
2018 Income and Expense Study

March 8, 2018

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2018 Income and Expense Study

What's New

From 2015 to 2016, Net Operating Income (revenue remaining after operating expenses are paid) grew **4.4%**. This is the **12th** consecutive year that Net Operating Income has increased.

On average, in stabilized buildings, from 2015-2016:

- ◆ Rental income increased by **3.1%**
- ◆ Total income rose by **3.1%**
- ◆ Operating costs increased by **2.4%**
- ◆ Net operating income (NOI) grew by **4.4%**

Introduction

As part of the process of establishing rent adjustments for stabilized apartments, as required by the Rent Stabilization Law, the NYC Rent Guidelines Board (RGB) has analyzed the cost of operating and maintaining rental housing in New York City since 1969. Historically, the Board's primary instrument for measuring changes in prices and costs has been the Price Index of Operating Costs (PIOC), a survey of prices and costs for various goods and services required to operate and maintain rent stabilized apartment buildings.

In 1990, the RGB acquired a new data source that has greatly expanded the information base used in the rent adjustment-setting process: Real Property Income and Expense (RPIE) statements from rent stabilized buildings collected by the NYC Department of Finance. RPIE data encompasses both revenue and expenses, allowing the Board to accurately gauge the overall economic condition of New York City's rent stabilized housing stock. By using consecutive RPIE filings from an identical set of buildings, a longitudinal comparison can also be made that illustrates changes in conditions over a two-year period.

This report examines the conditions that existed in New York's rent stabilized housing market in 2016, the year for which the most recent data set is available, and the extent to which these conditions changed from the prior year, 2015.

Local Law 63

The income and expense data for stabilized properties originates from Local Law 63, enacted in 1986. This statute requires owners of apartment buildings to file RPIE statements with the NYC Department of Finance annually. While certain types of properties are exempt from filing RPIE forms (cooperatives, condominiums, most residential-only buildings with fewer than 11 units or with an assessed value under \$40,000), the mandate produces detailed financial information on thousands of rent stabilized buildings. To ensure only rent stabilized buildings are analyzed, the NYC Department of Finance releases summary data only after matching I&E data with building registration data from NYS Homes and Community Renewal (HCR). The data used in RGB I&E studies this year includes 15,389 properties containing 705,122 units.

RPIE Study

Rents and Income¹

In 2016, rent stabilized property owners collected monthly rent averaging \$1,371 per unit. As in previous years, units in pre-war buildings rented for less

on average (\$1,289 per month) than those in post-war buildings (\$1,589 per month).² At the borough level, the average monthly rents in stabilized buildings were \$1,917 in Manhattan (\$2,282 in Core Manhattan³ and \$1,366 in Upper Manhattan); \$1,282 in Queens; \$1,177 in Brooklyn; \$1,044 in Staten Island; and \$977 in the Bronx. Average monthly rent per unit in the City, excluding Core Manhattan, was \$1,184.

Examining medians, the median rent Citywide was \$1,182. At the borough level, median monthly rent was \$1,627 in Manhattan; \$1,236 in Queens; \$1,105 in Brooklyn; \$1,046 in Staten Island; and \$966 in the Bronx.

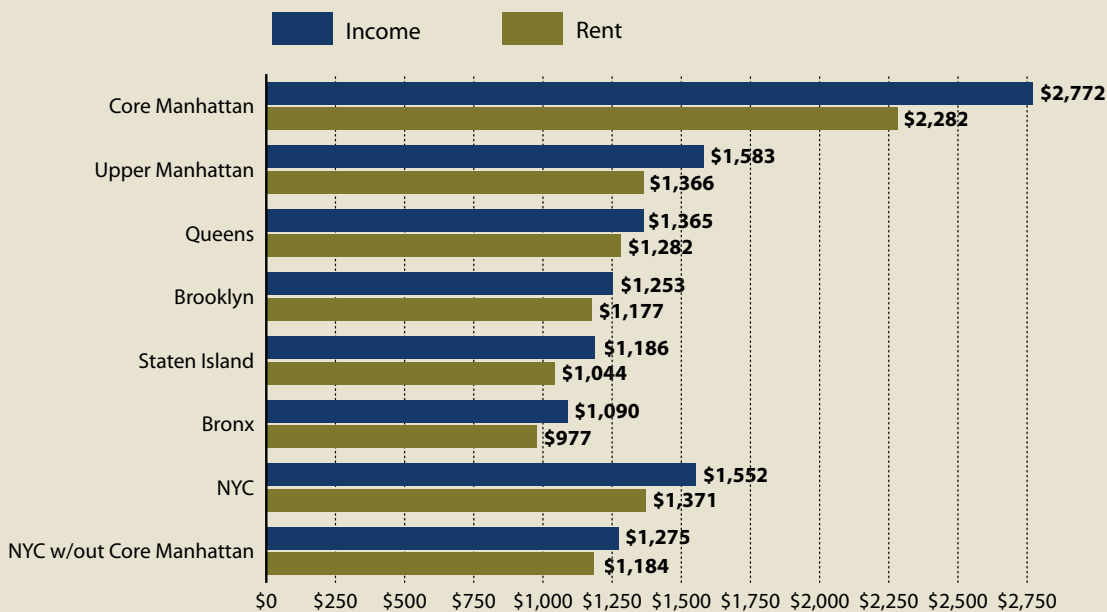
Many owners of stabilized buildings augment income from their apartment rents by selling services to their tenants as well as by renting commercial space. Current RPIE filings show an average monthly gross income of \$1,552 per unit in 2016, with pre-war buildings earning \$1,464 per unit and those in post-war properties earning \$1,786 per unit. Gross income was highest in Core Manhattan, at \$2,772 per unit per

month, and lowest in the Bronx, at \$1,090. In between are Upper Manhattan, with an average monthly income of \$1,583; Queens, at \$1,365; and Brooklyn, at \$1,253. Monthly income per unit in the City, excluding Core Manhattan, was \$1,275. These gross income figures encompass rent from stabilized apartments as well as the sale of services (e.g., laundry, parking) and commercial income (e.g., retail, cell towers, billboards). Such proceeds accounted for an 11.7% share of the total income earned by building owners in 2016, down one-tenth of a point from the previous year. By borough, income earned from services and commercial rents was 16.6% in Manhattan (17.7% in Core Manhattan and 13.7% in Upper Manhattan); 12.0% in Staten Island; 10.4% in the Bronx; and 6.1% in both Brooklyn and Queens. The graph on this page shows the average rent and income collected in 2016 by borough, and for the City.

Median Citywide income for owners in 2016 was \$1,280. At the borough level, Manhattan had the

Average Monthly Collected Rent/Income per Dwelling Unit by Borough*

Rent and Income Highest in Manhattan in 2016



* See endnote 1

Note: Core Manhattan represents the area south of W 110th and E 96th Streets.

Upper Manhattan is the remainder of the borough.

Source: NYC Department of Finance, 2016 RPIE Data

highest median income, at \$1,893; followed by Queens at \$1,285; Brooklyn at \$1,153; Staten Island at \$1,141; and the Bronx at \$1,053. (For rent and income averages and medians by borough and building age and size, see Appendices 3 and 4.)

Comparing Rent Measurements

Another data source, NYS Homes and Community Renewal (HCR) annual registration data, provides important comparative rent data to the collected rents stated in RPIE filings. A comparison of the collected RPIE rents to the HCR rents provides a good indicator of the overall rental market and reflects both how well owners can collect the rent roll and the prevalence of vacancies.

Rents included in RPIE filings are different than HCR figures primarily because of differences in how average rents are computed. RPIE data reflects actual rent collections that account for vacancies or non-payment of rent. By contrast, HCR data consists of legal rents registered annually with the agency. Because HCR rent data does not reflect preferential rents,⁴ nor include vacancy and collection losses, these rents are generally higher than RPIE rent collection data. Furthermore, RPIE information includes unregulated apartments in buildings containing rent stabilized units. Also, the RPIE information reflects rents collected over a 12-month period while HCR data reflects rents registered on April 1, 2016. In sum, despite the anomalies between the two rent indicators, the difference between RPIE rents and HCR rents reflects preferential rents as well as vacancy and collection losses incurred by building owners.

In comparing annual RPIE and HCR average rents from 1991 to 2004, the gap between the two contracted steadily during that time. In fact, from 1991-2001, the difference between RPIE and HCR rents decreased by almost two-thirds, from a difference of 15% between the two in 1991 to a difference of 5.6% in 2001. By contrast, from 2002 until 2016, the gap has grown in most years, including this past year, when, the gap rose from 23.6% in 2015 to the current 24.1%, as indicated by the average I&E rent of \$1,371 and HCRs average stabilized rent of \$1,807. The increase in the gap between collected and legal rent

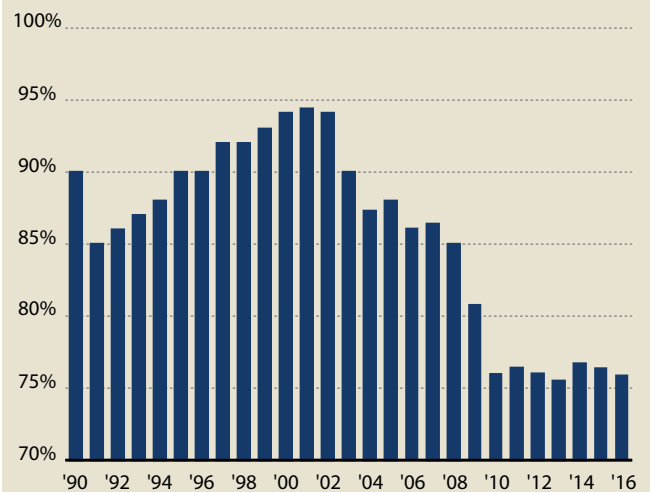
indicates that building owners are collecting a declining proportion of their maximum legal rent in 2016 (see graph on this page).

At the borough level, the gap between collected and legal rent varies. In 2016, Queens property owners collected an average rent (\$1,282) that was 22.4% below HCR's average legal rent for the borough (\$1,651), while owners in the other boroughs collected average rents that were 24.2% lower than legal rents in Manhattan; 25.4% lower in Brooklyn; 25.8% lower in the Bronx; and 32.3% lower in Staten Island. At least part of this differential is due to preferential rents, usually offered when the legal stabilized rent exceeds the market rate for the area.

Another benchmark that can help place RPIE rent data in context is the RGB Rent Index, which measures the overall effect of the Board's annual rent increases on contract rents each year. As the table on the next page shows, average RPIE rent growth was higher than the renewal lease increases allowed by the RGB's guidelines for a sixth consecutive year. RPIE rent growth, up 3.1%, was greater than the increase in the

Average Monthly Citywide Collected Rents as a Share of Average Monthly HCR Legal Registered Rents, 1990-2016

Percentage of Legal Rent Collected Decreased in 2016



Source: HCR Annual Rent Registrations; NYC Department of Finance, 1990-2016 RPIE Data.

RGB rent index, which was up 1.6%, between 2015 and 2016 (adjusted to a calendar year).⁵

There are several ways in which rents may be raised beyond the RGB's guidelines, including the deregulation of apartment units; raising preferential rents; vacancy allowances; and through individual apartment and building-wide improvements.

In addition, with comparatively lower guidelines from 2013-14 to 2015-16, including two years with rent freezes, all three rent indexes have measurably reflected those lower guidelines, resulting in slower growth each year.

An extended view of the three indices illustrates that overall, HCR legal rents have grown faster than both collected rents and RGB rent guidelines from 1990 to 2016. During that period, HCR adjusted legal rents increased 217.1%; RPIE collected rents increased 191.5%⁶; and the RGB Rent Index increased 172.0% (these figures are not adjusted for inflation).⁷

Operating Costs

Rent stabilized apartment buildings regularly incur several types of expenses. RPIE filings include data on eight categories of operating and maintenance (O&M) costs: taxes; labor; utilities; fuel; insurance; maintenance; administrative; and miscellaneous costs. Costs do not include debt service. However, in contrast to revenues, this data does not distinguish between expenses for commercial space and those for apartments, making the calculation of "pure" residential operating and maintenance costs impossible, except in a smaller data set of residential-only buildings. Thus, the operating costs reported are comparatively high because they include maintenance costs for commercial space.

The average monthly operating cost for units in stabilized buildings was \$985 in 2016. Costs were lower in units in pre-war structures (\$938), and higher among post-war buildings (\$1,108). Geographically, average costs were lowest in the Bronx (\$742); Staten Island (\$772); Brooklyn (\$799); and Queens (\$873); and highest in Manhattan (\$1,408). Within Manhattan, costs for units located in Core Manhattan averaged \$1,656 a month, while the costs in Upper Manhattan were \$1,033. Excluding Core Manhattan, the average monthly operating costs for stabilized building owners in New York City was \$821. The graph on the next page details average monthly expenses by cost category and building age for 2016. The graph shows that taxes make up the largest share of expenses, averaging 30.2% of all costs among all rent stabilized buildings.

Citywide, 2016 median expenses were \$847. By borough, Manhattan had the highest median costs, at \$1,159; followed by Queens at \$802; Brooklyn at \$744; the Bronx at \$714; and Staten Island at \$693. (Appendices 1, 2 and 3 break down average costs by

Rent Comparisons, 1990-2016

2015-16 HCR Legal Rents Grew Faster Than RPIE Collected Rents and RGB Rent Index

	RPIE Rent Growth	HCR Rent Growth (Adjusted) [§]	RGB Rent Index (Adjusted) [∅]
1990-91	3.4%	4.1%	4.1%
1991-92	3.5%	3.0%	3.7%
1992-93	3.8%	3.0%	3.1%
1993-94	4.5%	2.4%	2.9%
1994-95	4.3%	3.1%	3.1%
1995-96	4.1%	4.1%	4.5%
1996-97	5.4%	4.6%	5.2%
1997-98	5.5%	3.3%	3.7%
1998-99	5.5%	3.7%	3.8%
1999-00	6.2%	4.4%	4.2%
2000-01	4.9%	5.3%	5.0%
2001-02	4.0%	4.4%	4.5%
2002-03	3.6%	6.9%	4.1%
2003-04 [‡]	-	1.6%	5.5%
2004-05	4.6%	5.8%	4.6%
2005-06	5.6%	7.2%	4.3%
2006-07	6.5%	6.0%	4.2%
2007-08	5.8%	5.9%	4.7%
2008-09	1.4%**	5.4%	7.5%
2009-10	0.7%	5.4%	5.2%
2010-11	4.4%	5.7%	3.7%
2011-12	5.0%	5.8%	4.4%
2012-13	4.5%	5.4%	4.1%
2013-14	4.8%	5.1%	4.1%
2014-15	4.4%	4.5%	2.2%
2015-16	3.1%	4.0%	1.6%
1990 to 2016* [‡]	191.5%	217.1%	172.0%

* Not adjusted for inflation **Revised from prior reports

∅ See endnote 5 § See endnote 6

‡ See endnote 7

Sources: NYS HCR Annual Rent Registrations;
NYC Department of Finance, 1990-2016 RPIE Data

borough and building age; Appendix 4 details median costs; and Appendix 6 details distribution of costs.)

In 1992, the NYC Department of Finance and RGB staff tested RPIE expense data for accuracy. Initial examinations found that most “miscellaneous” costs were administrative or maintenance costs, while 15% were not valid business expenses. Further audits on the revenues and expenses of 46 rent stabilized properties revealed that O&M costs stated in RPIE filings were generally inflated by about 8%. Costs tended to be less accurate in small (11-19 units) properties and more precise for large (100+ units) buildings. However, these results are somewhat inconclusive since several owners of large stabilized properties refused to cooperate with the NYC Department of Finance’s assessors. Adjustment of the 2016 RPIE O&M cost

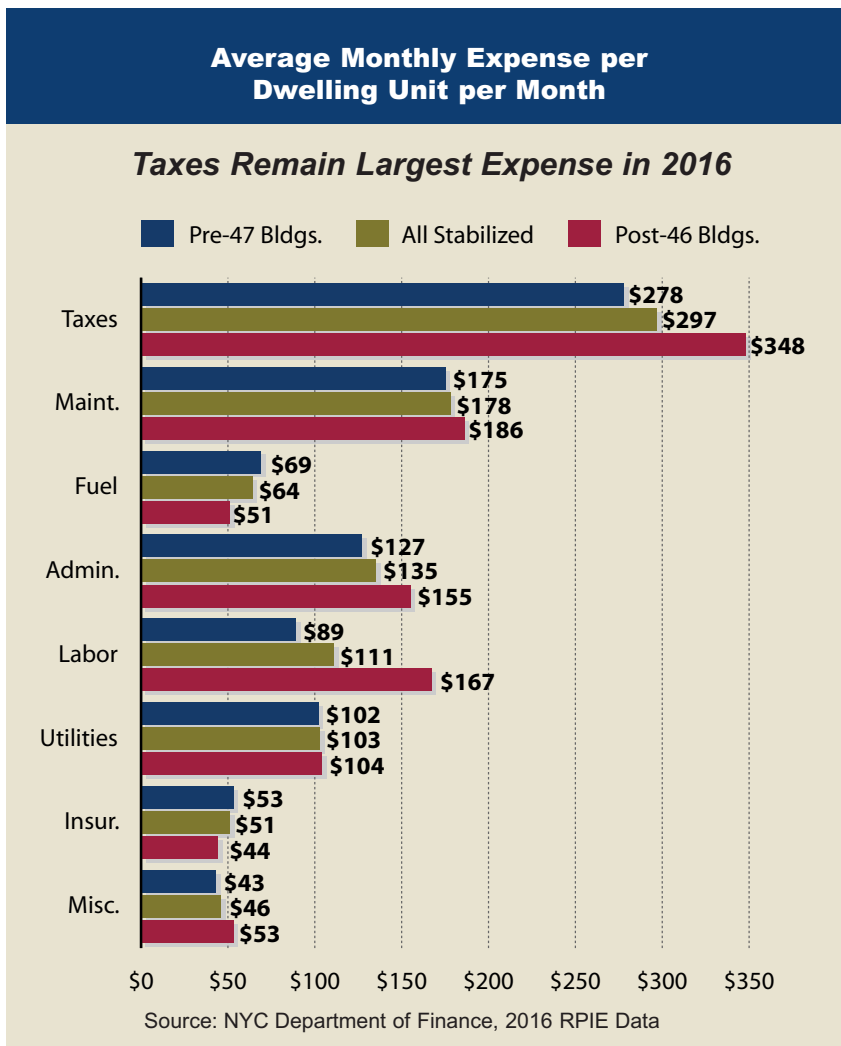
(\$985) by the results of the 1992 audit results in an average monthly O&M cost of \$904.

Just as buildings without commercial space typically generate less revenue than stabilized properties with commercial space, operating expenses in these buildings tend to be lower on average than in buildings with a mixture of uses. In 2016, unaudited average O&M costs for “residential-only” buildings were \$894 per month and average audit-adjusted O&M costs for these buildings were \$822 per month.

“Distressed” Buildings

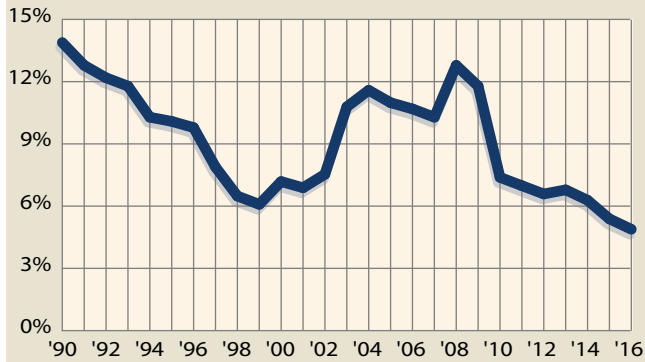
Buildings that have operating and maintenance costs that exceed gross income are considered, for the purposes of this study, distressed. Among the properties that filed RPIEs for 2016, 749 buildings, equal to 4.9% of the total number of rent stabilized buildings, had reported O&M costs that exceeded gross income, a half point decline from the prior year, and the lowest ever recorded in this study. Since 1990, when 13.9% of stabilized properties were considered distressed, the proportion of distressed buildings declined each year until 1999, reaching 6.1%. From 1999 until 2004, the proportion generally increased, but has declined for ten of the last twelve years, reaching in 2016 its lowest level in the 27-year history of this study (see graph on the next page).

Most distressed stabilized properties (60%) are mid-sized buildings, containing 20 to 99 units. In addition, the vast majority (91%) are pre-war buildings. By borough, 51% of the buildings are in Manhattan; while the remaining buildings are in the Bronx (21%); Brooklyn (16%); Queens (11%) and Staten Island (less than 1%). (See Appendix 7 for a complete breakdown of distressed buildings by borough, building size and building age.)



Percent of Distressed Properties, 1990-2016

Share of Distressed Properties Fall to Record Low in 2016



Source: NYC Department of Finance, 1990-2016 RPIE Data

Net Operating Income

Revenues exceed operating costs in most stabilized buildings, yielding funds that can be used for mortgage payments, improvements and/or pre-tax profit. The amount of income remaining after operating and maintenance (O&M) expenses are paid is typically referred to as Net Operating Income (NOI). While financing costs, income taxes and appreciation determine the ultimate value of a property, NOI is a good indicator of its basic financial condition. Moreover, changes in NOI are easier to track on an aggregated basis than changes in profitability, which require an individualized examination of return on capital placed at risk.

On average, apartments in rent stabilized buildings generated \$568 of net income per month in 2016, with units in post-war buildings earning more (\$678 per month) than those in pre-war buildings (\$526 per month). Average monthly NOI is greater among stabilized properties in Manhattan (\$890) than for those in the other boroughs: \$492 in Queens; \$454 in Brooklyn; \$414 in Staten Island; and \$348 per unit per month in the Bronx. There was a notable difference when looking at NOI on a sub-borough level in Manhattan. Core Manhattan properties earned on average \$1,116 per unit per month in NOI, while

properties in Upper Manhattan yielded an NOI of \$550. The monthly NOI average calculated Citywide, excluding Core Manhattan, was \$454. Looking at the NOI using audit-adjusted expense figures, the Citywide NOI in 2016 was \$648.

Average monthly unaudited NOI in “residential-only” properties Citywide was \$525 per unit in 2016, 7.6% lower than the average for all stabilized buildings.

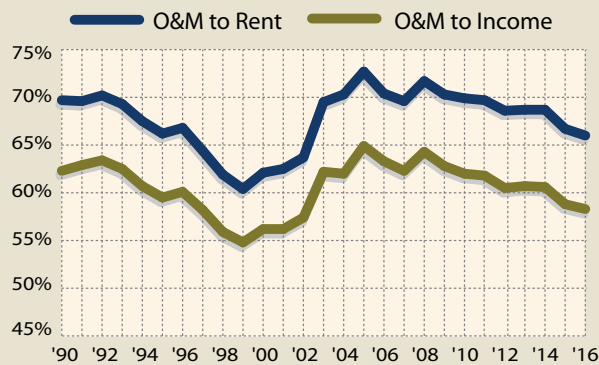
NOI reflects the revenue available after payment of operating costs; that is, the amount of money owners have for financing their buildings; making improvements; and for pre-income tax profits. While NOI should not be the only criterion to determine the ultimate profitability of a property, it is a useful exercise to calculate the annual NOI for a hypothetical “average stabilized building” with 11 or more units. Multiplying the average unaudited monthly NOI of \$568 per unit by the typical size of buildings in this year's analysis (an average of 45.8 units) yields an estimated average annual NOI of about \$312,176 in 2016. Excluding Core Manhattan, the monthly NOI of \$454 per unit multiplied by the typical size of buildings in this year's analysis outside Core Manhattan (an average of 46.3 units) yields an estimated average annual NOI of about \$252,222.

Operating Cost Ratios

Another way to evaluate the financial conditions of New York City's rent stabilized housing is by measuring the ratio of expenses to revenues. Traditionally, the RGB has used O&M Cost-to-Income and O&M Cost-to-Rent ratios to assess the overall health of the stabilized housing stock, assuming that buildings are better off by spending a lower percentage of revenue on expenses. The graph on the top of the next page shows how over the period from 1990 to 2016, the proportion of total income and rent collections spent on audit-adjusted operating costs has fluctuated. The audit-adjusted Cost-to-Income ratio in 2016 was 58.3%, a decline of half of a percentage point from the prior year's 58.8%. This means that on average, owners of rent stabilized properties spent roughly 58.3 cents out of every dollar of revenue on operating and maintenance costs in 2016. Looking at unaudited

Ratios of Citywide Average Monthly Audit-Adjusted O&M Costs to Average Monthly Gross Income and Rent 1990-2016

Cost-to-Income and Cost-to-Rent Ratios Decrease in 2016



Source: NYC Dept. of Finance, 1990-2016 RPIE Data

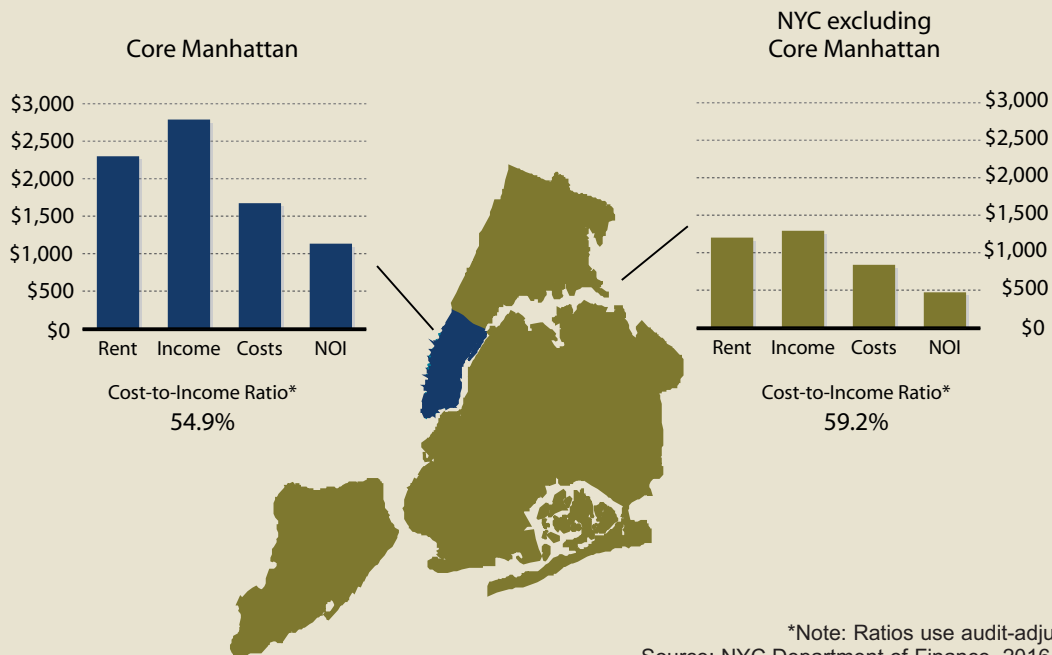
expenses, the cost-to-income ratio in 2016 was 63.4, a 0.6 percentage point decline from the prior year. The unaudited median cost-to-income ratio was 64% in 2016.

Examining the ratio of costs to rent collections, audit-adjusted operating costs in 2016 were 66.0% of revenues from rent, down seven-tenths of a percentage point from the prior year. Using unaudited expenses, the cost-to-rent ratio in 2016 was 71.8%, a 0.8 percentage point decline. Looking at the unaudited median cost-to-rent ratio, it was 70% in 2016.

Rents, income, and costs per unit were on average highest in Core Manhattan in 2016 (see map and graphs on the bottom of this page). Excluding Core Manhattan, the average revenue and costs figures are lower, resulting in different expense to revenue ratios. The audit-adjusted Cost-to-Income Ratio for the rest of the City was 59.2%, higher than the Cost-to-Income Ratio for stabilized buildings in Manhattan's Core (54.9%). These figures indicate that on average, owners

Average Monthly Rent, Income, Operating Costs and Net Operating Income per Dwelling Unit and Cost-to-Income Ratios, Core Manhattan and the Rest of the City, 2016

Cost-to-Income Ratio Remains Lower in Core Manhattan



*Note: Ratios use audit-adjusted costs.
Source: NYC Department of Finance, 2016 RPIE Data

of stabilized properties outside of Core Manhattan spend about 4.3 cents more of every dollar of revenue on expenses, as compared to their counterparts in Core Manhattan.

In an analysis of the distribution of operating costs in relation to total income in buildings by decile, it may be useful to examine the percentage of buildings with cost-to-income ratios at or below certain levels. The Department of Finance calculated decile levels, revealing that half of all rent stabilized buildings Citywide have unaudited cost-to-income ratios of 0.64 or less. This means that half the building owners spent no more than 64 cents out of every dollar of revenue on operating and maintenance costs in 2016. Looking at the 70% decile level Citywide, 70% of buildings pay

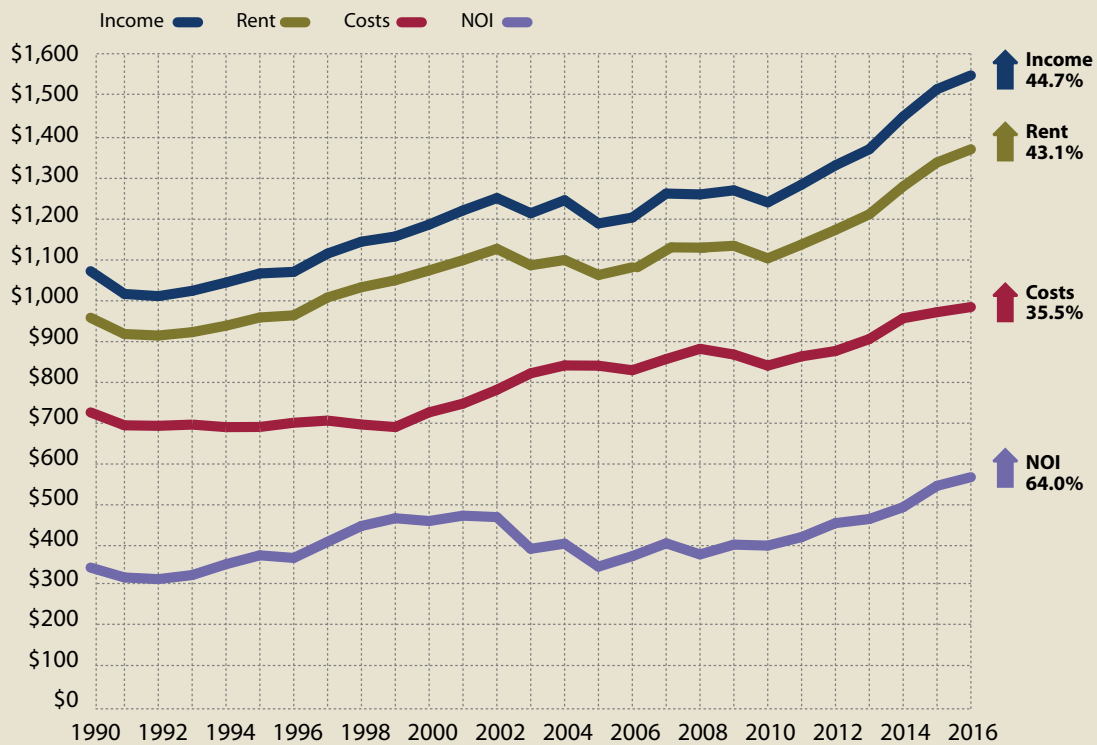
no more than 72 cents of every dollar of revenue on operating and maintenance costs, and 30% pay more. The complete table of all ten decile levels Citywide and by borough can be found in Appendix 8.

Net Operating Income After Inflation

The amount of net operating income is a function of the level of expense and the level of revenue in each year (revenues minus operating expenses equals net operating income). Adjusting NOI as well as rent, income and costs figures for inflation (in constant 2016 dollars) and comparing different base years to the latest data available is a useful way to assess the health of the stabilized housing stock and how well

Citywide Income, Rent, Costs and NOI After Inflation, 1990-2016

Inflation-Adjusted Net Operating Income Up 64% Since 1990
(Average Monthly Income, Rent, Operating Costs and NOI per Dwelling Unit in Constant 2016 Dollars)

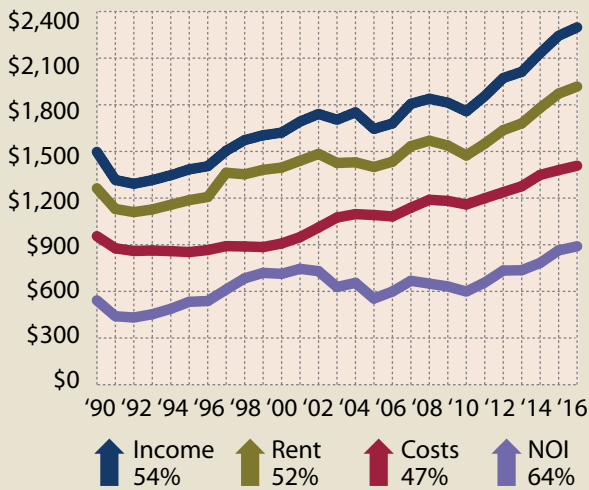


Note: Percent changes are point-to-point measurements and should not be considered cumulatively.
 Sources: NYC Rent Guidelines Board *Income and Expense Studies*, 1992-2018.
 NYC Department of Finance, 1990-2016 RPIE Data.

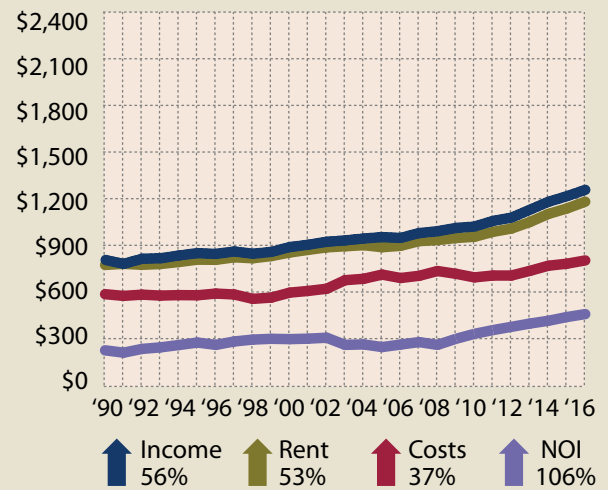
Income, Rent, Costs and NOI After Inflation per Borough, 1990-2016

Since 1990, Inflation-Adjusted NOI Rises Citywide and in Each Borough
 (Average Monthly Income, Rent, Operating Costs and Net Operating Income per Dwelling Unit in Constant 2016 Dollars)

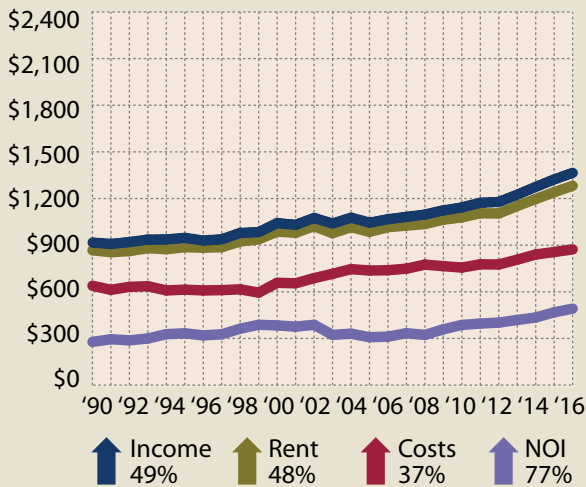
Manhattan 1990-2016



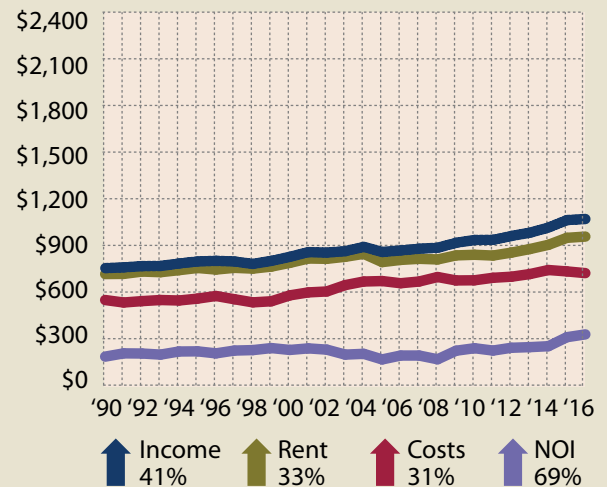
Brooklyn 1990-2016



Queens 1990-2016



Bronx 1990-2016



Note: Percent changes are point-to-point measurements and should not be considered cumulatively.
 Staten Island is excluded due to insufficient data from prior years.
 Sources: NYC Rent Guidelines Board *Income and Expense Studies*, 1992-2018.
 NYC Department of Finance, 1990-2016 RPIE Data.

revenues have been meeting or exceeding expenses without erosion by inflation.

Point-to-point comparisons of average figures show that, from 1990 to 2016, after adjusting for inflation, NOI has increased 64.0% (see graph on page ten). This indicates that revenues have outpaced expenses to the extent that average monthly NOI was worth 64% more in 2016 than it was in 1990, after adjusting for inflation. A different point-to-point comparison shows that between 2015 (NOI's second highest year since 1990) and 2016, NOI rose 3.9%, after adjusting for inflation.

Another way to look at how rent, income and costs, as well as NOI, have changed after accounting for inflation is to graph inflation-adjusted monthly figures for each of the components measured in the I&E studies. Between 1990 and 2016, inflation-adjusted rent increased a cumulative 43.1%, income by 44.7%, and costs by 35.5%, resulting in the increase in NOI of 64.0%.

Examining the ratio of NOI to income, since 1990, the ratio has varied. From 1990-96, the ratio of NOI/income averaged 33%; from 1997-2002, 39%; from 2003-2009, 31%; and since 2010, the average ratio of NOI/income has been about 34%. This means that on average, over the past seven years, 34 cents of every dollar earned is net operating income for the owner.

While the Citywide graph of inflation-adjusted revenue, expense and NOI figures is useful for demonstrating the overall stabilized rental housing market, disaggregating the same figures by borough shows how the market can differ from area to area (see graphs on previous page). Looking at each of the boroughs individually, from 1990 to 2016, all boroughs saw sizable increases in their net income, with Brooklyn seeing the most significant increase, with NOI more than doubling, increasing 106%; followed by Queens, up 77%; the Bronx, up 69%; and Manhattan, up 64%.

Longitudinal Study

The longitudinal section of this study measures changes in rent, income, costs, operating cost ratios, and net operating income that occurred in the same set of 13,995 buildings from 2015 to 2016.

Rents and Income

Rent collections increase for a number of reasons, including increases allowed under RGB renewal guidelines; vacancy allowances; termination of preferential rents; individual apartments improvements; and building-wide major capital improvements (MCIs).

Average rent collections in stabilized buildings grew by 3.1% in 2016. Rent collections in pre-war buildings grew at a higher rate, up 3.2%, than in post-war buildings, which rose by 2.8%. Rent collections increased the greatest among smaller, 11-19 unit buildings, up 3.6%; while rents grew 3.1% among mid-sized, 20-99 unit buildings; and the least among large, 100+ unit buildings, up 2.7%. Examining rent collections by borough, Brooklyn saw the largest increase, up 4.1%; followed by Queens, up 3.9%; Staten Island, up 3.3%; Manhattan, up 2.8%; and the Bronx, up 1.5%. Within Manhattan, Upper Manhattan rents grew at a faster rate, up 3.3%, than the 2.7% increase in rents in Core Manhattan. Rent collections in the City, excluding Core Manhattan, rose 3.2%. The growth in median rent Citywide was 3.7%.

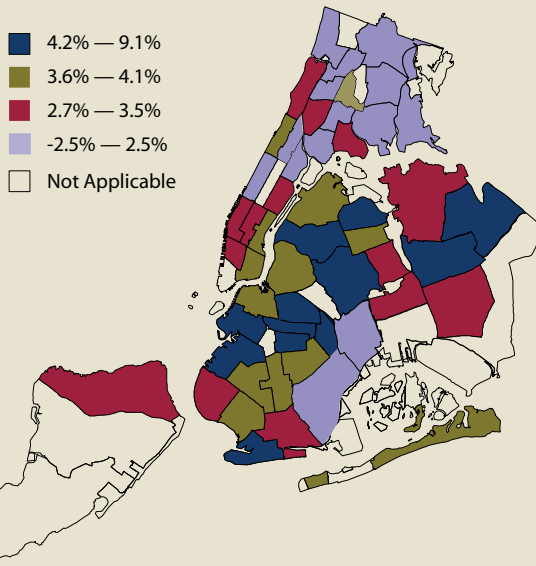
Looking at rent collections throughout New York City, 94% of Community Districts saw increases in average rent from 2015 to 2016.⁸

At the neighborhood level, the greatest rent growth was found in Brooklyn's Flatlands/Canarsie, rising 9.1%; followed by Bayside/Little Neck, Queens, up 7.1%; Bedford-Stuyvesant, Brooklyn, up 6.3%; and Hillcrest/Fresh Meadows, Queens, up 6.2%. In Manhattan, the neighborhood growing the most was Morningside/Hamilton Heights, up 4.1%; while East Tremont/Belmont saw the highest growth in the Bronx, rising 4.0%. Conversely, two neighborhoods in the Bronx and one in Brooklyn saw rents decline, with East New York/Starett City, Brooklyn, falling the most, down 2.5%. See map on next page and Appendix 13 for a breakdown of changes in rent collections by Community District throughout NYC.

The average total income collected in rent stabilized buildings, comprising apartment rents, commercial rents and sales of services, grew by the same percentage as rent, up 3.1% from 2015 to 2016. Revenues grew faster in pre-war buildings, up 3.3%, than in post-war buildings, up 2.6%. Brooklyn saw the highest growth in income, rising 3.9%; followed by

Change in Rent by Community District, 2015-16

Rents Increase in 94% of Community Districts



Source: NYC Department of Finance, 2015-16 RPIE Data

Queens, up 3.8%; Manhattan, up 3.1%; Staten Island, up 2.0%; and the Bronx, up 1.6%. Within Manhattan, Upper Manhattan income rose 3.5%; while Core Manhattan income grew by 2.9%. Total income in the City, excluding Core Manhattan, grew 3.2%. The median growth in income Citywide was 3.7%.

Operating Costs

Average expenses in stabilized buildings Citywide increased 2.4% from 2015 to 2016. However, the change in operating costs varied by building age and by borough. Pre-war buildings saw expenses rise 2.1%, while newer, post-war buildings saw expenses increase 2.9%. Breaking down the change in costs by borough, costs grew the most in Brooklyn, up 3.9%; while costs rose 2.8% on Staten Island; 2.7% in Manhattan; and 2.5% in Queens. Conversely, costs declined 0.2% in

the Bronx. Within Manhattan, Upper Manhattan costs rose 0.5%; while Core Manhattan costs grew by 3.7%. Operating costs in the City, excluding Core Manhattan, rose 1.8%. Citywide, median expenses rose 1.4%. For a detailed breakdown of the changes in rent, income and costs by building size, age and location, see Appendices 10 and 11.

RPIE Expenses and the PIOC

Data sets from the RPIE and the RGB's long-running survey, the Price Index of Operating Costs (PIOC), each provide a form of independent verification for the expense findings in the other. However, comparison of I&E and PIOC data is somewhat problematic due to differences in the way each instrument defines costs and time periods. For example, there is a difference between when expenses are incurred and paid by owners as reported in the RPIE, versus the price quotes obtained from vendors for specific periods as surveyed in the PIOC. In addition, the PIOC primarily measures prices on a March to March basis, while most RPIE statements filed by landlords are based on the calendar year. (See Endnote 6.) To compare the two, weighted averages of each must be calculated, which may cause a loss in accuracy. Finally, the PIOC measures a hybrid of costs, cost-weighted prices and pure prices, whereas the RPIE provides unaudited owner-reported costs. The PIOC grew by 4.3% from 2015 to 2016, the same period as the 2.4% increase in I&E costs, close to a two percentage point difference. (See graph on next page.)

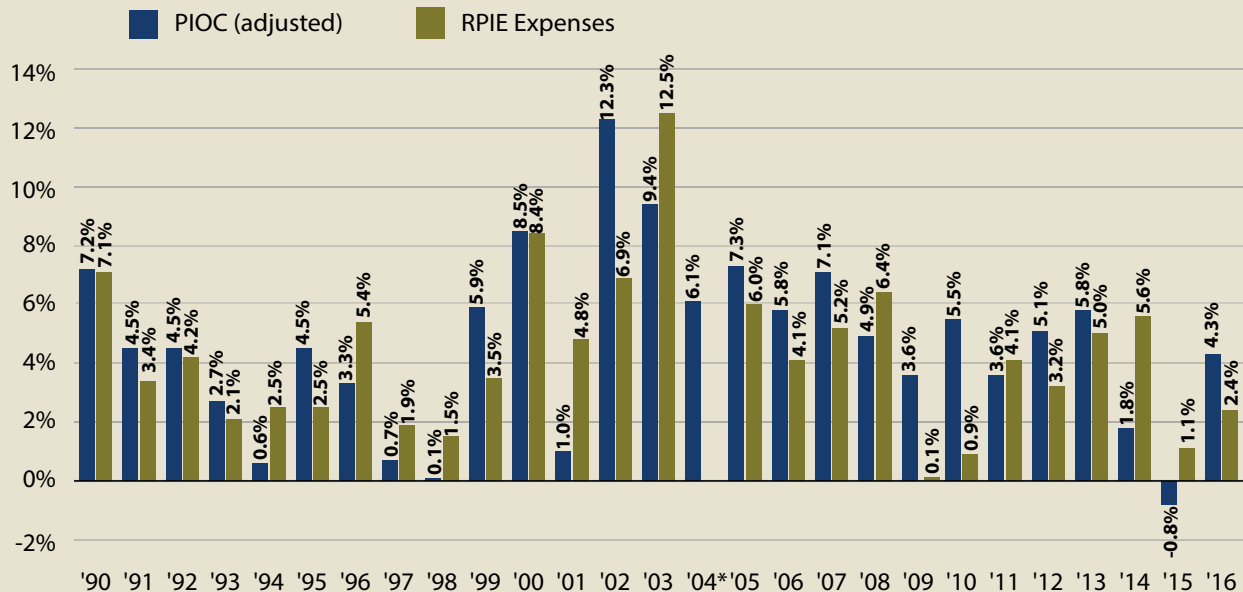
From 1990-91 to 2015-16, cumulative growth in owners' costs as measured by the two indices varied. Overall nominal costs measured in the PIOC increased at a greater rate, 196.1%, compared to RPIE data, which grew 173.7% over this period.⁹

Operating Cost Ratios

Between 2015 and 2016, the proportion of gross income spent on audit-adjusted expenses (the O&M Cost-to-Income ratio) declined, falling by four-tenths of a percentage point. The proportion of rental income used for audit-adjusted expenses (the O&M Cost-to-Rent ratio) likewise declined, falling by one-half percentage point.

Change in Operating & Maintenance Costs, RPIE and the PIOC, 1990 to 2016

In 2016, PIOC Costs Grew More Than Owner-Reported RPIE Expenses



Notes: *Longitudinal RPIE data for 2004 is unavailable (see endnote 9).

Sources: NYC Department of Finance, 1990-2016 RPIE Data; RGB Price Index of Costs (PIOC) 1990-2016

Net Operating Income

Net Operating Income (NOI) refers to the earnings that remain after operating and maintenance (O&M) expenses are paid, but before payments of income tax and debt service. Since average actual collected income grew more than operating costs, Citywide net operating income in rent stabilized buildings increased by 4.4% in 2016, the 12th consecutive year that NOI has grown.

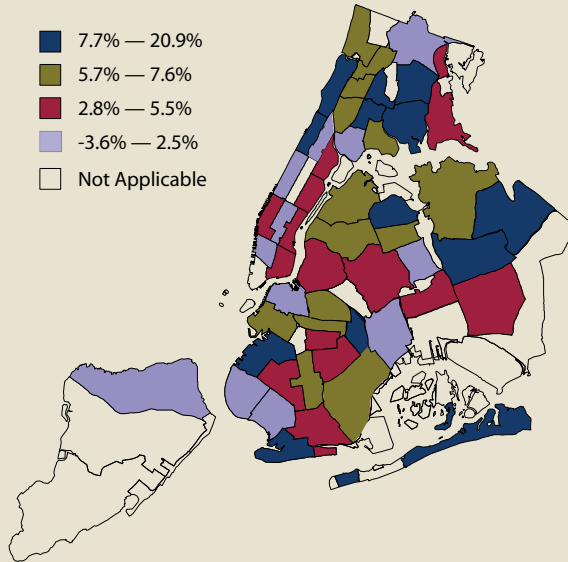
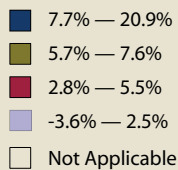
The average change in NOI from 2015 to 2016 differed throughout the City. Every borough saw NOI increase, with Queens seeing the largest growth, up 6.2%; while NOI rose 5.7% in the Bronx; 4.0% in Brooklyn; 3.7% in Manhattan; and 0.5% in Staten Island. Within Manhattan, Upper Manhattan NOI increased 10.0%, while it rose 1.8% in Core Manhattan. Citywide, NOI in pre-war buildings

increased 5.5%, while newer, post-war buildings grew by 2.1%. Monthly NOI in the City, excluding Core Manhattan, increased 6.0%. See Appendix 12 for a breakdown of NOI by borough, building age and building size.

At the Community District level, NOI rose in the vast majority (92%) of the City. The neighborhoods seeing the greatest growth in NOI were Bayside/Little Neck, Queens, up 20.9%; Morningside/Hamilton Heights, Manhattan, up 19.4%; Morrisania/Melrose/Claremont, Bronx, up 17.6%; East Tremont/Belmont, Bronx, up 15.4%; and Washington Heights/Inwood, Manhattan, up 14.9%. The Brooklyn neighborhood seeing the greatest growth in NOI was Brownsville/Ocean Hill, up 10.7%. By contrast, two neighborhoods in the Bronx, one on Staten Island and one in Brooklyn experienced a decline in NOI, with the largest decline, 3.6%, in East New York/Starett City,

Change in NOI by Community District, 2015-16

Net Operating Income Grows in 92% of Community Districts



Source: NYC Department of Finance, 2015-16 RPIE Data

Brooklyn. The map on this page and Appendix 13 shows how NOI varied in each neighborhood throughout NYC. (See endnote 8.)

Summary

RPIE filings, from almost 15,400 rent stabilized buildings containing over 705,100 units in the main RPIE study, and from close to 14,000 buildings containing almost 651,000 units in the longitudinal study, were analyzed in this year's *Income and Expense Study*. Citywide, average rent and revenue collections each rose 3.1%; and expenses rose by 2.4%. Since collected revenue grew more than actual expenses, Net Operating Income (NOI) Citywide increased by 4.4%, the 12th consecutive year that NOI has increased. (See table on next page for historical data.) Additionally, the proportion of distressed properties Citywide once again declined to their lowest level ever recorded by this survey, falling half a percentage point from the prior year. Further, the audit-adjusted cost-to-income ratio was 58.3%, also down half a percentage point from last year.

Methodology

The information in this report was generated by analyzing data sets derived from RPIE forms filed with the NYC Department of Finance in 2017 by owners of apartment buildings with primarily eleven or more dwelling units. The data in these forms, which reflects financial conditions in stabilized buildings for the year 2016, was made available to NYC Rent Guidelines Board research staff in November 2017 for analysis. Unit averages contained in this analysis were computed by the NYC Department of Finance. The averages were then weighted by the RGB using data from the 2014 NYC Housing and Vacancy Survey, the most recent comprehensive data available, to calculate averages that are representative of the population of residential buildings in New York City. In addition, medians were calculated and included in this report. The medians derived from the data were also produced by the NYC Department of Finance and are unweighted.

Two types of summarized data, the primary RPIE data and longitudinal data, were obtained for stabilized buildings. The primary RPIE data, which provides a “snapshot” or “moment-in-time” view, comes from properties that filed RPIE forms in 2016, or alternatively, TCIE (Tax Commission Income & Expense) forms.¹⁰ Data from the forms was used to compute average and median rents, operating costs, etc., that were typical of the year 2016. Longitudinal data, which provides a direct comparison of identical elements over time, encompasses properties that filed RPIE/TCIE forms for the years 2015 and 2016. The longitudinal data describes changing conditions in average rents, operating costs, etc., by comparing forms from the same buildings over two years. Thus, the main part this report measures conditions existing throughout 2016, while the longitudinal data section measures changes in conditions that occurred from 2015 to 2016.

This year, 15,389 buildings containing rent stabilized units were analyzed in the main RPIE study and 13,995 buildings were examined in the longitudinal study. The collection of buildings was created by matching a list of properties registered with HCR against building data found in 2017 RPIE or TCIE statements (or 2016 and 2017 statements for the longitudinal study). A building is considered

**Changes in Average Monthly Rent, Income, Operating Costs and
Net Operating Income per Dwelling Unit, 1990-2016**

***Net Operating Income (NOI) Increased 4.4% from 2015 to 2016,
12th Consecutive Yearly Increase in NOI***

	<i>Avg. Rent Growth</i>	<i>Avg. Income Growth</i>	<i>Avg. Cost Growth</i>	<i>Avg. NOI Growth</i>
1990-91	3.4%	3.2%	3.4%	2.8%
1991-92	3.5%	3.1%	4.2%	1.2%
1992-93	3.8%	3.4%	2.1%	6.3%
1993-94	4.5%	4.7%	2.5%	9.3%
1994-95	4.3%	4.4%	2.5%	8.0%
1995-96	4.1%	4.3%	5.4%	2.3%
1996-97	5.4%	5.2%	1.9%	11.4%
1997-98	5.5%	5.3%	1.5%	11.8%
1998-99	5.5%	5.5%	3.5%	8.7%
1999-00	6.2%	6.5%	8.4%	3.5%
2000-01	4.9%	5.2%	4.8%	5.9%
2001-02	4.0%	4.1%	6.9%	-0.1%
2002-03	3.6%	4.5%	12.5%	-8.7%
2003-04	-	-	-	-
2004-05	4.6%	4.7%	6.0%	1.6%
2005-06	5.6%	5.5%	4.1%	8.8%
2006-07	6.5%	6.5%	5.2%	9.3%
2007-08	5.8%	6.2%	6.4%	5.8%
2008-09	1.4%	1.8%	0.1%	5.8%
2009-10	0.7%	1.2%	0.9%	1.8%
2010-11	4.4%	4.5%	4.1%	5.6%
2011-12	5.0%	5.3%	3.2%	9.6%
2012-13	4.5%	4.5%	5.0%	3.4%
2013-14	4.8%	4.9%	5.6%	3.5%
2014-15	4.4%	4.4%	1.1%	10.8%
2015-16	3.1%	3.1%	2.4%	4.4%

Source: NYC Department of Finance, 1990-2016 RPIE Data
Note: Longitudinal data from 2003-04 is unavailable.

rent stabilized if it contains at least one rent stabilized unit.

Once the two data sets were drawn, properties that met the following criteria were not included:

- Buildings containing fewer than 11 units. Owners of buildings with fewer than 11 apartments (without commercial units) are not required to file RPIE forms;
- Owners who did not file an RPIE or TCIE form in 2017 for the main part of this study, or an RPIE or TCIE form in both 2016 and 2017 for the longitudinal study;
- No unit count could be found in RPIE/TCIE records; and
- No apartment rent or income figures were recorded on the RPIE or TCIE forms. In these cases, forms were improperly completed or the building was vacant.

Three additional methods were used to screen the data so properties with inaccurate building information could be removed to protect the integrity of the data:

- In early I&E studies, the NYC Department of Finance used the total number of units from their Real Property Assessment Data (RPAD) files to classify buildings by size and location. RGB researchers found that sometimes the unit counts on RPIE forms were different than those on the RPAD file, and consequently deemed the residential counts from the RPIE form more reliable;
- Average monthly rents for each building were compared to rent intervals for each borough to improve data quality. Properties with average rents outside of the borough rent ranges were removed from all data. Such screening for outliers is critical since such deviations may reflect data entry errors and thus could skew the analysis; and
- Buildings in which operating costs exceeded income by more than 300% as well as buildings above the 99th percentile or below the 1st percentile were excluded.

As in prior studies, after compiling both data sets, the NYC Department of Finance categorized data reflecting particular types of buildings throughout the five boroughs (e.g., structures with 20-99 units). □

Endnotes

1. RPIE rent figures include money collected for apartments, owner-occupied or related space and government subsidies. Income encompasses all revenue from rent, including commercial rent, sales of services, such as laundry, parking, and vending, and all other operating income.
2. Pre-war buildings refer to those built before 1947; post-war buildings refer to those built after 1946.
3. Core Manhattan represents the area south of W 110th and E 96th Streets. Upper Manhattan is the remainder of the borough.
4. Preferential rents refer to actual rent paid, which is lower than the "legal rent," or the maximum amount the owner is entitled to charge. Owners can offer preferential rents when the current market cannot bear the legal rent. According to HCR, approximately 30% of all 2016 apartment registrations filed indicate a preferential rent.
5. Since the 2008 *Income and Expense Study*, adjustment of the RGB Rent Index has been calculated on a January-to-December calendar year. Also see Endnote 6.
6. According to the NYC Department of Finance, over 90% of owners filing RPIEs report income and expense data by calendar year. In earlier reports, adjusted HCR data was calculated on a July-to-June fiscal year. Beginning with the 2008 *Income and Expense Study*, adjustment of HCR Citywide data was calculated on the January-to-December calendar year, so figures may differ from data reported in prior years.
7. RPIE longitudinal data from 2003-04 is excluded from this study because no longitudinal data was available for 2003-04. Therefore, the growth in RPIE collected rents, 191.5%, is understated. To make a more valid comparison between the three indices, cumulative increases in both the RGB Rent Index and HCR contract rent calculations exclude 2003-04 data as well. If 2003-04 data were included, the RGB Rent Index increased 186.9% and the HCR rent increased 222.3%.
8. Six Community Districts were excluded from this analysis because they contained too few buildings for the data to be reliable. Unlike Citywide and borough level rent and expense data, average CD rents and expenses are unweighted and do not necessarily represent the population of buildings in these Community Districts. All averages were computed by the NYC Department of Finance.
9. Due to the unavailability of RPIE longitudinal data for 2003-04, PIOC data from 2003-04 is also excluded from this comparison.
10. TCIE (Tax Commission Income & Expense) forms are used by the NYC Department of Finance when RPIE forms are not filed by owners.

Appendices

1. Average Operating & Maintenance Cost in 2016 per Apartment per Month by Building Size and Location, Structures Built Before 1947

	Taxes	Labor	Fuel	Water/Sewer	Light & Power	Maint.	Admin.	Insurance	Misc.	Total
Citywide	\$278	\$89	\$69	\$78	\$24	\$175	\$127	\$53	\$43	\$938
11-19 units	\$343	\$88	\$80	\$80	\$28	\$189	\$145	\$58	\$57	\$1,066
20-99 units	\$247	\$77	\$69	\$79	\$23	\$170	\$121	\$53	\$42	\$880
100+ units	\$452	\$211	\$51	\$67	\$33	\$201	\$155	\$47	\$34	\$1,251
Bronx	\$141	\$71	\$78	\$85	\$24	\$160	\$102	\$57	\$22	\$739
11-19 units	\$146	\$83	\$94	\$91	\$29	\$163	\$103	\$62	\$22	\$793
20-99 units	\$140	\$70	\$77	\$85	\$24	\$158	\$101	\$57	\$22	\$734
100+ units	\$146	\$88	\$63	\$82	\$20	\$194	\$115	\$51	\$11	\$770
Brooklyn	\$207	\$65	\$60	\$78	\$20	\$156	\$103	\$51	\$37	\$776
11-19 units	\$228	\$69	\$71	\$76	\$21	\$168	\$115	\$53	\$33	\$834
20-99 units	\$199	\$60	\$59	\$79	\$19	\$153	\$101	\$50	\$39	\$758
100+ units	\$240	\$104	\$49	\$74	\$21	\$160	\$107	\$50	\$31	\$836
Manhattan	\$463	\$130	\$70	\$75	\$31	\$210	\$180	\$55	\$70	\$1,283
11-19 units	\$508	\$109	\$83	\$85	\$35	\$224	\$199	\$65	\$88	\$1,395
20-99 units	\$409	\$101	\$70	\$75	\$27	\$203	\$170	\$54	\$71	\$1,177
100+ units	\$700	\$327	\$50	\$57	\$48	\$231	\$208	\$45	\$34	\$1,702
Queens	\$255	\$76	\$66	\$69	\$20	\$160	\$95	\$47	\$36	\$824
11-19 units	\$231	\$64	\$77	\$65	\$20	\$145	\$75	\$48	\$40	\$765
20-99 units	\$257	\$71	\$66	\$69	\$20	\$162	\$100	\$48	\$31	\$823
100+ units	\$280	\$126	\$47	\$71	\$16	\$171	\$97	\$45	\$56	\$909
Core Manhattan	\$635	\$157	\$61	\$65	\$33	\$222	\$208	\$55	\$64	\$1,500
11-19 units	\$622	\$106	\$75	\$79	\$32	\$229	\$212	\$64	\$75	\$1,495
20-99 units	\$592	\$113	\$59	\$62	\$27	\$213	\$200	\$53	\$73	\$1,391
100+ units	\$779	\$358	\$49	\$55	\$52	\$240	\$221	\$46	\$23	\$1,825
Upper Manhattan	\$263	\$98	\$79	\$85	\$28	\$196	\$148	\$54	\$76	\$1,028
11-19 units	\$278	\$115	\$97	\$95	\$40	\$213	\$172	\$65	\$113	\$1,188
20-99 units	\$260	\$91	\$78	\$85	\$26	\$194	\$145	\$54	\$70	\$1,002
100+ units	\$291	\$164	\$52	\$65	\$28	\$183	\$139	\$40	\$88	\$1,050
City w/o Core	\$201	\$75	\$70	\$80	\$23	\$165	\$110	\$53	\$39	\$816
11-19 units	\$226	\$80	\$81	\$80	\$26	\$171	\$116	\$55	\$50	\$884
20-99 units	\$195	\$71	\$70	\$81	\$22	\$164	\$109	\$53	\$37	\$802
100+ units	\$237	\$114	\$52	\$73	\$21	\$173	\$110	\$48	\$41	\$868

Notes: The sum of the lines may not equal the total due to rounding. Totals in this table may not match those in Appendix Table 3 due to rounding. Data in this table is NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The category "Utilities" used in the I&E Study is the sum of "Water & Sewer" and "Light & Power." The number of Pre-47 rent stabilized buildings in Staten Island was too small to calculate reliable statistics. Owners are not required to report tax expenses; therefore, tax figures used in this report were calculated by the NYC Department of Finance.

Source: NYC Department of Finance, RPIE Filings.

2. Average Operating & Maintenance Cost in 2016 per Apartment per Month by Building Size and Location, Structures Built After 1946

	Taxes	Labor	Fuel	Water/Sewer	Light & Power	Maint.	Admin.	Insurance	Misc.	Total
Citywide	\$348	\$167	\$51	\$68	\$36	\$186	\$155	\$44	\$53	\$1,108
11-19 units	\$197	\$96	\$57	\$64	\$40	\$173	\$123	\$50	\$55	\$855
20-99 units	\$244	\$101	\$50	\$69	\$31	\$166	\$134	\$45	\$46	\$886
100+ units	\$457	\$235	\$51	\$67	\$41	\$204	\$175	\$42	\$59	\$1,330
Bronx	\$135	\$95	\$64	\$84	\$38	\$149	\$128	\$46	\$19	\$759
11-19 units	-	-	-	-	-	-	-	-	-	-
20-99 units	\$134	\$81	\$64	\$77	\$38	\$147	\$116	\$48	\$21	\$726
100+ units	\$140	\$126	\$63	\$96	\$38	\$151	\$149	\$39	\$15	\$818
Brooklyn	\$212	\$107	\$42	\$67	\$31	\$167	\$134	\$47	\$56	\$864
11-19 units	-	-	-	-	-	-	-	-	-	-
20-99 units	\$214	\$92	\$41	\$67	\$27	\$165	\$142	\$48	\$50	\$846
100+ units	\$213	\$144	\$42	\$68	\$38	\$161	\$116	\$45	\$60	\$887
Manhattan	\$748	\$329	\$54	\$57	\$50	\$252	\$239	\$46	\$64	\$1,838
11-19 units	\$329	\$107	\$79	\$70	\$60	\$220	\$242	\$58	\$51	\$1,216
20-99 units	\$516	\$161	\$50	\$59	\$37	\$206	\$190	\$46	\$77	\$1,341
100+ units	\$813	\$377	\$54	\$56	\$53	\$264	\$251	\$46	\$60	\$1,975
Queens	\$263	\$127	\$48	\$68	\$29	\$165	\$121	\$39	\$62	\$921
11-19 units	\$210	\$109	\$52	\$57	\$42	\$142	\$99	\$45	\$37	\$792
20-99 units	\$259	\$102	\$51	\$70	\$27	\$165	\$118	\$40	\$49	\$882
100+ units	\$273	\$151	\$45	\$67	\$28	\$167	\$126	\$37	\$78	\$972
Staten Island	\$200	\$124	\$45	\$56	\$26	\$177	\$105	\$41	\$4	\$777
11-19 units	-	-	-	-	-	-	-	-	-	-
20-99 units	-	-	-	-	-	-	-	-	-	-
100+ units	-	-	-	-	-	-	-	-	-	-
Core Manhattan	\$856	\$364	\$55	\$56	\$50	\$263	\$252	\$47	\$74	\$2,017
11-19 units	\$563	\$101	\$69	\$76	\$49	\$229	\$232	\$57	\$107	\$1,483
20-99 units	\$626	\$178	\$44	\$54	\$36	\$213	\$207	\$45	\$83	\$1,485
100+ units	\$910	\$409	\$57	\$56	\$53	\$275	\$263	\$47	\$71	\$2,141
Upper Manhattan	\$294	\$181	\$48	\$61	\$49	\$201	\$179	\$43	\$21	\$1,077
11-19 units	-	-	-	-	-	-	-	-	-	-
20-99 units	\$239	\$117	\$62	\$71	\$40	\$185	\$146	\$48	\$60	\$968
100+ units	-	-	-	-	-	-	-	-	-	-
City w/o Core	\$221	\$118	\$49	\$70	\$33	\$165	\$129	\$43	\$48	\$875
11-19 units	\$192	\$96	\$56	\$64	\$40	\$172	\$121	\$50	\$54	\$846
20-99 units	\$209	\$93	\$51	\$70	\$30	\$161	\$127	\$45	\$43	\$831
100+ units	\$239	\$151	\$47	\$70	\$34	\$168	\$132	\$39	\$52	\$933

Notes: The sum of the lines may not equal the total due to rounding. Totals in this table may not match those in Appendix Table 3 due to rounding. Data in this table is NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The category "Utilities" used in the I&E Study is the sum of "Water & Sewer" and "Light & Power." The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island and Upper Manhattan; Post-46 buildings with 20-99 units on Staten Island; as well as 100+ unit buildings in Upper Manhattan and Staten Island, was too small to calculate reliable statistics. Owners are not required to report tax expenses; therefore, tax figures used in this report were calculated by the NYC Department of Finance.

Source: NYC Department of Finance, RPIE Filings.

3. Average Rent, Income and Costs in 2016 per Apartment per Month by Building Size and Location

	Post-46			Pre-47			All		
	Rent	Income	Costs	Rent	Income	Costs	Rent	Income	Costs
Citywide	\$1,589	\$1,786	\$1,108	\$1,289	\$1,464	\$938	\$1,371	\$1,552	\$985
11-19 units	\$1,323	\$1,467	\$855	\$1,382	\$1,681	\$1,066	\$1,376	\$1,658	\$1,043
20-99 units	\$1,303	\$1,419	\$886	\$1,225	\$1,365	\$880	\$1,239	\$1,375	\$881
100+ units	\$1,869	\$2,143	\$1,330	\$1,710	\$2,008	\$1,251	\$1,819	\$2,100	\$1,305
Bronx	\$1,061	\$1,170	\$759	\$959	\$1,073	\$739	\$977	\$1,090	\$742
11-19 units	-	-	-	\$934	\$1,090	\$793	\$937	\$1,096	\$793
20-99 units	\$1,052	\$1,129	\$726	\$956	\$1,068	\$734	\$966	\$1,074	\$733
100+ units	\$1,082	\$1,241	\$818	\$1,059	\$1,164	\$770	\$1,070	\$1,200	\$793
Brooklyn	\$1,282	\$1,387	\$864	\$1,140	\$1,206	\$776	\$1,177	\$1,253	\$799
11-19 units	-	-	-	\$1,189	\$1,282	\$834	\$1,197	\$1,291	\$837
20-99 units	\$1,278	\$1,371	\$846	\$1,116	\$1,176	\$758	\$1,134	\$1,197	\$767
100+ units	\$1,255	\$1,379	\$887	\$1,279	\$1,349	\$836	\$1,264	\$1,368	\$869
Manhattan	\$2,619	\$3,082	\$1,838	\$1,714	\$2,071	\$1,283	\$1,917	\$2,298	\$1,408
11-19 units	\$1,661	\$1,976	\$1,216	\$1,714	\$2,268	\$1,395	\$1,714	\$2,265	\$1,394
20-99 units	\$1,933	\$2,264	\$1,341	\$1,622	\$1,894	\$1,177	\$1,647	\$1,924	\$1,191
100+ units	\$2,809	\$3,307	\$1,975	\$2,222	\$2,756	\$1,702	\$2,599	\$3,110	\$1,877
Queens	\$1,323	\$1,426	\$921	\$1,240	\$1,302	\$824	\$1,282	\$1,365	\$873
11-19 units	\$1,308	\$1,436	\$792	\$1,127	\$1,189	\$765	\$1,148	\$1,218	\$768
20-99 units	\$1,284	\$1,374	\$882	\$1,248	\$1,307	\$823	\$1,258	\$1,325	\$839
100+ units	\$1,358	\$1,469	\$972	\$1,351	\$1,433	\$909	\$1,356	\$1,460	\$957
Staten Island	\$1,023	\$1,190	\$777	-	-	-	\$1,044	\$1,186	\$772
11-19 units	-	-	-	-	-	-	-	-	-
20-99 units	-	-	-	-	-	-	\$1,031	\$1,092	\$716
100+ units	-	-	-	-	-	-	-	-	-
Core Manhattan	\$2,859	\$3,373	\$2,017	\$2,033	\$2,512	\$1,500	\$2,282	\$2,772	\$1,656
11-19 units	\$1,852	\$2,408	\$1,483	\$1,835	\$2,503	\$1,495	\$1,836	\$2,501	\$1,494
20-99 units	\$2,155	\$2,522	\$1,485	\$1,991	\$2,355	\$1,391	\$2,003	\$2,367	\$1,398
100+ units	\$3,025	\$3,572	\$2,141	\$2,383	\$2,981	\$1,825	\$2,781	\$3,348	\$2,021
Upper Manhattan	\$1,596	\$1,843	\$1,077	\$1,339	\$1,552	\$1,028	\$1,366	\$1,583	\$1,033
11-19 units	-	-	-	\$1,463	\$1,779	\$1,188	\$1,464	\$1,774	\$1,182
20-99 units	\$1,357	\$1,595	\$968	\$1,318	\$1,516	\$1,002	\$1,320	\$1,519	\$1,002
100+ units	-	-	-	\$1,367	\$1,561	\$1,050	\$1,486	\$1,701	\$1,077
City w/o Core	\$1,264	\$1,379	\$875	\$1,154	\$1,237	\$802	\$1,184	\$1,275	\$821
11-19 units	\$1,315	\$1,454	\$846	\$1,135	\$1,220	\$793	\$1,161	\$1,255	\$801
20-99 units	\$1,225	\$1,318	\$831	\$1,127	\$1,205	\$782	\$1,146	\$1,226	\$792
100+ units	\$1,305	\$1,445	\$933	\$1,279	\$1,371	\$874	\$1,297	\$1,424	\$916

Notes: City, borough totals and building size categories are weighted. Cost figures in this table are NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island, and Upper Manhattan; Post-46 buildings with 20-99 units on Staten Island; as well as 100+ unit buildings in Upper Manhattan and Staten Island, was too small to calculate reliable statistics. In addition, the number of Pre-47 rent stabilized buildings of all size groupings in Staten Island was too small to calculate reliable statistics.

Source: NYC Department of Finance, RPIE Filings.

4. Median Rent, Income and Costs in 2016 per Apartment per Month by Building Size and Location

	Post-46			Pre-47			All		
	Rent	Income	Costs	Rent	Income	Costs	Rent	Income	Costs
Citywide	\$1,270	\$1,365	\$892	\$1,169	\$1,262	\$841	\$1,182	\$1,280	\$847
11-19 units	\$1,231	\$1,465	\$840	\$1,282	\$1,480	\$983	\$1,281	\$1,480	\$975
20-99 units	\$1,207	\$1,282	\$822	\$1,134	\$1,214	\$808	\$1,142	\$1,222	\$809
100+ units	\$1,387	\$1,520	\$1,050	\$1,298	\$1,390	\$884	\$1,359	\$1,478	\$998
Bronx	\$1,049	\$1,111	\$700	\$957	\$1,046	\$716	\$966	\$1,053	\$714
11-19 units	-	-	-	\$913	\$1,050	\$755	\$916	\$1,055	\$752
20-99 units	\$1,047	\$1,092	\$699	\$958	\$1,042	\$710	\$966	\$1,048	\$709
100+ units	\$1,068	\$1,190	\$709	\$1,053	\$1,180	\$762	\$1,057	\$1,185	\$755
Brooklyn	\$1,213	\$1,292	\$811	\$1,093	\$1,139	\$737	\$1,105	\$1,153	\$744
11-19 units	-	-	-	\$1,111	\$1,173	\$767	\$1,111	\$1,179	\$772
20-99 units	\$1,209	\$1,273	\$793	\$1,084	\$1,127	\$728	\$1,094	\$1,139	\$733
100+ units	\$1,217	\$1,323	\$868	\$1,231	\$1,305	\$808	\$1,219	\$1,310	\$829
Manhattan	\$2,208	\$2,564	\$1,506	\$1,595	\$1,853	\$1,135	\$1,627	\$1,893	\$1,159
11-19 units	\$1,628	\$1,951	\$1,211	\$1,653	\$2,071	\$1,280	\$1,652	\$2,066	\$1,278
20-99 units	\$1,941	\$2,138	\$1,218	\$1,541	\$1,731	\$1,063	\$1,561	\$1,757	\$1,072
100+ units	\$2,853	\$3,258	\$1,890	\$2,037	\$2,456	\$1,537	\$2,571	\$2,939	\$1,745
Queens	\$1,296	\$1,375	\$901	\$1,215	\$1,244	\$766	\$1,236	\$1,285	\$802
11-19 units	\$1,227	\$1,343	\$727	\$1,133	\$1,157	\$727	\$1,135	\$1,174	\$727
20-99 units	\$1,263	\$1,332	\$857	\$1,236	\$1,272	\$781	\$1,242	\$1,291	\$799
100+ units	\$1,352	\$1,445	\$980	\$1,324	\$1,388	\$884	\$1,336	\$1,437	\$954
Staten Island	\$1,000	\$1,130	\$706	-	-	-	\$1,046	\$1,141	\$693
11-19 units	-	-	-	-	-	-	-	-	-
20-99 units	-	-	-	-	-	-	\$1,022	\$1,060	\$654
100+ units	-	-	-	-	-	-	-	-	-
Core Manhattan	\$2,479	\$2,856	\$1,662	\$1,844	\$2,178	\$1,288	\$1,882	\$2,217	\$1,316
11-19 units	\$1,628	\$2,040	\$1,366	\$1,748	\$2,219	\$1,348	\$1,747	\$2,217	\$1,348
20-99 units	\$2,096	\$2,214	\$1,336	\$1,896	\$2,112	\$1,227	\$1,907	\$2,130	\$1,232
100+ units	\$3,038	\$3,414	\$1,981	\$2,364	\$2,830	\$1,736	\$2,779	\$3,250	\$1,906
Upper Manhattan	\$1,476	\$1,570	\$917	\$1,206	\$1,372	\$904	\$1,215	\$1,379	\$906
11-19 units	-	-	-	\$1,236	\$1,518	\$1,026	\$1,239	\$1,518	\$1,020
20-99 units	\$1,310	\$1,411	\$825	\$1,196	\$1,345	\$885	\$1,199	\$1,352	\$884
100+ units	-	-	-	\$1,198	\$1,355	\$876	\$1,354	\$1,505	\$977
City w/o Core	\$1,202	\$1,280	\$814	\$1,072	\$1,150	\$762	\$1,089	\$1,166	\$768
11-19 units	\$1,166	\$1,338	\$763	\$1,095	\$1,182	\$793	\$1,100	\$1,188	\$792
20-99 units	\$1,158	\$1,222	\$784	\$1,064	\$1,139	\$753	\$1,075	\$1,149	\$757
100+ units	\$1,276	\$1,369	\$932	\$1,193	\$1,262	\$814	\$1,240	\$1,332	\$871

Notes: Cost figures in this table are NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island and Upper Manhattan; Post-46 buildings with 20-99 units on Staten Island; as well as 100+ unit buildings in Upper Manhattan and Staten Island, was too small to calculate reliable statistics. In addition, the number of Pre-47 rent stabilized buildings of all size groupings in Staten Island was too small to calculate reliable statistics.

Source: NYC Department of Finance, RPIE Filings.

5. Average Net Operating Income in 2016 per Apartment per Month by Building Size and Location

	Post-46	Pre-47	All		Post-46	Pre-47	All
Citywide	\$678	\$526	\$568	Core Manhattan	\$1,356	\$1,012	\$1,116
11-19 units	\$612	\$615	\$615	11-19 units	\$925	\$1,008	\$1,007
20-99 units	\$533	\$485	\$493	20-99 units	\$1,037	\$964	\$969
100+ units	\$814	\$756	\$796	100+ units	\$1,431	\$1,156	\$1,327
Bronx	\$411	\$334	\$348	Upper Manhattan	\$766	\$524	\$550
11-19 units	-	\$297	\$303	11-19 units	-	\$591	\$592
20-99 units	\$403	\$334	\$341	20-99 units	\$627	\$514	\$517
100+ units	\$423	\$394	\$407	100+ units	-	\$511	\$624
Brooklyn	\$523	\$430	\$454	City w/o Core	\$504	\$435	\$454
11-19 units	-	\$448	\$454	11-19 units	\$608	\$427	\$454
20-99 units	\$525	\$418	\$430	20-99 units	\$486	\$422	\$434
100+ units	\$492	\$513	\$499	100+ units	\$512	\$497	\$508
Manhattan	\$1,244	\$788	\$890				
11-19 units	\$761	\$872	\$871				
20-99 units	\$923	\$717	\$734				
100+ units	\$1,333	\$1,054	\$1,233				
Queens	\$504	\$479	\$492				
11-19 units	\$644	\$424	\$450				
20-99 units	\$492	\$484	\$486				
100+ units	\$497	\$524	\$503				
Staten Island	\$412	-	\$414				
11-19 units	-	-	-				
20-99 units	-	-	\$376				
100+ units	-	-	-				

Notes: City, borough totals and building size categories are weighted. Cost figures used to calculate NOI in this table are NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island and Upper Manhattan; Post-46 buildings with 20-99 units on Staten Island; as well as 100+ unit buildings in Upper Manhattan and Staten Island, was too small to calculate reliable statistics. In addition, the number of Pre-47 rent stabilized buildings of all size groupings in Staten Island was too small to calculate reliable statistics.

Source: NYC Department of Finance, RPIE Filings.

6. Distribution of Operating Costs in 2016, by Building Size and Age

	Taxes	Maint.	Labor	Admin.	Utilities	Fuel	Misc.	Insurance	Total
Pre-47	29.6%	18.7%	9.5%	13.6%	10.9%	7.4%	4.6%	5.7%	100.0%
11-19 units	32.1%	17.7%	8.2%	13.6%	10.1%	7.5%	5.4%	5.5%	100.0%
20-99 units	28.1%	19.3%	8.7%	13.8%	11.5%	7.8%	4.7%	6.0%	100.0%
100+ units	36.1%	16.0%	16.9%	12.4%	8.0%	4.1%	2.7%	3.8%	100.0%
Post-46	31.4%	16.8%	15.1%	14.0%	9.4%	4.6%	4.8%	4.0%	100.0%
11-19 units	23.0%	20.2%	11.2%	14.3%	12.2%	6.6%	6.4%	5.9%	100.0%
20-99 units	27.5%	18.7%	11.3%	15.1%	11.3%	5.7%	5.2%	5.1%	100.0%
100+ units	34.3%	15.3%	17.7%	13.2%	8.1%	3.8%	4.4%	3.2%	100.0%
All Bldgs.	30.2%	18.1%	11.2%	13.7%	10.4%	6.5%	4.7%	5.2%	100.0%
11-19 units	31.3%	18.0%	8.5%	13.7%	10.3%	7.4%	5.5%	5.5%	100.0%
20-99 units	28.0%	19.2%	9.2%	14.0%	11.5%	7.4%	4.8%	5.9%	100.0%
100+ units	34.9%	15.5%	17.4%	12.9%	8.0%	3.9%	3.9%	3.4%	100.0%

Source: NYC Department of Finance, RPIE Filings.

7. Number of “Distressed” Buildings in 2016

	Citywide	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Core Manh	Upper Manh
Pre-47								
11-19 units	263	41	47	148	27	0	91	57
20-99 units	406	98	65	205	37	1	97	108
100+ units	11	3	1	6	1	0	3	3
All	680	142	113	359	65	1	191	168
Post-46								
11-19 units	11	4	2	4	1	0	2	2
20-99 units	43	12	7	9	14	1	6	3
100+ units	15	3	1	7	4	0	7	0
All	69	19	10	20	19	1	15	5
All Bldgs.								
11-19 units	274	45	49	152	28	0	93	59
20-99 units	449	110	72	214	51	2	103	111
100+ units	26	6	2	13	5	0	10	3
All	749	161	123	379	84	2	206	173

Source: NYC Department of Finance, RPIE Filings.

Note: “Distressed” buildings are those that have operating and maintenance costs that exceed gross income.

8. Operating Cost-to-Income Ratios by Decile in 2016

	# of Bldgs	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Citywide	15,389	0.48	0.53	0.57	0.60	0.64	0.68	0.72	0.78	0.89	5.82
Manhattan	6,350	0.46	0.51	0.54	0.57	0.61	0.65	0.70	0.77	0.90	5.82
Bronx	3,370	0.52	0.57	0.61	0.65	0.68	0.72	0.76	0.82	0.91	1.89
Brooklyn	3,589	0.49	0.54	0.57	0.61	0.64	0.68	0.71	0.77	0.86	2.77
Queens	2,000	0.48	0.53	0.56	0.59	0.63	0.66	0.70	0.76	0.85	2.21
Staten Island	80	0.48	0.53	0.57	0.61	0.64	0.68	0.74	0.77	0.80	1.19

Source: NYC Department of Finance, RPIE Filings.

9. Number of Buildings and Dwelling Units in 2016 by Building Size and Location

	Post-46		Pre-47		All	
	Bldgs.	DUs	Bldgs.	DUs	Bldgs.	DUs
Citywide	1,954	204,896	13,434	500,192	15,389	705,122
11-19 units	151	2,220	3,602	54,592	3,753	56,812
20-99 units	1,170	66,952	9,444	376,030	10,615	443,016
100+ units	633	135,724	388	69,570	1,021	205,294
Bronx	384	30,033	2,986	129,372	3,370	159,405
11-19 units	17	267	363	5,520	380	5,787
20-99 units	296	17,476	2,542	112,598	2,838	130,074
100+ units	71	12,290	81	11,254	152	23,544
Brooklyn	420	40,419	3,169	114,671	3,589	155,090
11-19 units	28	414	890	13,389	918	13,803
20-99 units	270	16,553	2,210	93,131	2,480	109,684
100+ units	122	23,452	69	8,151	191	31,603
Manhattan	482	70,025	5,867	199,704	6,350	269,763
11-19 units	50	746	1,965	29,741	2,015	30,487
20-99 units	209	10,675	3,732	129,810	3,942	140,519
100+ units	223	58,604	170	40,153	393	98,757
Queens	612	60,021	1,388	55,109	2,000	115,130
11-19 units	50	708	376	5,816	426	6,524
20-99 units	361	20,891	949	40,025	1,310	60,916
100+ units	201	38,422	63	9,268	264	47,690
Staten Island	56	4,398	24	1,336	80	5,734
11-19 units	6	85	8	126	14	211
20-99 units	34	1,357	11	466	45	1,823
100+ units	16	2,956	5	744	21	3,700
Core Manhattan	389	59,694	3,637	119,120	4,026	178,814
11-19 units	36	552	1,479	22,443	1,515	22,995
20-99 units	157	8,075	2,038	63,836	2,195	71,911
100+ units	196	51,067	120	32,841	316	83,908
Upper Manhattan	93	10,331	2,230	80,584	2,324	90,949
11-19 units	14	194	486	7,298	500	7,492
20-99 units	52	2,600	1,694	65,974	1,747	68,608
100+ units	27	7,537	50	7,312	77	14,849

Source: NYC Department of Finance, RPIE Filings.

DU = Dwelling Unit

10. Longitudinal Income and Expense Study, Estimated Average Rent, Income and Costs Changes (2015-2016) by Building Size and Location

	Post-46			Pre-47			All		
	Rent	Income	Costs	Rent	Income	Costs	Rent	Income	Costs
Citywide	2.8%	2.6%	2.9%	3.2%	3.3%	2.1%	3.1%	3.1%	2.4%
11-19 units	4.3%	3.6%	8.4%	3.5%	3.6%	2.5%	3.6%	3.6%	3.0%
20-99 units	2.8%	2.7%	2.7%	3.2%	3.3%	1.7%	3.1%	3.2%	1.9%
100+ units	2.8%	2.5%	2.7%	2.5%	3.1%	3.8%	2.7%	2.7%	3.1%
Bronx	-0.4%	-0.1%	0.4%	2.0%	2.0%	-0.4%	1.5%	1.6%	-0.2%
11-19 units	-	-	-	2.7%	2.3%	-1.4%	2.7%	2.2%	-0.8%
20-99 units	0.3%	0.6%	-1.2%	1.9%	1.9%	-0.4%	1.7%	1.7%	-0.5%
100+ units	-1.7%	-1.4%	3.0%	2.9%	3.2%	1.6%	-0.1%	0.1%	2.5%
Brooklyn	4.4%	4.0%	4.9%	4.0%	3.9%	3.5%	4.1%	3.9%	3.9%
11-19 units	-	-	-	4.1%	4.2%	3.2%	3.9%	3.9%	4.7%
20-99 units	4.5%	4.0%	4.8%	3.9%	3.8%	3.1%	4.1%	3.9%	3.6%
100+ units	4.6%	4.4%	3.0%	4.4%	4.0%	7.6%	4.5%	4.2%	4.8%
Manhattan	2.4%	2.3%	3.2%	3.0%	3.4%	2.5%	2.8%	3.1%	2.7%
11-19 units	4.3%	3.9%	-1.0%	3.2%	3.4%	2.9%	3.2%	3.4%	2.9%
20-99 units	0.8%	1.1%	2.2%	3.3%	3.6%	2.2%	3.1%	3.4%	2.2%
100+ units	2.7%	2.5%	3.4%	1.7%	2.8%	3.2%	2.4%	2.6%	3.4%
Queens	3.7%	3.4%	2.2%	4.1%	4.2%	3.0%	3.9%	3.8%	2.5%
11-19 units	5.7%	5.4%	4.1%	4.3%	4.5%	1.9%	4.7%	4.8%	2.5%
20-99 units	3.6%	3.6%	3.2%	4.2%	4.4%	3.0%	3.9%	4.1%	3.1%
100+ units	3.6%	3.1%	1.2%	3.6%	3.3%	4.1%	3.6%	3.1%	1.7%
Staten Island	2.9%	1.3%	1.4%	-	-	-	3.3%	2.0%	2.8%
11-19 units	-	-	-	-	-	-	-	-	-
20-99 units	-	-	-	-	-	-	3.5%	3.6%	7.3%
100+ units	-	-	-	-	-	-	-	-	-
Core Manhattan	2.3%	2.1%	3.8%	2.9%	3.4%	3.6%	2.7%	2.9%	3.7%
11-19 units	3.5%	2.4%	2.9%	3.3%	3.7%	3.8%	3.3%	3.7%	3.8%
20-99 units	0.0%	0.2%	2.7%	3.3%	3.5%	3.7%	2.8%	3.0%	3.6%
100+ units	2.6%	2.4%	3.9%	1.7%	2.8%	3.2%	2.3%	2.5%	3.7%
Upper Manhattan	3.5%	3.6%	-1.1%	3.2%	3.5%	0.7%	3.3%	3.5%	0.5%
11-19 units	-	-	-	2.8%	2.6%	0.6%	2.8%	2.7%	0.5%
20-99 units	4.4%	5.0%	0.1%	3.4%	3.8%	0.5%	3.4%	3.8%	0.5%
100+ units	-	-	-	2.3%	2.8%	3.7%	2.8%	2.9%	0.2%
All City w/o Core	3.2%	2.9%	2.4%	3.3%	3.3%	1.5%	3.2%	3.2%	1.8%
11-19 units	4.3%	3.7%	8.5%	3.6%	3.6%	1.6%	3.8%	3.6%	2.5%
20-99 units	3.2%	3.2%	2.7%	3.2%	3.2%	1.2%	3.2%	3.2%	1.5%
100+ units	2.9%	2.5%	1.4%	3.6%	3.5%	4.8%	3.1%	2.8%	2.3%

Notes: City, borough totals and building size categories are weighted. Cost figures in this table are NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island and Upper Manhattan, as well as 20-99 and 100+ unit buildings on Staten Island and 100+ units buildings in Upper Manhattan was too small to calculate reliable statistics. In addition, the number of Pre-47 rent stabilized buildings in all categories in Staten Island was too small to calculate reliable statistics.

Source: NYC Department of Finance, RPIE Filings.

11. Longitudinal Income and Expense Study, Estimated Median Rent, Income and Costs Changes (2015-2016) by Building Size and Location

	Post-46			Pre-47			All		
	Rent	Income	Costs	Rent	Income	Costs	Rent	Income	Costs
Citywide	3.9%	3.1%	3.7%	3.8%	3.5%	1.4%	3.7%	3.7%	1.4%
11-19 units	2.7%	7.0%	-0.5%	4.4%	4.5%	2.6%	4.4%	4.4%	2.9%
20-99 units	3.1%	3.8%	2.8%	3.8%	3.6%	1.8%	3.8%	3.4%	1.9%
100+ units	3.4%	4.2%	3.3%	3.9%	3.3%	2.6%	3.7%	3.4%	3.5%
Bronx	2.4%	3.7%	1.4%	2.5%	2.9%	0.7%	2.7%	2.9%	0.7%
11-19 units	-	-	-	3.0%	1.9%	0.1%	2.3%	2.0%	-0.1%
20-99 units	2.7%	3.3%	1.1%	2.4%	2.8%	0.8%	2.7%	2.9%	0.7%
100+ units	-0.3%	2.1%	1.3%	2.2%	3.0%	2.8%	1.9%	2.9%	3.3%
Brooklyn	5.7%	5.4%	5.2%	4.5%	3.5%	3.5%	4.4%	3.7%	3.8%
11-19 units	-	-	-	3.9%	3.4%	1.8%	3.8%	3.3%	2.0%
20-99 units	5.4%	4.9%	6.3%	4.5%	4.0%	3.6%	4.4%	3.6%	3.8%
100+ units	5.4%	4.1%	3.2%	5.2%	4.7%	16.9%	5.1%	5.0%	4.4%
Manhattan	4.4%	3.0%	1.7%	3.2%	3.4%	2.0%	3.2%	3.3%	2.5%
11-19 units	0.9%	-0.4%	0.7%	3.6%	2.2%	2.3%	3.5%	2.3%	2.1%
20-99 units	3.3%	3.1%	5.6%	2.8%	3.7%	0.8%	2.7%	3.2%	0.9%
100+ units	2.1%	2.4%	5.7%	4.1%	4.1%	3.6%	1.0%	3.2%	4.8%
Queens	4.6%	2.8%	4.1%	4.0%	3.6%	1.3%	3.4%	3.9%	1.6%
11-19 units	3.2%	2.9%	1.7%	3.4%	3.0%	1.7%	2.8%	3.7%	1.7%
20-99 units	3.2%	3.6%	2.8%	3.0%	3.8%	2.4%	3.0%	4.1%	2.4%
100+ units	3.8%	3.6%	4.0%	2.2%	3.8%	5.0%	3.8%	3.1%	5.9%
Staten Island	1.5%	2.2%	2.6%	-	-	-	1.9%	1.1%	1.5%
11-19 units	-	-	-	-	-	-	-	-	-
20-99 units	-	-	-	-	-	-	1.5%	3.2%	-0.3%
100+ units	-	-	-	-	-	-	-	-	-
Core Manhattan	3.3%	3.0%	3.3%	3.5%	3.2%	3.0%	3.7%	2.9%	3.5%
11-19 units	-5.6%	-2.3%	2.8%	3.3%	3.0%	3.1%	3.2%	2.9%	3.2%
20-99 units	3.4%	1.7%	4.2%	4.2%	3.2%	2.8%	4.2%	3.2%	3.3%
100+ units	2.7%	2.3%	4.5%	1.1%	2.7%	4.8%	1.4%	2.7%	4.7%
Upper Manhattan	4.4%	4.8%	-0.6%	3.7%	4.0%	-0.2%	3.4%	3.6%	-0.2%
11-19 units	-	-	-	2.5%	5.8%	-2.9%	2.7%	5.8%	-2.6%
20-99 units	4.3%	3.7%	12.6%	3.5%	4.9%	-0.2%	3.6%	4.7%	-0.1%
100+ units	-	-	-	4.8%	4.2%	-3.7%	3.8%	4.7%	1.6%
All City w/o Core	3.6%	3.6%	2.2%	3.6%	3.5%	1.7%	3.6%	3.5%	1.9%
11-19 units	4.1%	5.1%	9.8%	3.8%	3.8%	0.9%	3.8%	3.8%	1.1%
20-99 units	3.3%	2.8%	3.0%	3.6%	3.5%	1.9%	3.6%	3.5%	2.2%
100+ units	3.5%	2.7%	6.3%	4.2%	3.9%	5.1%	3.5%	3.2%	4.6%

Notes: Cost figures in this table are NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island and Upper Manhattan, as well as 20-99 and 100+ unit buildings on Staten Island and 100+ units buildings in Upper Manhattan was too small to calculate reliable statistics. In addition, the number of Pre-47 rent stabilized buildings in all categories in Staten Island was too small to calculate reliable statistics.

Source: NYC Department of Finance, RPIE Filings.

12. Longitudinal Income and Expense Study, Avg. Net Operating Income Changes (2015-2016) by Building Size & Location

	Post-46	Pre-47	All		Post-46	Pre-47	All
Citywide	2.1%	5.5%	4.4%	Core Manhattan	-0.3%	3.1%	1.8%
11-19 units	-2.3%	5.7%	4.7%	11-19 units	1.7%	3.6%	3.6%
20-99 units	2.7%	6.2%	5.5%	20-99 units	-3.4%	3.2%	2.3%
100+ units	2.0%	1.9%	2.0%	100+ units	0.2%	2.2%	0.8%
Bronx	-1.1%	7.6%	5.7%	Upper Manhattan	11.6%	9.8%	10.0%
11-19 units	-	13.3%	10.9%	11-19 units	-	6.9%	7.3%
20-99 units	4.1%	7.4%	6.9%	20-99 units	13.3%	10.8%	10.9%
100+ units	-9.1%	6.3%	-4.2%	100+ units	-	1.0%	7.8%
Brooklyn	2.4%	4.6%	4.0%	All City w/o Core	3.8%	6.9%	6.0%
11-19 units	-	6.3%	2.4%	11-19 units	-2.4%	7.7%	5.7%
20-99 units	2.7%	5.0%	4.4%	20-99 units	4.0%	7.3%	6.6%
100+ units	7.2%	-1.4%	3.2%	100+ units	4.7%	1.2%	3.7%
Manhattan	0.9%	5.0%	3.7%				
11-19 units	13.5%	4.3%	4.4%				
20-99 units	-0.5%	6.0%	5.4%				
100+ units	1.1%	2.1%	1.4%				
Queens	5.9%	6.5%	6.2%				
11-19 units	7.1%	9.4%	8.6%				
20-99 units	4.4%	6.8%	5.9%				
100+ units	6.9%	1.9%	5.9%				
Staten Island	1.2%	-	0.5%				
11-19 units	-	-	-				
20-99 units	-	-	-2.9%				
100+ units	-	-	-				

Notes: City, borough totals and building size categories are weighted. Cost figures used to calculate NOI in this table are NOT adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs. The number of Post-46 rent stabilized buildings with 11-19 units in the Bronx, Brooklyn, Staten Island and Upper Manhattan, as well as 20-99 and 100+ unit buildings on Staten Island and 100+ units buildings in Upper Manhattan was too small to calculate reliable statistics. In addition, the number of Pre-47 rent stabilized buildings in all categories in Staten Island was too small to calculate reliable statistics.

Source: NYC Department of Finance, RPIE Filings.

13. Longitudinal Income and Expense Study, Change in Rent and Net Operating Income by Community District (2015-2016)

CD	Neighborhood	Rent Change	NOI Change
Manhattan			
102	Greenwich Village	3.1%	1.1%
103	Lower East Side/Chinatown	3.7%	4.6%
104	Chelsea/Clinton	2.8%	5.0%
105	Midtown	3.3%	0.8%
106	Stuyvesant Town/Turtle Bay	3.9%	3.1%
107	Upper West Side	2.5%	0.8%
108	Upper East Side	3.1%	3.2%
109	Morningside Hts./Hamilton Hts.	4.1%	19.4%
110	Central Harlem	2.2%	0.2%
111	East Harlem	1.2%	3.6%
112	Washington Hts./Inwood	3.5%	14.9%
Bronx			
201	Mott Haven/Port Morris	0.8%	-3.3%
202	Hunts Point/Longwood	2.8%	7.0%
203	Morrisania/Melrose/Claremont	1.4%	17.6%
204	Highbridge/S. Concourse	2.7%	6.5%
205	University Heights/Fordham	2.0%	7.6%
206	E. Tremont/Belmont	4.0%	15.4%
207	Kingsbridge Hts./Mosholu/Norwood	1.5%	5.7%
208	Riverdale/Kingsbridge	2.1%	6.9%
209	Soundview/Parkchester	1.8%	7.7%
210	Throgs Neck/Co-op City	-0.8%	2.8%
211	Pelham Parkway	1.2%	8.1%
212	Williamsbridge/Baychester	-0.6%	-1.9%
Brooklyn			
301	Williamsburg/Greenpoint	4.1%	3.9%
302	Brooklyn Hts./Fort Greene	3.6%	2.5%
303	Bedford-Stuyvesant	6.3%	6.7%
305	East New York/Starett City	-2.5%	-3.6%
306	Park Slope/Carroll Gardens	4.4%	6.2%
307	Sunset Park	4.6%	7.9%
308	North Crown Hts./Prospect Hts.	4.9%	6.9%
309	South Crown Hts.	4.5%	3.3%
310	Bay Ridge	2.7%	0.5%
311	Bensonhurst	4.0%	1.9%
312	Borough Park	3.6%	5.3%
313	Coney Island	5.0%	8.1%
314	Flatbush	3.9%	7.4%
315	Sheepshead Bay/Gravesend	3.5%	5.5%
316	Brownsville/Ocean Hill	4.6%	10.7%
317	East Flatbush	3.9%	2.8%
318	Flatlands/Canarsie	9.1%	6.9%
Queens			
401	Astoria	3.8%	6.3%
402	Sunnyside/Woodside	4.5%	7.1%
403	Jackson Hts.	5.3%	11.9%
404	Elmhurst/Corona	3.8%	5.7%
405	Middle Village/Ridgewood	4.2%	2.8%
406	Forest Hills/Rego Park	3.4%	1.5%
407	Flushing/Whitestone	3.3%	6.1%
408	Hillcrest/Fresh Meadows	6.2%	11.9%
409	Kew Gardens/Woodhaven	3.5%	4.8%
411	Bayside/Little Neck	7.1%	20.9%
412	Jamaica	3.3%	5.4%
414	Rockaways	3.8%	8.3%
Staten Island			
501	North Shore	3.3%	-0.5%

Note: Six Community Districts (CDs) contained too few buildings to be included in the analysis.
Source: NYC Department of Finance, RPIE Filings.

14. Longitudinal Analysis, Number of Buildings and Dwelling Units in 2015 & 2016, by Building Size and Location

	Post-46		Pre-47		All	
	Bldgs.	DUs	Bldgs.	DUs	Bldgs.	DUs
Citywide	1,753	187,191	12,242	463,806	13,995	650,997
11-19 units	127	1,877	3,178	48,249	3,305	50,126
20-99 units	1,040	59,659	8,695	349,144	9,735	408,803
100+ units	586	125,655	369	66,413	955	192,068
Bronx	328	26,262	2,647	117,092	2,975	143,354
11-19 units	13	206	291	4,480	304	4,686
20-99 units	252	14,927	2,278	101,855	2,530	116,782
100+ units	63	11,129	78	10,757	141	21,886
Brooklyn	369	35,976	2,864	106,191	3,233	142,167
11-19 units	22	329	754	11,360	776	11,689
20-99 units	237	14,609	2,046	87,204	2,283	101,813
100+ units	110	21,038	64	7,627	174	28,665
Manhattan	434	64,388	5,406	186,715	5,840	251,103
11-19 units	46	689	1,787	27,055	1,833	27,744
20-99 units	182	9,255	3,457	121,268	3,639	130,523
100+ units	206	54,444	162	38,392	368	92,836
Queens	570	56,526	1,305	52,584	1,875	109,110
11-19 units	40	568	339	5,244	379	5,812
20-99 units	337	19,557	906	38,447	1,243	58,004
100+ units	193	36,401	60	8,893	253	45,294
Staten Island	52	4,039	20	1,224	72	5,263
11-19 units	6	85	7	110	13	195
20-99 units	32	1,311	8	370	40	1,681
100+ units	14	2,643	5	744	19	3,387
Core Manhattan	356	55,843	3,390	112,097	3,746	167,940
11-19 units	35	540	1,367	20,730	1,402	21,270
20-99 units	139	7,024	1,910	60,159	2,049	67,183
100+ units	182	48,279	113	31,208	295	79,487
Upper Manhattan	78	8,545	2,016	74,618	2,094	83,163
11-19 units	11	149	420	6,325	431	6,474
20-99 units	43	2,231	1,547	61,109	1,590	63,340
100+ units	24	6,165	49	7,184	73	13,349

Source: NYC Department of Finance, RPIE Filings.

DU = Dwelling Unit