Appendix 2. A framework and method for determining the economic viability of converting particular commercial properties into apartments

The model is composed of two primary elements. The first element calculates the current value of maintaining the property as a Class B brown office building. This calculation is based on the discounted value of net cash flows over the forthcoming decade and the remaining value at the point of sale after 10 years.

We make plausible assumptions about revenues and costs for a representative Class B office building and discount these cash flows using a typical discount rate to obtain the fair market value of the office.

We perform this office valuation both from a pre-pandemic vantage point and in the current environment. This current value is significantly lower than pre-pandemic office valuation levels, which reflects the extent to which office values have been impaired by remote work, higher interest rates, and climate change regulation. We assume that this depressed current value is the acquisition price of the property slated for conversion to apartments.

The second element is the value derived from converting the brown office building into a green apartment building. Initially, we consider a market-rate rental project built without subsidies. We make plausible assumptions about the cost and timeline for construction to achieve the conversion to multifamily use, likely financing expenses (higher due to the rising interest rate environment), and likely future net income and property taxes as an apartment rental property. Our model sells the apartment 10 years after acquisition, aligning with the 10-year holding period used in the office valuation.

The green aspect of the conversion enters our calculation in several ways. First, because the green apartment building is built to modern energy efficiency standards, it does not incur any GHG emission fines. Second, we assume low vacancy rates, given strong projected demand for urban living in a green building. Third, we assume a rent premium due to the value tenants place in living in a green building. Fourth, green status lowers operational expenses due to energy cost reductions. Fifth, green status lowers both construction and permanent financing costs, given lenders' stated intent to enhance the sustainability features of their loan portfolio. Sixth, we assume a risk discount (i.e., a lower beta) compared to a regular apartment building due to the building's green status, which results in a boost to the building's valuation.

1. What is the value of a brown Class B office building pre-pandemic?

We envision a generic 250,000 gross square feet Class B office property. For concreteness' sake, we apply our model to NYC, although it is generic and applies equally to all cities in the U.S., as long as input parameters are properly adjusted.

Before the pandemic, such an office in NYC would be worth about $400 per square foot, or $100 million. This valuation can be justified using our pro forma model under the following assumptions on cash flows, which are realistic for the few years just before the pandemic. We assume a net effective rent (NER) of $49.44 per square foot per year, representing about 70 percent of the pre-pandemic average Manhattan office rent, reflecting that Class B properties command below-average rents. Second, we assume the building faces a 12 percent constant vacancy rate, around the pre-pandemic office vacancy rate in Manhattan. And third, we assume a 5.5 percent discount rate, which is the sum of the 10-year Treasury rate of 2.0 percent, a good assumption for the average 10-year yield over the 10-year period from 2013 to 2022, plus a risk premium of 3.5 percent.

TABLE A-2.

Key model parameters

	Office pre-pandemic	Office post-pandemic	Apartment market	Apartment affordable
		Building characteristics		
Rentable space (square feet)	212,500	212,500	175,000	175,000
		Rent and vacancy		
Monthly rent ($/square foot)	4.12	3.50	8	6.84
Annual rent growth	1.5%	1%	2.5%	2.3%
Vacancy	12%	17%	5%	4.5%
Annual vacancy growth	–	1%	–	–
		Operational expenses		
Credit loss	1.5%	3%	–	–
Operating expenses (% gross rent)	30%	30%	27%	27%
		Financing conditions		
Exit discount rate	5.5%	8.41%	7.41%	7.21%
Exit cap rate	4%	7.41%	4.91%	4.91%
		Property Taxes		
Property tax rate of market value	1.9%	1.9%	1.4%	1.4%
Property tax collected (NPV, million $)	54.9	21.7	104.6	81.3
		Environmental attributes		
GHG taxes 2024–29 ($/square foot)	–	0.32	–	–
GHG taxes 2030– ($/square foot)	–	0.72	–	–
		Conversion details		
Months to design	–	–	30	30
Months to lease up	–	–	18	18
Hard and soft costs	–	–	80	80
Green improvements	–	–	10	10
		Bottom line		
NOI 2033 (million $)	4.7	3	11.5	9.2
Valuation 2022 (million $)	100	38.9	–	–
NPV 2022 (million $)	–	–	4.1	-8.6
IRR 2022	–	–	16.8%	12.1%

Source: Compstak; authors' calculations.

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The first column of table A-2 summarizes the key model parameters. This $100 million building generates $54.9 million in total current and future property tax revenues for the city in present value terms.[2]

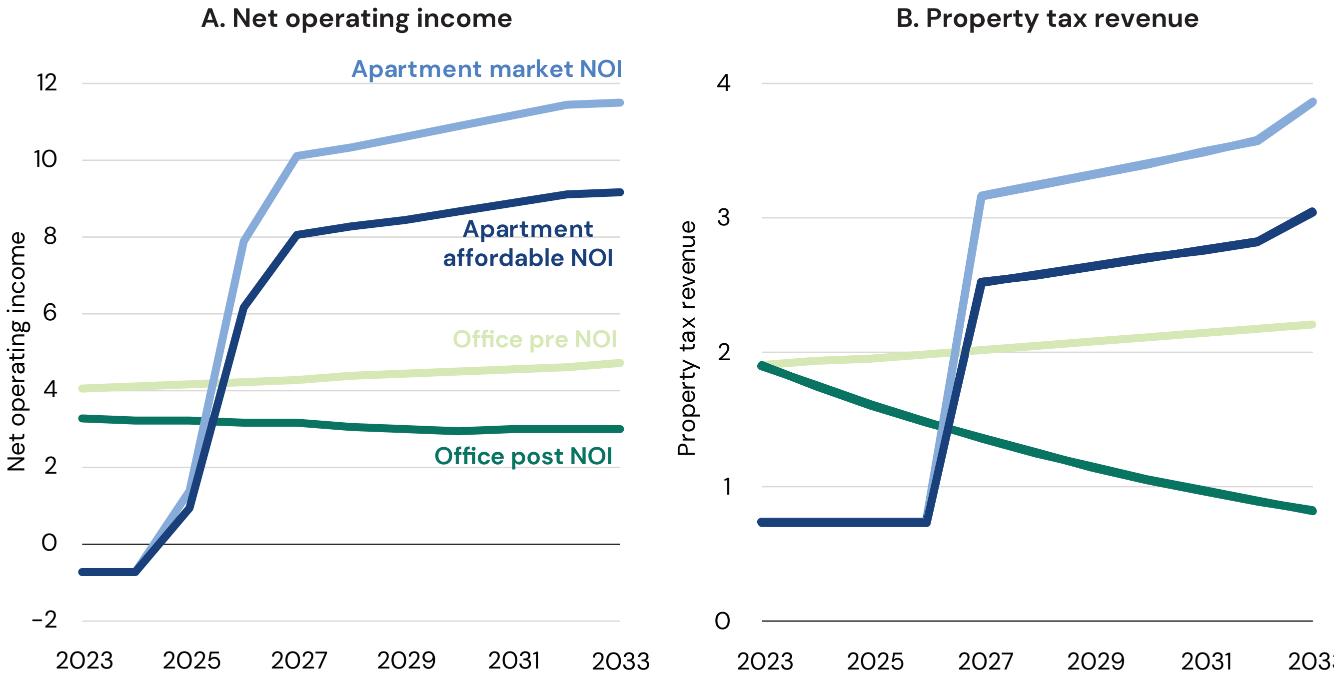
Figure A-1 graphs two key model outputs: annual net operating income (NOI) in Panel A and annual property tax revenue in Panel B, plotted over the course of the 10-year holding period from 2023 to 2033. The light green lines represent the output for the pre-pandemic office.

2. How much value have Class B offices lost in recent years?

Over the past few years, the environment for Class B offices has changed radically with the arrival of triple headwinds: the rise in interest rates, the rise in remote work, and GHG tax considerations. We make three modifications to our model to highlight the valuation impacts of these three forces. The parameters and key results are shown in table A-2 and in the "office post" lines in figure A-1.

FIGURE A-1.

Model results over time, 2023–33



Source: Authors' calculations.

Notes: The figure shows outputs from the model over time for the four cases examined (offices before the pandemic, offices after the pandemic, market-rate apartments, and apartments with an affordable component). The left panel plots the property's net operating income or NOI (Panel A) and the right panel plots property tax revenues in millions of dollars (Panel B).

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Rise in interest rates

First, we consider the impact of changes in interest rates. We increase the 10-year interest rate from 2.0 percent to the observed 10-year Treasury yield as of March 29, 2023, equal to 3.5 percent. We use the complete 10-year rate forward curve until the close of 2032 for discounting future cash flows. The rise in interest rates alone shrinks the property's value from $100 million to $63.1 million. The 10-year rate has risen since March, more than 1 percentage point through mid-October. Incorporating those higher interest rates would further shrink the property's value.

This significant decrease in value is largely attributed to the spike in the exit cap rate from 4 percent to 6.4 percent, given the forward rate for 2032 is 4.4 percent or 241 basis points above the previously assumed 2 percent rate. This large jump in the exit cap rate diminishes the exit value from $117.7 million to $73.4 million, even though cash flows remain stable. The rest of the effect comes from applying a higher discount rate to all cash flows when calculating the present value.

It is important to underline the 36.9 percent plunge in value for a property that is otherwise in good health. The magnitude of the value drop illustrates the power of convexity. Interest rate (cap rate) increases, when coming off a low base rate of interest (a low cap rate), can dramatically lower property values.

Rise in remote work

Next, we introduce several assumptions to model the cash flow problems emerging from the shift to work-from-home (WFH). Substantial research has grown to document the rise in remote work since the start of the pandemic, with survey evidence highlighting the apparent persistence of remote work (Aksoy et al. 2022). These shifts have large implications for both the cash flows and the risks inherent in traditional office buildings, as firms respond to these trends by adjusting their office demand.

We incorporate these adjustments in our model by accounting for a Class B office becoming a riskier asset, either due to greater risk in cash flows in the WFH environment or because investors could have grown more risk averse. To capture this increase in risk, we increase the unlevered office risk premium from 3.5 percent to 4 percent. The value of the building drops from $63.1 million to $58.6 million due to this increase in risk.

We additionally account for the immediate challenges of remote work on a reduction in rents by 15 percent, from $49.44 to $42.03 per square foot annually. This decrease corresponds to the observed fall in active lease revenue in the NYC data (measured using the CompStak data). This decrease is phased in over time by presuming that a fixed fraction of leases expires each period and by applying the decrease to only newly signed leases. This reduction in office rents reduces the property value to $48 million.

We then decrease rent growth from 1.5 percent to 1.0 percent per year for similar reasons, lowering the value of the building further to $44.1 million.

Next, we elevate the vacancy rate in the property from 12.0 percent to 17.0 percent to reflect the increase in a Class B Manhattan office, consistent with the evolution of the NYC vacancy rate between the end of 2019 and the end of 2022. This lowers the value to $38 million.

Furthermore, we increase the vacancy rate by 1.0 percentage point each year so that it grows from 17.0 percent in 2023 to 27.0 percent by 2033 and remains constant at 27.0 percent after 2033. This reflects further declines in occupancy as pre-pandemic leases continue to roll off and Class B tenants have better options in higher-quality buildings. This lowers the value to $29.8 million. Finally, we increase the credit loss from 1.5 percent to 3.0 percent to reflect rising tenant nonpayment, resulting in an office value of $28.4 million.

The above calculations were made under the assumption that the property tax remained unchanged from its pre-pandemic value (specifically at 1.9 percent of the pre-pandemic market value and growing at 1.5 percent per annum). This assumption implies that, by 2032, the effective tax rate will have escalated to 9.0 percent of the market value of the building. However, it is rather unlikely that such a massive depreciation in value, as detailed above, would happen without a substantial reassessment of the tax over the course of the 10-year holding period. The city authorities would likely adjust the assessed value downward automatically as the net operating income (NOI) on similar properties dropped. The NOI is a key measure of operational profits for real estate and serves as a base for both property taxation and valuation. Alternatively, the landlord could contest the tax bill, and could present a compelling argument for a downward revision.

In light of this reality, we incorporate an 8.05 percent annual reduction in the tax bill. This gradual reduction restores the effective tax rate to its pre-pandemic value of 1.9 percent of the actual market value by 2032. The reduction in tax leads to a significant increase in the NOI by 2033 and, in turn, a substantial increase in the exit valuation. The responses in property taxes hedge to an extent the shock from remote work. The result is an office value of $40.5 million.

Greenhouse gas tax considerations

Finally, we take into account the environmental impact on the office's valuation. We factor in the GHG emission fines stipulated by Local Law 97, set at $0.32 per square foot from 2024 until 2029, and at $0.72 per square foot from 2030 onward for NYC. These penalties are calculated based on the published fines for Class B office buildings in 2024 and 2030. They total to $80,000 per annum from 2024 to 2029 and $180,000 annually thereafter. In this scenario, the enactment of Local Law 97 reduces the office building's value to $38.9 million, or by an additional 4.1 percent.

Implications for property valuation

To sum up, a property that had a pre-pandemic valuation of $100 million is presently valued at $38.9 million after taking into account the triple forces of rising interest rates, the emergence of remote work, and environmental taxes. This constitutes a 61 percent loss in value. Interestingly, this figure aligns closely with the forecasts for Class B office spaces in the model provided by Gupta, Mittal, and Van Nieuwerburgh (2023).

3. Converting the office to apartments

3.1 Modeling the conversion process

The financial distress of conventional office buildings sets the stage for the valuation of an alternative: green market-rate apartment buildings. The parameters for this valuation are shown in table A-2.

The first phase involves construction and lease-up, followed by the stabilization phase when the apartment building is fully occupied and functional as an apartment property. We anticipate a timeline of 30 months for the completion of the transformation, inclusive of the permitting phase. This process is expedited in comparison to a ground-up development, which could take well over five years in NYC. The redevelopment phase is followed by an 18-month period required to lease the new apartment building.

We assume that the net rentable square footage of the revamped apartment building is 175,000 square feet, which is 70 percent of the total 250,000 gross square feet. This accommodates a larger loss factor for apartments (30 percent) than for office spaces (15 percent) to account for the loss of interior space due to deep floorplates or, potentially, for the necessity to construct an inner courtyard (i.e., a light well). At an average of 875 square feet per unit, the conversion allows for the creation of 200 apartment units within the property.

We assume it costs $38.9 million to acquire the old office building at its revised fair market value, $80 million for the hard and soft construction costs of conversion (excluding the cost of debt), and $10 million for supplementary green enhancements not already incorporated as part of a standard conversion. The conversion cost of $80 million equates to $400,000 per apartment unit ($457.14 per square foot for the average 875–square foot apartment, or $320 per square foot for a building with 250,000 gross square feet before factoring in the loss factor). A 2023 Urban Land Institute report discusses 21 recent conversion case studies with a median hard and soft conversion cost of $255,000 (Kramer, Eyre, and Maloney 2023). Half of the case studies have a cost between $210,000 and $300,000. Our number is higher because our calculations are for a high-cost market. These costs, however, can vary significantly depending on the unique attributes of the property (e.g., requirement for a light well, ventilation improvements, luxury finishes, etc.) as well its location (with implications for labor costs, regulations, etc.). We return to table A-3 to assess the robustness of our estimates with respect to this crucial parameter. The additional $40 per square foot is a plausible estimate for supplementary development costs required to en-hance the building's energy efficiency, given that major construction is already under way.[3]

3.2. How is the conversion financed?

The funding for this project comes from both debt and developer equity. We assume that the developer ob-tains 65 percent of the total $128.9 million in acquisi-tion and development costs from a construction loan and covers the rest with equity (contributed over the course of the construction phase). This construction loan is drawn in stages: a first tranche at the end of 2022 to buy the office building, a second tranche in 2023 for 50 percent of the conversion costs, a third tranche in 2024 for 30 percent of the conversion costs, and the final tranche in 2025 for the last 20 per-cent of the conversion costs. The construction loan has a variable rate priced at secured overnight financ-ing rate (SOFR) plus 4.5 percent, for a total interest rate of 8.75 percent in the first year.

By the end of 2026, the lease-up period concludes, and the asset is stabilized. The developer then secures a permanent, fixed-rate mortgage with a 30-year amortization period. The interest rate on the loan is set to the 10-year Treasury forward rate as of lease-up plus a 1.75 percent spread for a total interest rate of 5.44 percent. To set the loan-to-value ratio, the lender values the collateral using the 2026 cap rate, calculated from the 2026 discount rate and the rent growth rate. Considering a 2027 NOI of $10.1 million, the building's end-of-2026 value is $241.2 million.[4]

3.3. What are the cash flows from the apartment building?

The economic viability of converting to apartments hinges on the generation of sufficiently high cash flows from these apartments. We base our calculations on the assumption that the newly-converted apartment building will charge a standard rent comparable to new, upscale multifamily properties in NYC. This amounts to a rent of $8 per square foot monthly in 2023 (the 90th percentile of Manhattan rents in May 2023), in addition to a green rent premium of 3.1 percent.[5] This implies a monthly rent of $7,217 per unit (of 875 square feet). We assume that apartment rents (for green assets) grow at 2.5 percent per year after 2023. We assume that the vacancy rate is 5 percent for green NYC apartments and will be constant over time. We assume no credit losses.

These revenues are balanced against operating costs that are expected to be 27 percent of potential gross rent for standard new apartments (excluding property taxes but including recurring capital expenditures). However, for our green building we expect 5 percent lower operating costs due to energy efficiency gains.

Another significant cost change occurs following the conversion of the building into an apartment complex in 2027, when the property tax rate changes from 1.9 percent (office) to 1.4 percent (apartments). This property tax change resulting from change in property type is applied to the end-of-2026 property value of $237.2 million, yielding an annual 2027 property tax of $3.3 million, which then grows at the rate of rents (2.5 percent). Interestingly, this conversion results in the government collecting more property tax in present value terms over time.

The result of these shifts is that the NOI is projected to rise from $10.1 million in 2027 to $11.5 million in 2033. By the end of 2032 the building is sold, and its value is calculated as the 2033 NOI divided by the 2032 cap rate for a green apartment asset (4.91 percent). This results in an exit value of $234.7 million before, and $230 million after, sales fees and transaction taxes. After repaying the outstanding mortgage balance of $109 million, the net sales proceeds amount to $121 million at the end of 2032.

3.4. Main result: Does conversion make financial sense?

Our model shows a before-tax internal rate of return (IRR) for the office-to-apartment conversion of 16.8 percent for the developer. This is a levered return or equity return.

Determining whether this is a reasonable equity return, given the associated risks, is challenging due to the investment's complex nature. The conversion entails a blend of a speculative four-year development, akin to a high-risk opportunistic private equity investment, followed by a six-year stabilized asset investment, akin to a lower-risk core (private equity) investment.

An approximate way to estimate the levered beta for the stabilized (core) phase is to multiply the unlevered beta by the assets-to-equity ratio, which is two in this case (given a loan-to-value ratio of 0.5). With an unlevered beta of 0.6, we derive a levered beta of 1.2. The fair discount rate, consequently, is the 10-year Treasury yield plus a risk premium of 6 percent (1.2 times 5 percent). With an average 10-year forward Treasury yield of around 3.9 percent, the fair cost of equity capital is around 9.9 percent. Indeed, this is a plausible value for a levered return in a core real estate investment. We use this discount rate to discount the value of the stabilized apartment building's cash flows back to the end of 2026, obtaining the value of the stabilized apartment building at that time.

To discount this 2026 value back to the end of 2022, we use a much higher discount rate to reflect the much higher risk associated with the development and lease-up phase. We use the 10-year Treasury yield plus a risk premium of 12 percent, twice the value for the stabilized investment.

As is common for the initial development stage, the cash flows to the equity investor are negative (2023–25). To reflect the commitment associated with these outlays, it is customary to discount them at the risk-free rate (10-year Treasury yield). By discounting them at a low rate, we increase the present value of the outlays, and lower the net present value (NPV) of the overall conversion project. This builds conservatism into the approach.

4. How do the deal economics change with an affordable housing component?

A key aspect of the economic viability of the above office-to-apartment conversion was the ability to lease new units at market rates. Is it economically feasible to create affordable units as part of an office-to-apartment conversion? If not, what government subsidies (i.e., which programs and how many dollars) are needed to make such programs pencil out?

4.1. How to define affordability?

We define an affordable rental housing unit as one where a tenant whose income is at 80 percent of the area median income (AMI) does not spend more than 30 percent of household income on rent. AMI for a family of three is $96,080 in NYC. An affordable rent is therefore $1,922 per month per unit (of 875 square feet), or $2.20 per square foot. This compares to the market rent of $7,217 per unit or $8 per square foot. This definition of affordable housing is between two and three times the poverty line across the U.S. and aligns with the standard for federal low-income rental assistance programs. However, it does not necessarily provide deeply affordable housing to poor and near-poor households without additional rental subsidies.

The model considers several ways in which affordable units differ from market-rate units. First, we assume that the affordable units do not earn the green building rent premium we assumed for market-rate units. Second, we assume that the rent on an affordable unit grows at a slower pace than the rent on a market-rate unit, which is consistent with rent-stabilization practices. We set this rent growth rate to 1.5 percent per year, compared to 2.5 percent for market-rate units. Third, we assume that the vacancy rate for affordable units is only 2.5 percent, compared to 5 percent for market-rate units, to reflect the fact that there is excess demand (a long waiting list) to get into a new apartment building at below-market rents. Fourth, we assume that affordable units have lower risk given rent stabilization and low vacancy. We assume an unlevered beta that is 0.2 lower (for the affordable units only). Fifth, the property tax bill reflects the lower market value of the property. Sixth, we assume that the affordability mandate lasts for a finite period (25 years), after which the property reverts to a market-rate property.

4.2. What are the conversion returns under affordability mandate but without subsidies?

If the office-to-apartment conversion mandates 20 percent affordable units, the developer must set aside 40 of the 200 apartments for below-market tenants. This is a version of mandatory inclusionary housing. Without subsidies, the IRR of the investment falls from 16.8 percent to 12.1 percent, and the NPV drops from $4.1 million to –$8.6 million. The cost in terms of forgone developer profit per affordable unit provided is $318,345.

Given that the NPV is negative, the developer would not pursue the conversion. Increasing the percentage of affordable units or lowering the income threshold for affordability would make the conversion even less attractive. This shows that even modest affordability requirements can ruin the economics of the deal.

4.3. What does the affordability mandate cost taxpayers and society?

The affordability requirement lowers the NPV of tax collections by $23.3 million (in NPV terms) *relative to the market-rate development*, or $581,742 per affordable unit. The combined cost to produce the 40 affordable units to the government (in lost tax revenue) and the developer (in lost profit) is $36 million, or $900,087 per affordable unit.

There is, however, another way to look at these tax implications. *Relative to the status quo*, which is a poorly performing Class B office building that brings in only $21.7 million in NPV of tax revenues, the tax revenues from the apartment property with affordability mandate are nearly $60 million higher. The apartment building with 20 percent affordable units captures 72 percent of the increase in tax revenues of a 100 percent market-rate apartment building. Since the NPV from conversion for the developer is negative, thus preventing the conversion from taking place, a natural suggestion is to use some of the increase in tax revenues (obtained by moving away from the status quo) to subsidize the conversion.

5. How sensitive are the conversion economics to different assumptions?

The model's results rely on various assumptions, so it is crucial to understand how changes in key parameters might affect the outcomes. By returning to the baseline model parameters and modifying one variable at a time while keeping others constant, we can observe the sensitivity of the results. Table A-3 pro-vides a summary of these findings. The model's con-clusions are most sensitive to conversion cost esti-mates, apartment rent levels, acquisition price of the asset, the building's suitability for conversion, and the affordable housing mandate. This underscores the im-portance of doing the analysis case by case.

5.1. How sensitive are results to construction costs?

The first key parameter is the hard and soft conversion cost. We vary it from $200,000 per unit, among the lowest estimates in the literature, to $500,000 per unit, a higher estimate that might reflect higher costs of labor, supply chain disruptions, or (unforeseen) structural issues with the conversion. For every $100,000 per unit in extra conversion costs, the NPV goes down by about $17 million, or $82,806 per unit ($95 per net rentable square foot).

5.2. How sensitive are results to apartment rents?

The conversion's profitability is highly dependent on the rental market's robustness. In the baseline model, we assumed a monthly rent of $8 per square foot for a new market-rate apartment. After accounting for a 3.1 percent green rent premium, this equals $7,217 monthly rent per unit. However, if the base rent drops to $7 per square foot (or $6,315 monthly post-green premium), the NPV becomes negative. If it drops further to $6 per square foot ($5,413 monthly), the NPV is substantially negative.

There could be a trade-off between creating high-end apartments with high rent and high conversion cost and creating somewhat less expensive apartments at a lower cost. For instance, at a rent of $6 per square foot, a much lower conversion cost of $225,594 per unit (as opposed to the baseline $400,000 per unit) is required to maintain the baseline NPV.

A similar trade-off could arise across markets. Markets like NYC or San Francisco may have high conversion costs and high apartment rents, while other markets like in Minneapolis or St. Louis have much lower apartment rents but also lower conversion costs. See the discussion in the main text around table 3.

5.3. How sensitive are results to the acquisition cost?

In the baseline model, the office building is purchased at a significant discount from its original valuation (61 percent). But at that price, the previous owner might be underwater on their mortgage and unwilling to sell. Similarly, in a distress debt situation in which the owner has handed the office keys to the lender, the existing lender may not be willing or able to take such a large loss.

For instance, at a 50 percent discount ($200 per square foot instead of $155 per square foot), the NPV decreases to –$6.42 million. Conversely, at an even larger 75 percent discount, the NPV increases to $17.30 million.

5.4. How sensitive are results to the loss factor? The power of the density bonus

The suitability of a building for conversion, represented by the loss factor, also significantly influences profitability. The NPV can decrease by $24.8 million if the loss factor is 45 percent (about 30 apartment units fewer) or increase by the same amount if the loss factor is only 15 percent.

Zoning policy can confer a density bonus for the creation of affordable housing units. A density bonus is equivalent to a lower loss factor in our model. A 10 percent loss factor corresponds to 257 apartment units, which is a 28.6 percent density bonus compared to 200 units in the benchmark model. The NPV of $53.7 million is large and positive. This illustrates the power of the density bonus. Moreover, this policy has no direct fiscal cost.

5.5. How sensitive are results to the scope of the affordability mandate?

The affordable housing mandate, which involves varying the share of affordable housing units and adjusting the property tax abatement and share of subsidized construction and permanent debt, accordingly, impacts NPV, IRR, and the present discounted value (PDV) of tax revenues. Specifically, for a share of affordable units of *x* percent, we reduce property taxes by *x* percent and provide subsidized construction and permanent financing for a portion of *x* percent of the respective loans, where *x* is set to 0, 10, 20, 30 percent in the last panel of table A-3.

The NPV and IRR decrease when the share of affordable units increases even as the tax expenditure increases. This suggests that proportional debt subsidies and tax abatements cannot entirely compensate for the reduced rents from the affordable units.

6. Providing more details around calculations in table 3

Table 3 provides the geographic distribution of office buildings that were physically suitable for conversion to apartments. We now ask whether these conversions are also financially feasible.

This is a challenging question that ideally requires a building-by-building analysis. Such analysis is beyond the scope of this paper. We take a first pass at this question by using a limited set of regional information. Specifically, we account for differences in (1) pre-pandemic office values for Class B offices, (2) declines in office values over the December 2019 to December 2022 period, (3) apartment rents, and (4) costs of construction across CBSAs. These numbers are listed in table A-2. Besides the office purchase price, the con-version cost, and the apartment rent, all other model parameters are held fixed at their benchmark values (and hence do not vary regionally). Since we use the same inputs for each building in a given CBSA, this ex-ercise predicts that either all or none of the buildings are financially feasible conversions. The last column of the table therefore reports either the total number of buildings that are physically suitable for conversion for those CBSAs for which the typical conversion is also financially feasible or zero for those CBSAs where the typical Class B office conversion is not financially fea-sible. The conversion assumes a 100 percent market-rate apartment rental building.

Table 3 suggests that the typical conversion is financially feasible in NYC, San Francisco, San Jose, Boston, and Denver. These are markets where apartment rents are high enough to overcome the purchase cost of the office building and the cost of conversion. While informative, we reiterate that these are just averages that likely hide substantial variation within CBSAs.