NYU Furman Center

Housing for an Inclusive New York:
Affordable Housing Strategies for a High-Cost City

Fourth in a series of five policy briefs by the NYU Furman Center

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POLICY BRIEF | NOVEMBER 2015

The Latest Legislative Reform of the 421-a Tax Exemption: A Look at Possible Outcomes

Since the early 1970s, New York City has provided a state-authorized, partial property tax exemption for the construction of new residential buildings. In the 1980s, the New York City Council amended the program to require that participating residential buildings in certain portions of Manhattan also provide affordable housing. Most recently, New York State extended the existing program through the end of 2015 and created a new 421-a framework for 2016 onward. However, for the program to continue beyond December, the legislation requires that representatives of residential real estate developers and construction labor unions reach a memorandum of understanding regarding wages of construction workers building 421-a program developments that contain more than 15 units.

This brief explores the possible impacts of the new 421-a legislation on residential development across a range of different neighborhoods in New York City, including neighborhoods where rents and sale prices are far lower than in the Manhattan Core and where the tax exemption or other subsidy may be necessary to spur new residential construction under current market conditions.[1] We assess what could happen to new market rate and affordable housing production if the 421-a program were allowed to expire or if it were to continue past 2015 in the form contemplated by recently passed legislation. Our analysis shows that changes to the 421-a program could significantly affect the development of both market rate and affordable housing in the city.

1 The Manhattan Core stretches from the southern tip of Manhattan to 110th Street on the west side and 96th Street on the east side.

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I. What is the 421-A Program?

The 421-a property tax exemption substantially reduces the property taxes that a newly built residential development incurs. During the "full-exemption" period, the property owner pays a partial tax based only on the property's assessed value prior to any development for a period; then, the full tax (based on the property's post-development assessed value) is phased in over an additional period of time.[2]

Over time as the housing market has strengthened, the New York City Council added requirements for affordable housing in portions of the city. In the 1980s, the law was amended so that developers constructing projects in portions of Manhattan (designated as the Geographic Exclusion Area or "GEA") could only qualify for the 421-a program exemption if they either set aside 20 percent of the units as affordable for low-income households or purchased negotiable certificates that support the development of affordable units in buildings elsewhere in the city.[3] The current rent standard for the affordable units is based on 60 percent of the area median income (AMI), which is $46,620 for a three-person household in 2015.[4] With subsequent amendments, the State and local legislature expanded the GEA to include neighborhoods beyond Manhattan as shown in Figure 1. Residential developments in areas not included in the GEA have continued to be eligible without a set-aside requirement, but all units in a building receiving the benefit (both affordable and market-rate) have been subject to rent stabilization.

Figure 1: 421-a Geographic Exclusion Area, 2015

Sources: New York City Department of Housing Preservation and Development, NYU Furman Center

II. The New Legislation

The new legislation passed in June 2015 extends the current program to December 2015.[5] Following that, the legislation calls for the program to either expire if no labor agreement is reached or to continue under a new framework that eliminates the GEA. Under the new framework, all rental development receiving the benefit would need to provide affordable housing on-site. To participate in the program, rental developers would need to select one of the options for providing affordable housing summarized in Table 1. As the table shows,

2 Assessed Value (AV) for residential properties of four or more units is equal to 45 percent of the Market Value (MV), as determined by the Department of Finance. The MV is determined for all Class 2 properties as though they were income-producing properties (e.g., rentals) even if in reality the properties are condominiums or cooperatives.

3 Since 2007, it has only been possible to locate the affordable units off-site through the purchase of negotiable certificates that are left over from written agreements entered into prior to December 28, 2007. See Appendix I for discussion of negotiable certificates.

4 If there is substantial government assistance, at least 20 percent of the building must be affordable for households with income at or below 120 percent of AMI with an average affordability for households at 90 percent of AMI. N.Y. REAL PROP. TAX LAW § 421-a (2)(c)(ii) (McKinney 2015). See the Appendix I for more details about 421-a.

5 Negotiable certificates can be used through the duration of the current program (i.e., through December 2015). N.Y. REAL PROP. TAX LAW § 421-a (3)(a) (McKinney 2015).

Table 1: Program Characteristics of Current 421-a Program and Pending 421-a Program for Years 2016-2019

	Current 421-a program with affordable housing	Current 421-a program without affordable housing	Option A	Option B	Option C	Option D
Ownership Structure	Rental or Homeownership	Rental or Homeownership	Rental	Rental	Rental	Homeownership
Geographic Availability	Citywide	Outside of Geographic Exclusion Area	No restriction	No restriction	Unavailable in Manhattan south of 96 Street	Unavailable in Manhattan or for projects with more than 35 units Average initial assessed value per unit cannot exceed $65,000
Affordability Requirement (for a minimum of 35 years)	20% of units are at 60% of AMI (or up to 120% of AMI if there is substantial government assistance)	No requirement	25% total: 10% of units at 40% of AMI 10% of units at 60% of AMI 5% of units at 130% of AMI	30% total: 10% of units at 70% of AMI 20% of units at 130% of AMI	30% total: 30% of units at 130% of AMI	No AMI restrictions
Allowed Additional Subsidy	No restrictions	No restrictions	Tax-Exempt Bonds and Four Percent Low Income Housing Tax Credits	No restrictions (designed for use with HPD or other government discretion on direct subsidy)	None allowed	Not applicable
Tax Exemption	Manhattan south of 110th Street: 12 full years + eight-year phase-out with affordable housing on-site or two full years + eight-year phase out (subject to AV cap) with certificates Elsewhere: 21 full years + four-year phase-out with affordable housing on-site or 11 full years + four-year phase out (subject to AV cap), with certificates. For projects outside the GEA, this option is only available with substantial government assistance.	11 full years + 4-year phase-out	25 full years 25% for years 26-35	25 full years 30% for years 26-35	25 full years 30% for years 26-35	14 full years on assessed value of no more than $65,000 25% for years 15-20 on assessed value of no more than $65,000

the revised law increases the percentage of affordable units required and extends the length of the tax exemption. The full tax-exemption benefit for rentals would last 25 years everywhere followed by a 10-year phase out during which time the benefit would be based on the percentage of affordable units in the building.[6] The new program will also provide more options for the depth of affordability. Condominiums would no longer be eligible for the benefit except for smaller projects outside of Manhattan (see Option D in Table 1).[7]

While the 421-a program currently requires that all market-rate units enter rent stabilization for the benefit period, the new 421-a program will not subject the market-rate units to rent stabilization if the rent exceeds the then current threshold for deregulation, which New York State recently increased to $2,700 per month.[8] Under both the existing and new program, affordable units are subject to rent stabilization for 35 years (and for as long thereafter as a tenant at year 35 remains in the apartment).

Option A requires that 25 percent of the units be affordable with 10 percent at 40 percent of AMI, 10 percent at 60 percent of AMI and five percent at 130 percent of AMI (See sidebar for income limits for a three-person household). Option B requires that 30 percent of the units be affordable with 10 percent at no more than 70 percent of AMI and 20 percent at no more than 130 percent of AMI. While these AMI levels are too high for use of Low Income Housing Tax Credits (LIHTC) and tax-exempt bonds, Option B is designed for use in conjunction with other subsidy programs whereby a developer would likely provide affordable units at lower AMI levels. Option C requires that 30 percent of units be rented to households with income at no more than 130 percent of AMI, but unlike under Option B, developers are prohibited from using other grant, loan or subsidy programs and therefore likely would not provide units at lower AMI levels.[9]

The new program also offers a limited option outside of Manhattan for homeownership projects with no more than 35 units and with an initial, post-construction average assessed value (AV) per unit of $65,000 or below. For these buildings, Option D would impose no affordability requirement and a shorter tax exemption (capped at an AV of $65,000/unit) would apply—a 14-year full exemption followed by a six-year period with a 25 percent exemption from property taxes.

2015 HUD New York Metro Area Income Limits and the Maximum Affordable Rents for a Three-Person Household

Percentage of AMI	Annual Income	Monthly Affordable Rental Payment (30% of Monthly Income)*
40%	$31,080	$777*
60%	$46,620	$1,166
70%	$54,390	$1,360
130%	$101,010	$2,525

Sources: U.S. Department of Housing and Urban Development Income Limits, NYU Furman Center

**These payments include electricity and gas.*

6 For example, if 25 percent of the units are affordable, then 25 percent of the incremental value above the pre-construction value will be exempted for years 26 through 35. If 30 percent of units are affordable, then 30 percent of the incremental value will be tax exempt for years 26 through 35.

7 The new 421-a program also offers an extended tax exemption for certain existing properties.

8 N.Y. REAL PROP. TAX LAW § 421-a (16)(f)(xi) (McKinney 2015).

9 Households at slightly lower AMI levels (i.e. down to 120% of AMI) may be served depending on the marketing band chosen by the developer.

Table 2: Participation in the 421-a program among recently completed* market-rate buildings with 10 or more residential units located inside the GEA, 2011-2014

	Manhattan below 110th Street			Other parts of the GEA		
	Number of buildings	Number of units	Share of units	Number of buildings	Number of units	Share of units
Condominium buildings						
421-a (on-site)	0	0	0%	4	113	34%
421-a (certificates)	6	248	55%	6	139	42%
No tax exemption	7	200	45%	2	78	24%
Rental buildings						
421-a (on-site)	12	3,696	95%	26	2,124	81%
421-a (certificates)	3	104	3%	6	314	12%
No tax exemption	5	90	2%	4	199	8%

**This includes buildings that received an initial certificate of occupancy in 2011-2014 and new construction building permits after the current rules of the 421-a program took effect in July 2008. It excludes buildings receiving other types of residential property tax exemptions.*

III. Recent Utilization Patterns

Table 2, which summarizes the 421-a program use within the GEA between 2011 and 2014, provides some insight into how the proposed changes to the 421-a exemption are likely to affect future construction activity.[10]

Inside the GEA, despite the requirement that developers create affordable units, Table 2 shows that 98 percent of rental units in the Manhattan Core and 93 percent of rental units in other parts of the GEA benefited from the program, suggesting that the tax exemption may more than compensate for the cost of creating affordable units.[11]

The economic calculus for condominium developers inside the GEA appears to be quite different from that of rental developers, as many choose to forego the tax exemption altogether. Around half of the condominium projects in Manhattan below 110th Street did not participate in the 421-a program at all and instead pay full property taxes. The other half did participate by using negotiable certificates. But for the existence of remaining negotiable certificates, all of those condominium projects would have been built without the 421-a exemption according to interviews with real estate industry participants.[12]

10 See Appendix II for methodology used to compile Table 2.

11 During the study period, it was still possible for some developers to obtain a 421-a exemption through purchase of negotiable certificates that were left over from 2007 or earlier. 421-a projects creating affordable units on site may have also benefited from four percent LIHTC, tax-exempt bond financing and inclusionary housing floor area bonus.

12 As we can see in Table 2, it is possible for condominium developers to undertake development projects without using the 421-a program. There are several possible reasons for this. First, condominium developers may be less willing in general to provide affordable units on-site, perhaps because of the perceived difficulty of marketing high-priced units in buildings that have low-income tenants and because of the complexity of structuring a condominium with association fees or assessments for major capital improvements, or due to the requirement that affordable rental units be of comparable type to market-rate units. Second, condominium developers may not believe they can capture enough of the value of the property tax exemption through higher sales prices to make up for the cost of setting aside affordable units. Third, even if the condominium market efficiently prices units to reflect an exemption, the value may simply be worth less than it would be for a rental building, especially in Core Manhattan; under state law, the market valuation process the city must use to determine the tax burden on individual condominium units tends to undervalue units at the highest end of the market. This means the effective tax rate (measured as a percent of market value) on some condominium units is significantly lower than for other multifamily buildings, diminishing the relative value of the exemption. Additionally, condominium buyers may qualify for New York City's Co-op and Condominium Property Tax Abatement program if they purchase a unit that does not participate in 421-a and occupy it as their primary residence. Madar, J. (2015, March 26). Inclusionary Housing Policy in New York City: Assessing New Opportunities, Constraints, and Trade-offs. Retrieved from http://furmancenter.org/files/NYUFurmanCenter_InclusionaryZoningNYC_March2015.pdf. Lastly, negotiable certificates, while allowing for the units to be built offsite, offer a much reduced tax exemption period and so at best have limited value to condominium purchasers.

In the other parts of the GEA, most condominium development projects participated in the 421-a program. However, only four of the 10 recent condominium projects that availed themselves of the 421-a program provided affordable units on site. The rest purchased negotiable certificates, which allowed the affordable units to be off-site.

Measuring Financial Return

Real estate developers use a variety of methods to evaluate the attractiveness of investing in a particular project, depending in part on their time horizon for owning the property and their expectations for movements in rents or sale prices by the time the building would be complete and ready for occupancy. Individual developers may rely heavily on a single method or favor a combination of methods to ascertain the projects economic viability.

Our analysis uses two common measures of financial return to provide some insight into how developers would respond to changes in the 421-a program. The first is "stabilized net operating income yield" (NOI yield), which is equal to the net operating income (rental revenue less operating expenses) in the first full year of operation divided by the total development costs (including land and construction) for the project. By looking only at what is essentially year four of the project (when the building is expected to be in full operation), NOI yield consciously ignores any longer term value from increasing rents or extended property tax relief. Based on consultations with industry experts, we assume in our modelling that, in order to pursue a project, developers would seek a minimum NOI yield at least 5.25 or 5.75 percent, depending on the perceived riskiness of various neighborhood markets.

Second, we calculate an internal rate of return (IRR), a measure that takes into account both the upfront costs for land and construction (like the NOI yield) and the income stream earned over time (i.e., the net operating income over a 12 year period) and assumes a sale of the property at the end of year 12 at a price adjusted for the remaining property tax exemption.[13] We calculate the IRR (unleveraged) on an unleveraged basis (i.e., without debt financing). While the lack of debt simplifies the comparisons, the unleveraged IRR analysis does not take into account all of the differences between Option A and Option C in the equity contribution required from the developer in a debt-financed deal. Programs such as the Low Income Housing Tax Credit generate equity through the federal income tax system and so can serve to reduce the amount of capital required of the developer in a leverage deal thus allowing a developer to put in less of their own cash and potentially easing upfront cash demands on the developer.

For both the NOI yield and unleveraged IRR we need to plug in a land value for each market type. We derive this land value by calculating the amount of money that the developer could pay under the current 421-a program and still generate the target NOI yield for each market type.[14] As a result, these land values do not necessarily reflect the actual prices that developers are currently paying, but they do allow us to determine the direction of the impact of different changes to the 421-a program on NOI yield and unleveraged IRR.

13 While we have received many estimates of construction costs for mid- and high-rise buildings, we use the estimates from our Inclusionary Zoning analysis. Madar, J. (2015). *Inclusionary Housing Policy in New York City: Assessing New Opportunities, Constraints, and Trade-offs*. Retrieved from http://furmancenter.org/files/NYUFurmanCenter_InclusionaryZoningNYC_March2015.pdf.

14 See Appendix II for further discussion of target NOI yield level for different markets.

In the areas outside of the GEA, where there is no affordability requirement, virtually all privately developed multifamily buildings participated in the 421-a program despite the requirement that subjects all the rental units to rent stabilization. [15]

IV. Financial Analysis

To understand how the future of the 421-a program may affect development in different parts of the city, we conducted a financial analysis that examined both the potential expiration of the program and the adoption of the new 421-a program framework across four different market types: a very strong market within the GEA with market rents equal to $80 per square foot per year (e.g., Manhattan Core); a strong market within the GEA with market rents of $60 per square foot (e.g., Downtown Brooklyn); a moderate market within the GEA with market rents of $44 per square foot (e.g., parts of Astoria); and a moderate-low market outside of the GEA with market rents of $37 square foot (e.g., Bedford-Stuyvesant).

A. If the 421-a Program Expires

If no agreement is reached on construction worker wages and the 421-a program expires, the impact would vary significantly across our four market types. In all cases, the NOI yield and unleveraged IRR falls, and in two of the four markets it would remain depressed even if land were free.

Inside portions of the Manhattan Core where condominium development already dominates, the expiration of the 421-a program would further reduce the relative attractiveness of developing new rental housing. Rental development would become even less competitive than it is now.

In the rest of the Manhattan Core (and in strong markets elsewhere in the GEA such as Downtown Brooklyn) where both rental and condominium developments are using the 421-a program, the loss of the 421-a exemption would reduce the amount that residential developers would be willing to pay for the land and so land prices may fall unless developers of commercial offices or other allowable uses are willing to pay the original prices. Such a reduction in the value of land may make property owners less likely to sell, at least in the short run, thus depressing residential development activity overall and curtailing the supply of new housing. In the medium and long term, as landowners adjust their expectations of the value of development parcels downward or as market rents rise, the pace of development could resume.[16] The mix of development may also move more toward condominiums because condominium developers seem to benefit less than rental developers from the tax exemption, and so would be less hurt by its removal.[17] For those developers who have already bought the land and planned to use the 421-a program, expiration of the 421-a program would lower the return they can earn in at least the short run and could push more of them in the direction of condominium development.

15 Of 143 majority market-rate buildings completed outside the GEA between 2011 and 2014, 94 percent used 421-a and did not have to provide any affordable housing.

16 Based on our models, the price of land would not have to fall to zero in the Manhattan Core for developers to be able to earn a return on their investment even if they had to pay full property taxes. However the amount they pay for land would be lower than what they would be willing to pay with the 421-a property tax exemption. Of course if there are competing uses for the land, e.g., retail or office, then the land may be used for non-residential purposes, further limiting the expansion of the residential housing stock. Our NOI yield models estimate, for example, that a minimum rent of $65 per rentable square foot per year is needed to provide a return to developers based only on construction and operating costs for a high-rise residential building in Core Manhattan under a fully taxed environment. This roughly translates to $3,900 per month for a one-bedroom unit of 720 square feet.

17 See footnote 12.

In other neighborhoods, rents appear to be too low for mid- and high-rise construction to be viable without the tax benefit or other public subsidy. In Astoria and Bedford Stuyvesant where, according to our NOI yield model, the 421-a property tax exemption is required to make mid-rise development attractive, the expiration of the tax break would likely stifle development until rents rise (an outcome made more likely by the slowing of new construction). Our NOI yield model suggests that rents in excess of $56 per square foot are needed to provide a sufficient yield with full property taxes (even with no land cost). With rents in Astoria only at $44 per rentable square foot, rental income would be insufficient to cover the costs of mid-rise residential construction and operation if the 421-a program were to expire, even if there were zero cost of land. With market rents at $37 per rental square foot, new mid-rise rental development would even be less likely to be attractive to developers in Bedford-Stuyvesant.

In short, the expiration of the 421-a program could have a significant effect on residential development across the city, both by slowing the construction of new units at least in the short-run and possibly shifting some construction from rentals to condos. But the exact nature of the effect would vary depending on the market.

B. Potential Impact of the New Framework

Next we looked at the potential impact of the newly revised framework for the 421-a program on rental development across our market types assuming no change in construction costs. While in many cases the NOI yield would worsen because of the increased affordability requirements, in all cases the unleveraged IRR improves. Thus, for developers focused strictly on NOI yield, the amount they would be willing to pay for land may fall; while those basing investment decisions on unleveraged IRR could be more willing to pay somewhat more for land because, under this measure, the benefits from the extended tax exemption period exceed the costs of the larger affordable housing set aside. We also compare options A and C. We do not model Option B in the analyses because it is tailored for use in conjunction with discretionary public subsidy. However, we recognize that Option B might be attractive for developers who need more subsidy and are willing to trade deeper affordability requirements and/or a larger affordable set-aside than required under either Options A or Option C.

Very Strong Markets

In the Manhattan Core, as in all the markets we examined, the newly revised version of the 421-a program could allow rental development to compete more effectively against condominium development for developers who focus more on unleveraged IRR than NOI yield. Development would be slightly less attractive for those who would not trade a higher unleveraged IRR for the lower NOI yield. As can be seen in Table 3, the unleveraged IRR under Option A is higher than under the current program (6.6% versus 5.7%) as a result of the extended benefit.[18] This higher unleveraged IRR suggests that some rental developers might be able to bid more for land, or, in the case where the developer has already purchased the site, earn a greater financial return in the long run.[19]

However, it is not clear whether this increased

18 As noted in the above side bar, the models generating these hypothetical financial returns assume a land value that is derived based on the maximum a developer could pay and still receive the target NOI yield for the given market type. See Appendix II for a further discussion of why the land value we use for our models may be different from today's actual land prices in a given market. Also, in this particular instance, we do not model Option C because it is not available in Manhattan south of 96th Street.

19 The modification of the 421-a rent-stabilization requirement is not captured in our models. This change could, however, add to the attractiveness of the new version of 421-a in high-rent areas. Under the current version of 421-a, the market-rate units in participating buildings are entered into rent stabilization for the length of the exemption period. Under the new 421-a, market-rate units would not be subject to rent stabilization if rents exceed the threshold for deregulation (currently at $2,700).

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Table 3: Rental Development under Existing 421-a Program vs. Newly Revised 421-a Program Option A in Very Strong Markets

Manhattan Core ($80/sf) 195,000 Square Feet High-Rise		
Scenario	**Current**	**Option A**
4% Low Income Housing Tax Credits	Yes	Yes
Percent of Units at Market	80%	75%
Affordability	20% at 60% of AMI (47 units)*	10% at 40% of AMI (24 units) 10% at 60% of AMI (24 units) 5% at 130% of AMI (12 units)
Full Exemption	12 years	25 years
Exemption phase out	8-year phase out	25% tax exempt for years 26-35
NOI Yield	**5.2%**	**4.9%**
IRR (unleveraged)	**5.7%**	**6.6%**

**When units can be rented at a given AMI level, an owner can (and often does) market and rent those units for lower rent to lower-income households. Because affordable units are marketed to households within a specified band of incomes, not only at a single income point, we estimate for this table and tables 4, 5, and 6 that all units meeting a given AMI level result in an effective rent that is five percentage points lower than the required income. For instance, units meeting the affordability requirement of 60 percent of AMI would average rents affordable to a three person household with income at 55 percent of AMI ($42,735 per year) resulting in an average rent of $1,068 per month. For a three-person household with income at 125 percent of AMI ($97,125 per year), monthly rent would be $2,428.*

Table 4: Rental Development under Existing 421-a Program vs. Newly Revised 421-a Program in Strong Markets

Downtown Brooklyn ($60/sf) 195,000 Square Feet High-Rise			
Scenario	**Current**	**Option A**	**Option C**
4% Low Income Housing Tax Credits	Yes	Yes	No
Percent of Units at Market	80%	75%	70%
Affordability	20% at 60% of AMI (47 units)	10% at 40% of AMI (24 units) 10% at 60% of AMI (24 units) 5% at 130% of AMI	30% at 130% of AMI (71 units)
Full Exemption	21 years	25 years	25 years
Exemption phase out	4-year phase out	25% tax exempt for years 26-35	30% tax exempt from 26-35
NOI Yield	**5.2%**	**5.0%**	**5.2%**
IRR (unleveraged)	**6.7%**	**6.8%**	**7.3%**

benefit in the very strong markets would be sufficient to allow rental developers to outbid condominium developers who now appear to be setting the price for land in some areas of the Manhattan Core.

Strong Markets

In a strong market such as Downtown Brooklyn with rents of approximately $60/sf, the revised 421-a program would have two significant impacts. First, condominium developers who currently use the 421-a exemption would no longer be eligible for the program because condominium values in these areas would most likely exceed the maximum value allowed for participation.[20] Second,

20 With average initial assessed value per unit needing to be less than $65,000 upon the first assessment following the completion date, condominium buildings with a Department of Finance assigned average market value per unit of $145,000 and above would not qualify for the exemption. The project cap of 35 units for condominiums further reduces the attractiveness of the property tax exemption for condominiums.

Table 5: Rental Development under Existing 421-a Program vs. Newly Revised 421-a Program in Moderate Markets

Astoria ($44/sf) 60,000 Square Feet Mid-Rise

Scenario	Current	Option A	Option C
4% Low Income Housing Tax Credits	Yes	Yes	No
Percent of Units at Market	80%	75%	70%
Affordability	20% at 60% of AMI (15 units)	10% at 40% of AMI (7 units) 10% at 60% of AMI (7 units) 5% at 130% of AMI (4 units)	30% at 130% of AMI (22 units)
Full Exemption	21 years	25 years	25 years
Exemption phase out	4-year phase out	25% tax exempt for years 26-35	30% tax exempt from 26-35
NOI Yield	5.8%	5.6%	5.9%
IRR (unleveraged)	7.9%	8.1%	9.0%

as in all the markets we examined, the increase in unleveraged IRR could make rental development more attractive than it is currently.

Table 4 presents the returns for a hypothetical development in Downtown Brooklyn under the current 421-a program and the new 421-a program. While the NOI yield drops under Option A compared to the current program, it is essentially unchanged under Option C. On the other hand, both Option A and Option C show a higher unleveraged IRR than the current program. While Option C generates more rental revenue than Option A as long as market rents do not exceed $120 per square foot, Option A does allow developers to raise equity through the sale of Low Income Housing Tax Credits. On an unleveraged basis Option C provides the higher unleveraged IRR (7.3%) vs. Option A (6.8%).[21] When combined with debt financing, however, LIHTC equity can potentially improve the developer's return on his or her own equity and thus the relative attractiveness of Option A.

Moderate Markets

The newly revised 421-a program could also make rental development more attractive in moderate markets (e.g., Astoria) where the GEA today already requires some affordable housing. As in all other markets where Option C is available, the higher rental income available under Option C makes it preferable to Option A based on NOI yield and our unleveraged IRR measure.[22] As Table 5 shows, Option C results in a higher unleveraged IRR (9.0% Option C vs. 8.1% Option A) and a higher NOI yield (5.9% Option C vs. 5.6% Option A). As noted above, the use of debt-financing under Option A may improve its relative attractiveness.

Moderate-Low Markets

In moderate-low markets such as Bedford Stuyvesant, the new affordability requirement may not discourage development as some have worried might happen. Although the new versions of the 421-a program would result in slightly lower rents than

21 When market rents are below $120 per square foot, the higher average rents from the affordable units (125% of AMI vs. 61% of AMI) more than compensate for the loss of higher income due to fewer market rate units (75% vs. 70%).

22 Because of the higher AMI cap for the affordable units (130 percent of AMI vs. 60 percent of AMI), Option C also yields a slightly higher NOI yield than the current program.

Table 6: Rental Development under Existing 421-a Program vs. Newly Revised 421-a Program in Moderate-Low Markets

Bedford-Stuyvesant ($37/sf) 63,000 SF Floor Area Mid-Rise

Scenario	Current	Option A	Option C
4% Low Income Housing Tax Credits	No	Yes	No
Percent of Units at Market	100%	75%	70%
Affordability	N.A.	10% at 40% of AMI (8 units) 10% at 60% of AMI (8 units) 5% at 130% of AMI (4 units)	30% at 130% of AMI (23 units)
Full Exemption	11 years	25 years	25 years
Exemption phase out	4-year phase out	25% tax exempt for years 26-35	30% tax exempt from 26-35
NOI Yield	5.7%	5.0%	5.5%
IRR (unleveraged)	6.0%	6.8%	8.1%

market rents[23] and NOI yield would fall slightly, the unleveraged IRR would increase because, just like in the markets discussed above, the value of the extended tax exemption would more than offset the new affordability requirement. Even here, Option A with its deeper affordability requirements allow for a higher unleveraged IRR than the current program, but Option C again provides the higher unleveraged return (see Table 6). As discussed earlier, the use of debt-financing under Option A may improve its relative attractiveness.

A Note on the Effects of Higher Construction Costs

Because the new 421-a legislation has made continuation of the program contingent on an agreement on labor costs, we consider the possible impact of a rise in construction costs. As noted above, the expiration of the 421-a program would be unlikely to affect residential development in those portions of the Manhattan Core where the development of condominiums without use of the 421-a program already predominates. To the extent the pending program is intended to make rental more competitive with condominium development, any increase in construction costs will temper the impact, if not make future rental development even less likely than under the current program.

Elsewhere, the impact of an increase in construction costs will depend on the net change from today's program in the level of overall benefit. As long as developers do not perceive the increase in construction costs as diminishing the net benefits from the program designed for 2016 and beyond, rental developers would continue to use the program and should be able to outbid condominium developers who no longer have access to the program.[24] If the increase in construction costs results in a fall of net benefits from current levels, rental developers could refrain from undertaking new projects until the price of land falls. In the less strong rental markets, a rise in construction

23 With market rents of $37 per rentable square foot, a rental developer would only be forgoing minimal revenue by restricting rents for households at 130 percent of AMI. At 130 percent of AMI, the average rent per square foot of affordable units would be $34 given our estimates of unit sizes (see Appendix II for further detail) and projections of rental income due to marketing bands. This analysis only looks at the financial impact and does not take into account how the developer may react to the additional income restrictions placed on the affordable units.

24 Because the condominiums produced under the newly revised 421-a program Option D would have an average AV of $65,000 per unit or less, we do not expect they would be developed in strong markets like Downtown Brooklyn. Elsewhere, the decision by developers of condominium properties of 35 units or less to take advantage of Option D could turn on the impact of any agreement on labor costs.

costs could leave mid- and high-rise rental development uneconomic at current market rents even if land were free. As land prices fall, it might also be the case that condominium development could become viable even without any property tax exemption.

An increase in construction costs could impact development under the 421-a program's Option B in a different manner. In those instances, the 421-a tax exemption would only be a piece of the overall subsidy package required to bring rents down to target levels. Any increase in the cost of construction here could perhaps be offset by lowering other costs. If not, more subsidy will be needed for the targeted number of units in the Mayor's Housing New York plan or fewer units will be able to be produced.

Conclusion

Our financial analysis of the possible outcomes from the 421-a legislation offers some insights into its potential impact on new construction. First, if the 421-a benefit expires in 2016, residential developers would lower the amount they would be willing to pay for land in many parts of the city. The result could be a pause in new residential developments in areas outside of the Manhattan Core as both buyers and sellers of land adjust to the new market. In the parts of the Manhattan Core where condominium development without the 421-a exemption supports a higher land price than rental development, expiration of the 421-a program would not affect the prices condominium developers are willing to pay but would make rental development even less competitive.

In strong markets such as Downtown Brooklyn, where fully taxed condominium development is not driving land prices, development could resume once landowners and developers adjust to lower land values. However, this new development could tend more toward condominiums, which seem to benefit less from the property tax exemption than do rental properties. In weaker markets, development of high-rise or mid-rise buildings without additional subsidy might not be feasible even if land were free.

Second, if the newly revised 421-a program with its higher affordability requirements and longer exemption period goes into effect in 2016 without any increase in construction costs, the city is likely to have more affordable rental units developed in many parts of the city compared to what the existing 421-a program would have created. Condominium development without the 421-a program may still continue to dominate in certain portions of Manhattan, though the program appears to make rentals more attractive.

Outside of the Manhattan Core, however, our unleveraged IRR analysis suggest that the new program is unlikely to cause a curtailment of residential development. Under this measure of financial return, both Option A and Option C are better than today's program, meaning that rental development with the 421-a program would be more attractive than it is now, even in the parts of the city where no affordable set-aside is currently required. Based on our analysis of unleveraged IRRs alone, Option C appears to offer higher returns than Option A in all our market types where the two are available, but does not allow the developer to raise equity through the federal tax system with Low Income Housing Tax Credits. When combined with debt financing, LIHTC equity can potentially improve the developer's return on his or her own equity and thus the relative attractiveness of Option A. If developers go with Option C, the city would still get 50 percent more units than under the current program but at rents that are at higher AMI levels (30% of the units at up to 130% of AMI versus 20% at up to 60% of AMI).

For rental buildings constructed under Options A and C, the impact of an increase in the cost of construction under the program will depend on the overall effect on the bottom line taking account of both the lengthening of the period of property tax exemption and the increase in affordability requirements. If the net effect of all these changes should be negative, developers that use the 421-a program may defer further development until land prices fall or rents rise, with the concomitant interruption in the flow of new projects. In moderate-low markets like Bedford-Stuyvesant a decrease in the net benefits from those offered by the program today could stifle the development of new, mid-rise residential buildings even if land prices were zero. For development that relies more heavily on government subsidy (Option B), an increase in labor costs would need to be offset by paring down other costs or increasing other public subsidies, thus constraining the type and amount of affordable housing that can be produced with a given amount of government resources.

Appendix I

Details of the 421-a Program

The current version of the 421-a property tax exemption, still available to new residential development with three or more units until the end of 2015, covers both rental and ownership properties in New York City.[25] If a project participates in the program, the value created by the development is exempt from the city's property tax during construction and for a set period ranging from 10 to 25 years.

Under the current law, if a project is located within an area called the "Geographic Exclusion Area" (GEA), the developer must set aside at least 20 percent of units as affordable housing in order to qualify for the 421-a property tax exemption (unless the developer can purchase one of the remaining certificates produced under a now-defunct off-site program, discussed below). The GEA currently encompasses all of Manhattan[26] and several neighborhoods in the other boroughs, including some of their most expensive areas (see Figure 1 in the main text). In Manhattan south of 110th Street, the exemption ends 20 years after construction is complete (including an 8-year phase-out period). In the rest of the GEA, the exemption lasts for 25 years after construction is complete (including a four-year phase-out period). The exemption periods for buildings using certificates are 10 and 15 years, respectively.

If a project is developed with other types of government subsidy within the GEA, all the affordable units must be affordable to households earning no more than 120 percent of AMI (in 2015, this equaled $93,240 for a three-person household), and in buildings with 25 or more total units, the average level of affordability for all the affordable units cannot exceed 90 percent of AMI (in 2015, this equaled $69,930 for a three-person household).

Projects outside of the GEA that have only market rate units can also qualify for an exemption but only one that lasts 15 years (including a four-year phase-out period) without including any affordable housing. If developed with substantial government assistance, the average rent cannot exceed a level affordable to a household earning 80 percent of AMI and the maximum rent for any unit must not be greater than what would be affordable to a household earning 100 percent of AMI.

25 Some new housing development that is 100 percent affordable can qualify for other types of property tax exemptions, not discussed in this brief.

26 As a result of restrictions imposed by New York City Council, the 421-a property tax exemption is not generally available in the parts of Manhattan that are zoned for very high-density commercial development (with commercial floor area ratio equal to 15), which are located in the Midtown and Downtown commercial districts. However, legislation enacted by New York State in 2013 specifically made five development sites in these parts of Manhattan eligible for the 421-a exemption.

Affordable units that a developer provides to qualify for a 421-a property tax exemption must be provided on the same zoning lot. For 35 years after construction, these units may only be initially sold or rented to tenants who, at the time of initial sale or initial or subsequent lease, have incomes that match the requirements discussed above.[27]

Developers are also able to qualify for property tax exemption under the 421-a program for sites within the GEA by purchasing "negotiable certificates" that were generated by written agreements entered into prior to December 28, 2007 under an old off-site production option. Affordable housing developers were able to generate these certificates by building new affordable units anywhere in the city. Under current law, no new written agreements for certificate units can be executed, but there are still a small number of unused certificates available that can be used by market rate projects to qualify for 10 or 15 years of tax exemption in the GEA. As a result, some number of new market-rate projects would continue to qualify for tax exemption without providing on-site affordable units until the remaining supply of certificates is exhausted.

For projects that are at least 20 percent affordable, there is no cap on the amount of property value to which the exemption can apply. For most other projects receiving the exemption (those outside the GEA without affordable housing and most of those using certificates [28]), the amount of property value that can be exempt is capped at an amount set by law.

27 For example, in 2015, 100 percent of the median income for a three-person household in the New York City area (which, as defined by federal guidelines, includes New York City and Putnam, Rockland, and Westchester counties) was $77,700.

28 Some certificates generated tax exemption that was not subject to the cap provided those projects commenced on or before June 30, 2009.

Analyzing Recent Development Activity

To better understand what different types of development use the 421-a tax exemption program, we analyzed data provided by New York City Department of Buildings to catalog every new building that received a new building permit after July 1, 2008, when the current 421-a rules took effect, and received an initial certificate of occupancy between 2011 and 2014. We then matched the buildings to New York City Department of Finance records to identify which are participating in the 421-a program and, based on the length of the exemption, whether they qualified by using negotiable certificates or providing affordable units on-site. We excluded buildings that received other forms of property tax exemption or public subsidy, most of which are subsidized housing built under the Low Income Housing Tax Credit program, units built on state-owned land, or units exempt through a special act of the New York City Council.[29]

Appendix II

Modeling Assumptions

To build and run the model we needed to make a number of assumptions, and these assumptions are laid out in this Appendix. In forming these assumptions, we solicited input from a number of developers and investors who often had differing opinions. In order to choose what values to use in the model, we selected estimates that fell within the bounds articulated by the market participants and that would provide a reasonable idea of the direction of the impact of the policy alternatives tested. However, specific estimates of, for example, the minimum level of rents required for construction to be economically attractive are dependent on such variables as the choice of NOI yield and the costs of construction and operations.

29 We also excluded a small number of projects that were ineligible to participate in 421-a because they are in a zoning district with a commercial floor area ratio of 15.

Construction Type	Hard Costs per gross square foot (excluding parking)	Hard Costs per gross square foot of parking area	Soft costs per gross square foot
High-rise with no parking	$375	n/a	$75
High-rise with 20% parking ratio	$310	$200	$75
Mid-rise with 50% parking ratio	$250	$200	$75

Current Construction Costs and Capital Reserves

Our models start with the above amounts as indicative of current hard and soft costs.[30]

Soft costs include design costs, engineering costs, and construction period property taxes, among other costs; however, financing costs, including construction period interest, are modeled separately.

We assume annual capital reserve contributions of $300 per unit for years 3 to 12 and $600 per unit in year 13 and later. Contribution amounts increase annually by three percent.

Building Size and Configuration

Our modeling assumes that developers have an effective six percent zoning density bonus by building under the "quality housing" formula available in many zoning districts in New York City, so 1,000 square feet of nominal zoning density permits 1,060 square feet of above-ground floor area. To calculate the amount of rentable square feet per above-ground floor area, we assume an 18 percent "loss factor" to account for common areas and above-grade mechanical space. This loss factor does not include square footage that is allocated to parking.

To calculate the number of units of each type per 1,000 square feet of above-ground floor area, we allocate the rentable square footage, and then divide by the unit sizes.

	Allocation of rentable square feet in building	Unit size
Studio	25%	520
One bedroom	45%	720
Two bedroom	30%	1,050

To determine the gross square feet needed for parking, we assume 300 square feet per required space. We assume all parking is below grade so does not occupy any of the permitted zoning density.

For models of full buildings, we assume a project site of 15,000 square feet and the following permitted floor area ratios:

Project Type	Permitted FAR
High-rise with no parking, very strong market, inside the GEA	13.0*
High-rise with 20% parking ratio, very strong market, inside the GEA	13.0*
Mid-rise with 50% parking ratio, moderate market, inside the GEA	4.0
Mid-rise with 50% parking ratio, Moderate-low market, outside the GEA	4.2

**Assumes development rights purchased through a zoning lot merger*

Operating and Management Costs

Beginning in year three, we assume operating and management costs of $12.50 per rentable square foot for high-rise construction and $9 per rentable square foot for mid-rise construction (rates are as of year 0 and escalate three percent each year).

We also assume management fees equal to three percent of effective gross revenue for high-rise projects and five percent of effective gross revenue for mid-rise projects.

30 We arrived at these costs through an informal survey in which we received a wide range of figures. We chose numbers that seemed to be in the ballpark but we make no claim that these construction costs are indicative of the costs of any specific project.

Property taxes

For buildings with 421-a tax exemption, we calculate the base tax liability using the fiscal year 2014-2015 Class 2 property tax rate (12.855%) and the following assessed values per square foot of land area.

- $200 per square foot of land area for our high-rise/very strong market project type (based on the Manhattan Core)
- $35 per square foot of land area in our high-rise/strong market project type (based on Downtown Brooklyn)
- $35 per square foot of land area in our mid-rise/moderate market project type (based on Astoria)
- $15 per square foot of land area in our mid-rise/moderate-low market project type (based on Bedford Stuyvesant)

For buildings subject to full property tax, we calculate the tax liability as follows, based on the process used by the New York City Department of Finance (DOF) as outlined in the current version of the New York City Residential Property Taxes guide for Class 2 properties (available at https://www1.nyc.gov/html/dof/downloads/pdf/brochures/class_2_guide.pdf):

- For year three, the tax liability is equal to the base tax (see above), increased by 10 percent per year from year zero. (We assume taxes for years one and two are included in soft costs).
- Beginning in year four, the first year of full operation, we:
  - Divide the building's net operating income by a total cap rate of 13.115 percent (the rate used by DOF for market-rate new construction) to calculate the market value;
  - Multiply the market value by the 45 percent assessment level for Class 2 properties to determine the actual assessed value;
  - Divide the increase in actual assessed value since the prior year by five (i.e., to phase the increased assessed value in over five years);
  - Calculate the current year's transitional assessed value by adding to the previous year's transitional assessed value the phase-in from the most recent increase in actual assessed value and the previous four phase-ins (in year four, the transitional assessed value is equal to the actual assessed value);
  - Calculate the property tax liability by multiplying the transitional assessed value by the Class 2 property tax rate of 12.855 percent as of the 2014-2015 fiscal year. (We use the current Class 2 property tax rate as our projection for the tax rate in all future years of operation. It is possible that the City Council could reduce the rate in the upcoming years as the city's tax base increases; but, longer term, it is possible the rate will increase again when the city faces another economic contraction.)

Building Revenue

Market Rents: We assume that market-rate net rentable square feet would generate gross rent equal to the amounts shown below, regardless of unit type, reduced in year four by a five percent economic vacancy rate.

We assume market rents will increase three percent per year.

Project Type	Gross Rent per Rentable Square Foot
High-rise with no parking, very strong market, inside the GEA	$80 per rentable sf
High-rise with 20% parking ratio, very strong market, inside the GEA	$60 per rentable sf
Mid-rise with 50% parking ratio, moderate market, inside the GEA	$44 per rentable sf
Mid-rise with 50% parking ratio, moderate-low market, outside the GEA	$37 per rentable sf

Note: Amounts are as of year zero, but increase by three percent per year.

Other income (e.g., from amenity charges, fees, etc.): Beginning in year three, $1,000* per market-rate unit per year in the very strong market type; $750* per market-rate unit per year in the strong and moderate market types; and $500 per market-rate unit per year in the moderate-weak market type.

Net parking revenue (beginning in year three):

- For high rise construction in a strong market: $3,300* per space per year, with 10 percent vacancy, less operating expenses of $900* per space per year
- For mid-rise construction in a moderate market: $2,700* per space per year, with 10 percent vacancy, less operating expenses of $900* per space per year
- For mid-rise construction in a moderate-low market: $2,400* per space per year, with 10 percent vacancy, less operating expenses of $900* per space per year

Affordable Rents: equal to 30 percent of the 2015 AMI level assuming studios will be occupied by one-person households; half of the one-bedroom units will be occupied by one-person households and half by two-person households; and two-bedroom apartments will be occupied by three-person households. We assume AMI increases three percent each year (as it has, on average, over the past 20 years).

**Amounts are as of year zero, but increase by three percent per year.*

Financial Performance

Calculating NOI Yield and Unleveraged IRR:
The NOI yield is equal to the net operating income generated in year four divided by the total amount spent on land (for full-building models), hard and soft construction costs, and capital reserves set-aside in years three and four. We assume land is purchased at the end of year zero, construction occurs during years one, two, and three (with construction costs incurred 20 percent in year one, 60 percent in year two, and 20 percent in year three) and lease-up begins in year three, resulting in full occupancy (subject to five percent economic vacancy) in year four.

For our analyses, we assume developers will need to earn the target NOI shown in the following table for each project type. These NOI yields are equal to the exit cap rate for each project (which we estimate based on interviews with industry participants) plus 125 basis points.

Project Type	Target NOI Yield	Exit Cap Rate
High-rise with no parking, very strong market, inside the GEA	5.25%	4.00%
High-rise with 20% parking ratio, very strong market, inside the GEA	5.25%	4.00%
Mid-rise with 50% parking ratio, moderate market, inside the GEA	5.75%	4.50%
Mid-rise with 50% parking ratio, moderate-low market, outside the GEA	5.75%	4.50%

We also calculate an unleveraged internal rate of return (IRR). As with NOI yield, the unleveraged IRR takes into account the upfront costs for land and construction but it does not stop at year four. The unleveraged IRR takes into account the income stream earned over time (i.e., the net operating income over a 12 year period) and assumes a sale of the property at the end of year 12 at a price adjusted for the remaining property tax exemption. We use the same exit cap rates shown above to estimate the sale price of the property at the end of year 12, based on the year 13 net operating income under a full tax scenario and the year 12 value of the remaining property tax exemption (calculated using a four percent discount rate). We then subtract sale expenses equal to 3.5 percent of sale proceeds.

The following table shows the unleveraged IRRs we calculated under the current 421-a program. These unleveraged IRRs correspond to the respective NOI yields we used to build this base case for each project type:

Project Type	Base Case NOI Yield	Base Case 12 Year Unleveraged IRR
High-rise with no parking, very strong market, inside the GEA	5.24%	5.73%
High-rise with 20% parking ratio, very strong market, inside the GEA	5.24%	6.67%
Mid-rise with 50% parking ratio, moderate market, inside the GEA	5.78%	7.89%
Mid-rise with 50% parking ratio, moderate-low market, outside the GEA	5.73%	6.02%

Land Values

To calculate an unleveraged IRR and NOI yield under various 421-a program environments, we need to plug in a value for land. For this purpose, we derive land values for each market type based on the amount our model shows that a developer could pay, given rent levels and construction and operating costs, and still generate the target NOI yield for the base case (current 421-a program). As a result, these values do not necessarily reflect prices being paid in the marketplace as developers may factor in expectations of future rent movements or may rely on alternative approaches for assessing their expected return. The land value for each market is derived for the base case of rental development which assumes the use of the 421-a tax exemption and, within the GEA, the use of Low Income Housing Tax Credits.

The resulting values are:

Market Type	Example neighborhood	Land Value (per effective zoning sf)
Very Strong, inside the GEA	Manhattan Core	$415
Strong, inside the GEA	Downtown Brooklyn	$245
Moderate, inside the GEA	Astoria	$55
Moderate-low, outside the GEA	Bedford-Stuyvesant	$25

When considering financial return based on modified exemption and affordability requirements, we keep land values constant so that the additional benefits and costs are fully reflected in the financial return (NOI yield and unleveraged IRR), rather than reflected in an adjusted land value.

Four Percent Low Income Housing Tax Credits

We assume the use of four percent Low Income Housing Tax Credits under the existing 421-a program and under the new program's Option A. Four percent LIHTC normally come as a result of using tax-exempt bonds. To estimate the value, we multiplied the hard and soft costs by 0.95 (rough approximation of costs that would be eligible), 1.3 (basis boost as New York City is a HUD-designated Difficult Development Area (DDAs)), 0.20 (percent of project units affordable to households at 60 percent of AMI or lower), 0.032[31] (credit amount), $0.95 (value of credit in syndication), 10 (for the years of credits provided), and 0.9999 (amount raised). In our models, 20 percent of LIHTC equity comes in at year one, 20 percent in year two and the remaining 60 percent in year three.

31 LIHTC Facts & Figures. (n.d.). Retrieved from http://www.novoco.com/low_income_housing/facts_figures/

The $0.95 value for the credit is based on feedback that there is market risk associated with mixed-income buildings.

While the 1.3 basis boost is available throughout New York City today, not all projects may be eligible moving forward. Starting in 2016, HUD will no longer designate entire metro areas as DDAs.[32] Instead, it will designate Difficult to Develop Areas by zip code, to be called Small Difficult to Develop Areas (SDDA). While the most recent maps HUD has issued for 2015 indicate that the most expensive areas of Manhattan and Brooklyn will still qualify for SDDA status, some areas of the city may lose their designation as DDAs and thus not be eligible for the 30 percent basis boost going forward. The only other option currently for qualifying for the basis boost is for a project to be located in a Qualified Census Tract, which, by definition, is a very low income area.

Threshold Rents for Development

To analyze the possible impact of changes in the 421-a program, we estimated the minimum rent per square foot of apartment area needed for a developer to earn a sufficient financial return on the "hard" and "soft" construction costs for high-rise and mid-rise rental buildings in New York City. These threshold rents do not take into account paying for land—the price of which is largely a function of the extent to which market rents exceed the minimum needed to provide sufficient return on construction costs.

32 Federal Register | Statutorily Mandated Designation of Difficult Development Areas for 2014. (n.d.). Retrieved from https://www.federalregister.gov/articles/2013/11/18/2013-27505/statutorily-mandated-designation-of-difficult-development-areas-for-2014

Authors

Eric Stern
Mark Willis
Josiah Madar

Special Thanks

Jessica Yager

Acknowledgments

We gratefully acknowledge the generous support of the Ford Foundation for the research that made this policy brief possible. The statements made and views expressed in this brief, however, are solely the responsibility of the authors. We are also grateful to Elizabeth Propp for her real estate industry expertise and her generous help developing the financial models on which our analysis so heavily depends; Jonathan Miller of Miller Samuel for providing rent data; Reis, Inc. for providing development pipeline data; the advisory boards of the Furman Center and Moelis Institute for Affordable Housing Policy for their insight and valuable feedback on early findings and drafts of our report; and the other experts, stakeholders, and city officials we consulted to hone our models, refine our understanding of existing programs, and discuss our findings.

The NYU Furman Center advances research and debate on housing, neighborhoods, and urban policy. Established in 1995, it is a joint center of the New York University School of Law and the Wagner Graduate School of Public Service. More information about the Furman Center can be found at **www.furmancenter.org**.