAMILY, CONDOMINIUMS, AND CO-OPS, 2014

	Number of Sales ⁹	Median Sale Price
New York City	33,115	\$575,700
The Bronx	2,004	\$360,500
Brooklyn	8,401	\$620,800
Manhattan	8,756	\$1,301,600
Queens	9,838	\$485,600
Staten Island	4,116	\$395,900

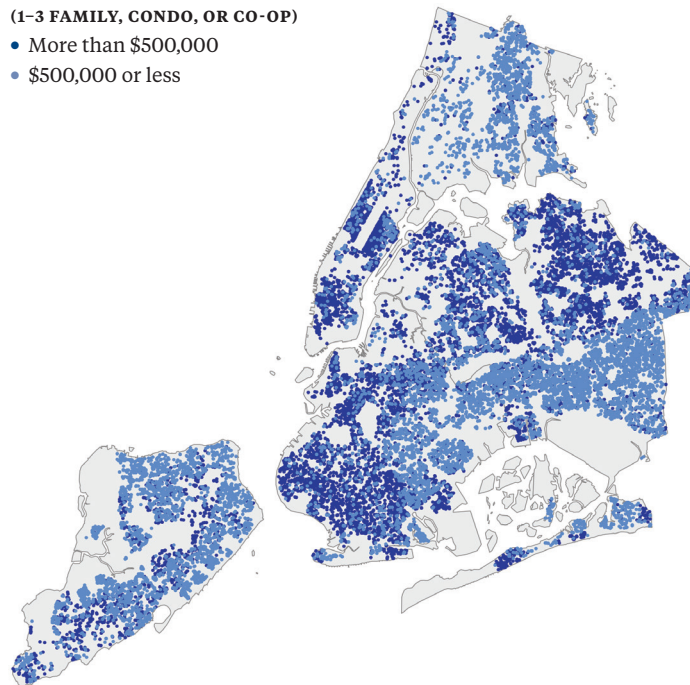
Sources: New York City Department of Finance, NYU Furman Center

FIGURE 8: PROPERTY SALES OF 1-3 FAMILY, CONDOMINIUMS, AND CO-OPS, 2014

RESIDENTIAL SALE

(1-3 FAMILY, CONDO, OR CO-OP)

- More than \$500,000
- \$500,000 or less



Sources: New York City Department of Finance, NYU Furman Center

⁷ Condominiums and co-op sales are for individual units though the unit may be in a multifamily building.

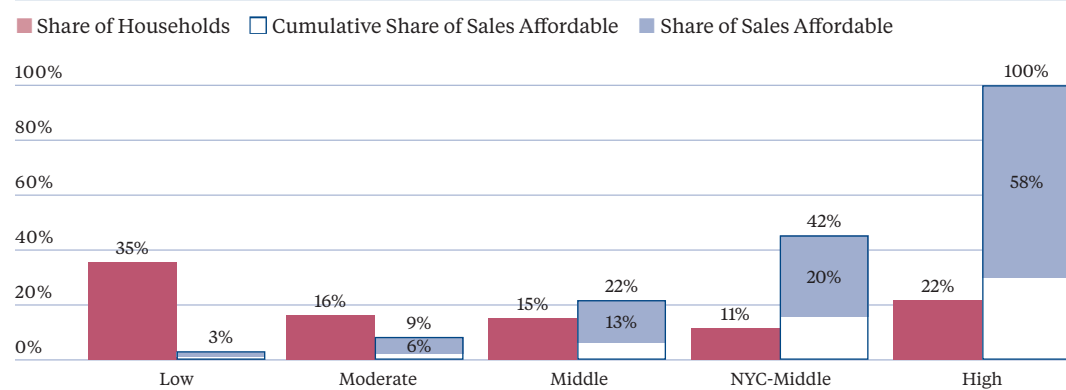
⁸ Sales volume and median price did not vary significantly from 2013 sales.

⁹ See Methodology for a description of the universe of sales.

The majority of sales in New York City in 2014 were too expensive for the vast majority of New York City households.

Low-Income and Moderate-Income households comprised 51 percent of New York City households in 2014 (35% and 16%, respectively), yet only nine percent of sales in the city were affordable to these households (3% were affordable to Low-Income households and an additional 6% were affordable to Moderate-Income households). Middle-Income households could afford 22 percent of sales in the city in 2014. Even after including NYC-Middle-Income households, less than half of sales in 2014 (42%) were affordable to the 77 percent of New York households that fall into the Low-Income, Moderate-Income, Middle-Income, and NYC-Middle-Income categories.

FIGURE 9: SHARE OF HOUSEHOLDS AND SHARE AFFORDABLE SALES BY INCOME LEVEL IN NEW YORK CITY, 2014

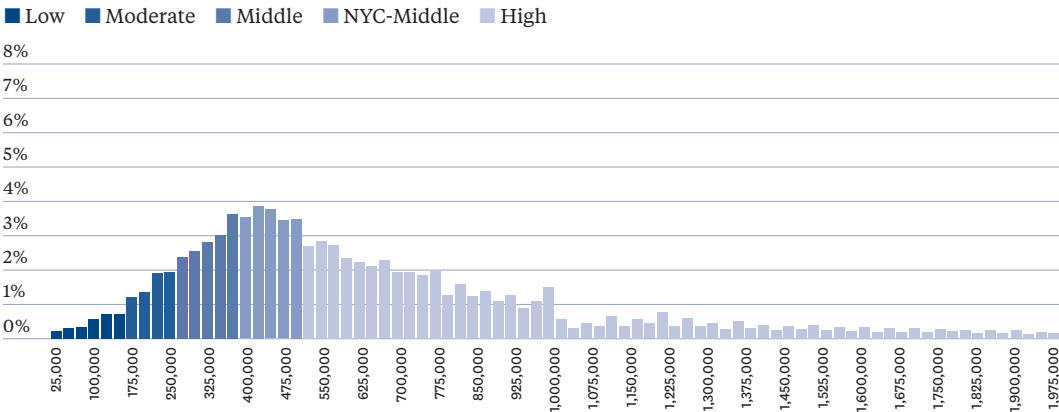


Note: Labels are rounded.

Sources: American Community Survey, New York City Department of Finance, NYU Furman Center

In terms of the distribution of sale prices in New York City, just over a fifth of all sales in 2014 (22%) were priced between \$200,000 and \$400,000. The most common sales price range, as shown in Figure 10, were sales between \$300,000 and \$500,000, which were 27 percent of all sales in 2014.

FIGURE 10: DISTRIBUTION OF 1-3 FAMILY, CONDOMINIUM, AND CO-OP PROPERTY SALES BY PRICE IN NEW YORK CITY, 2014 (2015\$)¹⁰



Sources: New York City Department of Finance, NYU Furman Center

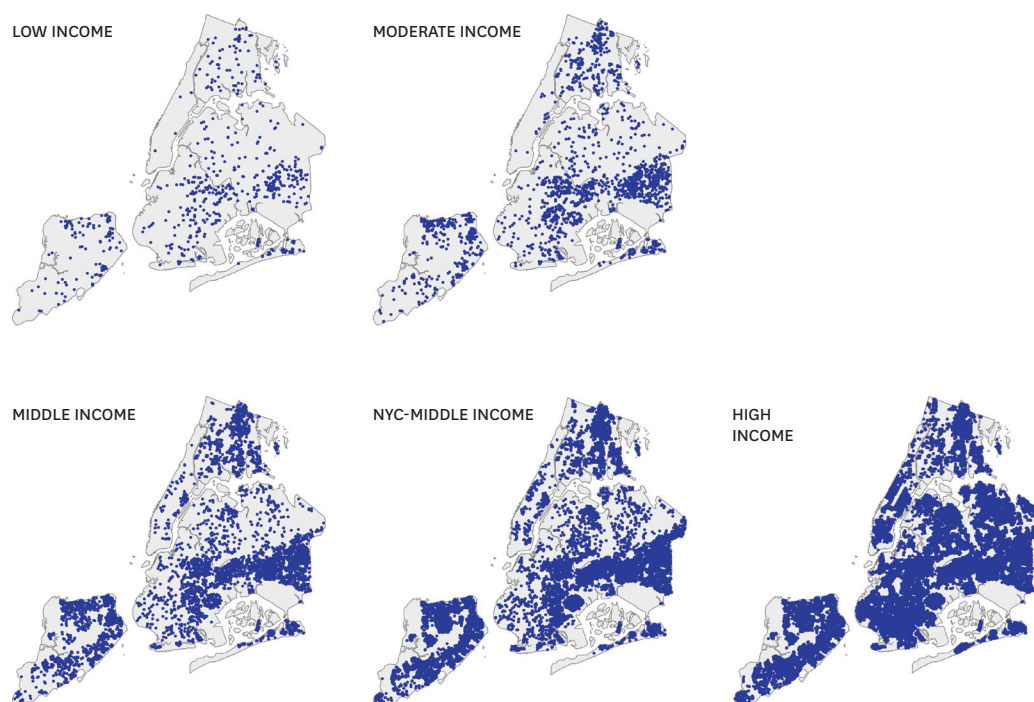
10 Not shown: Nine percent of sales in 2014 were over \$2,000,000.

Sales of homes affordable to Low-Income and Moderate-Income households are concentrated outside of Manhattan.

The relatively few 2014 sales affordable to Low-Income and Moderate-Income households were clustered in eastern Queens, the north Bronx, and the north shore of Staten Island. Sales affordable to Middle-Income households were heavily clustered in eastern Brooklyn, Queens, and the north Bronx. Most sales citywide—including almost all Manhattan home sales—were only affordable to High-Income households.

FIGURE 11: PROPERTY SALES OF 1-3 FAMILY, CONDOMINIUMS, AND CO-OPS, BY INCOME LEVEL AFFORDABILITY, 2014

- Residential Sale (1–3 family, condo, or co-op)

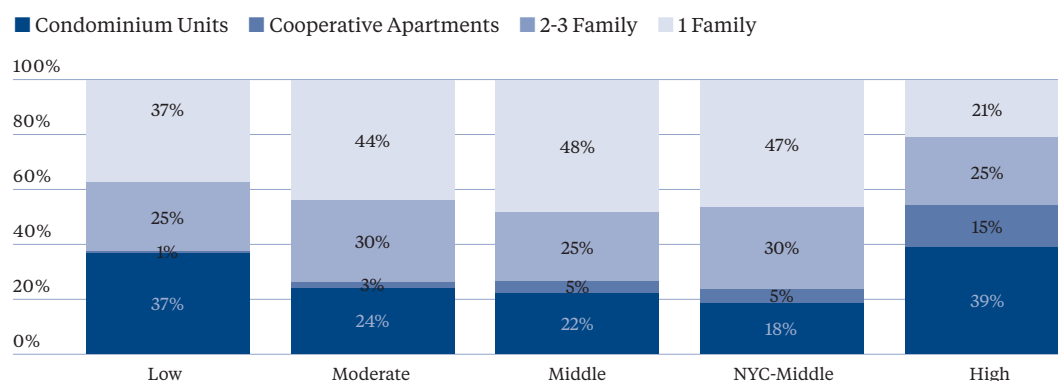


Sources: New York City Department of Finance, NYU Furman Center

In New York City, condominiums represented large shares of the sales affordable to both Low-Income and High-Income households, while cooperative apartments were more commonly affordable only to High-Income households.

Among the properties sold in New York City in 2014 that were affordable to Low-Income households, 37 percent were condominium units, making them as common as single-family homes at that price level. Condominiums also comprised the greatest share of the sales that were affordable only to High-Income households (39%) and were much less prominent for sales only affordable to Moderate-Income, Middle-Income and NYC-Middle-Income households, respectively. The pattern was different for cooperative apartments, which comprised a significant share of sales affordable only to High-Income households (15%), and fewer sales affordable at lower prices.

FIGURE 12: PROPERTY TYPE COMPOSITION OF SALES BY INCOME IN NEW YORK CITY, 2014



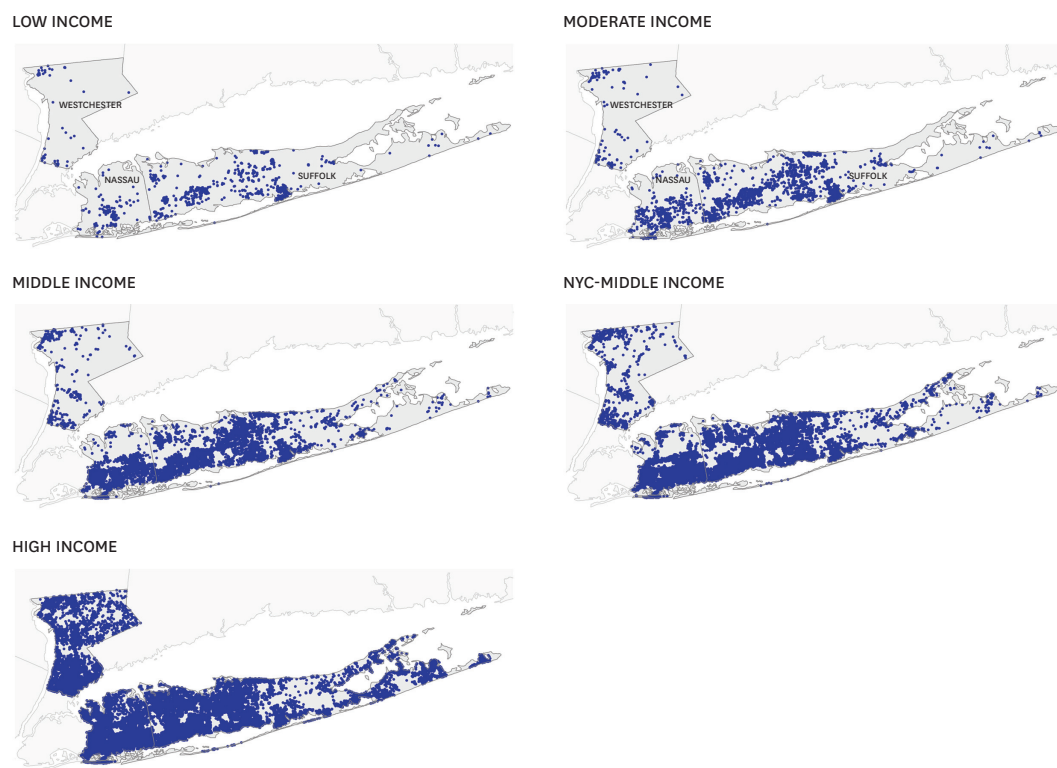
Sources: New York City Department of Finance, NYU Furman Center

Part 3

Homeownership Opportunities in Westchester, Nassau, and Suffolk Counties

Some New York City residents considering homeownership may choose to explore opportunities beyond the city's five boroughs. To get a sense of what might be affordable, we analyzed the home purchase options in Westchester County, Nassau County, and Suffolk County. While Nassau and Suffolk Counties hold some potential for those with lower income, almost all the homes sold in 2014 in Westchester County were only affordable to High-Income households.¹¹ In fact, the vast majority of sales affordable to Low-Income, Moderate-Income, and Middle-Income New York City households in the three nearby counties were primarily located in Suffolk County.

FIGURE 13: PROPERTY SALES OF 1-4 FAMILY, CONDOMINIUMS, AND CO-OPS, BY INCOME LEVEL AFFORDABILITY, 2014



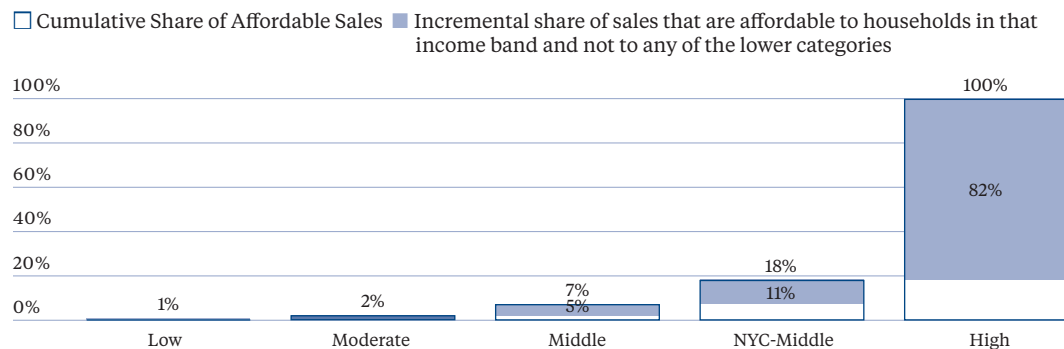
*Note: Sales with incomplete address information are not shown.
Sources: New York State Real Property Services, NYU Furman Center*

¹¹ The analysis in this section uses the Area Median Family Income for New York City (which is the same as that for Westchester County). Appendix D takes into account the median family income for the Nassau-Suffolk Metropolitan Statistical Area, which is what the FFEIC uses for Nassau and Suffolk counties.

Westchester County offered only limited affordability to Low-Income, Moderate-Income, Middle-Income, and NYC-Middle-Income New York City households; just 18 percent of sales in 2014 were affordable to those groups.

In Westchester County, affordable options comprised an even lower share of total sales than in New York City. In 2014, less than one percent of sales were affordable to Low-Income potential homebuyers, while about two percent were affordable to Moderate-Income homebuyers (an additional 1% of sales). Seven percent of sales were affordable to Middle-Income households, while 18 percent of sales were affordable to NYC-Middle-Income households. The vast majority of sales prices in Westchester County in 2014—about 82 percent—were affordable only to High-Income households.

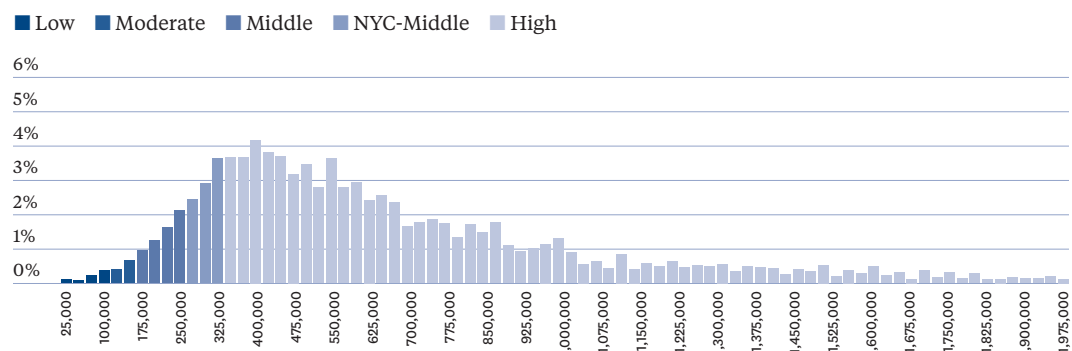
FIGURE 14: SHARE OF HOUSEHOLDS AND SHARE OF AFFORDABLE SALES BY INCOME LEVEL IN WESTCHESTER COUNTY, 2014



Sources: American Community Survey, New York State Real Property Services, NYU Furman Center

In terms of the distribution of sale prices in Westchester County, just over a quarter of all sales in 2014 (24%) were priced between \$200,000 and \$400,000. The most common sales price range, as shown in Figure 15, were sales between \$300,000 and \$500,000, which were 29 percent of all sales in 2014.

FIGURE 15: DISTRIBUTION OF SALES BY PRICE IN WESTCHESTER COUNTY, 2014 (2015\$)¹²



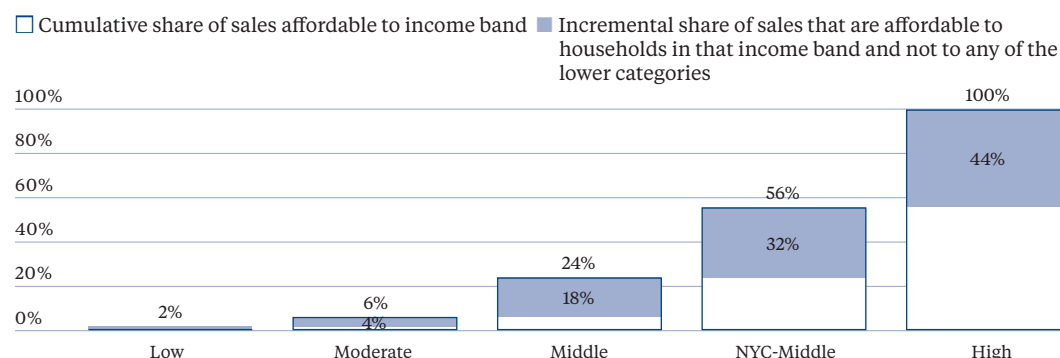
Sources: New York State Real Property Services, NYU Furman Center

¹² Not shown: Five percent of sales in 2014 were over \$2,000,000.

In Nassau County, only 24 percent of sales were affordable for Low-Income, Moderate-Income, or Middle-Income households.¹³

In Nassau County, only about six percent of sales were affordable to New York City Low-Income and Moderate-Income homebuyers in 2014. Only an additional 18 percent of sales were affordable to Middle-Income households for a cumulative total of 24 percent. A NYC-Middle-Income household, however, could afford 56 percent of home sales in Nassau County, more than the 42 percent of 2014 sales in New York City.

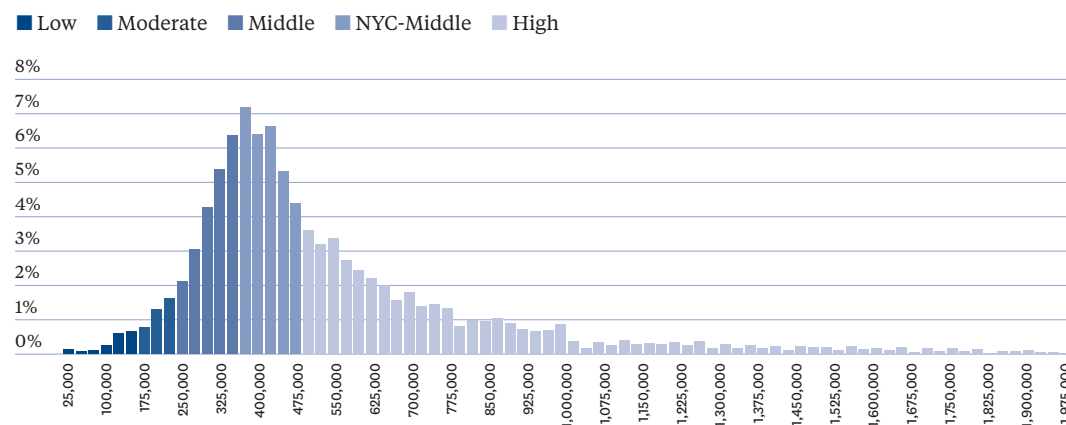
FIGURE 16: SHARE OF HOUSEHOLDS AND SHARE OF AFFORDABLE SALES BY INCOME LEVEL IN NASSAU COUNTY, 2014



Sources: American Community Survey, New York State Real Property Services, NYU Furman Center

In terms of the distribution of sale prices Nassau County, over a third of all sales in 2014 (36%) were priced between \$200,000 and \$400,000. The most common sales price range, as shown in Figure 17, were sales between \$275,000 and \$475,000, which were nearly half (46%) of all sales in 2014.

FIGURE 17: DISTRIBUTION OF SALES BY PRICE IN NASSAU COUNTY, 2014 (2015\$)¹⁴



Sources: New York State Real Property Services, NYU Furman Center

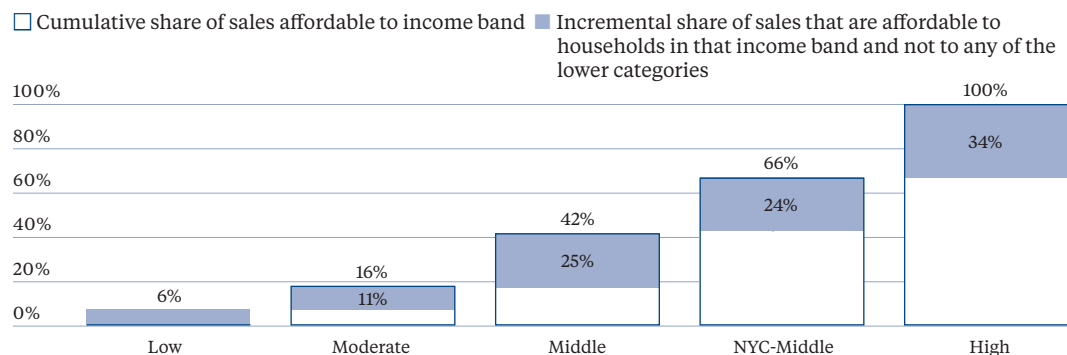
¹³ The analysis in this section uses the Area Median Family Income for New York City (which is the same as that for Westchester County). Appendix D takes into account the median family income for the Nassau-Suffolk Metropolitan Statistical Area, which is what the FFEIC uses for Nassau and Suffolk counties.

¹⁴ Not shown: Two percent of sales in 2014 were over \$2,000,000.

Suffolk County offered the most affordable home purchase options for households at all income levels; a majority of sales in 2014 (66%) were affordable to NYC-Middle-Income New York City households.¹⁵

In Suffolk County, while only six percent of sales in 2014 were affordable to Low-Income New York City households, a total of 16 percent of sales were affordable to Moderate-Income households, and a total of 42 percent of sales were affordable to Middle-Income households—higher percentages than in the other geographies. Only 34 percent of sales in Suffolk County were affordable only to High-Income households.

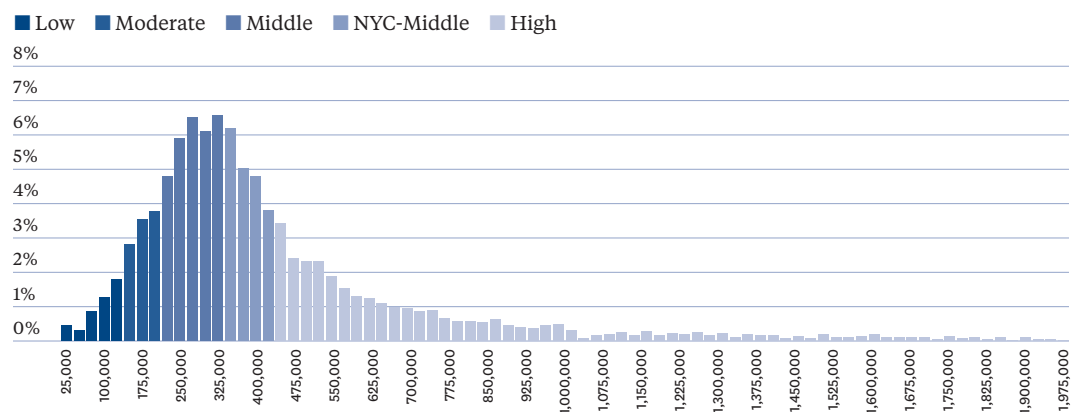
FIGURE 18: SHARE OF HOUSEHOLDS AND SHARE AFFORDABLE SALES BY INCOME LEVEL IN SUFFOLK COUNTY, 2014



Sources: American Community Survey, New York State Real Property Services, NYU Furman Center

In terms of the distribution of sales prices Suffolk County, nearly half of all sales in 2014 (46%) were priced between \$200,000 and \$400,000. This range was also the most common sales price range, as shown in Figure 19.

FIGURE 19: DISTRIBUTION OF SALES BY PRICE IN SUFFOLK COUNTY, 2014 (2015\$)¹⁶



Sources: New York State Real Property Services, NYU Furman Center

¹⁵ The analysis in this section uses the Area Median Family Income for New York City (which is the same as that for Westchester County). Appendix D takes into account the median family income for the Nassau-Suffolk Metropolitan Statistical Area, which is what the FFEIC uses for Nassau and Suffolk counties.

¹⁶ Not shown: Four percent of sales in 2014 were over \$2,000,000.

Conclusion

This report helps to shed light on the extreme variation in the homeownership rate among New Yorkers and quantify the homeownership options that exist at different income levels.

We show that the high cost of housing in the New York City real estate market in 2014 presented a challenge for the 66 percent of all New York City households that earned \$83,000 or less annually, since they could only afford only 22 percent of sales in the city that year. For Low-Income and Moderate-Income New York City households we find that the homeownership rate was not only lower than the national rate but disproportionately lower. If housing prices continue to rise at a pace faster than incomes, the availability of housing stock affordable to these income groups will continue to shrink.

The price of homes available for purchase also tends to correlate with distance from Manhattan. We find that affordable homeownership opportunities in New York City for Low-Income, Middle-Income, and Moderate-Income households are heavily concentrated outside of Manhattan, often requiring longer and more expensive commutes. The suburbs may not be as expensive as Manhattan, but the options for New York City households earning less than \$114,000 annually are quite limited in Westchester County. Options for these households are somewhat better in Nassau County, with Suffolk County offering a much more affordable mix of housing options.

Methodology

All dollar figures in this report are presented in constant 2015 dollars, adjusted using the Consumer Price Index (CPI) for All Urban Consumers (Current Series) without seasonal adjustments from the Bureau of Labor Statistics over all major expenditure classes for the relevant metropolitan area.

Data Sources

Home Mortgage Disclosure Act

The Home Mortgage Disclosure Act (HMDA) requires financial institutions with assets totaling at least \$43 million in 2014 to report information on loan applications and originations if they have originated or refinanced any first-lien home purchase loans on one- to four-family properties (including condominium and co-op units) in the previous year. Thus, the HMDA data capture most, but not all, one- to four-family residential mortgage lending activity. We use this dataset to calculate the loan-to-income ratio used to estimate potential home purchasing power. All analysis of these data is based on non-business-related loans on owner-occupied, one- to four-family properties (including condominiums and cooperative apartments). We exclude from our analysis any loans for manufactured or multifamily rental housing (with five or more units), loans on properties that are not owner-occupied, and any loans deemed to be business related (classified as those loans for which a lender reports an applicant's ethnicity, race, and sex as "not applicable").

New York City Department of Finance

New York City property sales data are from the New York City Department of Finance (DOF). We receive an annual sales file from DOF under an exclusive arrangement. We supplement the annual sales file with deed filings obtained from DOF's Automated City Register Information System (ACRIS), a publicly available database. This sales data captures all property ownership transactions that result in the parties filing a real property transfer tax return, which covers most sales occurring in the city. For a given sales record, we know the unique sale identifier, execution date, price, buyer and seller names, parcel identifiers of properties involved in the transaction, and the significance of the sale (i.e. whether the sale was made at arm's length). In our sample, we keep sales that include arm's length transactions with a non-trivial price (at least \$10,000), which DOF does not consider insignificant. We then further limit our sample to only one-, two-, and three-family properties, condominium units, and cooperative apartments.

New York State Office of Real Property Tax Services

The property sales data for Westchester, Nassau, and Suffolk counties are from the New York State Office of Real Property Tax Services, which we access from the data warehouse application SalesWeb. The source of these data is the State of New York Real Property Transfer

Report, and the data contain information on all real property sales in New York State, outside of New York City. The data include sale location, including county and municipality. As with our New York City data, we restrict our sample to only arm's length sales of one-, two-, and three-family properties, condominium units, and cooperative apartments.

U.S. Census Bureau

We use data from the American Community Survey (ACS), an annual survey conducted by the U.S. Census Bureau, from 2005 to 2014. We also report the homeownership rate over time, and for this indicator we use the Neighborhood Change Database 2010, which is compiled by GeoLytics and the Urban Institute with support from the Rockefeller Foundation (2010), and includes decennial census summary file data from 1970 to 2010.

While most ACS indicators use pre-tabulated summary data, some indicators in this report are calculated by aggregating individual- and household-level data from the ACS Public Use Microdata Samples (PUMS). The only geographic information that ACS PUMS data identify for a household are its state and Public Use Micro Area (PUMA). New York City's PUMAs are completely coterminous with city boundaries, but in Westchester there are PUMAs that cross the county line. To address this issue we use geographic crosswalks provided from the Missouri Census Data Center, and assign a PUMA to the county in which the plurality of its housing units are located (based on the 2010 Decennial Census).

Households

The U.S. Census Bureau defines a household as consisting of all the people who occupy a housing unit. A household includes the related family members and all the unrelated people who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters (e.g. nursing facilities, college/university dormitories).

The "householder" refers to the person (or one of the people) in whose name the housing unit is owned or rented (maintained) or, if there is no such person, any adult member, excluding roomers, boarders, or paid employees. If the house is owned or rented jointly by a married couple, the householder may be either spouse.

Householder Race and Ethnicity

The U.S. Census Bureau uses the race and ethnicity of the head householder to determine the race and ethnicity of the household, and in this report we do the same to maintain consistency with HMDA where we use the race and ethnicity of the applicant. In this report, unless otherwise noted, "Hispanic" refers to any race, "Asian" is non-Hispanic Asian, "black" is non-Hispanic black, and "white" is non-Hispanic white.

Purchase Affordability

Defining Low-, Moderate-, Middle-, and NYC-Middle-Income Households

For this report we use a set of five income categories, based on definitions established by the Federal Financial Institutions Examination Council (FFIEC). The FFIEC income definitions are percentages of Area Median Family Income (AMFI) as determined by family median income at the Metropolitan Statistical Area (MSA) level.¹⁷ The FFIEC classifies “Low-Income” households as those earning less than 50 percent of AMFI, “Moderate-Income” households as those earning between 50 and 80 percent of AMFI, and “Middle-Income” households as those earning between 80 and 120 percent of AMFI. Because affordable housing programs in New York City serve middle-income households up to 165 percent of Area Median Income (a standard set by the U.S. Department of Housing and Urban Development (HUD) as a basis for determining housing affordability), we have added an additional income band of 120 to 165 percent of AMFI, which we label “NYC-Middle-Income.” The remaining households with incomes above 165 percent of AMFI are classified as “High-Income.”

New York City and Westchester County are within the New York-Jersey City-White Plains MSA. Nassau and Suffolk counties make up their own MSA (Nassau-Suffolk MSA). Because the primary focus of this analysis is to investigate opportunities for New York City households to purchase homes in nearby New York, we use the AMFI for the New York-Jersey City-White Plains MSA to determine affordability. In the Appendix we estimate the share of households and affordable sales by income based on local AMFI. For national benchmarks cut by income band, we use the census microdata (described above) and determine income band based on the AMFI in each household’s respective MSA.

Determining Affordability

Potential Purchasing Power

In order to estimate the potential purchasing power of a household, we made several assumptions. First, we estimate the multiple of income a household would realistically be able to borrow, assuming that the household qualifies for a mortgage. Second, we assumed a household had sufficient liquid assets to cover closing costs, a reserve, and a down payment. The affordable sales price for a household is therefore the mortgage amount, plus the down payment.

¹⁷ Based on the American Community Survey 2006-2010 estimates.

Potential Borrowing Power

Lenders limit the amount they are willing to lend based on how much of a household's income will be required to cover monthly mortgage payments, property taxes, insurance on the home, and any other regular payments such as those to a condominium association or for other debt such as a car loan. These characteristics vary across borrowers and properties being purchased.

In order to model potential borrower power, we used data available from the Home Mortgage Disclosure Act (HMDA) to estimate the purchasing power of a typical borrower. We use the median ratio of mortgage to income as reported in the 2014 HMDA data by geography. We limited the HMDA sample to non-government, purchase-money mortgages at or below \$625,000 for purchases in New York City, Westchester, Suffolk, and Nassau Counties. We used these ratios separately for New York City, and Westchester, Nassau, and Suffolk Counties to calculate the price tiers affordable at the different income cutoffs.

TABLE 1: MEDIAN RATIO OF MORTGAGE AMOUNT TO INCOME BY GEOGRAPHY, 2014

Geography	Median Ratio
New York City	3.53
Westchester County	2.36
Nassau County	3.28
Suffolk County	3.04

Sources: Home Mortgage Disclosure Act, NYU Furman Center

Using these ratios in our model, a Middle-Income New York City household earning about \$83,000 annually would be able to borrow \$291,535 in New York City, \$194,786 in Westchester County, \$271,424 in Nassau County, or \$251,345 in Suffolk County.

Down Payment

For this analysis we assume that a home purchaser with a non-government mortgage contributes a down payment of 20 percent of the total purchase price. Because non-government mortgages can have lower down payment requirements, our 20 percent down payment assumption may overstate the affordable purchase price.

Total Potential Purchasing Power

The final affordable sales price for a household is the mortgage amount, plus a 20 percent down payment.

TABLE 2: AFFORDABILITY ASSUMPTIONS FOR NEW YORK CITY HOUSEHOLDS BY PURCHASE LOCATION AND INCOME BAND, 2014

Income Band (Maximum Annual Household Income)	Affordability Assumptions	New York City (Median Ratio: 3.53)	Westchester (Median Ratio: 2.36)	Nassau (Median Ratio: 3.28)	Suffolk (Median Ratio: 3.04)
Low-Income (\$34,000)	Mortgage size	\$121,473	\$81,161	\$113,093	\$104,727
	Down payment (20%)	\$30,368	\$20,290	\$28,273	\$26,182
	Total purchase amount	\$151,841	\$101,451	\$141,366	\$130,909
Moderate-Income (\$55,000)	Mortgage size	\$194,357	\$129,858	\$180,949	\$167,563
	Down payment (20%)	\$48,589	\$32,464	\$45,237	\$41,891
	Total purchase amount	\$242,946	\$162,322	\$226,186	\$209,454
Middle-Income (\$83,000)	Mortgage size	\$291,535	\$194,786	\$271,424	\$251,345
	Down payment (20%)	\$72,884	\$48,697	\$67,856	\$62,836
	Total purchase amount	\$364,419	\$243,483	\$339,280	\$314,181
NYC-Middle-Income (\$114,000)	Mortgage size	\$400,861	\$267,831	\$373,208	\$345,599
	Down payment (20%)	\$100,215	\$66,958	\$93,302	\$86,400
	Total purchase amount	\$501,076	\$334,789	\$466,509	\$431,999

Sources: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act, NYU Furman Center

Appendix A

Select Indicators, New York City Boroughs

	Bronx	Brooklyn	Manhattan	Queens	Staten Island	New York City	United States
Housing Price Index, All Residential Property Types (Index=100 in 1990)							
2000	111	136	163	125	121	130	-
2005	210	270	318	248	227	252	-
2010	186	239	340	201	200	225	-
2014	199	310	463	241	208	278	-
Index of Real Median Household Income (Index=100 in 1990)							
2000	93	92	108	92	93	95	-
2005	100	109	130	106	108	110	-
2010	87	96	116	91	94	96	-
2014	77	94	119	84	81	89	-
Homeownership Rate							
1990	18%	26%	18%	43%	64%	29%	64%
2000	20%	27%	20%	43%	64%	30%	66%
2006	21%	32%	24%	47%	72%	34%	67%
2010	19%	28%	23%	43%	64%	31%	65%
2014	18%	28%	23%	43%	68%	31%	63%
Homeownership Rate by Race and Ethnicity, 2010-2014							
Asian	29%	39%	21%	47%	74%	39%	57%
Black	21%	25%	9%	48%	42%	26%	42%
Hispanic	10%	15%	7%	25%	45%	15%	45%
White	47%	36%	33%	50%	78%	42%	71%
Median Household Income by Owner-Status, 2014							
All Households	\$33,712	\$47,966	\$76,089	\$57,241	\$71,121	\$52,996	\$53,657
Owner Households	\$76,345	\$80,723	\$143,843	\$78,122	\$86,885	\$86,359	\$68,795
Mortgage-Holder Households, 2014							
Share of Owner Households with a Mortgage	60%	63%	53%	61%	69%	61%	64%
Share of Mortgage-Holder Households by Housing Costs as a Percent of Household Income, 2014							
Spent 30-50% of Income on Housing Costs	24%	23%	12%	25%	23%	22%	19%
Spent 50% or More of Income on Housing Costs	28%	29%	12%	26%	24%	25%	12%
Homeownership Rate by Income Level, 2014							
Low	7%	14%	10%	27%	43%	16%	42%
Moderate	15%	23%	14%	35%	67%	25%	58%
Middle	24%	33%	18%	46%	72%	34%	69%
NYC-Middle	42%	40%	24%	53%	77%	43%	77%
High	59%	52%	38%	65%	89%	52%	86%
Property Sales of 1-3 Family, Condominiums, and Co-ops, 2014							
Number of Sales	2,004	8,401	8,756	9,838	4,116	33,115	-
Median Sale Price	\$360,454	\$620,781	\$1,301,639	\$485,611	\$395,926	\$575,725	-

Data Sources: American Community Survey, Home Mortgage Disclosure Act, New York City Department of Finance, NYU Furman Center

Appendix B

Select Indicators, Westchester, Nassau, and Suffolk Counties

	Westchester	Nassau	Suffolk	United States
Homeownership Rate				
1990	60%	80%	80%	64%
2000	60%	80%	80%	66%
2006	64%	82%	81%	67%
2010	62%	80%	79%	65%
2014	60%	80%	78%	63%
Homeownership Rate by Race and Ethnicity, 2010-2014				
Asian	66%	86%	79%	57%
Black	36%	69%	54%	42%
Hispanic	34%	63%	61%	45%
White	74%	85%	83%	71%
Median Household Income by Owner-Status, 2014				
All Households	\$83,477	\$99,035	\$86,266	\$53,657
Owner Households	\$119,894	\$112,094	\$100,724	\$68,795
Mortgage-Holder Households, 2014				
Share of Owner Households with a Mortgage	65%	64%	69%	64%
Share of Mortgage-Holder Households by Housing Costs as a Percent of Household Income, 2014				
Spent 30-50% of Income on Housing Costs	22%	24%	24%	19%
Spent 50% or More of Income on Housing Costs	17%	20%	20%	12%
Homeownership Rate by Income Level, 2014				
Low	33%	63%	58%	42%
Moderate	43%	78%	78%	58%
Middle	51%	83%	86%	69%
NYC-Middle	67%	93%	92%	77%
High	84%	94%	94%	86%
Property Sales of 1-3 Family, Condominiums, and Co-ops, 2014				
Number of Sales	7,567	11,551	14,710	–
Median Sale Price	\$560,606	\$436,550	\$345,435	–

*Note: Income level based on Area Median Family Income in NYC-Newark-Jersey City Metropolitan Statistical Area for Westchester County and based on Nassau-Suffolk Metropolitan Statistical Area for Nassau and Suffolk counties.
Data Sources: American Community Survey, Home Mortgage Disclosure Act, New York City Department of Finance, NYU Furman Center*

Appendix C

Affordability Assumptions Applied to Households in Westchester, Nassau, and Suffolk Counties (Based on Local Area Median Family Income)

Income Level (Maximum Annual Household Income)	Affordability Assumptions	Nassau	Suffolk
Low-Income (\$53,000)	Mortgage size	\$172,512	\$159,750
	Down payment (20%)	\$43,128	\$39,938
	Total purchase amount	\$215,640	\$199,688
Moderate-Income (\$84,000)	Mortgage size	\$276,020	\$255,601
	Down payment (20%)	\$69,005	\$63,900
	Total purchase amount	\$345,024	\$319,501
Middle-Income (\$126,000)	Mortgage size	\$414,029	\$383,401
	Down payment (20%)	\$103,507	\$95,850
	Total purchase amount	\$517,537	\$479,251
NYC-Middle-Income (\$173,000)	Mortgage size	\$569,290	\$527,177
	Down payment (20%)	\$142,323	\$131,794
	Total purchase amount	\$711,613	\$658,971

Income Level (Maximum Annual Household Income)	Affordability Assumptions	Westchester
Low-Income (\$34,000)	Mortgage size	\$81,161
	Down payment (20%)	\$20,290
	Total purchase amount	\$101,451
Moderate-Income (\$55,000)	Mortgage size	\$129,858
	Down payment (20%)	\$32,464
	Total purchase amount	\$162,322
Middle-Income (\$83,000)	Mortgage size	\$194,786
	Down payment (20%)	\$48,697
	Total purchase amount	\$243,483
NYC-Middle-Income (\$114,000)	Mortgage size	\$267,831
	Down payment (20%)	\$66,958
	Total purchase amount	\$334,789

Note: Income level based on Area Median Family Income in NYC-Newark-Jersey City Metropolitan Statistical Area for Westchester County and based on Nassau-Suffolk Metropolitan Statistical Area for Nassau and Suffolk counties.

Data Sources: Home Mortgage Disclosure Act, NYU Furman Center

Appendix D

Share of Households and Affordable Sales by Income for Westchester, Nassau, and Suffolk Households (Based on Local Households)

Westchester, 2014 (Income Levels Based on NYC-Newark-Jersey City Metropolitan Statistical Area)

	Share of Households	Incremental share of sales that are affordable to households in that income level and not to any of the lower categories	Total Share of Sales
Low	22%	–	1%
Moderate	14%	1%	2%
Middle	14%	2%	7%
NYC-Middle	12%	7%	18%
High	38%	18%	100%

Nassau, 2014 (Income Levels Based on Nassau-Suffolk Metropolitan Statistical Area)

	Share of Households	Incremental share of sales that are affordable to households in that income level and not to any of the lower categories	Total Share of Sales
Low	27%	–	5%
Moderate	16%	5%	25%
Middle	20%	25%	62%
NYC-Middle	15%	62%	80%
High	23%	80%	100%

Suffolk, 2014 (Income Levels Based on Nassau-Suffolk Metropolitan Statistical Area)

	Share of Households	Incremental share of sales that are affordable to households in that income level and not to any of the lower categories	Total Share of Sales
Low	30%	–	15%
Moderate	18%	15%	43%
Middle	21%	43%	71%
NYC-Middle	14%	71%	82%
High	17%	82%	100%

Note: Income level based on Area Median Family Income in NYC-Newark-Jersey City Metropolitan Statistical Area for Westchester County, based on Nassau-Suffolk Metropolitan Statistical Area for Nassau and Suffolk counties.

Sources: American Community Survey, New York State Real Property Services, NYU Furman Center