EXPLANATORY STATEMENT - APARTMENT ORDER #53

Explanatory Statement and Findings of the Rent Guidelines Board in Relation to 2021-22 Lease Increase Allowances for Apartments and Lofts under the Jurisdiction of the Rent Stabilization Law¹

Summary of Order No. 53

The Rent Guidelines Board (RGB) by Order No. 53 has set the following maximum rent increases for leases effective on or after October 1, 2021 and on or before September 30, 2022 for apartments under its jurisdiction:

For a one-year lease commencing on or after October 1, 2021 and on or before September 30, 2022: 0% for the first 6 months of the lease and 1.5% for the remaining 6 months of the lease.

For a two-year lease commencing on or after October 1, 2021 and on or before September 30, 2022: 2.5%

Adjustments for Lofts

For Loft units to which these guidelines are applicable in accordance with Article 7-C of the Multiple Dwelling Law, the Board established the following maximum rent increases for increase periods commencing on or after October 1, 2021 and on or before September 30, 2022.

For one-year increase periods commencing on or after October 1, 2021 and on or before September 30, 2022: 0% for the first 6 months and 1.5% for the remaining 6 months.

For two-year increase periods commencing on or after October 1, 2021 and on or before September 30, 2022: 2.5%

These guidelines apply to all leases and increase periods. Therefore, consistent with guidance from New York State Homes and Community Renewal (HCR), the guidelines apply to vacant apartment and loft units that become occupied during the term of the Order, as well as to renewal leases or periods. No more than one guideline adjustment may be added during the guideline year governed by Order No. 53.

The guidelines do not apply to hotel, rooming house, and single room occupancy units that are covered by separate Hotel Orders.

Special Guideline

Leases for units subject to rent control on September 30, 2021 that subsequently become vacant and then enter the stabilization system are not subject to the above adjustments. Such newly stabilized rents are subject to review by HCR. In order to aid HCR in this review, the

¹ This Explanatory Statement explains the actions taken by the Board members on individual points and reflects the general views of those voting in the majority. It is not meant to summarize all the viewpoints expressed.

Rent Guidelines Board has set a special guideline of **39%** above the maximum base rent.

All rent adjustments lawfully implemented and maintained under previous apartment Orders and included in the base rent in effect on September 30, 2021 shall continue to be included in the base rent for the purpose of computing subsequent rents adjusted pursuant to this Order.

Background of Order No. 53

The Rent Guidelines Board is mandated by the Rent Stabilization Law of 1969 (Section 26-510(b) of the NYC Administrative Code) to establish annual guidelines for rent adjustments for housing accommodations subject to that law and to the Emergency Tenant Protection Act of 1974. In order to establish guidelines, the Board must consider, among other things:

- the economic condition of the residential real estate industry in the affected area including such factors as the prevailing and projected (i) real estate taxes and sewer and water rates, (ii) gross operating and maintenance costs (including insurance rates, governmental fees, cost of fuel and labor costs), (iii) costs and availability of financing (including effective rates of interest), (iv) overall supply of housing accommodations and overall vacancy rates;
- 2. relevant data from the current and projected cost of living indices for the affected area; and
- 3. such other data as may be made available to it.

The Board gathered information on the above topics by means of public meetings and hearings, written submissions by the public, and written reports and memoranda prepared by the Board's staff. The Board calculates rent increase allowances on the basis of cost increases experienced in the past year, its forecasts of cost increases over the next year, its determination of the relevant operating and maintenance cost-to-rent ratio, and other relevant information concerning the state of the residential real estate industry.

Material Considered by the Board

Due to the COVID-19 health crisis, the Board held virtual public meetings and hearings.² Order No. 53 was issued following **six** virtual public meetings, **two** virtual public hearings, its review of written, oral and video submissions provided by the public, and a review of research and memoranda prepared by the Board's staff. Approximately **61** written, oral and video submissions were received by the Board from many individuals and organizations including public officials, tenants and tenant groups, and owners and owner groups. The Board members were provided with copies of public comments received by the **June 17, 2021** deadline. All of the above listed documents were available for public inspection.

Open meetings of the Board were held virtually following public notice on April 15, April 22, April 29 and June 3, 2021. On **May 5, 2021**, the Board adopted proposed rent guidelines for apartments, lofts, and hotels.

² On March 12, 2020, Governor Cuomo issued Executive Order Number 202.1, in part suspending "Article 7 of the Public Officers Law, to the extent necessary to permit any public body to meet and take such actions authorized by the law without permitting in public in-person access to meetings and authorizing such meetings to be held remotely by conference call or similar service, provided that the public has the ability to view or listen to such proceeding and that such meetings are recorded and later transcribed."

Public hearings were held virtually on **June 15 and June 17, 2021** pursuant to Section 1043 of the New York City Charter and Section 26-510(h) of the New York City Administrative Code. Testimony on the proposed rent adjustments for rent-stabilized apartments and lofts was heard on June 15 from **4:00 p.m. to 7:20 p.m.** and June 17 from **5:15 p.m. to 10:23 p.m.** Testimony from members of the public speaking at these hearings was added to the public record. The Board heard testimony from **approximately 119** apartment tenants and tenant representatives, **33** apartment owners and owner representatives, and **7** public officials. In addition, **one** speaker read into the record written testimony from a public official. On **June 23**, **2021** the guidelines set forth in Order No. 53 were adopted.

A written transcription and/or audio recording and/or video recording was made of all proceedings.

Presentations by RGB Staff and Housing Experts Invited by Members of the Board

Each year the staff of the New York City Rent Guidelines Board is asked to prepare numerous reports containing various facts and figures relating to conditions within the residential real estate industry. The Board's analysis is supplemented by testimony from industry and tenant representatives, housing experts and by various articles and reports gathered from professional publications.

Listed below are invited speakers and the dates of the public meetings at which their testimony was presented:

Meeting Date / Name	Affiliation
April 15, 2021:	<u>Staff presentations</u> 2021 Income and Expense Study 2021 Income and Affordability Study
April 22, 2021:	<u>Staff presentations</u> 2021 Price Index of Operating Costs 2021 Mortgage Survey Report
1. Rafael E. Cestero	Community Preservation Corporation (CPC) President and CEO
2. Mike Edelman	<u>M&T Realty Capital Corporation</u> Group Vice Chair
3. Lucy Joffe	NYC Dept. of Housing Preservation and Development (HPD) Assistant Commissioner
4. Woody Pascal	NYS Homes and Community Renewal (HCR) Deputy Commissioner
April 29, 2021:	
1. Samuel Stein	Tenant group testimony: Community Service Society of New York (CSSNY)

 Kate Ham Tim Collins Eliot Hetterly Brian Sullivan Larry Wood Juan Chulde Amadi Ozier LeVera Sutton 	Community Service Society of New York (CSSNY) Collins, Dobkins and Miller LLP Association for Neighborhood and Housing Development (ANHD) Mobilization for Justice, Inc. Goddard Riverside Law Project Apartment Tenant Apartment Tenant SRO Tenant
 Vito Signorile Basha Gerhards Joseph Condon Jan Lee Mary Ann Rothman 	Owner group testimony: Rent Stabilization Association (RSA) Real Estate Board of New York (REBNY) Community Housing Improvement Program (CHIP) Small Property Owners of New York (SPONY) Council of New York Cooperatives and Condominiums (CNYC)
June 3, 2021:	<u>Staff presentations</u> 2021 Housing Supply Report Changes to the Rent Stabilized Housing Stock in New York City in 2020 Impacts of a Recession on Owner Expenditures
1. Matthew Murphy	NYU Furman Center Executive Director

Selected Excerpts from Oral and Written Testimony from Tenants and Tenant Groups³

Comments from tenants and tenant groups included:

"Looking at the O&M ratio from the income side and considering the factors which continue to fuel owner overcompensation, during the heart of the recession, when nearly every other investment in the nation was in decline, rent stabilized housing in New York City witnessed a significant increase in net operating income – rising from 35.7% of each rent dollar collected in 2008 to 39.4% in 2014. That rise was unconscionable and unjustified. Notwithstanding a new administration which took a more honest look at the data and which authorized far more modest rent adjustments over the past six years, net operating income actually continued to rise to 41.8% in 2016 dropping back only to 39.6% in 2019. This is clear and unequivocal evidence that owners have continued to do very well – riding on the substantial gains made during the very hard years of the Great Recession and continuing until the present economic downturn."

"Federal, state and city actions may staunch some of the bleeding, but this crisis will not be resolved quickly, and certainly not within the coming year. As the *latest Income and Affordability Study* notes, both the New York City Comptroller and the city's Office of Management and Budget estimate that employment, especially for the hardest hit industries, will not return to pre-pandemic employment levels for at least another year. Of course, this has not been an easy year to operate rent stabilized apartments either, as landlords'

³ Sources: Submissions by tenant groups and testimony by tenants.

representatives will no doubt attest momentarily. But the scale of the hardships facing tenants and landlords, as well as the context of what preceded it, are in no way equivalent. According to pre-pandemic data detailed in the latest Income and Expense Study, rent collections across the city rose 3.3 percent, more than double the RGB guideline for that year, and Net Operating incomes (NOI) increased 2.9 percent, rising as high as 45 percent in Bushwick. In fact, overall NOI increased 14 out of the last 15 years....If there is any time to consider a rent rollback, it is now, during the worst economic downtown since the great depression. The life of the city depends on it."

"The COVID-19 pandemic has revealed and exacerbated deep inequalities in our society. Tenants in neighborhoods that have been hit hardest by the pandemic have also suffered the most from high rent burdens, low availability of units and high rates of eviction. Those same neighborhoods are also largely Black and Latinx, revealing the ways in which systemic racism intersects with disparities in housing affordability. This year in particular, it is critical to prevent rent increases for tenants and protect the City's limited stock of affordable housing."

"The role of the RGB is to assure affordability and stability, not profitability and displacement. Landlords do not need or deserve a rent increase. Rather, tenants need and deserve a rent rollback. It is outrageous to consider any increase in rent when so many are in dire need and facing eviction. For the sake of fairness and justice, the Board should adhere to its original mission to prevent rent gouging and save true housing affordability. Please, vote to rollback rents."

"The RSA claims that last year the 'Board froze rent levels once again despite staff data supporting a moderate rent increase.' In fact, the RGB staff's repeatedly found steady growth in owner net operating income after adjusting for inflation. The RSA claimed that 'the average one-year guideline between 2002 and 2013 was approximately 3.3%, while the average PIOC was 5.8%.' In fact, the more reliable Income and Expense data shows costs rose only 5.1% per year. And, in fact, rent rolls rose an average of 4.7% per year during this period using the RGB rent index. Finally, the RSA charged that 'this year, commensurate adjustments call for, at a minimum, a 2% increase on one-year leases.' Perhaps the RSA can explain why they need another rent increase in the face of clear evidence produced by the RGB staff that their net operating income increased over 52% since 1990 after adjusting for inflation."

Selected Excerpts from Oral and Written Testimony from Owners and Owner Groups⁴

Comments from owners and owner groups included:

"We understand that this Board was left in an unprecedented situation last year in the midst of a global pandemic. However, the increased operating expenses outlined in last year's data, as well as the first decrease in net operating income in nearly 20 years, simply cannot be swept under the rug....Therefore, any consideration of a fourth rent freeze in the last eight years is unwarranted. In line with this year's commensurate adjustments, this year's PIOC, NOI calculated between 2017-2018, the impact of the HSTPA, and last year's RGB data that was intentionally ignored, RSA firmly believes that an increase of 3% for a one-year lease and a 5% increase for a two-year lease is justifiable."

⁴ Sources: Submissions by owner groups and testimony by owners

"This board's data acknowledges that the cost of providing housing has increased, and that housing providers need to be able to reasonably increase rents in order to keep up and stay in business. At a minimum, the board's data calls for a 2.75% increase for a one year lease and a 5.75% increase for a two-year lease. To adopt guidelines below those rates would be a conscious decision to ignore the data, punish property owners, and make a political statement. And although this board has historically focused on tenant affordability concerns when adopting the guidelines, with monumental rent relief available to tenants and protections from rent increases and evictions as part of that relief, it would appear this board doesn't have to be concerned with those issues this year."

"The data provided by RGB staff this year not only justifies the need for rent increases, but with severe limitations imposed over the last two years by the HSTPA, the need for investment back into aging rent-stabilized buildings has never been more dependent on this Board's ability to approve adequate rent guideline increases.... Reasonable rent guideline increases are now the only avenue building owners can take if they hope to preserve their aging buildings. A fourth rent freeze cannot alleviate housing affordability problems, certainly not without threatening the living conditions of tenants and jeopardizing future investments in the City's rent-stabilized stock. They allow tenants to live in decent, affordable housing, and allow rental property owners to generate the money they need to meet all City and State mandates and keep a steady flow of money into a City economy that is in desperate need of a boost as we recover from the impact of the COVID-19 pandemic."

"Private owners are providing a huge portion of the affordable housing stock in New York City and city and state policies are making it harder and harder for us to provide good quality, affordable housing. Your decision this month impacts our ability to do just that. So I asked you to vote for the guidelines you issued and approve a 2% increase on one-year leases and a 3% increase on two-year leases."

"My family has owned the same property for decades and our goal is to preserve affordable housing. We cannot do that without reasonable rent increases. Over the past few years the rent freezes have made it impossible to operate where income is zero percent but expenses go up by 10%. Our income remains the same but expenses like taxes. water, insurance, keep going up, and we keep getting squeezed from both sides. This is not a business venture. This is our livelihood, we live here, we have a sense of community. We employ people in the area, everything has a trickle-down effect and I don't like how people make it sound like it sprinkles straight into our pockets and that's the end of the story. Now, the rent money does not go straight into our pockets. We pay the property taxes, the heat, the hot water, people like the super, the painter, the stuff involved in the local hardware store. Those people in turn use that money to pay their staff, pay their bills and feed their families, just like we do."

Selected Excerpts from Oral and Written Testimony from Public Officials⁵

Comments from public officials included:

"We urge the RGB to set a 0% increase for 1-year rent stabilized leases, and a 1% increase for 2-year rent stabilized leases. After the year we've had, when so many New Yorkers lost their jobs, family members, and friends, increasing rent doesn't make sense. Last year's federal eviction moratorium kept so many communities afloat when keeping food on the table seemed

⁵ Sources: Submissions by public officials.

nearly impossible. A rent increase would be devastating to these New Yorkers. Looking ahead to the future of rent guidelines, I ask that the RGB look at proposing rent decreases as well. The RGB must continue to use its authority to guarantee real affordability for all tenants."

"As thousands of New Yorkers continue to struggle with the effects of Covid-19, not just on their personal but their financial well-being, it is vital for the Rent Guidelines Board to continue to freeze rent increases on our stabilized housing market. Despite an eviction moratorium passed by the state legislature, the damage of losing one's job or loved ones, and the mental, emotional, and physical trauma they face, continues to loom. We must do all we can to support them from an economy that is suffering. Even a minor increase would put an added burden on many family households who are still navigating how they will recover from the pandemic. We cannot overlook that this does not affect just a tiny fraction of New Yorkers. This will affect more than one million families and homes."

"In order to recover from the pandemic, we need to ensure New Yorkers can stay in their homes. That is why I am respectfully requesting that the Rent Guidelines Board vote for a 0% increase on both one- and two-year leases. As the Board highlighted in the 2021 *Income and Affordability Study*, job losses have skyrocketed in the past year. The city lost an average of 516,000 jobs in 2020, and unemployment rates surged to the highest levels recorded in at least 45 years. Throughout the pandemic, my office has heard frequently from tenants struggling to pay their rent because of economic hardships....The Board is in the unique position of being able to provide a measure of stability to tenants as other protections expire--and it is vital that you take that opportunity. I ask that you vote for a rent freeze."

"I urge the Board to view the above findings in the context of three decades of RGB determinations that favored property owners over rent stabilized tenants. When seen this way, all current unaffordability among rent stabilized households include the result of a cumulative 30% in rent increases since 1991. Though it is the pandemic that caused some tenants to suddenly become unable to pay rent, the amount of total rental arrears among rent stabilized households is higher than it should be if there hadn't been historic overcompensation to property owners. It is thus the Board's responsibility to close the overcompensation gap rather than to maintain or to further widen it."

"Even a minor increase would put an added burden on many family households who are still navigating how they will recover from the pandemic. We cannot overlook that this does not affect just a tiny fraction of New Yorkers. This will affect more than one million families and homes. The stresses of worrying about putting a roof over one's head, in addition to the financial toll many New Yorkers have because of the pandemic, should lead the RGB to determine, on June 23, 2021, that a zero percent increase at this time is warranted."

FINDINGS OF THE RENT GUIDELINES BOARD

Rent Guidelines Board Research

The Rent Guidelines Board based its determination on its consideration of the oral and written testimony noted above, as well as upon its consideration of statistical information prepared by the RGB staff set forth in these findings and the following reports:

- 1. 2021 Income and Expense Study, April 2021 (based on income and expense data provided by the Finance Department, the Income and Expense Study measures rents, operating costs and net operating income in rent stabilized buildings);
- 2. 2021 Mortgage Survey Report, April 2021 (evaluates recent underwriting practices, financial availability and terms, and lending criteria);
- 3. 2021 Income and Affordability Study, April 2021 (includes employment trends, housing court actions, changes in eligibility requirements and public benefit levels in New York City);
- 4. 2021 Price Index of Operating Costs, April 2021 (measures the price change for a market basket of goods and services which are used in the operation and maintenance of stabilized buildings);
- 5. 2021 Housing Supply Report, June 2021 (includes new housing construction measured by certificates of occupancy in new buildings and units authorized by new building permits, tax abatement and exemption programs, and cooperative and condominium conversion and construction activities in New York City); and
- 6. Changes to the Rent Stabilized Housing Stock in NYC in 2020, June 2021 (quantifies all the events that lead to additions to and subtractions from the rent stabilized housing stock).

The six reports listed above may be found in their entirety on the RGB's website, nyc.gov/rgb, and are also available at the RGB offices, One Centre St., Suite 2210, New York, NY 10007 upon request.

2021 Price Index of Operating Costs for Rent Stabilized Apartment Units in New York City

This year, the PIOC for all rent stabilized apartments increased by 3.0%. Increases occurred in all PIOC components, except Fuel and Administrative Costs. The largest proportional increase was seen in Insurance (18.8%), followed by Taxes (3.9%), Maintenance (3.1%), Labor Costs (2.8%), and Utilities (2.1%). Fuel and Administrative Costs both declined over the year, by 3.3% and 0.7%, respectively. The growth in the Consumer Price Index (CPI), which measures inflation in a wide range of consumer goods and services, during this same time period was lower than the PIOC, rising 1.5%.⁶ See Table 1 for changes in costs and prices for all rent stabilized apartment buildings from 2020-21.

The "Core" PIOC, which excludes changes in fuel oil, natural gas and steam costs used for heating buildings, is useful for analyzing long-term inflationary trends. The Core PIOC rose by 3.5% this year and was higher than the overall PIOC due to the exclusion of costs in the Fuel component, which fell 3.3%. The PIOC for hotels increased by 1.9%, while apartments heated by gas increased by 3.8% and those heated by oil increased by 1.6%.

⁶ The average CPI for All Urban Consumers, New York-Northeastern New Jersey for the year from March 2020 to February 2021 (283.5) compared to the average for the year from March 2019 to February 2020 (279.3) rose by 1.5%. This is the latest available CPI data and is roughly analogous to the 'PIOC year'.

Table	1
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2020-21 Percentage Changes in Components of the Price Index of Operating Costs for Rent Stabilized Apartment Houses in New York City ⁷					
Component	Expenditure	2019-20	2019-20 Weighted		
	Weights	Percentage Change	Percentage Change		
Taxes	32.62%	3.90%	1.27%		
Labor Costs	11.08%	2.84%	0.31%		
Fuel Oil	7.28%	-3.29%	-0.24%		
Utilities	9.81%	2.10%	0.21%		
Maintenance	18.00%	3.08%	0.55%		
Administrative Costs	15.60%	-0.74%	-0.12%		
Insurance Costs	5.61%	18.77%	1.05%		
All Items	100%	-	3.05%		

Source: 2021 Price Index of Operating Costs.

Local Law 63/Income & Expense Review

The sample size for the Income and Expense (I&E) Study is 14,777 properties containing 668,359 units. This is the 29th year that staff has been able to obtain longitudinal data in addition to cross-sectional data. The RGB staff found the following average monthly (per unit) operating and maintenance (O&M) costs in 2020 Real Property Income and Expense (RPIE) statements for the year 2019:

Table 2

2019 Average Monthly Operating and Maintenance Costs Per Unit						
	Pre '47 Post '46 All Stabilized					
Total	\$1,030	\$1,159	\$1,070			

Source: 2021 Income and Expense Study, from 2020 Real Property Income and Expense filings for 2019, NYC Department of Finance.

In 1992, the Board benefited from the results of audits conducted on a stratified sample of 46 rent stabilized buildings by the Department of Finance. Audited income and expense (I&E) figures were compared to statements filed by owners. On average the audits showed an 8% over reporting of expenses. The categories, which accounted for nearly all of the expense over reporting, were maintenance, administration, and "miscellaneous." The largest over-reporting was in miscellaneous expenses.

If we assume that an audit of this year's I&E data would yield similar findings to the 1992 audit, one would expect the average O&M cost for stabilized buildings to be \$983, rather than \$1,070. As a result, the following relationship between operating costs and residential rental income was suggested by the Local Law 63 data:

⁷ Totals may not add due to weighting and rounding.

Table 2(a)

2020 Operating Cost to Rent/Income Ratio Adjusted to 1992 Audit					
O&M Rent O&M to Rent Income O&M to Income					
	Costs ⁸		Ratio		Ratio
All stabilized	\$983	\$1,450	0.678	\$1,626	0.604
Source: 2021 Income and Expense Study, from 2020 Real Property Income and Expense filings for 2019, NYC					

Department of Finance.

On April 14, 2021 the staff of the Rent Guidelines Board released a memo to Board members with additional information concerning the *2021 Income and Expense Study*. The memo follows:

Three years ago, the Rent Guidelines Board asked RGB staff to research whether the income and expense profile of stabilized buildings varies depending on the proportion of stabilized units. This is an update of that memo, using data for the most recent year available.

The RGB staff requested and analyzed supplemental data from the NYC Department of Finance for the same RPIE period as that reported in the 2021 Income & Expense (I&E) Study, grouping stabilized buildings into these categories (not mutually exclusive, as they overlap each other):

- 20% or more stabilized units
- 50% or more stabilized units
- 80% or more stabilized units
- Buildings containing at least one stabilized unit.

These groupings are also broken down by geography as well.

Of note in this data is the sizable difference between Core Manhattan and the City excluding Core Manhattan. This is particularly significant when focusing on buildings containing 80%+ stabilized unit, which represent 82% of all buildings containing stabilized units, vs. just 28% in Core Manhattan.

A further discussion of income and expense statistics accompany each of the seven tables that follow.

Location of Buildings by Stabilized Proportion

Table 1 illustrates the proportion of buildings that are stabilized in each category, broken down by location. It shows that in New York City excluding Core Manhattan, the vast majority of stabilized buildings contain mostly stabilized units: 82% of buildings contain at least 80% stabilized units. Meanwhile, in Core Manhattan, stabilized buildings contain a much smaller proportion of stabilized units: just 28% of buildings contain at least 80% stabilized units.

⁸ Overall O&M expenses were adjusted according to the findings of an income and expenses audit conducted by the Department of Finance in 1992. The unadjusted **O&M to Rent** ratio would be 0.738. The unadjusted **O&M to Income** ratio would be 0.658.

Looking further at the proportion of buildings containing at least 80% stabilized units, the proportions are: 71% in Upper Manhattan; 75% in Queens; 80% on Staten Island; 84% in Brooklyn; and 93% in the Bronx.

	All Buildings Containing Stabilized Units	20%+ Stabilized	50%+ Stabilized	80%+ Stabilized
Percentage of Buildings, by				
Stabilized Proportion				
Citywide	100%	89%	78%	70%
Manhattan	100%	81%	55%	44%
Bronx	100%	95%	95%	93%
Brooklyn	100%	92%	89%	84%
Queens	100%	92%	88%	75%
Staten Island	100%	94%	84%	80%
Core Manhattan	100%	73%	38%	28%
Upper Manhattan	100%	95%	86%	71%
City w/o Core Manhattan	100%	94%	90%	82%

Table I

Source: NYC Department of Finance, RPIE Filings.

Average Rent, Income and Costs: Core Manhattan vs. City w/o Core

Table 2 breaks down average rent, income, and costs per unit per month by Citywide, Core Manhattan, and City excluding Core Manhattan. The table shows that average rent, income, and costs are less in all parts of the City when going from all buildings containing stabilized units to 80%+ stabilized. The differences are a great deal more significant in Core Manhattan, and less so in the rest of the City.

Table	2
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	All Buildings Containing Stabilized Units	20%+ Stabilized	50%+ Stabilized	80%+ Stabilized
Average Rent				
Citywide	\$1,457	\$1,403	\$1,275	\$1,228
Core Manhattan	\$2,070	\$1,981	\$1,702	\$1,623
City w/o Core Manhattan	\$1,259	\$1,253	\$1,223	\$1,195
Average Income				
Citywide	\$1,668	\$1,605	\$1,441	\$1,376
Core Manhattan	\$2,546	\$2,466	\$2,192	\$2,065
City w/o Core Manhattan	\$1,385	\$1,381	\$1,349	\$1,318
Average Costs				
Citywide	\$1,103	\$1,068	\$973	\$93 I
Core Manhattan	\$1,614	\$1,572	\$1,419	\$1,339
City w/o Core Manhattan	\$938	\$937	\$918	\$897

Source: NYC Department of Finance, RPIE Filings. Notes: Data is not weighted, and therefore may differ from that reported in the *2021 Income & Expense Study*. Data is *not* adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs.

Average Rent, Income and Costs: Citywide and by Borough

Table 3 breaks down average rent, income, costs, and NOI in 2019 per unit per month by location and proportion of stabilized units. When looking at NYC excluding Core Manhattan there is minor variation in NOI based upon the proportion of stabilized units. For instance, the City excluding Core Manhattan ranges from \$447 for all stabilized buildings to \$421 for 80%+ stabilized, a \$26 difference. However, NOI in Core Manhattan ranges from \$932 for all stabilized buildings to \$726 for 80%+ stabilized, a \$206 difference. In the other parts of the City, NOI varies \$55 in Upper Manhattan; \$24 in Brooklyn; \$20 in Queens; \$3 in Staten Island; and \$2 in the Bronx.

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2019 RPIE Averages	Rent	Income	Costs	NOI
Citywide	\$1,457	\$1,668	\$1,103	\$565
20%+ Stabilized	\$1,403	\$1,605	\$1,068	\$537
50%+ Stabilized	\$1,275	\$1,441	\$973	\$468
80%+ Stabilized	\$1,228	\$1,376	\$931	\$444
Manhattan	\$1,817	\$2,199	\$1,436	\$763
20%+ Stabilized	\$1,721	\$2,093	\$1,382	\$711
50%+ Stabilized	\$1,464	\$1,794	\$1,218	\$577
80%+ Stabilized	\$1,374	\$1,669	\$1,141	\$528
Bronx	\$1,056	\$1,187	\$829	\$359
20%+ Stabilized	\$1,056	\$1,192	\$833	\$360
50%+ Stabilized	\$1,054	\$1,191	\$832	\$359
80%+ Stabilized	\$1,050	\$1,186	\$829	\$357
Brooklyn	\$1,300	\$1,388	\$906	\$482
20%+ Stabilized	\$1,296	\$1,384	\$904	\$481
50%+ Stabilized	\$1,269	\$1,356	\$891	\$466
80%+ Stabilized	\$1,249	\$1,335	\$877	\$458
Queens	\$1,349	\$1,424	\$94 1	\$483
20%+ Stabilized	\$1,351	\$1,425	\$943	\$482
50%+ Stabilized	\$1,341	\$1,414	\$939	\$475
80%+ Stabilized	\$1,314	\$1,384	\$921	\$463
Staten Island	\$1,125	\$1,201	\$829	\$372
20%+ Stabilized	\$1,139	\$1,209	\$824	\$385
50%+ Stabilized	\$1,128	\$1,198	\$816	\$382
80%+ Stabilized	\$1,109	\$1,180	\$805	\$375
Core Manhattan	\$2,070	\$2,546	\$1,614	\$932
20%+ Stabilized	\$1,981	\$2,466	\$1,572	\$894
50%+ Stabilized	\$1,702	\$2,192	\$1,419	\$773
80%+ Stabilized	\$1,623	\$2,065	\$1,339	\$726
Upper Manhattan	\$1,406	\$1,635	\$1,147	\$488
20%+ Stabilized	\$1,386	\$1,615	\$1,139	\$477
50%+ Stabilized	\$1,310	\$1,539	\$1,088	\$45 I
80%+ Stabilized	\$1,254	\$1,479	\$1,046	\$433
City w/o Core Manhattan	\$1,259	\$1,385	\$938	\$447
20%+ Stabilized	\$1,253	\$1,381	\$937	\$444
50%+ Stabilized	\$1,223	\$1,349	\$918	\$431
80%+ Stabilized	\$1,195	\$1,318	\$897	\$421

Source: NYC Department of Finance, RPIE Filings. Notes: Data is not weighted, and therefore may differ from that reported in the *2021 Income & Expense Study*. Data is *not* adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs.

Cost-to-Income Ratios: Core Manhattan vs. City w/o Core

Table 4 breaks down the audited and unaudited cost-to-income ratios by Citywide, Core Manhattan and City excluding Core Manhattan.

When looking at the unaudited cost-to-income ratios for all buildings containing stabilized units, there is a 4.3 percentage point difference between Core Manhattan (63.4%) and the rest of the City (67.7%). However, among buildings with 80%+ stabilized units, that difference shrinks to 3.3 percentage points (64.8% in Core Manhattan and 68.1% in the rest of the City). This suggests that building income and expenses ratios may be more dependent on the proportion of stabilized units in a building, rather than whether a building is located in Core Manhattan or elsewhere in the City.

	All Buildings Containing Stabilized Units	20%+ Stabilized	50%+ Stabilized	80%+ Stabilized
Audited Cost-to-Income Ratios				
Citywide	60.7%	61.1%	62.0%	62.2%
Core Manhattan	58.2%	58.6%	59.5%	59.6%
City w/o Core Manhattan	62.2%	62.3%	62.5%	62.5%
Unaudited Cost-to-Income Ratios Citywide	66. 1%	66.6%	67.5%	67.7%
Core Manhattan	63.4%	63.8%	64.7%	64.8%
City w/o Core Manhattan	67.7%	67.9%	68.1%	68.1%

Table 4

Source: NYC Department of Finance, RPIE Filings. Notes: Data is not weighted, and therefore may differ from that reported in the 2021 Income & Expense Study.

Average Growth in Rent, Income, Costs and NOI: Core Manhattan vs. City w/o Core

Table 5 breaks down the longitudinal change in rent, income, costs and NOI growth, from 2018 to 2019 Citywide, in Core Manhattan and in the City excluding Core Manhattan. The table shows that the increase in both rent and income was smaller throughout the City when going from 20%+ stabilized to 80%+ stabilized. For cost growth, the City excluding Core Manhattan saw similar cost growth among all categories of buildings, while in Core Manhattan, buildings with a higher proportion of stabilized units saw lower increases in costs. As for NOI growth, it was strongest among 50%+ stabilized properties in Core Manhattan and among 20%+ stabilized properties in the remainder of the City.

Table	5
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	All Buildings Containing Stabilized Units	20%+ Stabilized	50%+ Stabilized	80%+ Stabilized
Rent Growth				
Citywide	2.9%	2.9%	2.7%	2.5%
Core Manhattan	3.3%	3.5%	3.2%	2.9%
City w/o Core Manhattan	2.7%	2.7%	2.6%	2.5%
Income Growth				
Citywide	2.8%	2.8%	2.7%	2.6%
Core Manhattan	2.7%	2.7%	2.3%	1.9%
City w/o Core Manhattan	2.9%	2.9%	2.8%	2.6%
Cost Growth				
Citywide	3.3%	3.2%	3.1%	3.1%
Core Manhattan	3.4%	3.5%	2.7%	2.2%
City w/o Core Manhattan	3.2%	3.1%	3.2%	3.2%
NOI Growth				
Citywide	1.9%	2.1%	2.0%	1.5%
Core Manhattan	1.5%	1.4%	1.7%	1.5%
City w/o Core Manhattan	2.2%	2.5%	2.1%	1.5%

Source: NYC Department of Finance, RPIE Filings. Notes: Data is not weighted, and therefore may differ from that reported in the *2021 Income & Expense Study*. Data is *not* adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs.

Average Growth in Rent, Income, Costs and NOI: Citywide and by Borough

Table 6 breaks down average longitudinal rent, income, costs and NOI changes from 2018 to 2019 per unit per month, by location and proportion of a building containing stabilized units. Looking at NOI, variation between stabilized unit proportions differs in each part of the City. The largest difference was on Staten Island, where NOI among all buildings saw NOI decline 2.5%, and 50%+ stabilized, which grew by 3.1%. In Upper Manhattan, all buildings increased 3.6%, while 80%+ increased 2.1%. In Queens, all buildings increased 2.3%, while 80%+ increased 1.5%. Elsewhere, the difference in NOI growth between all buildings and 80%+ stabilized was minimal, varying 0.4 percentage points in Brooklyn; and 0.1 percentage point in the Bronx. Meanwhile, there was no difference in Core Manhattan.

Table	6
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2018-2019 Longitudinal Change	Rent	Income	Costs	NOI
Citywide	2.9%	2.8%	3.3%	1.9%
20%+ Stabilized	2.9%	2.8%	3.2%	2.1%
50%+ Stabilized	2.7%	2.7%	3.1%	2.0%
80%+ Stabilized	2.5%	2.6%	3.1%	1.5%
Manhattan	3.2%	2.8%	3.3%	2.0%
20%+ Stabilized	3.3%	2.9%	3.3%	2.0%
50%+ Stabilized	3.1%	2.7%	2.8%	2.4%
80%+ Stabilized	2.6%	2.3%	2.5%	1.8%
Bronx	2.0%	2.5%	3.6%	0.0%
20%+ Stabilized	2.0%	2.5%	3.6%	0.1%
50%+ Stabilized	2.0%	2.5%	3.6%	0.0%
80%+ Stabilized	2.0%	2.5%	3.7%	-0.1%
Brooklyn	2.9%	3.1%	3.2%	3.0%
20%+ Stabilized	3.0%	3.1%	2.9%	3.4%
50%+ Stabilized	2.9%	3.0%	2.9%	3.1%
80%+ Stabilized	2.8%	2.9%	3.0%	2.6%
Queens	2.9%	2.9%	3.2%	2.3%
20%+ Stabilized	2.8%	2.8%	2.9%	2.7%
50%+ Stabilized	2.8%	2.7%	3.1%	2.1%
80%+ Stabilized	2.6%	2.5%	3.1%	1.5%
Staten Island	2.1%	2.1%	4.4%	-2.5%
20%+ Stabilized	3.6%	3.3%	3.6%	2.8%
50%+ Stabilized	3.7%	3.4%	3.6%	3.1%
80%+ Stabilized	3.8%	3.5%	4.8%	1.1%
Core Manhattan	3.3%	2.7%	3.4%	1.5%
20%+ Stabilized	3.5%	2.7%	3.5%	1.4%
50%+ Stabilized	3.2%	2.3%	2.7%	1.7%
80%+ Stabilized	2.9%	I.9%	2.2%	1.5%
Upper Manhattan	3.0%	3.1%	2.9%	3.6%
20%+ Stabilized	2.9%	3.1%	2.9%	3.5%
50%+ Stabilized	2.9%	3.1%	3.0%	3.3%
80%+ Stabilized	2.5%	2.5%	2.7%	2.1%
City w/o Core Manhattan	2.7%	2.9%	3.2%	2.2%
20%+ Stabilized	2.7%	2.9%	3.1%	2.5%
50%+ Stabilized	2.6%	2.8%	3.2%	2.1%
80%+ Stabilized	2.5%	2.6%	3.2%	1.5%

Source: NYC Department of Finance, RPIE Filings. Notes: Data is not weighted, and therefore may differ from that reported in the 2021 Income & Expense Study. Data is not adjusted for the results of the 1992 NYC Department of Finance audit on I&E reported operating costs.

Distressed Properties: Core Manhattan vs. City w/o Core

Buildings that have operating and maintenance costs that exceed gross income are considered distressed. Table 7 breaks down the proportion of distressed properties Citywide; in Core Manhattan; and in the City excluding Core Manhattan. As the percentage of stabilized units in buildings located in Core Manhattan increases, so does the proportion of distressed buildings. For example, 6.9% of the buildings (169 buildings) that are at least 20% stabilized are distressed, while buildings that are at least 80% stabilized (80 buildings) have a higher rate of distress at 11.3%. Meanwhile, in the rest of the City, there is a minimal difference between the categories.⁹

	All Buildings Containing Stabilized Units	20%+ Stabilized	50%+ Stabilized	80%+ Stabilized
Distressed Proportion (Proportion of Buildings)				
Citywide	5.7%	5.6%	5.8%	5.8%
Core Manhattan	6.8%	6.9%	10.0%	11.3%
City w/o Core Manhattan	5.4%	5.3%	5.3%	5.3%
Distressed Proportion (Actual Building Counts)				
Citywide	818	709	626	555
Core Manhattan	223	169	112	80
City w/o Core Manhattan	595	540	514	475

Table 7

Source: NYC Department of Finance, RPIE Filings.

[END OF MEMO]

Forecasts of Operating and Maintenance Price Increases for 2021-22

In order to decide upon the allowable rent increases for two-year leases, the RGB considers price changes for operating costs likely to occur over the next year. In making its forecasts the Board relies on expert assessments of likely price trends for the individual components, the history of changes in prices for the individual components and general economic trends. The Board's projections for 2021-22 are set forth in Table 3, which shows the Board's forecasts for price increases for the various categories of operating and maintenance costs.

⁹ The proportion in the City excluding Core Manhattan is slightly higher in the "All Buildings Containing Stabilized Units" category due to a slightly higher proportion of distressed buildings containing fewer than 20% stabilized units.

Table	3
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Year-to-Year Percentage Changes in Components of the Price Index of Operating Costs: Actual 2020-21 and Projected 2021-22								
Price Index Projected Price Index								
	2020-21 2021-22							
Taxes	3.9%	-5.0%						
Labor Costs	2.8%	3.7%						
Fuel Oil	-3.3%	7.8%						
Utilities	2.1%	1.6%						
Maintenance	3.1%	3.9%						
Administrative Costs	-0.7%	2.1%						
Insurance Costs	Insurance Costs 18.8% 13.6%							
Total (Weighted)	3.0%	1.3%						

Source: 2021 Price Index of Operating Costs.

Overall, the PIOC is expected to grow by 1.3% from 2021 to 2022. Costs are predicted to rise in each component except Taxes, with the largest growth (13.6%) projected to be in Insurance. Other projected increases include Fuel (7.8%), Maintenance (3.9%), Labor Costs (3.7%), Administrative Costs (2.1%), and Utilities (1.6%). Taxes, the component that carries the most weight in the Index, is projected to decrease 5.0%. The table on this page shows projected changes in PIOC components for 2022. The Core PIOC is projected to rise 0.8%, 0.5 percentage points less than the overall projected PIOC for rent stabilized apartments.

Commensurate Rent Adjustment

Throughout its history, the Rent Guidelines Board has used a formula, known as the commensurate rent adjustment, to help determine annual rent guidelines for rent stabilized apartments. In essence, the "commensurate" combines various data concerning operating costs, revenues and inflation into a single measure to determine how much rents would have to change for net operating income (NOI) for rent stabilized apartments to remain constant.¹⁰ The different types of "commensurate" adjustments described below are primarily meant to provide a foundation for discussion concerning prospective guidelines.

In its simplest form, the commensurate rent adjustment is the amount of rent change needed to maintain owners' current dollar NOI for their rent stabilized apartments at a constant level. In other words, the commensurate provides a set of one- and two-year renewal rent adjustments, or guidelines, that will compensate owners for the change in prices measured by the PIOC and keep net operating income constant.

The first commensurate method is called the "Net Revenue" approach. While this formula takes into consideration the term of leases actually signed by tenants, it does not adjust owners' NOI for inflation. The "Net Revenue" formula is presented in two ways: first, by adjusting for the mix of lease terms; and second, by adding an assumption for rent stabilized apartment turnover and the subsequent impact on revenue from vacancy leases. Under the "Net Revenue" formula, a guideline that would preserve NOI in the face of this year's 3.0% increase in the PIOC is 2.25% for a one-year lease and 4.5% for a two-year lease. Using this

¹⁰ The commensurate rent adjustments are designed to keep NOI constant in rent stabilized apartments only. They are not designed to keep NOI constant in deregulated units where annual adjustments in rents are subject to changes in the real estate rental market. Therefore these formulas will not necessarily keep NOI constant for buildings that contain both rent stabilized and deregulated units.

formula, and adding assumptions for the impact of vacancy leases on revenues when apartments experience turnover, results in guidelines of 2.0% for one-year leases and 3.25% for two-year leases.

The second commensurate method considers the mix of lease terms while adjusting NOI upward to reflect general inflation, keeping both operating and maintenance (O&M) costs and NOI constant. This is commonly called the "CPI-Adjusted NOI" formula. A guideline that would preserve NOI in the face of the 1.5% increase in the Consumer Price Index (see Endnote 2) and the 3.0% increase in the PIOC is 2.75% for a one-year lease and 5.75% for a two-year lease. Guidelines using this formula and adding the estimated impact of vacancy leases are 2.5% for one-year leases and 4.5% for two-year leases.¹¹

The third commensurate method, the "traditional" commensurate adjustment, is the formula that has been in use since the inception of the Rent Guidelines Board and is the only method that relies on the PIOC projection. The "traditional" commensurate yields 2.0% for a one-year lease and 2.4% for a two-year lease. This reflects the increase in operating costs of 3.0% found in the 2021 PIOC and the projection of a 1.3% increase next year.

All of these commensurate methods have limitations. The "Net Revenue" formula does not attempt to adjust NOI by the effect of inflation. The "CPI-Adjusted NOI" formula inflates the debt service portion of NOI. For both of these commensurate methods, including a consideration of the amount of income owners receive on vacancy assumes that turnover rates are constant across the City.

As a means of compensating for cost changes, the "traditional" commensurate rent adjustment has two major flaws. First, although the formula is designed to keep owners' current dollar income constant, the formula does not consider the mix of one- and two-year lease renewals. Since only about two-thirds of leases are renewed in any given year, with a slight majority of leases being renewed having a one-year duration, the formula does not necessarily accurately estimate the amount of income needed to compensate owners for O&M cost changes.

A second flaw of the "traditional" commensurate formula is that it does not consider the erosion of owners' income by inflation. By maintaining current dollar NOI at a constant level, adherence to the formula may cause profitability to decline over time. However, such degradation is not an inevitable consequence of using the "traditional" commensurate formula.¹²

Finally, it is important to note that only the "traditional" commensurate formula uses the PIOC projection and that this projection is not used in conjunction with, or as part of, the "Net Revenue" and "CPI-Adjusted NOI" formulas. As stated previously, all three formulas attempt to compensate owners for the adjustment in their operating and maintenance costs measured each year in the PIOC. The "Net Revenue" and the "CPI-Adjusted NOI" formulas attempt to compensate owners for the adjustment in O&M costs by using only the known PIOC change in

¹¹ The following assumptions were used in the computation of the commensurates: (1) the required change in owner revenue is 65.8% of the 2021 PIOC increase of 3.0%, or 2.0%. The 65.8% figure is the most recent ratio of average operating costs to average income in buildings that contain rent stabilized units; (2) for the "CPI-Adjusted NOI" commensurate, the increase in revenue due to the impact of inflation on NOI is 34.2% times the latest 12-month increase in the CPI ending February 2020 (1.5%), or 0.52%; (3) these lease terms are only illustrative—other combinations of one- and two-year guidelines could produce the adjustment in revenue; (4) assumptions regarding lease renewals and turnover were derived from the 2017 Housing and Vacancy Survey; (5) for the commensurate formulae, including the impact on revenue from vacancy leases, a 3.97% increase in vacancy leases was applied to the estimated 10.1% of rent stabilized units that turn over each year (as based on 2017 NYC Housing and Vacancy Survey; data). This increase was derived from 2019 New York State Homes and Community Renewal registration data for vacant units (the most recent data available to the RGB), with adjustments to account for the presumed effect of the Housing Stability & Tenant Protection Act of 2019 on vacancy leases. The increase in vacancy leases is based on the increase that vacant units with preferential rents were able to take under RGB Apartment Order #52 (0%), and the approximated increase that vacant units with preferential rents took between 2018 and 2019; and (6) the collectability of these commensurate adjustments are assumed.

¹² Whether profits will actually decline depends on the level of inflation, the composition of NOI (i.e., how much is debt service and how much is profit), and changes in tax law and interest rates.

costs (3.0%). The traditional method differs from the other formulas in that it uses both the PIOC's actual change in costs as well as the projected change in costs (1.3%).

Each of these formulae may be best thought of as a starting point for deliberations. The data presented in other Rent Guidelines Board annual research reports (e.g., the Income and Affordability Study and the Income and Expense Study) along with public testimony can be used in conjunction with these various commensurates to determine appropriate rent adjustments.

Consideration of Other Factors

Before determining the guideline, the Board considered other factors affecting the rent stabilized housing stock and the economics of rental housing.

Effective Rates of Interest

The Board took into account current mortgage interest rates and the availability of financing and refinancing. It reviewed the staff's *2021 Mortgage Survey Report* of lending institutions. Table 4 gives the reported rate and points for the past nine years as reported by the mortgage survey.

Table 4

2021 Mortgage Survey ¹³ Average Interest Rates and Points for New Financing of Permanent Mortgage Loans 2013-2021									
	2013 2014 2015 2016 2017 2018 2019 2020 202							2021	
Avg. Rates	4.4%	4.9%	4.3%	4.0%	4.3%	4.8%	4.7%	4.0%	3.8%
Avg. Points	0.59	0.54	0.70	0.42	0.44	0.44	0.38	0.22	0.38

On May 4, 2021 the staff of the Rent Guidelines Board released a memo to Board members with additional information concerning the *2021 Mortgage Survey Report*. The memo follows:

At the April 22, 2021 meeting of the RGB, board members asked for additional data related to building sales prices. On page 2 is the average number of residential units in buildings that contain rent stabilized units sold each year. On page 3 is a table showing the average sales price per residential unit, citywide and by borough, not adjusted for inflation, for buildings that contain rent stabilized units, going back to the first year for which we have collected building sales data. On the same page is a graph illustrating the same data in New York City. On page 4 is a table showing prices adjusted for inflation, followed by a graph with the same data, also adjusted for inflation, in NYC.

¹³ Institutions were asked to provide information on their "typical" loan to rent stabilized buildings. Data for each variable in any particular year and from year to year may be based upon responses from a different number of institutions.

As the first table shows, the average size of buildings sold each year citywide and in each of the boroughs varied a great deal, with a few years noticeably impacted by the sale of large developments. For example, Stuy Town and Peter Cooper Village were recorded as sold in 2006, 2014 and 2015, increasing the average size for those years (for the purposes of recorded building sales, Stuy Town and Peter Cooper each count as one building).

Looking at the change in the average sales price per unit, adjusted for inflation (table and graph on page 4), all boroughs saw significant increases in prices over the entire period examined (2003-2020). Sales prices per unit peaked in 2019 Citywide and in the Bronx; 2018 in Manhattan and Queens; and 2016 in Brooklyn. Overall, from 2003 to 2020, sales prices per unit, adjusted for inflation, increased 195.6% in NYC; 230.3% in Manhattan; 200.1% in Brooklyn; 128.9% in the Bronx; and 121.7% in Queens.

Year	NYC	Manhattan	Brooklyn	Bronx	Queens
2020	25.4	26.7	23.3	34.9	17.6
2019	23.5	26.4	15.9	31.6	25.3
2018	27.0	29.0	20.2	28.9	35.3
2017	23.2	27.6	14.5	28.6	28.9
2016	31.0	43.4	16.6	33.9	29.0
2015	33.0	51.0	20.0	35.0	20.0
2014	33.6	57.4	16.5	37.2	21.4
2013	26.5	31.7	15.4	38.5	25.8
2012	25.5	29.0	16.8	37.8	21.0
2011	26.3	33.8	17.3	37.9	16.9
2010	30.6	41.6	15.8	46.9	18.6
2009	24.6	28.2	18.9	37.9	15.1
2008	28.6	36.8	20.8	35.9	29.2
2007	28.9	30.5	19.5	41.4	29.3
2006	36.7	60.9	22.2	36.6	31.2
2005	27.6	37.2	19.3	38.1	16.5
2004	26.1	29.1	20.3	34.1	28.4
2003	20.9	29.9	12.7	31.2	19.6

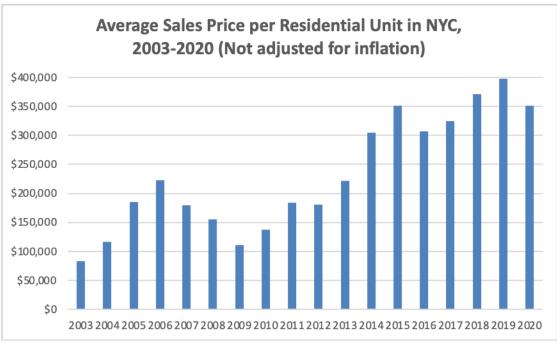
Average Number of Residential Units in Buildings that Contain RS Units Sold Each Year

Note: Staten Island is excluded due to the small number of buildings sold that contain rent stabilized units. Source: NYC Department of Finance.

Year	NYC	Manhattan	Brooklyn	Bronx	Queens
2020	\$351,149	\$520,700	\$291,321	\$183,406	\$229,240
2019	\$398,181	\$556,067	\$334,907	\$224,653	\$330,784
2018	\$371,313	\$554,657	\$313,533	\$190,210	\$326,780
2017	\$324,820	\$482,826	\$289,763	\$198,631	\$231,190
2016	\$306,529	\$370,252	\$323,031	\$171,887	\$269,124
2015	\$351,161	\$484,793	\$274,766	\$150,075	\$247,184
2014	\$305,100	\$442,488	\$217,822	\$118,186	\$226,207
2013	\$221,258	\$354,949	\$159,569	\$100,353	\$160,829
2012	\$180,659	\$284,297	\$124,352	\$83,535	\$123,457
2011	\$183,699	\$303,934	\$108,757	\$85,519	\$123,973
2010	\$137,423	\$219,117	\$114,123	\$72,807	\$120,857
2009	\$110,381	\$186,374	\$81,488	\$60,747	\$96,433
2008	\$154,775	\$235,822	\$109,138	\$99,792	\$157,871
2007	\$179,185	\$336,394	\$110,843	\$89,463	\$101,250
2006	\$222,249	\$363,644	\$108,714	\$78,737	\$101,671
2005	\$185,391	\$307,938	\$86,814	\$85,810	\$97,610
2004	\$116,708	\$212,436	\$63,422	\$76,597	\$90,834
2003	\$83,045	\$110,206	\$67,867	\$56,009	\$72,276

Average Sales Price per Residential Unit, 2003-2020 (Not adjusted for inflation)

Note: Staten Island is excluded due to the small number of buildings sold that contain rent stabilized units. Source: NYC Department of Finance.



Note: Staten Island is excluded due to the small number of buildings sold that contain rent stabilized units. Source: NYC Department of Finance.

	NYC	Manhattan	Brooklyn	Bronx	Queens
2020	\$351,149	\$520,700	\$291,321	\$183,406	\$229,240
2019	\$404,989	\$565,575	\$340,633	\$228,494	\$336,439
2018	\$383,904	\$573,465	\$324,165	\$196,660	\$337,860
2017	\$342,239	\$508,719	\$305,302	\$209,283	\$243,589
2016	\$329,289	\$397,743	\$347,016	\$184,650	\$289,107
2015	\$381,299	\$526,400	\$298,347	\$162,955	\$268,398
2014	\$331,703	\$481,069	\$236,815	\$128,491	\$245,930
2013	\$243,732	\$391,001	\$175,776	\$110,546	\$177,165
2012	\$202,354	\$318,437	\$139,285	\$93,566	\$138,283
2011	\$209,804	\$347,125	\$124,212	\$97,672	\$141,590
2010	\$161,418	\$257,376	\$134,049	\$85,520	\$141,959
2009	\$131,865	\$222,649	\$97,349	\$72,571	\$115,203
2008	\$185,718	\$282,968	\$130,957	\$119,743	\$189,433
2007	\$223,385	\$419,373	\$138,185	\$111,532	\$126,226
2006	\$284,906	\$466,164	\$139,363	\$100,935	\$130,334
2005	\$246,596	\$409,600	\$115,475	\$114,139	\$129,834
2004	\$161,225	\$293,468	\$87,615	\$105,815	\$125,482
2003	\$118,782	\$157,631	\$97,073	\$80,111	\$103,379

Average Sales Price per Residential Unit, Adjusted for Inflation, 2003-2020 (In 2020 dollars)

Note: Staten Island is excluded due to the small number of buildings sold that contain rent stabilized units. Source: NYC Department of Finance.



[END OF MEMO]

On June 14, 2021 the staff of the Rent Guidelines Board released a memo to Board members with an analysis of the largest NYC lenders to multifamily properties. The memo follows:

As part of the *Mortgage Survey Report*, the RGB annually examines sales of multifamily properties containing rent stabilized units. To further understand these building sales, RGB staff have been asked to analyze the institutions that recently provided financing for these building sales.

The NYC Department of Finance (DOF) collects public property sales information. Utilizing this data, published online by the DOF's Automated City Register Information System (ACRIS), RGB staff searched real property records and documents and examined sales of buildings containing rent stabilized units from calendar year 2019, the most recent year available when data analysis commenced. A building sale occurs when there is a transfer of ownership, that occurred for the purposes of this analysis, during 2019, and that was properly filed with DOF. A mortgage, which is used by investors to finance the purchase of a property, is also required to be filed with DOF, and were collected for this analysis. The DOF database, ACRIS, primarily defines properties by their Borough-Block-Lots (BBLs), rather than their address. Multifamily properties were identified by matching buildings containing rent stabilized units that registered with NYS Homes and Community Renewal (HCR) with BBLs in ACRIS. A building is considered rent stabilized if it contains at least one rent stabilized unit. This analysis excluded buildings where the sales price was listed as less than \$1,000, as well as buildings classified converted to coops/condos.

Using data consisting entirely of multifamily buildings that contain rent stabilized units that were sold in 2019, a total of 650 properties, the following table lists the twenty institutions that made the largest number of loans for these building purchases (refinancing is excluded). These twenty lenders financed 326 properties, representing 50.2% of the total number of recorded building sales (650). In addition, these same twenty lenders provided financing totaling \$1,849,168,399, which equals 52.3% of the total amount of financing (\$3,532,662,110) in 2019 towards the same 650 properties.

Lender	Number of Properties Receiving Mortgages	Proportion of Total Number of Loans	Total Sum of Mortgages	Proportion of Total Sum of Mortgages
NY COMMUNITY BANK	72	11.1%	\$382,491,538	10.8%
SIGNATURE BANK	37	5.7%	\$273,266,261	7.7%
JP MORGAN BANK	30	4.6%	\$107,545,573	3.0%
NYC COMMUNITY PRESERVATION CORP.	23	3.5%	\$41,256,538	1.2%
NYC HOUSING DEVELOPMENT CORP.	20	3.1%	\$47,209,679	1.3%
FIRST REPUBLIC BANK	19	2.9%	\$173,310,521	4.9%
WALKER & DUNLOP	14	2.2%	\$16,300,000	0.5%
CATHAY BANK	12	1.8%	\$14,629,943	0.4%
NYC (ACQUISITION FUND, DISTRESSED FUND OR HPD)	12	1.8%	\$110,148,226	3.1%
CAPITAL ONE	11	1.7%	\$240,255,075	6.8%
CBRE CAPITAL MARKETS	11	1.7%	\$49,775,128	1.4%
BNB BANK	10	1.5%	\$42,390,875	1.2%
CONNECTONE BANK	8	1.2%	\$29,141,915	0.8%
SANTANDER BANK	8	1.2%	\$60,607,375	1.7%
ARBOR	7	1.1%	\$132,252,311	3.7%
DIME COMMUNITY BANK	7	1.1%	\$42,008,795	1.2%
FLUSHING BANK	7	1.1%	\$15,093,757	0.4%
BERKADIA COMMERCIAL MORTGAGE	6	0.9%	\$22,882,022	0.6%
NYS HOUSING FINANCE AGENCY	6	0.9%	\$28,252,346	0.8%
STERLING NATIONAL BANK	6	0.9%	\$20,350,521	0.6%

[END OF MEMO]

Condition of the Rent Stabilized Housing Stock

The Board reviewed the number of units that are moving out of the rental market due to cooperative and condominium conversion.

Та	ble	5
		•

Number of Cooperative / Condominium Plans ¹⁴ Accepted for Filing, 2012-2020									
	2012 2013 2014 2015 2016 2017 2018 2019 2020								
New Construction	112	142	204	212	206	224	233	227	186
Conversion Non- Eviction	24	16	20	28	27	18	11	11	12
Conversion Eviction	2	0	0	0	0	0	0	0	0
Rehabilitation	9	19	36	43	45	33	42	43	37
Total	147	177	260	283	278	275	286	281	235
Subtotal:									
HPD Sponsored Plans	2	1	0	1	0	0	1	0	0

Source: New York State Attorney General's Office, Real Estate Financing.

Consumer Price Index

The Board reviewed the Consumer Price Index. Table 6 shows the percentage change for the NY-Northeastern NJ Metropolitan area since 2013.

Table 6

Percentage Changes in the Consumer Price Index for the New York City - Northeastern New Jersey Metropolitan Area, 2014-2021								
	(For "All Urban Consumers")							
	2014 2015 2016 2017 2018 2019 2020 2021							
1st Quarter Avg. ¹⁵ 1.4% -0.2% 0.7% 2.5% 1.6% 1.5% 2.3% 1.5%								
Yearly Avg.	1.3%	0.1%	1.1%	2.0%	1.9%	1.7%	1.7%	

Source: U.S. Bureau of Labor Statistics.

Calculation of the Current Operating and Maintenance Expense to Income Ratio

Each year the Board estimates the current average proportion of the rent roll which owners spend on operating and maintenance costs. This figure is used to ensure that the rent increases granted by the Board compensate owners for the increases in operating and maintenance expenses. This is commonly referred to as the O&M to income ratio.

¹⁴ The figures given above for eviction and non-eviction plans include those that are abandoned because an insufficient percentage of units were sold within the 15-month deadline. In addition, some of the eviction plans accepted for filing may have subsequently been amended or resubmitted as non-eviction plans and therefore may be reflected in both categories. HPD sponsored plans are a subset of the total plans. Some numbers revised from prior years.

¹⁵ First Quarter Average refers to the change of the CPI average of the first three months of one year to the average of the first three months of the following year. Some numbers have been revised from prior years.

With current longitudinal income and expense data, staff has constructed an index, using 1989 as a base year. This index is labeled as Table 7. Except for the last three years, this index measures past changes in building income and operating expenses as reported in annual income and expense statements. The second- and third-to-latest years in the table reflect actual PIOC increases and projected rent changes. The last year in the table - projecting into the future - include staff projections for both expenses and rents.

In order to calculate the change in income for the latest three years, staff uses the RGB Rent Index. The RGB Index calculates the change in rent based on the guidelines passed by the Board, as well as the change in rent upon vacancy. The RGB Index is calculated using the adjustments authorized in applicable Apartment and Loft Orders and the change in rents upon vacancy (most recently, 1.86%). Then, in order to represent the same 12-month time period as the change in costs, measured change in income is adjusted to match the same period as measured change in costs. Therefore, the change in rent incorporates seven months of the previous Rent Index (7/12^{ths} or 58.3%), plus five months of the most recent Rent Index, (5/12^{ths} or 41.7%).

However, this index is not without limitations. First, as noted, for the latest two years of the index, it will continue to rely upon the price index and staff rent and cost projections. Second, while this table looks at the overall relationship between costs and income, it does not measure the specific impact of any change in rent regulation on that relationship.

Revis	Revised Calculation of Operating and Maintenance Cost Ratio for						
Rent Stabilized Buildings from 1989 to 2022							
Year ¹⁶	Average Monthly	Average Monthly	Average O & M				
1000	O & M Per d.u. ¹⁷	Income Per d.u.	to Income Ratio				
1989	\$370 (\$340)	\$567	.65 (.60)				
1990	\$382 (\$351)	\$564	.68 (.62)				
1991	\$382 (\$351)	\$559	.68 (.63)				
1992	\$395 (\$363)	\$576	.69 (.63)				
1993	\$409 (\$376)	\$601	.68 (.63)				
1994	\$415 (\$381)	\$628	.66 (.61)				
1995	\$425 (\$391)	\$657	.65 (.59)				
1996	\$444 (\$408)	\$679	.65 (.60)				
1997	\$458 (\$421)	\$724	.63 (.58)				
1998	\$459 (\$422)	\$755	.61 (.56)				
1999	\$464 (\$426)	\$778	.60 (.55)				
2000	\$503 (\$462)	\$822	.61 (.56)				
2001	\$531 (\$488)	\$868	.61 (.56)				
2002	\$570 (\$524)	\$912	.63 (.57)				
2003	\$618 (\$567)	\$912	.68 (.62)				
2004	\$654 (\$601)	\$969	.67 (.62)				
2005	\$679 (\$624)	\$961	.71 (.65)				
2006	\$695 (\$638)	\$1,009	.69 (.63)				
2007	\$738 (\$678)	\$1,088	.68 (.62)				
2008	\$790 (\$726)	\$1,129	.70 (.64)				
2009	\$781 (\$717)	\$1,142	.68 (.63)				
2010	\$790 (\$726)	\$1,171	.67 (.62)				
2011	\$812 (\$746)	\$1,208	.68 (.63)				
2012	\$841 (\$772)	\$1,277	.66 (.60)				
2013	\$884 (\$812)	\$1,337	.66 (.61)				
2014	\$946 (\$869)	\$1,434	.66 (.61)				
2015	\$960 (\$882)	\$1,487	.64 (.59)				
2016	\$985 (\$905)	\$1,552	.63 (.58)				
2017	\$984 (\$904)	\$1,524	.65 (.59)				
2018	\$1,034 (\$950)	\$1,568	.66 (.61)				
2019	\$1,070 (\$983)	\$1,626	.66 (.61)				
202018	\$1,110 (\$1,019)	\$1,664	.67 (.61)				
2021 ¹⁹	\$1,143 (\$1,050)	\$1,685	.68 (.62)				
2022 ²⁰	\$1,158 (\$1,063)	\$1,702	.68 (.62)				

Table 7

¹⁶ The O&M and income data from 2008 to 2011 has been revised from that reported in previous explanatory statements to reflect actual, rather than estimated, expense and income data.

¹⁷ Operating and expense data listed is based upon unaudited filings with the Department of Finance. Audits of 46 buildings conducted in 1992 suggest that expenses may be overstated by 8% on average. Figures in parentheses are adjusted to reflect these findings.

¹⁸ Estimated expense figure includes 2020 expense updated by the PIOC for the period from 3/1/19 through 2/28/20 (3.7%). Income includes the income for 2020 updated by staff estimate based upon renewal guidelines and choice of lease terms for a period from 3/1/19 through 2/28/20 (2.33% --- i.e., the 10/1/18 to 9/30/19 rent projection (2.66%) times (.583), plus the 10/1/19 to 9/30/20 rent projection (1.87%) times (.417)).

¹⁹ Estimated expense figure includes 2021 expense updated by the PIOC for the period from 3/1/20 through 2/29/21 (3.0%). Income includes the income for 2021 updated by staff estimate based upon renewal guidelines and choice of lease terms for a period from 3/1/20 through 2/29/21 (1.26% --- i.e., the 10/1/19 to 9/30/20 rent projection (1.87%) times (.583), plus the 10/1/20 to 9/30/21 rent projection (0.40%) times (.417)).

²⁰ Estimated expense figure includes 2021 expense estimate updated by the 2022 PIOC projection for the period from 3/1/21 through 2/28/22 (1.3%). Income includes the income estimate for 2022 updated by staff estimate based upon renewal guidelines and choice of lease terms for a period from 3/1/21 through 2/28/22 (1.01% - i.e., the 10/1/20 to 9/30/21 rent projection (0.40%) times (.583), plus the 10/1/21 to 9/30/22 rent projection (1.86%) times (.417)).

Source: RGB Income and Expense Studies, 1989-2021; Price Index of Operating Costs, 2020 – 2021; RGB Rent Index for 2017 – 2021.

Changes in Housing Affordability

NYC's economy in 2020 showed many weaknesses as compared with the preceding year. Negative indicators include shrinking employment levels, which fell for the first time in 11 years, decreasing 11.1% in 2020. Gross City Product (GCP) decreased for the first time in 12 years, falling in inflation adjusted terms by 6.3% in 2020. The unemployment rate rose, increasing by 8.4 percentage points, to 12.3%, the highest level recorded in at least the last 45 years. There was also an increase in cash assistance caseloads of 8.6%, while SNAP caseloads rose 5.2%.

Positive indicators during 2020 include a decrease in both the number of non-payment filings and calendared cases in Housing Court, which fell by 56.4% and 62.7%, respectively, as well as a decrease in tenant evictions, which fell by 82.0% (all largely due to various eviction moratoriums in place since the start of the pandemic). Homeless levels also fell for the second consecutive year, by 5.9%. There was also a decrease in Medicaid enrollees, which fell 3.3%. Concurrent with Court closures, bankruptcy filings also decreased sharply, falling 40.7%, to the lowest level since at least 2000. In addition, average inflation-adjusted wages rose during the most recent 12-month period for which data is available (the fourth quarter of 2019 through the third quarter of 2020), rising 6.0% over the corresponding time period of the prior year (note that while average wages rose, total wages paid within NYC fell, by an inflation-adjusted 1.8%). Inflation remained steady between 2019 and 2020, at 1.7% in each year.

The most recent numbers, from the fourth quarter of 2020 (as compared to the fourth quarter of 2019), show many negative indicators, including cash assistance levels up 15.4%; SNAP recipients up 11.2%; Medicaid enrollees, up 1.2%; GCP falling, by 6.6% in real terms; employment levels down 13.2%; and the unemployment rate up 8.3 percentage points. However, homeless levels are down 10.6%; and in Housing Court, the number of cases heard (calendared) are down 50.9%²¹ and the number of non-payment filings are down 43.5%.²² A new appendix, Appendix 12, summarizes the change in each of these data points for each quarter of 2020.

We can also examine fourth quarter data in relation to the third quarter of 2020, which illustrates potentially positive trends. Accounting for seasonal changes in jobs, there was a decrease of 4.0 percentage points in the NYC unemployment rate in the fourth quarter of 2020 as compared to the third, and an increase of 2.6% in total employment. There was also a decrease of 2.1% in both homelessness and cash assistance recipients, while SNAP caseloads declined by 1.5% and Medicaid enrollment was virtually unchanged. On an annualized basis, GCP increased by 6.0% in the fourth quarter of 2020 as compared to the third.

On June 3, 2021 the staff of the Rent Guidelines Board presented a report called *Impacts of a Recession on Owner Expenditures* prepared by James F. Hudson, Ph.D. The report follows:

²¹ This data is obtained from the Civil Court of the City of New York, which cannot provide exact "quarterly" data. The Court has 13 terms in a year, each a little less than a month long. This data is for terms 10-13, which is from approximately the middle of September through the end of the year. It is compared to the same period of the prior year.

²² See previous Endnote.

This research paper addresses concerns about whether the Price Index of Operating Costs (PIOC) accurately captures the effect of recessions, during which expenditures made by building owners may be reduced as they respond to economic uncertainty. Since the PIOC is primarily based on the changes of prices (as opposed to costs), it may not capture these reductions in purchases, and thus may overstate the operating and maintenance (O&M) costs paid by owners. Per the National Bureau of Economic Research, a recession began in the U.S. during 2020, a period of time covered by the most recent PIOC study.

The first section presents some theory on how to assess the effects of recessions on expenditures related to the PIOC. Then, I use that approach to calculate a recession sensitive index for this year for certain components and the overall PIOC. See tables 13 at the end of this paper for all the analysis details.

Theory

The PIOC is a price index – it measures changes in prices from one year to the next. We use a market basket of goods and services typically purchased by building owners. If the average quantities of purchased items don't change from year to year, then the PIOC should accurately measure the change in costs.

There are two reasons for using a price index: first, we can collect price data quickly, so that we can measure price changes in the year before the guidelines are issued. In addition, price data is much easier to collect than actual expenditures. It should also be noted that the PIOC was developed prior to the inception of Real Property Income and Expense (RPIE) filings that are submitted annually to the NYC Department of Finance and document operating expenses incurred by owners. Since 1990, this data has been summarized and reported in the RGB's annual Income & Expense (I&E) Study. Prior to the requirement of RPIE filings, there was no mechanism for the collection of actual building owner costs. Even with the I&E data, in which the first year of data represented calendar year 1988, there's at least a year's delay in the availability of that data. The most recent I&E data is from 2019.

So, a price index is our best alternative for collecting data that applies to the most recent year, for use in estimating the change in owner expenses and promulgating rent adjustments. But the PIOC as implemented is actually a hybrid – it uses a sample of actual expenditures (costs) where possible and price changes where actual expenditures are not available. The following items are expenditures (based on tax bills and the owner survey sent to a sample of rent stabilized building owners each January): Taxes; Insurance; and Management Fees. All other items in the PIOC are based on the price change of a fixed quantity of goods (with the exception of fuel items used for heating, for which prices are tracked, but the quantity is flexible, based on the weather).

Which components to analyze: The recession hypothesis that we want to test is:

In times of recession, will owners reduce the quantities they buy in discretionary areas?

This hypothesis assumes that some categories where changes in expenditures are measured by price are not discretionary. That is, building owners are unlikely to be able to make large changes in the quantities they purchase during relatively short periods of economic uncertainty (1-2 years). That list includes:

- Fuel, primarily for heat
- Utilities
- Other administrative costs, primarily accountant and attorney fees

After eliminating the items where the PIOC measures expenditures and the ones that are less likely to be discretionary, the hypothesis is that building owners may reduce expenditures in following PIOC categories when faced with economic uncertainty:

- Labor, where there might be a change in the number of staff or their hours during recessions
- The Maintenance component, including painting, building repairs, and supplies

Those are the two areas analyzed in the remainder of this paper.

What data periods are we analyzing? The Income and Expenditure data, one of our major data sources, is collected by calendar year. The PIOC prices are collected on an annual basis, but slightly offset – originally May-April, more recently April-March. And recessions are defined on a quarterly basis.

We have the PIOC prices from the 1969-2021 PIOC, with data collection providing prices from roughly March-April of the PIOC year (with each year compared to a year earlier, for calculating price changes).

We also have the I&E data on annual expenditures by building owners from 1988-2019, with one missing year (2003). However, the first two years were for small samples, only 500 buildings, which makes the data potentially less reliable. So, this analysis will use data from the 1992 I&E on, which has expenditure data for 1990-2019.

When are the recessions? We also need to define recession years. The National Bureau of Economic Research, the official body designating US recessions, lists three recessions in the 1990-2019 period (the period for which I&E expenditure data is available):

- Q3 1990 through Q1 1991
- Calendar year 2001
- Q4 2007 through Q2 2009

This analysis uses the years 1990, 1991, 2001, 2007, 2008, and 2009 as recession years. That is, if the year included a quarter in recession, it's counted as a "recession year." And it applies the PIOC price changes as if they were for calendar years matching the I&E years.

Constant Dollars: When comparing expenditures in different years, it is useful to convert them into "constant" dollars. After all, the purchasing power of \$1,000 in 1991 is not the same as in 2021. To do that, we need a way to convert the expenditures each year into a comparable set of values. For large-scale economic analyses, this is typically done using a general inflation rate, for example the consumer price index. But for this analysis, we have much more specific price indices from the PIOC.

For example, let's say the expenditures (per the l&E) on maintenance were \$100 in one year and the PIOC shows a 5% price index from that year to the next. If the building owner spent \$105 in the second year, they would be able to buy the same amount of goods and services.

We can use the PIOC price increases for labor and maintenance to convert the annual expenditures in those components into constant dollar expenditures.

Any "constant dollar" series has to have a year in which those dollars are measured. For this analysis, I used 2020 so everything is in "constant 2020" dollars. This could be any year – it won't affect the analysis.

Data Quality: There is significant uncertainty in all the data used here. The data come from samples of owners and vendors. The methods used in both the I&E and the PIOC have

improved over time, which means that the older data are likely to be less accurate than the more recent years. As mentioned above, the analysis "years" do not match up perfectly. Since the data were limited, I stayed with very simple analytical methods; data quality did not support more advanced methods. Therefore, this analysis only provides a limited estimate of the effect of recessions. There is no calculation of statistical significance.

Analysis

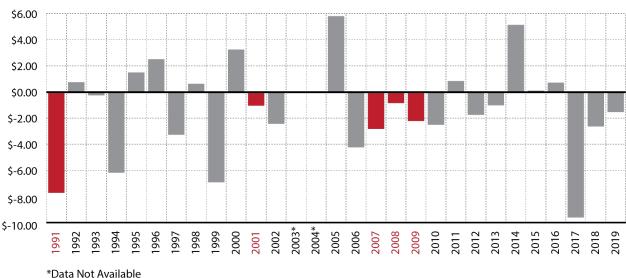
For this analysis, we need data on both expenditures (from the I&E data) and prices (from the PIOC). The main data series were:

- the I&E O&M Category Expenses
- the PIOC O&M series for Contractor Services, Maintenance, Parts & Supplies, and Replacement Costs
- the PIOC Labor series
- the weights in 2014 for the three components (prior to 2015) that now constitute the Maintenance component: Contractor Services, Parts & Supplies, and Replacement Costs

Labor: This analysis uses the I&E total labor series and the total labor PIOC index. The first step is to create a cumulative price index. That allows the I&E costs in each year to be converted to constant dollars.

Overall, the constant-dollar labor cost was \$157.49 per unit in 1990 and dropped \$116.56 in 2019 (in "2020 labor dollars").

The graph shows the year-to-year changes in constant dollar labor expenditures. Here, the recession years are shown in red. The first year of usable data was 1990, so the first change in expenditures is from 1990-1991 (labeled as "1991").



Labor Expenditure Change (Constant 2020 Dollars)

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There are many ways to model the effects of the recessions based on this series of data. The simplest is just to calculate the average cost changes in non-recession years vs. recession years.

For labor, the average change per year in constant-dollar labor costs (base 2020) was:

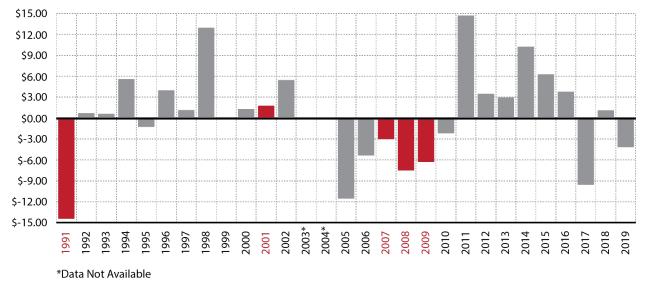
- -\$0.96 in non-recession years
- -\$2.93 in recession years

That is, the constant dollar expenditures on labor dropped by an average of 96 cents in non-recession years, but dropped \$2.93 per year in recession years. If you extrapolate inflation-adjusted I&E labor costs from 2019 (the most recent data) to 2020, the expected change in cost would be 1.7% lower in a recession year than a non-recession year.

Maintenance: Maintenance is slightly more complicated. Before 2015, the PIOC items that are now in Maintenance were in three different components – Contractor Services, Parts & Supplies, and Replacement Costs. I combined those into a single price index for all Maintenance by using their relative weights in 2014. These weights did not change much in the preceding decades, so I only used a single set of weights. It would be possible, but time consuming, get the specific component weights from each PIOC report. I don't think it would add any value to the analysis.

Overall, the constant-dollar maintenance cost found in the I&E was \$192.60 per unit in 1990 and \$192.21 in 2019 (in "2020 maintenance dollars").

Here are the changes in constant-dollar maintenance expenditures, with recession years once again shown in red.





The average changes in constant-dollar maintenance costs (base 2020) was:

- +\$1.82 in non-recession years
- -\$5.89 in recession years

If you extrapolate inflation-adjusted I&E maintenance costs from 2019 (the most recent data) to 2020, the expected change in cost would be 4.0% lower in a recession year than a non-recession year.

Recession-sensitive PIOC for 2021

Here, we apply the above results to the overall PIOC for 2021, because the National Bureau of Economic Research has designated 2020 as a year of recession. As such, how would the overall PIOC change if there really was a 1.7% drop in the amount of labor purchased and a 4.0% drop in the amount of maintenance purchased?

For Taxes, Insurance, and Management Fees, we assume that the PIOC covers actual changes in expenditures. For the other components and items (Fuel, Utilities, Administrative), we assume no change in the quantities and items purchased, which is the standard assumption for the PIOC.

Labor prices increased by 2.8%. But if we combine that with a 1.7% drop in quantity, the effective labor change is an increase of 1.1%.

Similarly, maintenance prices increased by 2.9%. But, combined with a 4.0% drop in quantity, the effective maintenance change is a decrease of 1.2%.

This leads to a "recession PIOC" of 2.1%, rather than the calculated value of 3.0%.

Once, the 2020 I&E data becomes available in the summer of 2021, it may be possible to start confirming these results. Given the data limitations, these findings are at best preliminary. There is no measure of statistical significance, but there does appear likely to be a drop in owner expenditures in these categories of purchases during recessions.

Year	% Change in Labor PIOC	Inflation Adjustment (2020 Constant \$)	RPIE Labor Costs	Constant \$ RPIE Labor Costs	RPIE Labor Costs Constant Dollar Change	
1990	5.7%	0.330	\$52.00	\$157.49		
1991	5.2%	0.347	\$52.00	\$149.77	(\$7.71)	
1992	5.3%	0.365	\$55.00	\$150.51	\$0.74	
1993	5.6%	0.386	\$58.00	\$150.26	(\$0.25)	
1994	4.3%	0.403	\$58.00	\$144.10	(\$6.17)	
1995	4.1%	0.419	\$61.00	\$145.58	\$1.48	
1996	3.2%	0.432	\$64.00	\$148.08	\$2.50	
1997	2.3%	0.442	\$64.00	\$144.80	(\$3.27)	
1998	2.7%	0.454	\$66.00	\$145.42	\$0.61	
1999	3.4%	0.469	\$65.00	\$138.50	(\$6.91)	
2000	2.6%	0.482	\$68.26	\$141.74	\$3.23	
2001	4.0%	0.501	\$70.43	\$140.69	(\$1.05)	
2002	4.0%	0.521	\$72.00	\$138.25	(\$2.44)	
2003*	3.5%	0.539				
2004	4.5%	0.563	\$75.00	\$133.21		
2005	3.5%	0.583	\$81.00	\$139.01	\$5.79	
2006	2.5%	0.597	\$80.49	\$134.77	(\$4.24)	
2007	8.1%	0.646	\$85.18	\$131.94	(\$2.82)	
2008	4.0%	0.671	\$88.00	\$131.09	(\$0.85)	
2009	2.9%	0.691	\$89.00	\$128.87	(\$2.22)	
2010	3.1%	0.712	\$90.00	\$126.36	(\$2.51)	
2011	2.7%	0.731	\$93.00	\$127.19	\$0.83	
2012	2.5%	0.749	\$94.00	\$125.43	(\$1.76)	
2013	3.0%	0.772	\$96.00	\$124.42	(\$1.01)	
2014	3.1%	0.795	\$103.00	\$129.54	\$5.12	
2015	3.8%	0.825	\$107.00	\$129.63	\$0.09	
2016	3.2%	0.852	\$111.00	\$130.33	\$0.70	
2017	4.1%	0.886	\$107.00	\$120.74	(\$9.60)	
2018	3.2%	0.915	\$108.00	\$118.10	(\$2.64)	
2019	6.0%	0.969	\$113.00	\$116.56	(\$1.54)	
2020	3.2%	1.000				
Average cl	hange recession y	vear			(\$2.93)	
Average change non-recession year						
Estimated 2020 Labor Costs (non-recession year)						
Estimated 2020 Labor Costs (recession year)						
Estimated 2020 Labor Costs (recession year)\$113.63Estimated Change in Labor Costs (recession year)-1.7%*2003 RPIE Data Not Available-1.7%						

 Table 1: Labor Costs Component Analysis (Recession Years Marked in Red)

Table 2: Maintenance Component Analysis (Recession Years Marked in Red)

1990 6.3% 0.374 \$72.00 \$192.60 1991 5.1% 0.393 \$70.00 \$178.17 (\$14.43) 1992 2.5% 0.403 \$77.00 \$178.85 \$0.68 1993 2.4% 0.412 \$74.00 \$179.46 \$0.61 1994 0.9% 0.416 \$77.00 \$185.05 \$5.59 1995 2.0% 0.424 \$78.00 \$183.79 (\$1.26) 1996 1.7% 0.431 \$81.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.565 \$113.00 \$204.86 \$1.77 2002 3.4% 0.585 \$113.00 \$200.31 \$5.45 2003* 4.2% 0.555 \$118.00 \$182.47 (Year	% Change in Maintenance PIOC	Inflation Adjustment (2020 Constant \$)	RPIE Maintenance Costs	Constant \$ RPIE Maintenance Costs	RPIE Maintenance Constant Dollar Change
1992 2.5% 0.403 \$72.00 \$178.85 \$0.68 1993 2.4% 0.412 \$74.00 \$179.46 \$0.61 1994 0.9% 0.416 \$77.00 \$185.05 \$5.59 1995 2.0% 0.424 \$78.00 \$183.79 (\$1.26) 1996 1.7% 0.431 \$81.00 \$187.75 \$3.96 1997 3.1% 0.445 \$84.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 - - 2004 3.7% 0.565 \$113.00 \$200.01 - - 2005 4.2% 0.555 \$118.00 \$188.47 (\$1.53) 200 2006 5.8% 0.6655	1990	6.3%	0.374	\$72.00	\$192.60	
1993 2.4% 0.412 \$74.00 \$179.46 \$0.61 1994 0.9% 0.416 \$77.00 \$185.05 \$5.59 1995 2.0% 0.424 \$78.00 \$183.79 (\$1.26) 1996 1.7% 0.431 \$81.00 \$187.75 \$3.96 1997 3.1% 0.445 \$84.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.565 \$113.00 \$200.01 2004 3.7% 0.565 \$118.00 \$186.47 (\$11.53) 2005 4.2% 0.589 \$114.10 \$183.12	1991	5.1%	0.393	\$70.00	\$178.17	(\$14.43)
1994 0.9% 0.416 \$77.00 \$185.05 \$5.59 1995 2.0% 0.424 \$78.00 \$183.79 (\$1.26) 1996 1.7% 0.431 \$81.00 \$187.75 \$3.96 1997 3.1% 0.445 \$84.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 - 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$180.10 \$3.02)	1992	2.5%	0.403	\$72.00	\$178.85	\$0.68
1995 2.0% 0.424 \$78.00 \$183.79 (\$1.26) 1996 1.7% 0.431 \$81.00 \$187.75 \$3.96 1997 3.1% 0.445 \$84.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 - - - 2004 3.7% 0.565 \$113.00 \$200.01 - 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$180.10 (\$3.02) 2006 5.8% 0.625 \$118.00 \$180.13 (\$2.18)	1993	2.4%	0.412	\$74.00	\$179.46	\$0.61
1996 1.7% 0.431 \$81.00 \$187.75 \$3.96 1997 3.1% 0.445 \$84.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$110.67 \$224.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 - - - 2004 3.7% 0.565 \$113.00 \$200.01 - 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$172.60 (\$7.50) 2010 2.2% 0.719 \$118.00 \$174.82 \$14.69	1994	0.9%	0.416	\$77.00	\$185.05	\$5.59
1997 3.1% 0.445 \$84.00 \$188.90 \$1.14 1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2010 2.2% 0.719 \$118.00 \$174.69 \$2012	1995	2.0%	0.424	\$78.00	\$183.79	(\$1.26)
1998 2.5% 0.456 \$92.00 \$201.83 \$12.93 1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$182.30 \$3	1996	1.7%	0.431	\$81.00	\$187.75	\$3.96
1999 3.3% 0.471 \$95.00 \$201.79 (\$0.04) 2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$	1997	3.1%	0.445	\$84.00	\$188.90	\$1.14
2000 4.1% 0.490 \$99.57 \$203.09 \$1.30 2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$182.30 \$3.47 2013 3.4% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.	1998	2.5%	0.456	\$92.00	\$201.83	\$12.93
2001 3.2% 0.506 \$103.67 \$204.86 \$1.77 2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$182.30 \$3.47 2013 3.4% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25	1999	3.3%	0.471	\$95.00	\$201.79	(\$0.04)
2002 3.4% 0.523 \$110.00 \$210.31 \$5.45 2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$174.69 \$3.47 2011 2.7% 0.738 \$132.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$	2000	4.1%	0.490	\$99.57	\$203.09	\$1.30
2003* 4.2% 0.545 2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.843 \$170.00 \$201.74 \$6.27 2014 3.9% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 <td< td=""><td>2001</td><td>3.2%</td><td>0.506</td><td>\$103.67</td><td>\$204.86</td><td>\$1.77</td></td<>	2001	3.2%	0.506	\$103.67	\$204.86	\$1.77
2004 3.7% 0.565 \$113.00 \$200.01 2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.866 \$178.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$195.96 <td>2002</td> <td>3.4%</td> <td>0.523</td> <td>\$110.00</td> <td>\$210.31</td> <td>\$5.45</td>	2002	3.4%	0.523	\$110.00	\$210.31	\$5.45
2005 4.2% 0.589 \$111.00 \$188.47 (\$11.53) 2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$178.82 \$14.69 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 </td <td>2003*</td> <td>4.2%</td> <td>0.545</td> <td></td> <td></td> <td></td>	2003*	4.2%	0.545			
2006 5.8% 0.623 \$114.10 \$183.12 (\$5.35) 2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 \$9.56) 2018 3.4% 0.918 \$184.00 \$192.91 <td>2004</td> <td>3.7%</td> <td>0.565</td> <td>\$113.00</td> <td>\$200.01</td> <td></td>	2004	3.7%	0.565	\$113.00	\$200.01	
2007 5.2% 0.655 \$118.00 \$180.10 (\$3.02) 2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000	2005	4.2%	0.589	\$111.00	\$188.47	(\$11.53)
2008 4.3% 0.684 \$118.00 \$172.60 (\$7.50) 2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2020 4.8% 1.000 - Average change non-recession year \$1.82 \$1.82 \$1.82	2006	5.8%	0.623	\$114.10	\$183.12	(\$5.35)
2009 2.9% 0.703 \$117.00 \$166.31 (\$6.29) 2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 \$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 \$4.16) 2020 4.8% 1.000 - Average change non-recession year \$1.82 \$1.82 \$1.82	2007	5.2%	0.655	\$118.00	\$180.10	(\$3.02)
2010 2.2% 0.719 \$118.00 \$164.13 (\$2.18) 2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 - Average change non-recession year \$1.82 \$194.73 \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 \$187.01 <	2008	4.3%	0.684	\$118.00	\$172.60	(\$7.50)
2011 2.7% 0.738 \$132.00 \$178.82 \$14.69 2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$194.73 \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 \$187.01 Estimated Change in Maintenance Costs (recession year) \$187.01 \$4.0% <td>2009</td> <td>2.9%</td> <td>0.703</td> <td>\$117.00</td> <td>\$166.31</td> <td>(\$6.29)</td>	2009	2.9%	0.703	\$117.00	\$166.31	(\$6.29)
2012 3.3% 0.762 \$139.00 \$182.30 \$3.47 2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 Estimated 2020 Maintenance Costs (recession year) \$187.01 Estimated Change in Maintenance Costs (recession year) \$187.01	2010	2.2%	0.719	\$118.00	\$164.13	(\$2.18)
2013 3.4% 0.788 \$146.00 \$185.25 \$2.95 2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 \$187.01 Estimated Change in Maintenance Costs (recession year) \$187.01 \$187.01	2011	2.7%	0.738	\$132.00	\$178.82	\$14.69
2014 3.9% 0.819 \$160.00 \$195.47 \$10.23 2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 Estimated Change in Maintenance Costs (recession year) \$187.01	2012	3.3%	0.762	\$139.00	\$182.30	\$3.47
2015 3.0% 0.843 \$170.00 \$201.74 \$6.27 2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 \$194.73 Estimated 2020 Maintenance Costs (recession year) \$187.01 \$187.01 Estimated Change in Maintenance Costs (recession year) -4.0%	2013	3.4%	0.788	\$146.00	\$185.25	\$2.95
2016 2.8% 0.866 \$178.00 \$205.52 \$3.78 2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 \$194.73 Estimated 2020 Maintenance Costs (recession year) \$187.01 \$187.01 Estimated Change in Maintenance Costs (recession year) -4.0% \$187.01	2014	3.9%	0.819	\$160.00	\$195.47	\$10.23
2017 2.5% 0.888 \$174.00 \$195.96 (\$9.56) 2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 \$187.01 Estimated Change in Maintenance Costs (recession year) -4.0% -4.0%	2015	3.0%	0.843	\$170.00	\$201.74	\$6.27
2018 3.4% 0.918 \$181.00 \$197.07 \$1.10 2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 Estimated Change in Maintenance Costs (recession year) \$187.01	2016	2.8%	0.866	\$178.00	\$205.52	\$3.78
2019 3.9% 0.954 \$184.00 \$192.91 (\$4.16) 2020 4.8% 1.000 Average change non-recession year \$1.82 \$1.82 \$1.82 Average change recession year (\$5.89) \$194.73 Estimated 2020 Maintenance Costs (non-recession year) \$187.01 Estimated Change in Maintenance Costs (recession year) -4.0%	2017	2.5%	0.888	\$174.00	\$195.96	(\$9.56)
20204.8%1.000Average change non-recession year\$1.82Average change recession year(\$5.89)Estimated 2020 Maintenance Costs (non-recession year)\$194.73Estimated 2020 Maintenance Costs (recession year)\$187.01Estimated Change in Maintenance Costs (recession year)-4.0%	2018	3.4%	0.918	\$181.00	\$197.07	\$1.10
Average change non-recession year\$1.82Average change recession year(\$5.89)Estimated 2020 Maintenance Costs (non-recession year)\$194.73Estimated 2020 Maintenance Costs (recession year)\$187.01Estimated Change in Maintenance Costs (recession year)-4.0%	2019	3.9%	0.954	\$184.00	\$192.91	(\$4.16)
Average change recession year(\$5.89)Estimated 2020 Maintenance Costs (non-recession year)\$194.73Estimated 2020 Maintenance Costs (recession year)\$187.01Estimated Change in Maintenance Costs (recession year)-4.0%	2020	4.8%	1.000			
Estimated 2020 Maintenance Costs (non-recession year)\$194.73Estimated 2020 Maintenance Costs (recession year)\$187.01Estimated Change in Maintenance Costs (recession year)-4.0%	Average ch	\$1.82				
Estimated 2020 Maintenance Costs (recession year)\$187.01Estimated Change in Maintenance Costs (recession year)-4.0%	Average ch	(\$5.89)				
Estimated Change in Maintenance Costs (recession year) -4.0%	Estimated 2	\$194.73				
	Estimated 2	\$187.01				
*2003 RPIE Data Not Available			nance Costs (re	ecession year)		-4.0%

*2003 RPIE Data Not Available

PIOC Component	2021 PIOC Weights	2021 PIOC Change	2021 Recession- Sensitive PIOC Change
Taxes	0.3262	3.9%	3.9%
Labor Costs	0.1108	2.8%	1.1%
Fuel	0.0728	-3.4%	-3.4%
Utilities	0.0981	2.1%	2.1%
Maintenance	0.1800	2.9%	-1.2%
Administrative Costs	0.1560	-0.7%	-0.7%
Insurance Costs	0.0561	18.8%	18.8%
ALL ITEMS	1.0000	3.0%	2.1%

Table 3: 2021 PIOC Components and 2021 Recession-Sensitive PIOC Components

[END OF REPORT]

Buildings with Different Fuel and Utility Arrangements

The Board was also informed of the circumstances of buildings with different fuel and utility arrangements including buildings that are master-metered for electricity and that are heated with gas versus oil (see Table 8). Under some of the Board's Orders in the past, separate adjustments have been established for buildings in certain of these categories where there were indications of drastically different changes in costs in comparison to the generally prevailing fuel and utility arrangements. This year the Board did not make a distinction between guidelines for buildings with different fuel and utility arrangements under Order 53.

Table 8

Changes in Price Index of Operating Costs for Apartments in Buildings with Various Heating Arrangements, 2020-21, and Commensurate Rent Adjustment						
2020-21 One-Year Rent Adjustment						
Index Type	Price Index	Commensurate With				
	Change O&M to Income Ratio of .6					
All Dwelling Units	3.0% 1.97%					
Pre 1947	3.1%	2.04%				
Post 1946	2.7% 1.78%					
Oil Used for Heating	1.6% 1.05%					
Gas Used for Heating	3.8%	2.50%				

Note: The O&M to Income ratio is from the 2021 Income and Expense Study. Source: 2021 Price Index of Operating Costs.

Adjustments for Units in the Category of Buildings Covered by Article 7-C of The Multiple Dwelling Law (Lofts)

Section 286, subdivision 7 of the Multiple Dwelling Law states that the Rent Guidelines Board "shall annually establish guidelines for rent adjustments for the category of buildings covered by this article." In addition, the law specifically requires that the Board "consider the necessity of a separate category for such buildings, and a separately determined guideline for rent adjustments for those units in which heat is not required to be provided by the owner and may establish such separate category and guideline."

The increase in the Loft PIOC this year was 5.1%, lower than the increase of 6.2% in 2020. Increases in costs were seen in all but two of the eight components that make up this index, with declines in Fuel and Administrative Costs-Other. Fuel declined by 13.3%, while Administrative Costs-Other fell by 4.0%. All other components increased, including Insurance Costs (18.8%), Administrative Costs-Legal (5.3%), Taxes (3.9%), Maintenance (3.6%), Labor Costs (2.6%), and Utilities (0.7%).

This year's guidelines for lofts are **0% for the first six months and 1.5% for the remaining six months** for a one-year period and **2.5%** for a two-year period.

Table 9

Changes in the Price Index of Operating Costs for Lofts from 2020-21				
Loft O & M				
Price Index Change				
All Buildings 5.1%				

Source: 2021 Price Index of Operating Costs.

Special Guidelines for Vacancy Decontrolled Units Entering the Stabilized Stock

Pursuant to Section 26-513(b) of the New York City Administrative Code, as amended, the Rent Guidelines Board establishes a special guideline in order to aid NYS Homes and Community Renewal in determining fair market rents for housing accommodations that enter the stabilization system. This year, the Board set the guidelines at **39**% above the maximum base rent.

The Board concluded that for units formerly subject to rent control **39%** above the maximum base rent was a desirable minimum increase.

INCREASE FOR UNITS RECEIVING PARTIAL TAX EXEMPTION PURSUANT TO SECTION 421-A AND 423 OF THE REAL PROPERTY TAX LAW

The guideline percentages for 421-a and 423 buildings were set at the same levels as for leases in other categories of stabilized apartments.

This Order does not prohibit the inclusion of the lease provision for an annual or other periodic rent increase over the initial rent at an average rate of not more than 2.2 per cent per annum where the dwelling unit is receiving partial tax exemption pursuant to Section 421-a of the Real

Property Tax Law. The cumulative but not compound charge of up to 2.2 per cent per annum as provided by Section 421-a or the rate provided by Section 423 is in addition to the amount permitted by this Order.

Votes

The votes of the Board on the adopted motion pertaining to the provisions of Order #53 were as follows:

	<u>Yes</u>	<u>No</u>	Abstentions
Guidelines for Apartment Order #53	5	4	-

Dated: June 23, 2021 Filed with the City Clerk: June 30, 2021

> David Reiss Chair NYC Rent Guidelines Board

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