Aftermath: Affordable Homeownership in New York City
Data Sources & Methodology | October 2018

DATA SOURCES

New York City Housing and Vacancy Survey

All household level data in the report (except for data about household housing cost burdens) is from New York City's Housing and Vacancy Survey, a survey prepared by the NYC Department of Housing and Preservation and Development and the U.S. Census Bureau. As the HVS is a sample survey, data derived from it are estimates and not exact counts. The survey is conducted every three years; for this report, we use the 2002, 2005, 2008, 2011, 2014, and 2017 surveys.

American Community Survey

The American Community Survey (ACS) is an annual sample survey administered by the U.S. Census Bureau that gathers information previously contained in the long form of the decennial census. The survey collects information from roughly 1 in 40 households, and data is released as 1-and 5-year estimates. The 1-year estimates are released for counties with populations greater than 65,000, and are more up-to-date but less reliable than the 5-year rolling estimates, which aggregate data for several years. In this report, we use data from the 1-year estimates for the most part, and 5-year estimates for "The Relationship Between Foreclosure Filings and Race in NYC Neighborhoods" map.

Comparisons between ACS and HVS

Comparisons between ACS and HVS are difficult because of the differing sample sizes and time frames between the two surveys. For this report, we relied primarily on the HVS because it provides rich information about New York City households, and, at the time of the report's writing, had the most up-to-date data.

For most data points, data from the ACS and HVS are similar, but we observed one discrepancy: HVS and ACS report different number of total households and homeowner households in Staten Island, which alters the homeownership rates calculated for the borough. In its 2017 1-year estimate, the ACS shows a homeownership rate of 69.6 percent, compared with a 61.7 percent homeownership rate reported in the HVS. Homeownership rates for Staten Island were also lower in the 2008, 2011, and 2014 HVSs compared with ACS estimates for those years, showing a gradual decline. By contrast, the ACS 1-year estimates show a fairly steady homeownership rate between those years.

Homeownership Rate for Staten Island

Source	2008	2011	2014	2017
HVS	68.12%	67.5%	64.6%	61.7%
ACS 1-year estimates	*Not available*	68.9%	68.2%	69.6%

Transaction Data from Automated City Register Information System

Sales data in this report are based on Center analyses of transactions in the city's Automated City Register Information System (ACRIS). The data is then joined with the city's tax roll data in order to identify the building class for each property which in turn we used to identify condos, coops, and 1-4 family homes.

Foreclosure Data

The Center purchases data about new foreclosure filings (Lis Pendens) from PropertyShark and cleans the data, removing duplicate filings, to identify new foreclosure filings against a property. If a filing with the same BBL (borough-block-lot number) occurs more than once within a 3-year period, we consider it a duplicate filing. Aggregate data about foreclosure auctions--auctions of homes at the end of the foreclosure process--are also published by PropertyShark.

Home Mortgage Disclosure Act Data

Home Mortgage Disclosure Act (HMDA) data provide information about home mortgage lending activity. HMDA Data is made available by the CFPB. In this report, we use mortgage origination data for originated loans for owner-occupied 1-4 family dwellings for home purchase and refinance secured by a first lien. We use data from 2007 through 2017 for Bronx, New York, Kings, Queens, and Richmond counties.

Center for NYC Neighborhoods and Network Partners Client Data

The Center and its Network Partners collect data about the clients it serves through their various programs; these data are anonymized before analysis. Data include some demographic information about clients, as well as financial and loan information for foreclosure prevention clients.

METHODOLOGY

Income Categories

Throughout this report, we reference five income categories, calculated using the HUD Area Median Income (AMI) limits for the referenced year and adjusted for family size. Income categories are calculated for each household based on household size and income from the New York City Housing and Vacancy Survey.

Income Category	Percent of HUD Area Median Income
Very Low Income	0-50%
Low Income	51-80%
Moderate Income	81-120%

Middle Income	121-165%
High Income	165% and above

These categories match those used by New York City's Department of Housing Preservation and Development, except that we have collapsed Extremely Low Income and Very Low Income into one category.

The 2018 Area Median Income limits can be found here:
https://www1.nyc.gov/site/hpd/renters/what-is-affordable-housing.page.
Limits for previous years can be found here: https://www.huduser.gov/portal/datasets/il.html.

Identifying Arm's Length Transactions
Our analysis focuses on arm's length transactions of residential properties, which include 1-4 unit homes, coops, and condos. Arm's length home sales are defined as transactions between unrelated parties where the sale price is determined by the market. We excluded sales of less than $100,000 which are frequently transfers between business partners or family. We also excluded sales from government entities or to nonprofit developers.

Identifying Investors
We follow Dan Immergluck and Ingrid Gould Ellen and her team at NYU in identifying investor buyers through the following three methods[1]:
1. Buying entities that have LLC, INC, or Corp in their name.
2. Entities that frequently buy homes: buyers that purchase more than four properties within a five-year period are flagged as investors.
3. Flippers: a transaction for a property that is resold it within a year is flagged as an investor purchase. Coops are excluded from this part of the analysis because of the difficulty of identifying specific coop units in ACRIS.

We removed government and nonprofit buyers who would have otherwise met these definitions.

As we identify flips by whether properties are resold within a year, we do not have complete information for how many properties purchased in 2017 will be sold in 2018 at the time of writing. We projected how many properties were bought by flippers in 2017 based on trends from previous years.

Identifying Affordable Sales

[1] Ellen, I., Madar, J. and Weselcouch, M. 2012. "What's really happening to the REO stock: An analysis of Three Cities: New York, Atlanta, and Miami." May 25. New York: Furman Center for Real Estate and Public Policy; Immergluck, Dan, "The Role of Investors in the Single-Family Market in Distressed Neighborhoods: The Case of Atlanta", Harvard Joint Center for Housing Studies, February 2013.

We built an "affordable sales calculator" in order to estimate the number of sales from 2005 to 2017 that would be affordable to a family making the New York City median annual income (roughly $60,000 in 2018) in each year. The price of an "affordable" home depends on the mortgage amount a buyer is able to secure and the downpayment they can afford. Because many low- and moderate-income families have limited savings to put towards a downpayment, our calculations assume buyers will seek a low-downpayment mortgage such as an FHA loan. As we note in the report, many coops do not accept downpayments below 20%, which makes our figures high-end estimates.

The affordability calculation inputs:

INPUT	SOURCES	NOTES
Front-end debt-to-income ratio	https://www.urban.org/sites/default/files/publication/92681/mortgage-insurance-data-at-a-glance_chartbook.pdf	Ratios are imputed from back-end ratios found in the Urban Institute report.
Income	https://www.huduser.gov/portal/datasets/il.html	
Mortgage Interest Premium	https://www.loans101.com/5650/history-of-fha-mortgage-insurance/	We include MIP in our assumptions because most buyers modelled here would use FHA products, which require mortgage insurance.
Interest rates	Historical Center data on interest rate at time of mortgage origination for foreclosure prevention clients	
Mortgage-to-income ratios	Home Mortgage Disclosure Act data made available by the CFPB	This ratio was used to project taxes and insurance
Effective tax rates	https://cbcny.org/nyc-effective-tax-rates	
Homeowners Insurance	https://www.iii.org/table-archive/21407	With projections for 2005, 2006, 2016 and 2017

Race and Ethnicity

Throughout the report, we use a shorthand to break down populations by race: "Asian", "Black", "Hispanic" and "White". The asian, black, and white categories are all specifically the populations of that identity who also identify as non-Hispanic. The Hispanic category includes peoples of all racial self-identifications who also identified as Hispanic.