Mixed-Income LIHTC Developments in Chicago: A First Look at Their Income Characteristics and Spillover Impacts

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Many policymakers and practitioners have embraced mixed-income housing as a key component of neighborhood stabilization and revitalization. Such developments ensure that high-quality housing remains available for low-income residents while also helping to attract more affluent, often more politically and socially connected individuals to the community. At least theoretically, the mix of enhanced social networks, increased social capital, and increased purchasing power can benefit existing residents and attract additional investment and economic activity to the area.

Most of the research on mixed-income development has focused on HOPE VI, Choice Neighborhoods, and other developments where income mixing was a deliberate goal. At the same time, many other residential developments do not have an explicit income mixing aim yet provide high-quality housing for households across multiple income levels. For example, a substantial proportion of properties financed in part with equity associated with the federal Low-Income Housing Tax Credit (LIHTC) contain a mix of market-rate and subsidized units. In Chicago alone, more than 19 percent of all LIHTC-financed developments for non-elderly households contain at least five units that are not subsidized and therefore are targeted for market-rate, presumably moderate-income or more affluent households. Unlike most HOPE VI and Choice Neighborhood developments, which are specifically designed to attract residents across a variety of income levels, LIHTC properties are developed primarily to create or preserve affordable housing for low-income people. Rarely is income mixing an explicit aim.

Little research exists on the extent of income mixing within LIHTC properties, even though there are far more of this type of mixed-income property than HOPE VI or Choice Neighborhoods developments. Nationally, there are 259 HOPE VI developments containing nearly 100,000 units. There are more than 10,000 LIHTC properties throughout the country (24 percent of all such developments) that contain both subsidized and market-rate units. ² In Chicago alone, 83 LIHTC properties have at least 5 market-rate units, and these developments

¹ "LIHTC Database Access," U.S. Department of Housing and Urban Development, http://lihtc.huduser.gov.

² Kirk McClure, "What Should Be the Future of the Low-Income Housing Tax Credit Program," *Housing Policy Debate* 29, no. 1 (2019), https://doi.org/10.1080/10511482.2018.1469526.

contain an average of 130 units apiece (about 10,750 in aggregate). ³ For those interested in mixed-income developments, it therefore makes sense to examine more closely the characteristics of these LIHTC properties. To what extent is there a mix of incomes within the LIHTC complexes? Is it realistic to expect properties without an explicit mixed-income focus to create and sustain mixed-income communities?

More broadly, LIHTC developments frequently serve as important components of a neighborhood stabilization and revitalization strategy. It is important to understand whether LIHTC properties with larger proportions of market-rate units have greater catalytic spillover neighborhood impacts than those that contain almost exclusively subsidized units. Multiple studies have found that mixed-income HOPE VI developments have had positive spillover effects on surrounding housing prices, public safety, and private investment. ⁴ There also is a growing body of research documenting the generally positive effects of LIHTC developments on surrounding home prices. ⁵ It remains unclear, however, whether and to what extent a mixed-income development makes a measurable difference in the dynamics of its surrounding community. None of the studies has focused specifically on the mixed-income character of the HOPE VI or LIHTC development and its relative importance in bringing about the observed change. It is quite possible, for instance, that the observed spillover benefits resulted primarily from the replacement of poor-quality properties or vacant lots with new or significantly rehabilitated, more fully occupied, and often better-managed developments, regardless of the actual mix of incomes among the buildings' residents.

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³ "LIHTC Database Access," U.S. Department of Housing and Urban Development, http://lihtc.huduser.gov.

⁴ See, for example, Mindy Turbov and Valerie Piper, "HOPE VI and Mixed-Finance Redevelopments: A Catalyst for Neighborhood Renewal." Discussion paper prepared for the Brookings Institution Metropolitan Policy Program, 2005; Edward Bair and John M. Fitzgerald, "Hedonic Estimation and Policy Significance of the Impact of HOPE VI on Neighborhood Property Values," *Review of Policy Research* 22, no. 6 (2005); Nina Castells, "HOPE VI Neighborhood Spillover Effects in Baltimore," *Cityscape* 12, no.1 (2010), doi: 10.2139/ssrn.1585386; Sean Zielenbach, Richard Voith, and Michael Mariano, "Estimating the Local Economic Impacts of HOPE VI," *Housing Policy Debate* 20, no. 3 (2010); William Cloud and Susan Roll, "Denver Housing Authority's Park Avenue HOPE VI Project: Community Impact Results," *Housing Policy Debate* 21, no. 2 (2011), https://doi.org/10.1080/10511482.2011.567288.

See, for example, Michael H. Schill et al. "Revitalizing Inner-City Neighborhoods: New York City's Ten-Year Plan," *Housing Policy Debate* 13, no. 3 (2002), doi: 10.1080/10511482.2002.9521454; Amy Ellen Schwartz et al. "The External Effects of Place-Based Subsidized Housing," (Working paper 05-02, The Furman Center For Real Estate and Urban Policy, 2005); Amy Ellen Schwartz et al. "The Impact of Subsidized Housing Investment on New York City's Neighborhoods," (Working paper 06-02, The Furman Center For Real Estate and Urban Policy, 2006); Amy Armstrong et al. "The Impact of Low Income Tax Credit Housing on Surrounding Neighborhoods: Evidence from New York City," (Working Paper 07-02," The Furman Center For Real Estate and Urban Policy, 2007); Ingrid Gould Ellen et al. "Does Federally Subsidized Rental Housing Depress Neighborhood Property Values?" *Journal of Policy Analysis and Management* 26, no. 2 (2007), doi: 10.1002/pam.20247; Cheryl Young, "There Doesn't Go the Neighborhood: Low-Income Housing Has No Impact on Nearby Home Values," *Trulia.com* (blog), November 16, 2016; https://www.trulia.com/blog/trends/low-income-housing/; and Rebecca Diamond and Timothy McQuade, "Who Wants Affordable Housing in Their Back Yard? An Equilibrium Analysis of Low-Income Property Development," (Working Paper, National Bureau of Economic Research, 2016), RePEc:nbr:nberwo:22204.

Our study aims to help fill this gap. We focus on LIHTC properties in the city of Chicago to identify the extent of income mixing in the developments, the role of local market conditions in determining that mix, and the relative impact of mixed-income versus fully subsidized properties on surrounding property values. We consider differences between LIHTC developments in relatively strong and weak local markets. Chicago's LIHTC developments tend to be located in more economically distressed communities, those with persistently high rates of poverty and unemployment. Residents of the neighborhoods containing LIHTC properties tend to be predominantly African American or Hispanic/Latino. ⁶ To the extent that mixed-income LIHTC properties can increase local property values and ultimately help attract additional investment and amenities to the areas, they can simultaneously help improve the quality of life for existing residents while making the communities more appealing to external investors.

Our analysis employs a mix of quantitative and qualitative methods, combining rigorous statistical analyses with in-depth interviews of key local developers, community leaders, and investors. Unlike many mixed-income analyses that focus on the characteristics of the people living in the developments and the benefits they may receive from such residence, we are concerned primarily with the interaction between mixed-income properties and local market dynamics. We start with a brief overview of the LIHTC program and how it has evolved within the city of Chicago. We then explore the demographic composition in a representative sample of LIHTC properties throughout the city and the factors contributing to those socio-economic patterns. Following this predominantly qualitative analysis, we pivot to a more quantitative assessment of the effects that different LIHTC properties have on surrounding property values. We augment the statistical study with brief case studies of selected neighborhoods that have a meaningful concentration of LIHTC properties; these provide a more nuanced understanding of the specific local factors that can enhance or hinder properties' spillover impacts. Finally, we discuss the policy and research ramifications of our findings.

A Brief Overview of the LIHTC Program

Established as part of the Tax Reform Act of 1986, the Low-Income Housing Tax Credit provides investors in affordable housing projects with federal tax credits equal to either 9 percent or 4 percent of the project's total eligible costs. ⁷ Investors can claim the credit each year for 10 years, provided that the project remains in compliance with various program regulations. The equity that the credits incentivize can support up to 70 percent of a project's total costs, significantly reducing the developer's financing expenses and enabling it to maintain low rents

⁶ Editors' Note: Authors elected not to use our recommended relevant terms for race/ethnicity for this volume which are black/African American and Hispanic/Latinx.

⁷ The value of the credit depends primarily on the type of project being financed; in general, new construction projects can qualify for the 9 percent credits, while rehabilitation or preservation projects tend to obtain 4 percent credits.

for the property's tenants. Costing the federal government approximately \$9 billion per year, the credits are allocated to individual projects in a competitive process administered by state housing finance agencies. LIHTC-financed properties currently account for about 90 percent of the affordable rental housing created throughout the country. Through mid-2016, more than 46,500 LIHTC-financed projects containing 3.05 million units had been placed in service throughout the country. 10

To be eligible for LIHTCs, a property must restrict rents in (a) at least 20 percent of its units to be affordable to households earning 50 percent or less of the respective area median income (AMI), adjusted by household size or (b) at least 40 percent of units to be affordable to households earning no more than 60 percent of AMI. Affordability is defined as rent equaling no more than 30 percent of the threshold income level. The developer must elect one of these eligibility thresholds at the outset and abide by it throughout the whole credit period. In each case, the LIHTC equity subsidizes the income-restricted units.

A 2018 legislative change to program rules now allows developers to select a third income eligibility option—permitting tenants earning up to 80 percent of AMI to be included in the project's affordability calculations, which implicitly encourages a broader mix of tenant incomes within the projects. Under the new rules, at least 40 percent of units have to be affordable to households whose *average* income is at or below 60 percent of AMI, with no tenant's income exceeding 80 percent of AMI. Again, the developer must select the income averaging option when applying for the credits. Given the newness of this option, it does not apply to any of the properties we have analyzed; therefore, none of the properties in our study include units whose rents are restricted for households earning up to 80 percent of AMI.

According to the <u>U.S. Department of Housing and Urban Development (HUD)</u>, about 71 percent of existing LIHTC projects are located in high-poverty neighborhoods, and about 77 percent are in neighborhoods with high proportions of minority residents. Such concentrations are logical results of the program's rules, which increase the amount of LIHTCs available (130 percent of total eligible costs instead of 100) to projects in difficult development areas or qualified census tracts—typically areas that suffer from severe economic distress and have large proportions of racial or ethnic minorities.

While the program's regulations allow for a significant proportion of the units in a given LIHTC development to be rented for the market rate, the vast majority of LIHTC-financed units historically have benefited low- and very low-income households. A 2013 analysis of 12,228 LIHTC projects in 16 different states—properties collectively containing more than 760,000

⁸ Mark P. Keightley, "An Introduction to the Low Income Housing Tax Credit," 2018, https://fas.org/sgp/crs/misc/RS22389.pdf.

⁹ "Low-Income Housing Tax Credit," Illinois Housing Development Authority, https://www.ihda.org/developers/tax-credits/low-income-tax-credit/.

¹⁰ "Low-Income Housing Tax Credits," U.S. Department of Housing and Urban Development, https://www.huduser.gov/portal/datasets/lihtc.html.

units—found that 93 percent of the units were occupied by households earning 60 percent or less of the prevailing AMI. Moreover, 40 percent of the units provided housing for extremely low-income households, those earning 30 percent or less of AMI. Still, 7 percent of the units went to households earning at least 61 percent of AMI and thus presumably did not count toward the income eligibility threshold. ¹¹

As we highlight below in our discussion of LIHTC properties in Chicago, some of the more recently developed LIHTC projects have higher proportions of market-rate units. The Illinois Housing Development Authority and other state and local housing authorities increasingly are factoring neighborhood dynamics into their allocation decisions, giving applicant projects additional points for their ability to contribute to broader neighborhood redevelopment strategies. This can potentially give more weight to projects in slightly stronger markets where other development activity is underway, and where market rents are high enough to make it financially worthwhile for a developer to include some market-rate units in the LIHTC property. Because of allocators' shifting geographic priorities and developers' ability under the new income averaging option to incorporate a wider range of tenant incomes in individual properties, an analysis of LIHTC tenant incomes and property spillover effects is both relevant and timely.

Characteristics of LIHTC Properties in Chicago

LIHTC developments in Chicago initially focused almost exclusively on housing low-income residents. Throughout much of the 1990s, nonprofit organizations developed or co-developed the vast majority of LIHTC properties in the city, designating virtually all of the units as "affordable" housing. Of the large LIHTC properties put into service in the city prior to 1998 (those with 100 or more units), only 7 percent had unsubsidized, "market rent" units. ¹²

With the beginning of the federal HOPE VI program in 1992 and the national emphasis on de-concentrating poverty, mixed-income housing became somewhat more prevalent in Chicago. A key element of the Chicago Housing Authority's Plan for Transformation (launched in 1999) entailed demolishing multi-story public housing high-rises that had been occupied solely by extremely low-income households and replacing them with developments targeting three different types of tenants. One-third of the units would be set aside for public housing

¹¹ "What Can We Learn about the Low Income Housing Tax Credit Program by Looking at the Tenants?" (Policy Brief, The Moelis Institute for Affordable Housing, New York University, 2012), http://furmancenter.org/files/publications/LIHTC_Final_Policy_Brief_v2.pdf.

¹² The LIHTC data came from three sources: HUD's "LIHTC Database Access," U.S. Department of Housing and Urban Development, http://lihtc.huduser.gov/; "Low-Income Housing Tax Credit: Previously Approved Projects," The Illinois Housing Development Authority, https://www.ihda.org/developers/tax-credits/low-income-tax-credit/; and "Multi-family production," The Illinois Housing Development Authority, https://www.ihda.org/wp-content/uploads/2015/07/mfproductionApril2016.xls.

residents, another third would be reserved for other low-income residents (those below 60 percent of the area median income), and the remaining third would be priced and targeted for market-rate households.

Concurrently, many housing developers in Chicago concluded that concentrating exclusively low-income residents in LIHTC projects in lower-income neighborhoods depressed the communities' revitalization potential. Some of these developers began to include a greater mix of incomes within newly developed and rehabilitated properties. Doing so was a way of incorporating some market-rate units in LIHTC and other affordable housing properties as a way of providing low-income but upwardly mobile individuals whose incomes increased over time with an opportunity to remain in and stabilize the properties and the surrounding communities. The approach also provided moderate-income households with an affordable, high-quality housing option. (LIHTC regulations permit resident households whose incomes rise above 140 percent of AMI to remain in the property as long as the next available unit in the development goes to an income-eligible household—i.e., one earning 60 percent or less of AMI.)

Subsequent events have increased the incentives for developers to include market-rate units. The collapse of the subprime mortgage market in the late 2000s forced many previous homeowners back into the rental market, driving up demand and thus market rents in many areas. This coincided with increasing affluence—and increased demand for market-rate housing—in some Chicago neighborhoods. ¹³ As part of its support for the Chicago Housing Authority's Plan for Transformation, the Illinois Housing Development Authority created a \$3 million annual set-aside for developers of mixed-income projects. ¹⁴

There are also some technical explanations for the increasing proportion of market-rate units in LIHTC developments. HUD changed the basis for its calculation of area median incomes, relying on annual American Community Survey data instead of extrapolations from the decennial census; during the great recession, this had the effect of lowering AMIs and thus reducing the rent that could be charged on the subsidized units. Furthermore, developers have to include a utility allowance in their determination of rents. The method for computing the allowance was based primarily on older, less energy-efficient properties, which often overestimated the actual amount and thus further reduced the amount of actual rent that could be charged for the subsidized properties. Taken together, these latter two figures lowered the

¹³ "Appendix: The Socioeconomic Change of Chicago's Community Areas (1970-2010)." Natalie P. Voorhes Center for Neighborhood and Community Improvement, http://voorheescenter.red.uic.edu/wp-content/uploads/sites/122/2107/10/Voorhees-Center-Gentrification-index-Oct-14.pdf.

¹⁴ Amy Khare, "Privatizing Chicago: The Politics of Urban Redevelopment in Public Housing Reforms," (PhD diss., University of Chicago, 2016), https://pqdtopen.proquest.com/doc/1799650562.html?FMT=ABS.

available income from the subsidized units and led more developers to explore the feasibility of including more market-rate units in the properties. ¹⁵

Because of these factors, nearly half of the large new and rehabilitated LIHTC properties placed in service in Chicago since 1998 have contained at least some market-rate units. Overall, however, the proportion of market-rate units remains low. As indicated in Table 1, only 83 of the 430 non-elderly LIHTC properties placed in service from 1987 to 2016 (19.3 percent) contained five or more market-rate units. ¹⁶ Within those properties, market-rate units comprise an aggregate 27 percent of all units. In the most "mixed" of those properties, 80 percent of the units are designated as market-rate.

Table 1:
KEY CHARACTERISTICS OF COOK COUNTY LIHTC PROPERTIES FOR NON-SENIOR CITIZENS

	All Developments	Properties with 5+ Market-Rate Units	Properties with <5 Market-Rate Units	Cook County Overall
Number of Properties	430	83	347	
Average Number of Units	94	130	85	
% Market-Rate units	7%	27%	0.2%	
Tract Median HH income	\$29,861	\$32,071	\$29,306	\$52,827
Tract Median Vacancy Rate	13%	12%	14%	9%
Tract Median Poverty Rate	33%	31%	34%	15%
Tract Median % African American ¹⁷	53.9%	63.8%	54.2%	6.0%
Tract Median Contract Rent	\$745	\$765	\$739	\$986
Tract Median Home Value	\$184,500	\$202,350	\$181,500	\$202,500

Note: Census tract data are based on American Community Survey 2012-2016 five-year estimates

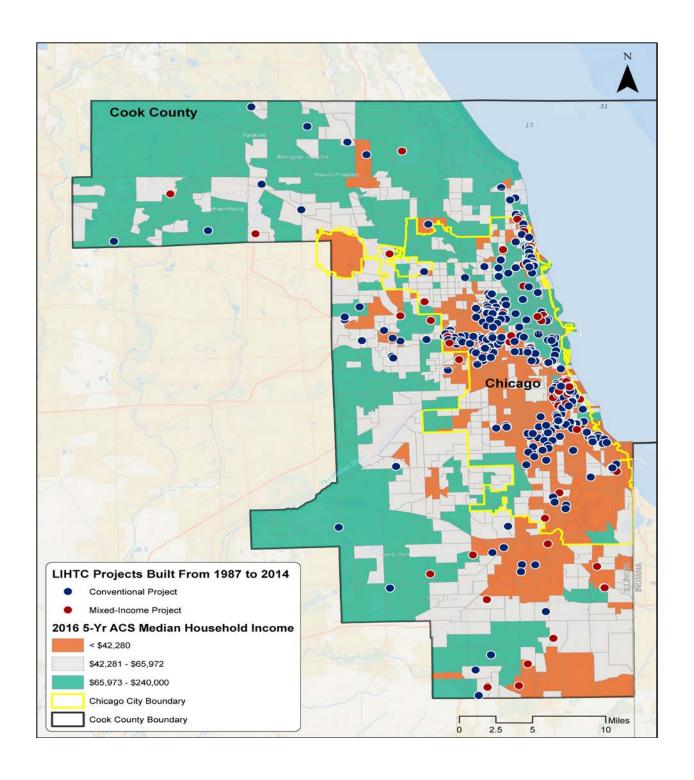
As Table 1 illustrates, Chicago-area LIHTC properties tend to be located in very low-income, predominantly African-American neighborhoods (see also map on next page). These communities have notably fewer moderate and middle-income households than other neighborhoods throughout Cook County. They also tend to have relatively weak real estate markets. Median contract rents in census tracts with LIHTC properties are more than 24 percent lower than the median rent for the county as a whole.

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¹⁵ Jerry Ascierto, "Low-Cost Housing a Challenge for Midwest Developers," Affordable Housing Finance, last modified October 1, 2007, https://www.housingfinance.com/news/low-cost-housing-a-challenge-for-midwest-developers o.

¹⁶ We have chosen 5 units as an effective threshold because that number suggests that the developer / project sponsor deliberately elected to include market-rate rental units in the property. A much larger number of properties have set aside 1 or 2 ostensibly market-rate units for the property/building manager and/or office space.

¹⁷ The proportions in the subset of tracts are greater than the universe as a whole because 33 tracts contain both "mixed-income" and "conventional" LIHTC properties.



Tenants in Subsidized LIHTC Units. As illustrated in the following representative examples, the income levels of lower-income tenants within Chicago-area LIHTC properties vary somewhat by the location of the property and the particular emphasis of the developer. ¹⁸ For example, the Holsten Real Estate Development Corporation owns multiple LIHTC properties in moderate- to middle-income neighborhoods within Chicago. In large part because of the higher resident incomes in those communities, the tenants in its subsidized units tend to be earning close to the LIHTC income limit (60 percent of AMI). Local market dynamics enable the properties to accept less-poor, but still qualifying, low-income tenants.

The nonprofit Bickerdike Redevelopment Corporation owns and manages several LIHTC developments in West Town and Logan Square, two near-Northwest Side neighborhoods that suffered from years of economic distress but that have experienced considerable gentrification in the past 10-15 years. Most of Bickerdike's LIHTC tenants qualify as very low-income. Four-fifths make less than \$30,000 annually, and 59 percent make less than \$20,000 per year. The organization deliberately sets rents so they are affordable for households at or below 50 percent of AMI. Such tenants include many older individuals who are aging in place, as well as a fair number of people working low-wage and/or part-time jobs; many of these workers saw their incomes drop dramatically during the recession. Of course, this effort to target lower-income individuals has not come without costs. Bickerdike has had to search for various types of subsidy in order to support tenants earning 30 percent or less of AMI. One approach has been to convert some buildings to project-based Section 8 developments (instead of having housing vouchers subsidize individual tenant households); this is a complicated process that often necessitates refinancing the property, among other things.

Particularly in the region's very low-income communities, tenant incomes in LIHTC-financed properties often have been much lower than the properties' developers initially anticipated. Consider the properties that Brinshore, a for-profit development firm, owns and manages in West Haven (due west of downtown) and in Grand Boulevard (south of downtown). Financed with a mix of HOPE VI, LIHTC, and federal Neighborhood Stabilization Partnership funds, the properties were designed primarily to provide affordable housing for households making 30 percent to 60 percent of AMI. The firm estimated that more than 75 percent of tenants would fall within this income range and about 20 percent would earn more than 60 percent of AMI. In actuality, the majority of residents earn 30 percent or less of AMI, and only 13 percent make more than 60 percent of AMI. Most tenants in these and other LIHTC properties the firm manages are Section 8 voucher holders, who tend to be extremely low-income. Property

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¹⁸ Because there is no single repository of property-level LIHTC tenant income data, we had to obtain that information from individual developers and property managers. Some had the information and were willing to make it available, while others did not. Those who had the information generally had it only for tenants in the subsidized units, since they have to verify those incomes for LIHTC compliance purposes. While our tenant income data are thus inherently incomplete, our conversations with local developers gave us confidence that the data generally reflect income trends in LIHTC properties throughout the market.

managers are "inundated with applications" for the properties, but virtually all of the applications come from very poor individuals and households; few applicants have high enough incomes to qualify for the properties' market-rate units.

Table 2: PROJECTED VERSUS ACTUAL INCOME MIX IN SELECTED BRINSHORE LIHTC PROPERTIES

Income Level	Initial Estimates	Actual Proportion
< 30% AMI	3.9%	55.7%
31-50% AMI	40.2%	22%
51-60%	36.3%	9.3%
> 60% (includes market rate)	19.7%	13%

Note: Proportions are based on tenant data as of mid-2016.

Based on our conversations with LIHTC developers, lenders, and allocators in Chicago, the for-profit firm's experience is typical of LIHTC developments in the city's distressed neighborhoods. Except in relatively well-off communities, tenants in the subsidized units frequently are not earning close to the maximum income level (60 percent of AMI). In the most distressed neighborhoods, it is often challenging to find renters earning 60 percent of AMI; most earn 50 percent or less.

To a large extent, the explanation for low tenant income levels lies in changing regional economic dynamics. As one developer explains, the lower middle class in Chicago "has been gutted." The minimum wage currently equates to about 30 percent of AMI, so a person earning 60 percent of AMI needs to make about twice the minimum wage. Yet many of those better paying jobs no longer exist. Technological advancements eliminated many jobs that did not require high skill levels but paid up to \$20 or \$25 per hour, including many of the positions held by less-educated middle- and lower-middle-class workers. And the market simply is not replacing those jobs in the city, according to officials working to promote development in Chicago's low-income neighborhoods. As a result, ostensibly affordable rents are still quite a stretch for many LIHTC tenants.

Market-Rate Units in LIHTC Properties. The flip side is that the low real estate values in many LIHTC neighborhoods make the properties' market-rate units quite affordable. "Market rents" in many LIHTC properties are significantly lower than the citywide average but are still a bit higher than the contract rent charged for the properties' subsidized units. Consider two representative properties in the State Street corridor on the South Side. Park Boulevard contains a mix of affordable and market-rate apartments and condominiums between 35th and 37th Streets, on the site of the former Stateway Gardens public housing property. Further south in Grand Boulevard, on the site of the former Robert Taylor Homes public housing complex, Legends South consists of five separate mixed-income apartment complexes between 38th and 44th Streets. A market-rate two-bedroom apartment in Park Boulevard rents for \$1,200 per month, about \$200 more than the rent for a subsidized apartment in the property. Market-rate one-bedroom units in

Legends South rent for \$935 per month. While this is a third higher than the \$695 charged for a subsidized "affordable" unit, it is well below the \$1,500 going rent for similar apartments elsewhere on the South Side. Further south, in the historically distressed Washington Park neighborhood, three-bedroom units in LIHTC properties developed by the St. Edmund's Redevelopment Corporation (SERC) rent for \$1,000 to \$1,200 monthly. For all practical purposes, "market rate" LIHTC units in these areas are simply "unsubsidized" or "non-incomerestricted" units.

Not surprisingly, the market-rate tenants at these and similar LIHTC properties are not significantly better off financially than their neighbors living in subsidized units. The market-rate tenants in the Grand Boulevard and Washington Park properties, for instance, are much more likely to earn about 70 percent of AMI than 100 percent of AMI or more. Those tenants tend to be city employees, public transit workers, health care providers, post office employees, and other moderate-wage workers who are looking for high-quality housing at bargain prices. There are basically three categories of tenants at SERC's properties in Washington Park: individuals on fixed incomes who do not have any additional subsidies, working people with modest incomes, and Section 8 voucher holders. Those in the first and second groups can obtain a better market-rate apartment in SERC's LIHTC developments than they could elsewhere in Chicago.

Because the market-rate rents at most LIHTC properties are substantially lower than those at comparable properties elsewhere in the city, it is relatively easy for the LIHTC properties to attract tenants for their market-rate units. The units in Brinshore's Westhaven properties, for instance, rent for about \$1.50 per square foot, whereas other new apartments in more affluent areas near downtown rent for more than \$3 per square foot. On a larger unit, the difference in monthly rent can be more than \$2,500. Brinshore's apartments are attractive, they come with free parking, they have central air conditioning, they have a washing machine and dryer in each unit, and they are in close proximity to downtown and to the Rush Presbyterian medical center. Moreover, they represent some of the only relatively new rental units in the city's low-income, predominantly African-American neighborhoods. As the city continues to recover from the recession, rents in many of its more affluent and middle-income areas are climbing. For moderate-income households, high-quality housing in a LIHTC or other mixed-income development proves very appealing.

Whether a mixed-income property in a lower-income community remains mixed-income ultimately depends on the willingness of market-rate tenants to stay. One important factor is the quality of the property's management. Each of the LIHTC developers with whom we spoke emphasized the importance of good, ongoing management in maintaining the quality of a building, attracting and retaining good tenants, and generating positive spillover benefits for its community. Good management begins with screening potential tenants. Property managers can

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¹⁹ Rents are as of mid-2016.

conduct criminal background checks of prospective residents, and they often require tenants to be drug-free and either employed or attending school. The managers set and enforce rules of tenant behavior, and they are ultimately responsible for a property's physical and social condition.

Managing a property well is not easy, especially in buildings where many of the subsidized tenants have significant personal and family challenges. One developer emphasizes that "property management is very hard work, and the people doing it tend to be underpaid and undervalued." Keeping track of the qualifications and requirements of various rental subsidy programs can be difficult. "You're asking \$14 an hour employees to understand a lot of data, a lot of different layers, a lot of different reporting requirements, and a very complicated rent structure," notes a senior official at a regional property management company.

Perhaps not surprisingly, there is a fair amount of burnout and turnover among property-level personnel, which can lead to a decline in the quality of the on-site management. One developer we interviewed believes that "people get lax and less careful, and they therefore let more problematic people in and/or don't enforce rules as diligently as they should." As standards for property maintenance and tenant behavior slip, a property can lose its luster. For developers and property management companies, figuring out how to train, support, and retain effective property managers is an ongoing concern.

In numerous LIHTC properties with a mix of subsidized and unsubsidized units, turnover among market-rate tenants tends to be lower than that among tenants in subsidized units. Within our sample, the turnover rate has been about 10 percent for market-rate units and 15 percent for the units designated as affordable. Part of the difference results from a larger proportion of tenants in the subsidized units being evicted for nonpayment of rent. Many voucher holders still struggle to come up with their required payment (set at 30 percent of their adjusted gross income), in part because they end up using their budgeted rent monies to cover other needs.

At the same time, certain properties struggle to attract and retain market-rate tenants because of the dynamics in their surrounding neighborhoods. Brinshore's Westhaven Park development is located on the site of the former Henry Horner Homes, a notoriously dangerous public housing complex. While crime in the area has declined significantly since Horner's demolition, the gangs that operated out of Horner have not left the area, and many gang members retain strong family and other ties with Westhaven Park residents. Consequently, many people still perceive Westhaven to be Horner and associate it with the public housing property's various problems. While the property is much improved from a physical perspective, crime remains a major concern—one that makes it challenging to fill the complex's market-rate units. Prospective homebuyers and market-rate renters look at Westhaven as a more affordable alternative to the hot West Loop market, but then read about the shootings that occur within the community and have second thoughts.

In short, the incomes of tenants in LIHTC properties reflect the socio-economic characteristics of the communities where the properties are located. Tenant incomes in LIHTC properties tend to be somewhat higher in gentrifying and more affluent neighborhoods than in persistently poor communities. Developers in the former areas are better able to attract tenants close to 60 percent of AMI for the properties' subsidized but non-targeted units, ²⁰ and they generally can charge higher rents—and therefore attract more moderate- and middle-income households—for any market-rate units in the properties. In contrast, the difference between the LIHTC rents and the market rents in weaker-market neighborhoods is not that great. For all practical purposes, "market rate" in these areas simply means "unsubsidized" or "non-incomerestricted." To the extent that there is income mixing within these communities' LIHTC properties, it is among low, very low, and extremely low-income tenants. "Mixed-income" LIHTC developments therefore are not bringing much socio-economic diversity and affluence to low-income communities.

The weakness of these latter real estate markets threatens the financial viability of mixed-income properties. The prevailing market rent often is less than the cost of operating and maintaining the unit; only in "hot" real estate markets is the rent on LIHTC market-rate units close to what it costs to develop and maintain the units. The LIHTC subsidy covers about 70 percent of the costs of the affordable units but does not cover any of the cost of the market-rate units. As a result, LIHTC market rate rents in economically distressed neighborhoods are "total economic losers," in the words of an affordable housing lender with extensive experience in the city's low-income neighborhoods. In the weakest markets, a property's affordable units are effectively subsidizing the market-rate units, not the other way around.

Spillover Effects of Mixed-Income LIHTC Properties

The presence of market-rate units within most Chicago LIHTC properties generally does not result in a broad mix of tenant incomes. But from a broader community stabilization and development perspective, is there a benefit to having market-rate units and tenants in the properties? To address this question, we considered the spillover impacts of the 430 non-senior citizen LIHTC developments that were put into service in Cook County between 1987 and 2016. We then segmented that universe of properties into two subsets: the 83 properties with 5 or more market-rate units, and the 347 other developments. We characterize the former group as the "mixed-income" LIHTC properties—or, perhaps more accurately, given the observed tenant incomes in the sample of properties discussed above, the partially subsidized properties.

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 $^{^{20}}$ We are distinguishing here between subsidized units with no income targeting (i.e. < 60 percent of AMI) and those specifically targeted for households further down the income ladder (< 30 percent or < 50 percent of AMI, for instance). Qualified Allocation Plans often give developers additional points for targeting a portion of their units to very low- or extremely low-income households.

Methodology. To measure changes in neighborhood conditions, we focused on differences in housing price trends within certain distance bands from the LIHTC property (0 – 1/8 mile, 1/8 – 1/4 mile, and 1/4 – 1/2 mile). While it is impossible to capture neighborhood dynamics in a single variable, residential property values serve as a useful proxy for assessing the extent of resident and investor confidence in an area and thus both its near-term desirability and its perceived longer-term economic prospects. ²¹ We obtained information on all home sales in Cook County from 1997 to 2016 from DataQuick Information Systems, geocoded the properties, and determined their distance from nearby LIHTC properties. (Many of the homes that changed hands are located within half a mile of multiple LIHTC properties.)

To assess the impact of LIHTC developments on surrounding property values, we employed a modified interrupted time series approach within the aforementioned distance bands. We compared housing price trends in the years prior to the completion of the LIHTC property with the trends subsequent to the property's completion. To account for the clustering of LIHTC developments in many Chicago neighborhoods (and the resulting influence of multiple such developments on the sale price of a single home), we included a post-development variable for each LIHTC property placed in service within a given distance band, as well as a temporal variable to reflect the number of years between the completion of the original and subsequent LIHTC property (or properties).

We also incorporated census tract and property characteristic effects in our model. Certain factors (neighborhood income and racial composition, for instance) can overwhelm a housing price trend analysis, and it is impossible both to identify and control for the multitude of neighborhood- and property-specific factors that can affect prices. In essence, our model accounts for differences in home sizes and types, neighborhood socio-economic conditions, and other particular local amenities. To get at differences across certain types of neighborhoods, we ultimately stratified our sample by census tract median income as well as by the tract's proportion of African-American residents. We then applied our model to the highest and lowest third of tracts within each category.²²

Overall LIHTC Price Effects. In general, the introduction of a LIHTC development into a Chicago neighborhood has had a positive, statistically significant effect on local property values. Prior to any LIHTC property being placed in service, values within one-eighth mile of the site were about 6.7 percent lower than the Cook County average. Once the development went into service, surrounding values increased by 10.8 percentage points relative to the county average, so

²¹ Sean Zielenbach, Richard Voith, and Michael Mariano, "Estimating the Local Economic Impacts of HOPE VI."

²² In our segmentation, high-income tracts are those with median household incomes of \$65,972 or more. Low-income tracts have median incomes of \$42,280 or less. High African-American neighborhoods are those where African Americans comprise 26 percent or more of the tract's residents. Low African-American neighborhoods have 3 percent or fewer African-American residents. An extended discussion of the model, as well as the results of the various regressions, can be found in "Too Much of a Good Thing? The Effects of Concentrated LIHTC Development on Surrounding House Prices," forthcoming.

that they were about 4.1 percent higher than average post-development. The property value impacts dissipated over distance. Home prices up to one-quarter mile from the LIHTC development increased by 10.3 percentage points relative to the county, while properties up to ½ mile away increased in value by only 4 percentage points. These findings are outlined in Table 3 below.

Far from depressing surrounding home prices, the development of subsequent LIHTC properties further boosted local prices. For example, the introduction of a second LIHTC property increased prices within the one-eighth- to one-fourth-mile band by another 1.5 percentage points. In other words, the first property increased prices by 10.3 points relative to the county average, and the second property increased values by 11.8 points. The introduction of a third LIHTC property boosted those values by another 3.6 points, so post-development values were 15.4 percentage points higher than their values prior to the initial LIHTC development.²³

Table 3:
OBSERVED HOUSE PRICE CHANGES, PRE-VERSUS POST- DEVELOPMENT, RESULTING FROM VARIOUS
LIHTC PROPERTIES

# of LIHTC Properties	Distance Band	All LIHTC Properties	"Mixed-Income" LIHTC Properties	"Conventional" LIHTC Properties
1	0 - 1/8 mile	.108 ****	.148	.108 ****
	1/8 - 1/4 mile	.103 ****	.119 **	.104 ****
	¹⁄4 - ¹∕2 mile	.040 **	.061	.044 *
2	0 - 1/8 mile	.122 ****	.200 ***	.114 ***
	1/8 – ½ mile	.118 ****	.163 ***	.114 ****
	¹⁄4 - ¹∕2 mile	.048 **	.058	.054 *
3 or more	$0 - \frac{1}{4}$.154 ****	.115	.172 ****
	1/4 - 1/2	.077 **	.075	.085 ***

^{****} significant at .001 level; *** significant at .01 level; ** significant at .05 level; * significant at .10 level

Note: Within certain distance bands, the price effects associated with each type of property are greater than the overall price effects. This results from the fact that some communities have both "mixed-income" and "conventional" properties within a short distance of each other.

As indicated in Table 3, "mixed-income" LIHTC developments—those containing at least five market-rate units—have had a greater effect on surrounding home prices than more "conventional" LIHTC properties, those with four or fewer market-rate apartments. The price benefits of the "mixed-income" properties have been greatest in closest proximity to the developments. Within one-eighth mile of a LIHTC property, the marginal price benefit of a "mixed-income" property was four percentage points greater than a "conventional" property (.148 versus .108). In areas with two "mixed-income" properties, the marginal price benefit was even greater: 8.6 percentage points (.200 versus .114). Moreover, the aggregate effect on home

²³ Because of the relatively small number of cases in which there are three or more LIHTC developments within one-eighth mile of each other, we combined the 1/8 and 1/4 mile bands in the analysis of the price impacts of three or more LIHTC developments.

prices increased with the introduction of a second "mixed-income" development – a gain of 5.2 percentage points within one-eighth mile of the two properties (.200 versus .148). With the introduction of a third "mixed-income" property, the positive impact disappears. We caution against placing too much weight on this finding, however, since there were very few cases in which three or more "mixed-income" LIHTC properties are closely clustered geographically.

Effects Across Different Neighborhoods. In many cases, LIHTC developments in Chicago either have converted a vacant lot into a residential property or transformed a deteriorating building into more productive use. Therefore, it was not surprising to find that LIHTC properties developed in the city between 1987 and 2016 generally have had positive, statistically significant price impacts. We also found that Chicago's "mixed-income" LIHTC properties have had a more positive effect on surrounding home prices than the city's more "conventional" developments. Yet that finding masks significant differences across neighborhoods, as illustrated in Table 4.

Table 4:
PRICE EFFECTS OF DIFFERENT LIHTC DEVELOPMENTS IN HIGH VERSUS LOW INCOME COMMUNITIES

FRICE ETTECTS OF DITTERENT EITHE DEVELOPINIENTS IN THIGH VERSOS LOW INCOME COMMONITIES					
# of LIHTC	Distance Band	"Mixed-Income" LIHTC – High	"Conventional" LIHTC – High	"Mixed-Income" LIHTC – Low-	"Conventional" LIHTC – Low-
Properties	Danu	Income Areas	Income Areas	Income Areas	Income Areas
1	0 - 1/8 mile	.317 ****	.058 **	.059	.176 ***
	1/8 – ½ mile	.224 ****	.042 **	.086 *	.168 ****
	1/4 - 1/2 mile	.001	.016	.100 *	.103 ****
2	0 - 1/8 mile	.321 ****	.042	.198 ***	.368 ****
	1/8 – ½ mile	.222 ***	.047 *	.230 **	.200 ****
	1/4 - 1/2 mile	.044	.024	.132 **	.152 ****
3 or more	$0 - \frac{1}{4}$ mile	.221 **	.098 **	.030	.283 ****
	1/4 - 1/2 mile	.106 **	.056 ***	.256 ****	.193 ****

^{****} significant at .001 level; *** significant at .01 level; ** significant at .05 level; * significant at .10 level

Strong Markets. "Mixed-income" LIHTC properties have had much greater effects on nearby home prices in high-income neighborhoods than in low-income ones. One potential explanation is that LIHTC developments in higher-income areas almost invariably focus on transforming tougher, more problematic properties from local liabilities into more useful assets. (More appealing properties likely have been developed or earmarked for market-rate uses.) In areas that already have comparatively strong markets, the elimination of a price "depressor" may enable surrounding values to move more quickly toward the prevailing norm. Another possibility is that the inclusion of market-rate units, and the higher rents those units can generate for the developer, may help minimize any negative perception of the property among nearby residents and potential neighborhood investors. The market-rate units also may serve as an incentive for the developer / project sponsor to ensure that the property remains in good condition going forward. To continue attracting higher-paying tenants—people who presumably have more

choices where to live—the developer / sponsor may be more rigorous in tenant screening and property management.

It is important to note that "conventional" LIHTC properties have had positive spillover price effects in these areas as well. Consider the Logan Square neighborhood, which has experienced substantial, sustained gentrification in the past 15 years. Instead of representing some of the only development in the community, LIHTC developments now have become the primary means of preserving affordability for the neighborhood's lower-income residents. There is little market or anecdotal evidence to suggest that wholly affordable LIHTC properties have had any negative spillover economic effects. Some of Logan Square's more affluent newcomers challenged the development of recent LIHTC properties, including the 61-unit, fully affordable Zapata Apartments near Palmer Square, fearing negative effects on local house prices. Yet there were few complaints once the properties were completed and leased up. The Palmer Square area has experienced continued investment, with no discernable depressing price effects, and has transformed from a "sketchy" area (to quote one resident) into a development anchor for the western part of the community.

Weak Markets. Turning to LIHTC property impacts in lower-income areas, we found that "conventional" LIHTC developments, those with few or no market-rate units, have had a greater effect on property values than their "mixed-income" counterparts. This is puzzling. In theory, the inclusion of market-rate units should have marginally greater benefits for the surrounding community. Market-rate tenants typically have higher incomes than subsidized tenants, and their additional purchasing power can help support local retail and other amenities. Higher-income individuals also tend to be more politically and civically engaged, all things being equal, which could result in additional pressure being placed on local officials to improve and maintain the local infrastructure and to ensure public safety. And indeed, "mixed-income" LIHTC developments in low-income areas have larger effects on nearby property values than do "conventional" LIHTC developments located in high-income communities.

What explains the counterintuitive price effect finding in low-income neighborhoods? Multiple explanations are likely. First, the market dynamics are different in low-income areas, where prevailing prices are already low. A problematic property may not have as strong a negative effect on surrounding values, simply because of the overall weakness of the real estate market. Consequently, eliminating the liability may not result in as much of a benefit, simply because there is a lower price "ceiling." While responsible developers are likely to take care in their tenant screening, there is less potential economic risk from losing a market-rate tenant in a low-income area than in a high-income area, because of the differences in rents.

Second, "conventional" and "mixed-income" LIHTC properties tend to be located in different parts of the city. As highlighted in Table 1, LIHTC properties that exclusively (or almost exclusively) target households at or below 60 percent of AMI tend to be located in higher-poverty communities. They also are more likely to have been developed in the 1980s and

1990s, when they often represented some of the only new construction the communities had seen in years. Affordable housing development was some of the only noticeable residential real estate activity in areas such as Logan Square and Washington Park in much of the 1980s and 1990s. Hispanic Housing Development Corporation and Bickerdike (both nonprofits) were two of the only developers active in Logan Square during the period. The quality of the organizations' properties, coupled with the lack of any other significant development in the area, may have magnified the impact of those LIHTC projects. Even though they were 100 percent affordable, those early projects helped convince nearby residents to invest in their own homes and encouraged others to re-consider the community as a place to live.

Third, there may be a higher amount of turnover among market-rate tenants at LIHTC properties in lower-income areas than in higher-income ones. This greater churn could limit the economic, political, and social capital benefits that more affluent households frequently generate for a community. (We do not have the data either to support or refute this hypothesis, however.)

An even more counterintuitive finding is that the impact of "mixed-income" LIHTC developments on home prices in low-income communities has increased with distance from the property. We suspect a couple of factors are at play here. There are far fewer "mixed-income" LIHTC properties than "conventional" LIHTC properties in the low-income communities (49 v. 236), and the areas where those "mixed-income" properties are located may be subject to particular (idiosyncratic) influences that have not been accounted for in our model. It also is possible that some of the lower-income neighborhoods abut communities with stronger real estate markets, and those external dynamics may be affecting home prices near the community boundaries (further from the LIHTC properties). Consider the dynamics along the State Street Corridor in Grand Boulevard, an area that houses both the Park Boulevard and Legends South mixed-income complexes. While both developments are attractive, fully or near-fully occupied, and well-managed, neither has sparked much additional commercial or residential investment.

Despite its reasonably favorable location—residents can access the Loop easily via the expressway or the green "el" line—the State Street Corridor simply does not have the appeal of other communities on the city's South Side. Hyde Park has the University of Chicago and a well-established intellectual community. North Kenwood-Oakland sits near Lake Michigan and Hyde Park, and it has a longer tradition of resident engagement. The Bronzeville area in the eastern part of Grand Boulevard benefits from a tradition of African-American arts and culture, as well as a series of graceful greystones. In contrast, the State Street Corridor has struggled economically for years, with a much poorer and less stable population than other neighborhoods in the area.

Thus far, the State Street Corridor has been unable to support significant additional development. Market-rate two-bedroom apartments in the area currently rent for about \$1,200 per month, only about half of the roughly \$3 per square foot that local developers claim is necessary to support unsubsidized development. Not surprisingly, LIHTC and similarly

subsidized housing remains the only economically viable residential development in the area. The local alderman has pushed for additional homeownership, but the likely sale prices cannot justify the development costs.

The State Street Corridor also has struggled to attract commercial and retail activity. The demolition of the Stateway Gardens and Robert Taylor Homes public housing complexes resulted in a significant loss of population in the area, and residential density remains low more than a decade later. (There currently is enough vacant land along the corridor to support small farms.) Retail and other consumer amenities depend on an area's demographics, and the State Street Corridor does not yet have enough "housetops" to sustain such businesses.

Predominantly African-American Neighborhoods. Chicago historically has been one of the country's more racially segregated cities, with strong spatial correlations between race and income. (Predominantly African-American neighborhoods tend to be disproportionately poor.) Thus it is not surprising that an analysis of LIHTC properties' spillover impacts in low-minority and high-minority neighborhoods found results—and disparities—similar to those in high-income and low-income communities, respectively. As Table 5 illustrates, "mixed-income" LIHTC developments have had greater price effects in (predominantly higher income) areas with relative few African-American residents than in lower-income areas with substantial proportions of such individuals. "Conventional" developments have had greater impacts in the largely African-American areas than "mixed-income" developments.²⁴

Table 5:
OVERALL PRICE EFFECTS OF LIHTC DEVELOPMENTS IN COMMUNITIES WITH HIGH VERSUS LOW
PROPORTIONS OF AFRICAN-AMERICAN RESIDENTS

Distance Band	"Mixed-Income" LIHTC – High Af-Am Areas	"Conventional" LIHTC – High Af-Am Areas	"Mixed-Income" LIHTC – Low- Af-Am Areas	"Conventional" LIHTC – Low- Af-Am Areas
0 - 1/8 mile	.062	.147 ***	.250 ****	.053 **
$1/8 - \frac{1}{4}$ mile	.098	.124 ***	.195 ***	.045 **
¹⁄₄ - ¹∕₂ mile	.141	.082 **	.064 *	.004

**** significant at .001 level; *** significant at .01 level; ** significant at .05 level; * significant at .10 level

²⁴ While our findings for LIHTC properties in communities with low proportions of African Americans are

of the population, compared to 241 conventional projects in these areas. Simply put, the substantial majority of LIHTC developments in heavily African-American neighborhoods are designed almost exclusively as subsidized affordable housing.

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statistically significant and generally consistent with what we found more broadly, it is important not to keep in mind that the analysis is based on a small number of subject properties. Only 16 LIHTC properties in Cook County are located in census tracts where African Americans comprise 3 percent or less of the population. At the same time, there are only 62 "mixed-income" LIHTC properties in tracts where African Americans represent at least 26 percent of the population, compared to 241 conventional projects in these areas. Simply put, the substantial majority of

Implications

Our study has focused on the characteristics and impacts of a subset of Cook County mixed-income developments in which income mixing was not the primary policy objective. These LIHTC properties contain a meaningful number of market-rate apartments. Unlike HOPE VI redevelopments and other affordable housing developments that deliberately aim to achieve a mix of tenant incomes, the LIHTC properties are designed primarily to create and/or preserve affordable housing for low-income renters. They may or may not have specific income targets within their subsidized units, but any unsubsidized units have neither income targets nor rent restrictions.

While Chicago and surrounding Cook County reflect many of the dynamics affecting urban America, they are not necessarily representative of conditions elsewhere in the country. Thus, it is important to examine the tenant characteristics and spillover effects of various "mixed-income" LIHTC properties in other markets to ensure the applicability of our findings more broadly. (We are currently conducting similar research in Los Angeles.) With that caveat, we feel that our Chicago analysis has several implications for developers, investors, and policy makers:

The financial realities of LIHTC developments – including the availability of subsidies and prevailing market rents – may significantly constrain a developer's ability to achieve a desired mix of incomes.

The ultimate mix of subsidized versus unsubsidized units in a given development depends on many factors specific to the development and its market, including:

- The strength of the market. Are market-rate rents substantially greater than LIHTC rents? Is there substantial demand for more higher-end units in the area, with corresponding options for greater economic returns for the developer?
- The mission of the developer and its desire/need for an economic return.
- The type of housing credits available for the project, as 4 percent credits tend to attract less equity than 9 percent credits.
- The availability of other (non-LIHTC) subsidy for the property.
- Whether the property involves new construction or rehabilitation, and if the latter, whether it is trying to preserve existing affordable housing.

From an economic feasibility perspective, there may well be situations in which more market-rate units are necessary within a property to preserve the maximum number of affordable units. But from a community development perspective, we see little compelling evidence to suggest that market-rate units should be a regular feature of LIHTC properties.

Limits on a property's total number of developable units may force hard choices on the amount of income mixing within those units.

Physical site constraints, zoning restrictions, and/or financial considerations may limit the number of units that can be developed on a given site. Including "market-rate" units in such developments may result in fewer subsidized units being built. If market-rate rents are high enough, though (likely only in strong or gentrifying neighborhoods), the presence of such units may generate enough cross subsidy for the property to support more very low or extremely low-income tenants in the affordable units. Developers and policy makers need to be mindful of these tradeoffs and be explicit about their specific goals for a given property.

The actual mix of incomes within a LIHTC property depends largely on micro-market conditions.

In Chicago, and likely in other cities with a range of micro-markets, tenant incomes in LIHTC properties generally reflect the socio-economic characteristics of the communities where the properties are located. In more affluent areas, the subsidized units tend to house residents whose incomes are close to 60 percent of AMI. Market-rate units tend to house more moderate-and middle-income households. In poorer areas, virtually all LIHTC residents tend to qualify as low-income. Tenants in subsidized units often have incomes at or below 30 percent of AMI, and the market-rate units tend to attract households earning at most 70 to 80 percent of AMI. These income ranges are nowhere near as broad as those in many HOPE VI developments, where stated policy aims included income mixing in addition to replacing distressed public housing.

Recent programmatic changes to LIHTC may expand in-building income mixes.

The recent changes to the LIHTC program may promote greater income mixing within "conventional" properties, albeit within a range of well below 30 percent of AMI to up to 80 percent of AMI. As detailed earlier, program regulations now allow subsidized units to support households earning up to 80 percent of AMI—provided that the average tenant income in the subsidized units is at or below 60 percent of AMI. This has the potential to create more affordable housing options for low-income households (those in the 60 to 80 percent of AMI range); many of these people have full-time jobs and bring stability to the community. At the same time, the new regulation promotes greater housing options for very and extremely low-income individuals, those earning 40 percent or less of AMI. This may help reduce the dependence of these individuals on Section 8 vouchers in order to afford LIHTC units. The ultimate outcomes will be the subject of future research.

In weak micro-markets, LIHTC properties are unlikely to attract a broad mix of incomes without substantial incentives to attract higher-income individuals.

The economic weakness of lower-income neighborhoods often makes them relatively unattractive to households that have a wide range of choices as to where to live. In Chicago, neighborhoods such as Washington Park and the State Street Corridor have little retail and few amenities, at least in comparison to other south side neighborhoods such as Bronzeville, Hyde Park, and Kenwood. Rents in these areas are affordable to low-income people, but not low enough to attract and retain higher-income people who have the financial wherewithal to afford more appealing areas. It is unclear what, if any, subsidy would be sufficient to attract these more affluent individuals into weak-market neighborhoods. Even the market-rate townhomes associated with the Cabrini Green redevelopment, in a highly desirable area just north of the Loop, were initially priced at a 25 percent discount to other comparable units in the area to attract the desired tenants. To attract more affluent residents to LIHTC properties in areas such as Washington Park, developers likely would have to lower the "market" rents even further. But such an approach would further jeopardize the financial viability of these already fragile projects.

Allocating additional resources to attract higher-income people to LIHTC properties in weak markets therefore seems counter-productive. There is no evidence to suggest that more mixed-income LIHTC developments in these areas have greater spillover effects than wholly subsidized properties. On the contrary, we find that LIHTC properties in low-income areas that are comprised of entirely (or almost entirely) subsidized units have about twice the impact on nearby prices as do LIHTC properties with a mix of subsidized and market-rate units. And from an equity perspective, it is hard to justify additional subsidy to attract more affluent households when there remains a substantial shortage of housing affordable to low-income households.²⁵

In strong micro-markets, within-building income mixing is easier to achieve for LIHTC properties. But in light of the need for affordable units in these communities and limited development capacity, traditional LIHTC developments may be more appropriate in these areas to ensure that lower-income people can continue to live in the communities.

In stronger, often gentrifying markets such as Logan Square, it is easier to attract more affluent households to market-rate LIHTC units. These mixed-income developments have greater spillover effects on surrounding house prices than wholly subsidized properties. At the same time, these gentrifying communities typically have a growing number of quality housing options for higher-income households and an increasing shortage of affordable housing options

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²⁵ DePaul's Institute for Housing Studies calculated that demand for affordable housing in Cook County in 2016 exceeded the supply by about 182,000 units. See "2018 State of Rental Housing in Cook County" (April 5, 2018); available at https://www.housingstudies.org/releases/2018-state-rental-housing-cook-county/

for low-income households. A LIHTC development often is one of the few mechanisms for creating and/or preserving affordable housing.

We therefore would argue that policy-makers encourage LIHTC properties in more affluent areas to contain more subsidized units instead of fewer. As we have found, LIHTC developments containing only subsidized units have a demonstrably positive effect on surrounding property values in both weaker and stronger micro-markets. In many weaker markets, the spillover effects of subsidized-only properties are greater than those of properties with a substantial number of market-rate units. In more affluent communities, more mixed LIHTC properties tend to have greater effects on property values. Yet given the need for affordable housing in these appreciating markets, we believe that the presence of additional subsidized units in a development is worth the trade-off of lower marginal property value increases.

LIHTC developments can help achieve a greater mix of resident incomes within a neighborhood.

The LIHTC program was not designed to promote mixed-income communities, yet individual developments can help foster that outcome. An entirely subsidized property can help ensure the continued availability of affordable housing for low-income residents of gentrifying areas, helping to alleviate the threat of displacement. All types of LIHTC properties have positive spillover effects on nearby property values. Such impacts can help strengthen weaker markets by increasing the net worth of existing owners and potentially helping to attract new residents with a wider range of incomes. In short, LIHTC developments can be important components of broader strategies to promote mixed-income neighborhoods. Trying to achieve a broader mix of incomes within specific LIHTC properties, however, is unlikely to be achievable (or economically feasible) in most of the communities where such developments are likely to be located.