



THE CITY OF NEW YORK  
INDEPENDENT BUDGET OFFICE

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July 7, 2016

Council Member Joe Borelli  
Council Member Steven Matteo  
New York City Council  
City Hall  
New York, NY 10007

Dear Council Members Borelli and Matteo:

At your request, the Independent Budget Office has reviewed some of the differences in assessments and tax burdens between one-, two-, and three-family homes in Staten Island and elsewhere in the city. Our analysis confirms that there are indeed large differences across the city, but that these differences are primarily due to a feature of the New York State Real Property Law that is intended to protect homeowners from steep increases in tax bills driven by rapid appreciation in their neighborhoods. Limits on increases in assessments have the greatest impact on tax burdens in those neighborhoods where property values have been rising most rapidly, thereby producing the inequities highlighted in your letter. We also looked for evidence that bias in the Department of Finance's assessment process could be responsible for the differences in tax burdens, but found none when assessment quality is evaluated against professional standards of performance. The attached memo provides greater detail on our analysis and findings.

If you have any further questions, please feel free to contact me at (212) 442-0225 or [RonnieL@ibo.nyc.ny.us](mailto:RonnieL@ibo.nyc.ny.us). Alternatively, please call George Sweeting, IBO's Deputy Director, at (212) 341-6044.

Sincerely,

A handwritten signature in blue ink that reads "Ronnie Lowenstein".

Ronnie Lowenstein

**To: George Sweeting**

**From: Geoffrey Propheter**

**Date: June 20, 2016**

**Subject: Analysis of Assessment and Tax Inequities in the Outer Boroughs**

## **Introduction**

At the request of Council Members Borelli and Matteo, IBO conducted an analysis of assessment and tax inequities of Class 1 properties in the boroughs outside Manhattan. The Council Members expressed concern that homes in Staten Island may be inequitably treated under the city's property tax system. In addition, the Council Members asked IBO to clarify the reassessment process particularly as it relates to changes in ownership and real property improvements.

IBO began with a case study, comparing the property tax treatment of two homes identified by the Council Members as potentially signaling inequities. In order to take a more comprehensive look at the issue, we then conducted a sales-ratio analysis based on the 16,505 Class 1 homes that sold in 2015 outside Manhattan in order to identify biases in assessment process. We also estimated tax burdens relative to market value and relative to household income for single-family homes in order to determine how tax inequities faced by Staten Island homeowners compare with inequities faced by homeowners in Brooklyn, Queens, and the Bronx. Finally, we discuss the law requiring annual reassessments and the impact of property improvements on assessments.

IBO finds no evidence of a bias in the assessment process that disproportionately favors Class 1 properties in the Bronx, Brooklyn, and Queens over Staten Island when evaluated against professional standards of performance. On the contrary, we find that properties in Staten Island are assessed more uniformly than elsewhere. IBO also finds that while single-family homeowners in Staten Island pay a higher tax burden relative to assessed market value in 2016 compared with other boroughs, less of their household income goes to the property tax compared with single-family homeowners in the three other boroughs outside Manhattan. IBO concludes that the inequities observed across boroughs by the Council Members are primarily due to the assessment growth limits established in state law, which provide greater tax benefits for more rapidly appreciating properties.

## **A Case Study of Class 1 Homes in Brooklyn and Staten Island**

The Council Members provided IBO with a list of 41 Class 1 homes, 20 from Brooklyn and 21 from Staten Island. As evidence of possible inequities between the boroughs, the Councilmembers highlighted differences in taxes, assessments, and market value for one property from each of the lists. The Brooklyn property is 474 Dean Street in Park Slope and the Staten Island property in Oakwood is at 554 Falcon Avenue. In 2016, the Department of Finance (DOF) estimated 474 Dean Street's market value at \$1.7 million while 554 Falcon Avenue's was \$509,000. The tax bills for each property were \$3,868 and

\$5,972, respectively. As a percentage of market value, 474 Dean Street pays \$0.23 in taxes for every \$100 of value whereas 554 Falcon Avenue pays \$1.17 in taxes for every \$100 of value. Taxes expressed relative to market value are called market-based effective tax rates (METR).

There are three factors behind the substantial variation in Class 1 property tax burdens in New York City. The first factor is state law requiring that taxes be based upon the lesser of a citywide target assessment ratio (determined by the Finance Commissioner) of 6.0 percent of the current year's market value, or 106.0 percent of the prior year's assessed value; the 6.0 percent limit on increases in assessed value is known as the assessment cap. The two other factors behind the variation in tax burdens are differences in the rate at which properties appreciate in value and the length of time increases in a property's assessed value have been limited by the assessment cap.

Because under state law assessed values cannot be more than 6.0 percent higher than the prior year's assessed value, the assessment cap drives a wedge between assessed value and market value. The more quickly prices appreciate over time, the greater the gap between a property's price and its assessed value. Since properties in many Brooklyn neighborhoods have been appreciating more rapidly than in most parts of Staten Island for a number of years, many Brooklyn homeowners will see more of their market value excluded from taxation than will homeowners in Staten Island. Thus, homes that have enjoyed the benefits of the assessment cap for a longer period of time will tend to have lower tax burdens than an otherwise identical home that has benefitted from capped assessments for a shorter period of time.

To illustrate, consider again 474 Dean Street and 554 Falcon Avenue. The former has been benefitting from the assessment cap for more than 20 years longer than the latter. When 554 Falcon Avenue was added to the tax roll in 2009, its fair market value was \$610,000 (\$110,000 for the value of the previously vacant lot and \$500,000 for the newly constructed house on the property) while 474 Dean Street's market value was estimated at \$899,000 that same year. Owing to more than two decades of capped assessment growth, the Dean Street property's assessed value that year (before exemptions) was \$15,141 while 554 Falcon Avenue's was \$32,301 (the new house was assessed at the 6.0 percent target assessment ratio while the land was assessed at less than 6.0 percent due to the cap). By 2016, 554 Falcon Avenue's assessed value had fallen to \$30,540 (a decrease of 5.5 percent) while 474 Dean Street's had increased to \$19,780 (a 30.6 percent increase).

Thus, the properties have very different tax burdens because they started enjoying the benefit of capped assessment growth at different times, and because the properties appreciated at different rates over their respective lives. Indeed, from 2009 through 2016, 474 Dean Street's market value grew 12.3 times faster than its assessed value while 554 Falcon Avenue's market value grew 3.4 times faster. Focusing on these two properties illustrates an important consequence of capping assessment growth: properties that appreciate more quickly over time benefit more than do otherwise similar properties that appreciate less quickly.

The cases of Dean Street and Falcon Avenue illustrate the difficulty of making meaningful comparisons of taxes and assessments based on properties that were built at different times. It is more useful to

compare properties built at the same time in order to hold constant the amount of time different properties have had to accumulate capped savings. To illustrate, IBO calculated 2016 METRs for all Class 1 properties in Brooklyn and Staten Island built in 2008, the same year 554 Falcon Avenue was constructed. We found homes are taxed at a similar rate—\$1.01 per \$100 of market value in Brooklyn and \$1.05 per \$100 of market value across the Narrows—but owners of Brooklyn homes built in 2008 collectively enjoy a lower effective tax rate because prices have appreciated more quickly from 2009 to 2016 in Brooklyn than in Staten Island. As its appreciation continues to outpace Staten Island’s, we expect the difference in tax burdens between the two boroughs to grow.

It is also important to note that the case study of the Dean Street and Falcon Avenue properties is based on selective sampling. We could selectively sample homes in Canarsie and compare them to homes in Todt Hill and get contrary results. Median home values have declined in both neighborhoods since 2008—in Canarsie by 23.0 percent and in Todt Hill by 6.3 percent. However, since 2000 median values have increased 103 percent and 151 percent, respectively. These patterns imply that Class 1 homes in Todt Hill would face a lower tax burden than Class 1 homes in Canarsie. Indeed, this is what we find. IBO calculates that for Class 1 homes built in 2008, the 2016 METR in Canarsie is \$1.14 (15 homes) compared with \$1.05 in Todt Hill (20 homes).

Because selectively choosing properties does not provide evidence of bias favoring one borough or neighborhood over another, IBO next considers if such a bias exists in the assessment process.

### **Analyzing Property Assessment Uniformity**

The city’s Department of Finance adheres to assessment quality standards promulgated by the International Association of Assessing Officers (IAAO). Two performance measures are used to evaluate assessment quality: the median assessment-sales ratio (ASR) and the coefficient of dispersion (COD).

The ASR is the ratio of the market value as estimated by the city to actual sales prices. Ideally, appraised market value will equal the price a property would fetch on the open market if it were put up for sale. A ratio equal to 1 indicates that the assessor had exactly estimated the property’s eventual sales price—a level of accuracy that could only reasonably occur by chance. In practice, the city finance department estimates market values using sophisticated models that relate prices of sold properties to unsold properties adjusting for differences in property characteristics. As a result there will invariably be differences between estimates of market value and actual prices. The ASR measures this inaccuracy. While individual properties may experience very different ASRs, the department’s assessment quality is evaluated in the aggregate using the median value of all ASRs. IAAO standards define a high quality assessment for jurisdictions with a sufficiently large number of property sales—such as New York City—as one where the median ASR lies between 0.90 percent and 1.10 percent.

The COD measures the variation in assessment around the median ASR. Whereas the ASR measures inaccuracy, the COD measures uniformity. Estimates can be inaccurate—that is, further from market value—but if all properties’ assessments are equally inaccurate, then the assessments are perfectly uniform. That is, no one property is benefiting more or less from an inaccuracy than any other property in the same class. For this reason the COD is the performance measure held in the highest regard by the

IAAO, as it measures the degree of unequal treatment. In a perfect world there would be no variation in assessments across properties relative to the median ASR in the same class, implying a COD equal to zero. Since perfect assessments are impossible in practice, not to mention prohibitively costly, the IAAO accepts CODs between 5.0 percent and 20.0 percent for residential properties in areas where there is great variation in the composition of the housing stock.<sup>1</sup> In areas with a more homogenous housing stock, such as Staten Island, a reasonable maximum COD would be 15.0 percent.

In the previous section we argued that observed differences in tax burdens between the selected Class 1 properties in Oakwood and Park Slope are driven in part by a feature of the city’s property tax system; namely, assessment caps. However, it is also possible that the city’s assessment process benefits Class 1 properties more so in some boroughs than in others by degrees that are not acceptable by professional standards. In order to evaluate this possibility, IBO conducted a sales-ratio analysis using 16,505 arms-length Class 1 property sales in fiscal year 2015 in the boroughs outside of Manhattan. If Staten Island Class 1 homes are treated differently from Class 1 homes in the Bronx, Brooklyn, or Queens relative to IAAO standards, we will be able to observe the differences in median ASRs and CODs.

IBO finds no evidence that Class 1 properties in Staten Island are treated differently than their counterparts in the other boroughs when evaluated against professional expectations for performance. Median ASRs and CODs for all types of Class 1 property are within IAAO’s range of acceptable performance, indicating that DOF consistently assesses properties according to industry standards. Notwithstanding this, Class 1 homes in Staten Island are assessed slightly more uniformly than in the other boroughs, which, as with all other observed variation, could be due to random factors independent of the assessment system. To uncover potential systematic bias favoring some properties over others, ratio analyses for multiple years would need to be conducted and the results further analyzed.

<b>Based on Sales in 2015, Class 1 Properties in Staten Island Were More Uniformly Assessed Than Other Boroughs Outside Manhattan.</b>			
<b>Borough</b>	<b>Sales</b>	<b>Median Assessment-Sales Ratio (ASR)</b>	<b>Coefficient of Dispersion (COD)</b>
Bronx	1,756	1.05	15.37
Brooklyn	5,205	0.91	17.79
Queens	6,426	0.99	13.99
Staten Island	3,118	0.99	13.15
<b>Overall</b>	<b>16,505</b>	<b>0.99</b>	<b>14.68</b>
NOTE: IAAO standards provide that acceptable median ASRs fall between 0.90 percent and 1.10 percent and that acceptable CODs fall between 5.0 and 15.0 in areas with relatively homogenous housing.			
<i>New York City Independent Budget Office</i>			

IBO therefore concludes that observed differences in taxes between 474 Dean Street and 554 Falcon Avenue are not indicative of a bias in property assessments according to professional standards. The findings instead suggest that differences in property appreciation coupled with a property’s time on the

market and state law limiting Class 1 assessment growth produce the wide disparities in taxes across neighborhoods both within and across boroughs.

### Comparing Ability to Pay Property Taxes

There are two useful measures for evaluating relative property tax burdens: market-based effective tax rates, which use the finance department’s measure of market value as a denominator, and income-based effective tax rates (IETRs), which divide a homeowner’s tax liability by their household income, thereby relating their tax to their ability to pay. We previously examined METRs, but homeowners may be more interested in how much of their income is spent on property taxes rather than how they are being taxed relative to their home’s value. It is thus instructive to consider differences in IETRs.

Using data from the city’s 2016 property tax roll, which is most closely based on market conditions in calendar year 2014, and the most recent self-reported household income from the American Community Survey at the borough level, IBO found that in the aggregate, single-family homeowners in Staten Island pay more in taxes as a percentage of fair market value than single-family homeowners in any other borough outside Manhattan.<sup>2</sup> This result should be unsurprising given, as we previously described, how assessment caps function to benefit more rapidly appreciating properties more so than more slowly appreciating properties. However, Staten Island homeowners in the aggregate pay \$0.80 to \$0.90 less per \$100 of household income than owners in the other boroughs. Put differently, Staten Island single-family homeowners collectively are not disadvantaged by the city’s tax system in a way that requires them to pay more of their income to the property tax.

<b>Single-Family Homes in Staten Island Had The Highest Market Value-Based Effective Tax Rate But The Lowest-Income Based Effective Tax Rate</b>		
	<b>Levy per \$100 of...</b>	
<b>Borough</b>	<b>Fair Market Value</b>	<b>Household Income</b>
Bronx	\$1.02	\$4.45
Brooklyn	\$0.85	\$4.55
Queens	\$0.91	\$4.58
Staten Island	\$1.05	\$3.66
<b>Overall</b>	<b>\$0.96</b>	<b>\$4.58</b>

SOURCES: Department of Finance, American Community Survey  
 NOTE: Market values are based on the 2016 tax roll and income is drawn from the 2010-2014 American Community Survey, five-year estimates.  
*New York City Independent Budget Office*

### Reassessments, Changes of Ownership, and Assessable Improvements

In their letter, the Council Members asked why improvements trigger a reassessment but a sale does not. Technically, neither an improvement nor a sale triggers a reassessment. They both come into play when the property is next assessed, although under the state law there are differences in how improvements and sales affect a property’s assessed value.

The city charter requires the Department of Finance to reassess properties annually as of January 5<sup>th</sup> each year for tax bills during the fiscal year that begins six months later on July 1<sup>st</sup>. As part of the required annual reassessment, the city reviews physical changes to properties that it has a record of, such as improvements that add to value or damage or demolition that reduce value. When a property is altered state law requires the Department of Finance to reflect the full value of property additions or other improvements (and similarly subtract value due to demolition or destruction) on the next tax roll. Furthermore, the change in value from a physical improvement is not subject to the assessment limit, meaning that 6.0 percent of the market value of the assessable improvement is added to the property's capped assessed value. (This can be observed in the case of 554 Falcon Avenue, where the assessment grew by 6.0 percent of the market value of the new construction in the first year without regard to the cap on annual assessment increases.)

In the case of a sale, it is true that the finance department does not immediately change its estimated market value to the sales price, but this does not imply that following a sale the market value of the property does not change. Depending upon the prices physically similar homes have sold for on the block or in the neighborhood, assessed market value will increase, decrease, or stay the same. If a property sells before the next reassessment is completed, it will have an assessed market value closer to the unsold homes than to its sales price. This occurs because by law and professional standards, the Department of Finance must value physically similar homes in the same area (usually tax blocks) equally.

Finally, the Council Members asked if the current system gives an advantage to real estate speculators purchasing homes in rapidly appreciating markets. The answer depends on which groups are being compared. A goal of the assessment caps is to protect current homeowners from at least some of the appreciation-driven tax increases that might exceed their ability to pay if the cap on assessment increases were not in place. Thus, current homeowners are to some extent protected from speculators. When homeowners, particularly long-term homeowners in "hot" neighborhoods do sell, the sales price will reflect some portion of the accumulated and future assessment cap benefits; buyers—either speculators or individuals purchasing the house as a residence—are willing to pay a higher price to "purchase" the stream of benefits attributable to the cap. In this case, a speculative buyer and/or the seller receive a benefit from the assessment cap even though at the time of sale, neither are continuing homeowners who are the intended beneficiaries of the assessment caps.

## **Conclusion**

IBO finds no evidence of a bias in the assessment process that disproportionately favors the Bronx, Brooklyn, and Queens over Staten Island when evaluated against professional standards of performance. On the contrary, based on homes sales in 2015, properties in Staten Island are assessed somewhat more uniformly than elsewhere in the city. IBO also finds that while single-family homeowners in Staten Island face a higher tax burden relative to property value in 2016 compared with other boroughs, less of their household income goes to the property tax compared with single-family homeowners elsewhere outside Manhattan. IBO concludes that the inequities observed across boroughs by the Council Members are primarily due to the assessment growth limits imposed by state

law, which protects taxpayers from tax increases driven by rapidly rising property values, but also provides the greatest benefit to owners of the most rapidly appreciating properties.

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**Endnotes**

<sup>1</sup> The IAAO assumes that any COD under 5.0 percent assumes selective sales sampling; that the measured assessment performance is *too* good to be true, in effect.

<sup>2</sup> The tax roll for fiscal year 2016 is based on property values as of January 5, 2015.