Long-Term Low Income Housing Tax Credit Policy Questions

Joint Center for Housing Studies of Harvard University

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Building Knowledge & Sharing Solutions for Housing & Urban Policy

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Building Knowledge and Sharing Solutions for Housing and Urban Policy

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Long-Term Low Income Housing Tax Credit Policy Questions

The Joint Center for Housing Studies of Harvard University

Looking beyond any lingering problems in investment demand for tax credits left over from the broader financial crisis, there are a number of longer-term questions about the future of the Low Income Housing Tax Credit (LIHTC) program that policy makers, advocates, policy analysts, and industry leaders have raised. This paper is a follow-up to a companion paper¹ that discusses in more detail the disruption in the LIHTC market that resulted from the financial crisis, the implementation and effectiveness of the two stopgap measures promulgated in the American Recovery and Reinvestment Act (ARRA), and proposals for supporting investor demand and pricing going forward.² Like that paper, this one is based on interviews with over two dozen industry experts, a review of analyses conducted by others, and a focus session with leading stakeholders held in November 2009. This paper additionally benefits from the input of industry experts during a teleconference in December 2009. Though the intention of this brief paper is to discuss long-term questions that have been posed concerning the future of the LIHTC program, further analysis would be required before having sufficient information to act on any of them.

This paper has three parts: first, a discussion of LIHTC policy issues, including program targeting; second, an examination of current issues surrounding tax credit investment demand; and third, a brief discussion of ongoing capital needs and asset management for LIHTC properties. It is not intended to be an exhaustive review of the issues but more an enumeration based on interviews and a review of the literature.

¹ Joint Center for Housing Studies (2009).

² The prior paper includes a discussion of several industry consensus legislative proposals. These include extending the carry back for housing tax credits to five years; extending the Tax Credit Exchange Program for another year and making it applicable to four percent credits; and relaxing passive loss rules to allow some pass-through entities and closely held corporations to invest in housing credits. In the time that has elapsed since the earlier report, Congress has considered several of these proposals but failed to pass them.

As might be expected, there are differences of opinion about what modifications to the program may be desirable and the policy aims to which the program ought to be directed. Inasmuch as possible, we have tried to make plain what the intention of the program was so that debates over alternative policy aims—from deeper targeting to more flexibility to create mixed income developments to pursuing other aims like transit-oriented development and inclusive development—are placed into context. It is also worth noting that states are granted considerable flexibility in establishing policy priorities, which they exercise through their Qualified Allocation Plans.

Policy Questions

The consensus among our industry informants is that the LIHTC program is a durable, politically resilient, and popular program that benefits significantly from its enabling legislation as part of the tax code, its wide geographic scope, and its state-level implementation. Many of our private-sector informants were strong champions of the LIHTC program. On the other hand, some academic and government reviewers expressed misgivings about the efficiency of LIHTC. Most of these had to do with concerns about the relative merits of housing production programs versus demand-side subsidies such as housing vouchers.

Where does LIHTC fit in national affordable housing policy? The LIHTC is the nation's primary program for the creation and preservation of rental housing that is affordable to low income households (households with incomes at or below 60 percent of local area median incomes) or very low-income households (households with incomes at or below 50 percent of local area median incomes). States are given broad discretion in deciding whether to give preference to particular types of projects, target populations, and locations when deciding how to allocate tax credits and these are encapsulated in Qualified Allocation Plans, which are made public and involve a public process in their formulation.

Because it is extremely low-income households (households with incomes at 30 percent of local area median incomes) who typically have the greatest housing cost burdens and for whom the shortage of affordable housing is most acute, ³ some have called for program modifications that would permit the LIHTC program to serve these even lower income groups without having to layer in additional subsidy sources. But this was not the intention of the program and, while as yet unfunded, a National Housing Trust Fund has been established to provide capital subsidies for new construction and preservation sufficient to serve extremely low-income renters without additional subsidies. In addition, our informants noted that LIHTC can be successfully used as one component of a layered subsidy approach which allows LIHTC housing to be offered to extremely low income households. Similarly, informants noted the importance of LIHTC in supporting housing for populations with special needs.

Given its focus on producing and preserving affordable rental housing, many saw the LIHTC program as a useful tool in efforts to spark community revitalization. By directly addressing the need for substantial rehabilitation of properties in low-income communities, the LIHTC not only brings investment to low-income communities that might not otherwise have received it, it can spark additional investments in these communities by helping increase values in nearby properties and preventing them from being lost from the stock.⁴ Going further, some of the people we spoke with argued that preserving good quality housing for low income families is worthwhile in and of itself.

While one informant expressed concern about the efficiency of the program in terms of the cents on the dollar in equity that the program delivers to properties—a concern raised by several economists in papers written about the program dating back to the 1990s—the return to investors fell and the share of each tax credit dollar spent on construction increased in the years leading up to the global financial crisis.⁵ During the crisis prices fell, but they improved as the crisis abated. Furthermore, most of those we interviewed

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³ McClure (2010); Nelson (1994).

⁴ Ellen (2008).

⁵ Ernst & Young (2009).

felt that the discount on the dollar that investors receive when purchasing tax credits from project developers and syndicators is well worth it because of the benefits that selling them to raise equity for LIHTC projects brings. These include the private-market discipline the LIHTC program provides in the construction, renovation, and asset management of subsidized housing, as well as the fact that taxpayers do not pay for failure because tax credits are recaptured if projects fail. In addition, although the lifecycle cost of LIHTC units appears to be higher than the comparable cost for Section 8 vouchers, these conclusions are predicated on certain assumptions (for example that market rents do not appreciate by more than an average of 3 percent a year). And the actual cost of the LIHTC program to the federal government is much lower than in the voucher program due to the shallower targeting of assistance.

While concerns have been raised on theoretical grounds that subsidized housing may not add to the total supply of housing—but instead simply "crowd out" unsubsidized production—empirical support for this contention is weak. Murray found that the type of program matters when he estimated the impact of subsidized production on total housing supply, with public housing adding to the total supply but programs like Sections 235 and 236 not. Sinai and Waldfogel, on the other hand, found that subsidized housing overall does add to the total supply of housing. The one recent study that looked at potential crowding out effects of the LIHTC program specifically was inconclusive, finding the evidence was not strong enough to reject alternative hypotheses. Importantly, none of these studies examine the more central question of whether subsidized housing may add to the supply of affordable housing even in cases where it does not add to the total supply of housing.

Still, subsidized production programs are not without their critics.¹⁰ Critics of federally assisted affordable housing production argue that income support or demand-side subsidies, i.e. vouchers, are more flexible and cost-effective than supply subsidies and are

⁶ DiPasquale, Fricke, and Garcia-Diaz (2003).

⁷ Murray (1999).

⁸ Sinai and Waldfogel (2005).

⁹ Malpezzi and Vandell (2002).

¹⁰ Glaeser and Gyourko (2008); Quigley (2007).

more likely to be deployed to meet the greatest housing needs. Proponents of supply-side subsidies point to the fact that they can spark neighborhood revitalization and augment the overall supply of affordable rental housing, helping to reduce market-wide rent increases that might otherwise occur and that, unchecked, would drive up both rents for many households and the costs of the voucher program (because it is pegged to fair market rent levels).¹¹

Some have questioned whether LIHTC production is successful enough in giving tenants access to affordable housing in moderate and higher income neighborhoods. Despite this concern, the LIHTC program has a better record than public housing and older project-based assistance programs in providing housing outside of areas of concentrated poverty. One informant noted that building any kind of high-density rental property, including low-income housing, can be difficult in low-density suburbs where poverty rates are low, and this makes it more challenging to get LIHTC housing built in these areas. And while the neighborhoods served by the LIHTC program in the 1990s had a disproportionately high share of black residents, the program may have positive benefits with respect to racial integration in these neighborhoods over time.

To make sure that subsidies are being directed where they are most needed to augment supply, some have said the tax credit program should concentrate on providing housing outside of high-poverty areas where there is an undersupply of similar housing, or for specific types of housing that may be undersupplied such as for large families and special needs populations. ¹⁶ But, as noted, the spatial distribution of LIHTC housing more closely matches the overall distribution of rental housing than other supply subsidies like public and older assisted housing, which tend to be more concentrated in areas of high poverty than LIHTC properties. In addition, as one reviewer stressed, LIHTC housing, which is required to accept voucher holders, can improve opportunities in areas with low

¹¹ See for example Apgar (1990).

¹² Cummings and DiPasquale (1999).

¹³ Freeman (2004).

¹⁴ Freeman (2004).

¹⁵ Horn and O'Regan (2010).

¹⁶ Khadduri, Burnett and Rodda (2003).

voucher success rates. Indeed, a recent study found that the LIHTC program creates important opportunities for voucher holders to secure housing in some areas.¹⁷

A number of discussants felt that all LIHTC construction and rehabilitation, whether targeted to specific areas or populations or not, serves the public interest by augmenting the supply of quality affordable rentals, and that decisions about where to direct LIHTC funding are best left up to the states which allocate the tax credit.

Should the tax credit be made flexible enough to reach those with the lowest incomes or encourage mixed income developments? Because of LIHTC's flat rent structure and relatively shallow subsidy (LIHTC rules mandate that rents be affordable to those earning 50 or 60 percent of area medians), as noted, the program was never designed to reduce the share of income that households with extremely low incomes must allocate to housing to 30 percent without additional subsidies. Nonetheless, helping the lowest income households is a stated goal of the program and it is often required or requested in state allocation plans. To reach these households, project sponsors usually need multiple layers of subsidy, which can be complex to arrange.

Some have suggested improving the incentives for mixed income housing to allow for deeper income targeting by giving properties flexibility to set rents so that only average rents have to fall below rent caps. Another idea that has been proposed to achieve these aims is to allow a certain number of market rate units to be included in the eligible basis of a property as defined for tax credit purposes in exchange for other units that are more deeply targeted. However, one state housing official felt that although these approaches have appeal, they would be difficult to implement. Several who commented said that it is unrealistic to expect a capital construction subsidy to metamorphose into ongoing operating support for units with extremely low rents and that it would be undesirable to press the program in this direction.

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¹⁷ Williamson, Smith, and Strambi-Kramer (2009).

Khadduri argues that one potential way to allow deeper targeting and encourage mixed income housing is to continue to improve the interoperability of the LIHTC and Housing Choice Voucher programs, combining the advantages of production and tenant-based subsidies. 18 When some units in LIHTC developments are set aside for voucher holders, it provides adequate operating subsidy to serve these voucher holders and gives them the benefits of living in a mixed-income development. Setting aside some units for voucher holders also improves the availability of units for voucher holders. At the same time, letting LIHTC rents stay at maximums close to market rents lets tenants and properties benefit from owners' incentives to compete for tenants. By not requiring rents that are far lower than market rate for low-income households, a split-subsidy approach also encourages building affordable housing in more desirable neighborhoods where prevailing rents are well above what extremely low-income households would be able to afford without a voucher. Thus, Khadduri argues that LIHTC should perhaps be explicitly understood and used, even more than it is today, as part of a split subsidy approach. Depending on the type of vouchers used, making this strategy easier to pursue might require further adjustments to HUD program rules in addition to those enacted in the Housing and Economic Recovery Act of 2008 (HERA). For example, awarding projectbased vouchers entails a lengthy review process before construction starts, and one reviewer noted this can cause challenges in meeting LIHTC deadlines.

Should the LIHTC program provide special incentives to produce housing in middle and higher income communities? Building LIHTC developments in affluent neighborhoods, though expensive, is seen by some as desirable because it usually gives tenants access to better schools and might improve job prospects. Whether it is important to provide low-income assisted renters with housing in upper and middle income neighborhoods has been a subject of much debate, however, with controlled studies of renter mobility using vouchers yielding mixed results as to the benefits for those who move from high to low poverty areas. ¹⁹ At present, most LIHTC developments are in

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¹⁸ Khadduri and Wilkins (2008).

¹⁹ Goetz and Chapple (2010).

neighborhoods with lower incomes and home prices relative to local metropolitan area medians.²⁰

There have been a number of suggestions for ways to encourage more development in higher cost areas, including sites near transportation corridors and public transit that are expensive and difficult to acquire. One method is to provide more flexibility around eligible basis at the project level to make development in these sorts of areas financially viable. This was partly achieved by HERA, which allowed states, for the first time, to provide a 30 percent "basis boost" for individual projects at their discretion. Previously this basis boost was only available in certain federally designated areas called "qualified census tracts."

A proposal that goes much farther would leave states entirely free to decide what should be included in the eligible basis, including allowing them to support land costs, which are the key drivers of differences in total project costs at different locations within states.²¹ Some states have already begun to use land costs as a factor in awarding basis boosts. One interviewee suggested allowing the use of nine percent credits for acquisition as well as new construction. This would provide a de facto land subsidy for the purchase of existing housing. These suggestions, however, would entail large changes to the LIHTC program, which from its inception was modeled after tax policies that exclude land from depreciable basis.

Some of our informants felt that building LIHTC housing in areas with low job growth, high multifamily vacancy rates, or market rents at or very close to LIHTC rent levels is undesirable. Their concern is that building additional rental units under these conditions may compete with existing housing (with the exception of housing that is designed to serve extremely low-income households or to meet needs in underserved submarkets such as housing for the elderly or disabled). Others suggested that to the extent that the LIHTC program is used in such areas, it is usually directed toward preservation and

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²⁰ Freeman (2004).

²¹ Khadduri and Wilkins (2008).

rehabilitation of existing housing, and that recapitalizing the existing subsidized stock is an important use for the credits in these areas to stabilize them or attract new investment. Indeed, many argued that it is appropriate and in fact often important to direct LIHTC funding to low-cost areas in order to fight neighborhood distress or provide better quality affordable rental housing in the communities where low-income people are already located. And some recent evidence suggests that LIHTC investment can help strengthen weak housing markets, especially if it is part of a neighborhood revitalization plan that is comprehensive in scope, targeted to a limited area, and includes efforts to build neighborhood capacity in planning and community development. ²² In fact, an increasing amount of evidence is accumulating that concentrated public investment in housing under the right conditions can help turn around housing markets by lifting values in surrounding areas. ²³

What are the benefits and drawbacks of the LIHTC program structure? The LIHTC program falls under the Treasury's purview, rather than the Department of Housing and Urban Development (HUD). The separation between the funding mechanism at the federal level and housing policy development and implementation at the state and local level is a hallmark of the LIHTC program and is viewed positively by nearly all our interviewees. The structure of the program is perceived by many as one which enables states to more easily innovate and make changes to reflect shifting local housing priorities within the existing program design.

Because it is a provision of the tax code, the LIHTC program is also less hemmed in by federal rules and regulations than the many other housing programs which rely on appropriations for funding. While it is difficult to change the program at the national level without new legislation, and there is typically a lag in getting changes up and running because states must first interpret and then respond to them, the devolution of authority in the program structure means that states can adjust their LIHTC policy priorities annually through their Qualified Allocation Plans.

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²³ Ellen (2008).

²² Walker (2010); Ellen, O'Regan and Voicu (2009).

Though the fact that the LIHTC is a tax program is viewed favorably, the LIHTC was one of the first general business tax credits. Thus, its enabling statutory language is more complex than that of newer credits. This bears on the competitiveness of the LIHTC in attracting investment. One person interviewed noted that it could be made simpler by making the language emulate that of the tax credits that followed it. In particular, the legislation could be simplified to include only the state allocation formula, income and rent limits, and recapture rules, with all other rules provided in regulation and administrative guidance. Opening the program rules up to change and reinterpretation every year, however, could make it more difficult for businesses to plan. Moreover, many of the program improvements and simplifications requested by industry practitioners were introduced in HERA, though they have yet to be fully tested or appreciated due to current market disruptions.

Although LIHTC funding can be used as a standalone capital subsidy for affordable housing, state and local decisions to award more points to proposals that bring rents down to a level that those with extremely low incomes can afford means that most projects need multiple forms of subsidy. On its own, the capital construction support provided by LIHTC was not intended to be, nor without additional subsidies is it enough, to offer rents that are affordable at 30 percent of income to extremely low-income households. Thus, deeply targeted projects must depend on a number of other funding streams.

While using multiple sources of funding generates multiple stakeholders and strengthens local support and oversight for a project, it also makes managing applications, operation, and compliance more difficult. It causes financing and construction delays, and increases ongoing coordination difficulty and expense. Relying on multiple sources of funds increases the risk that one will fall through and jeopardize an entire project. Some suggest that allocating agencies should avoid layering multiple program requirements on LIHTC housing, and should reduce reliance on additional subsidy sources. On the other hand, others suggest instead that states should facilitate one-stop shopping for project sponsors by developing a coordinated application process for multiple programs.

Is the LIHTC program transparent enough to support housing policy research and evaluation? As a provision of the tax code, the LIHTC program has far fewer reporting requirements than an appropriated program of similar size. This has simplified administration, but has resulted in less publicly available information on LIHTC than on many other housing programs. The lack of tenant information, in particular, has been criticized for inhibiting basic research, outcome measurements, and policy experiments. Indeed, until required by HERA, there had been no information collected systematically by the federal government about whom the program served. This was a source of concern among fair housing advocates. In a similar vein, one informant expressed a wish for greater transparency on tax credit pricing and syndication costs. Such transparency might not be that useful, however, because the specifics of each project that bear on pricing and costs would make it difficult to draw many reliable inferences from differences in pricing and fees. Going forward, since HERA mandated that HUD collect tenant demographic data from state housing agencies, HUD is in the process of implementing this directive. Once tenant data is compiled there will likely be a wealth of new housing research evaluating the LIHTC program from federal and university researchers which may yield new insights.

Some people suggested that the federal government, in partnership with state housing finance agencies, play a more active role in supporting and encouraging research, evaluation, and information sharing at the state level. Nevertheless, the HUD LIHTC database, which is the primary database available to researchers, does give information about the number and location of tax credit units, and researchers have used this to make inferences about the effect of tax credit housing on neighborhood poverty rates and housing prices.²⁴

What additional federal policy objectives could the LIHTC program serve? Though federal directives to states concerning priorities for awarding tax credits are enshrined in

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²⁴ Ellen, O'Regan, and Voicu (2009). For other examples of locational analyses, see Freeman (2004); Khadduri, Buron, and Climaco (2006); McClure (2006); and Horn and O'Regan (2010).

legislation, it is possible to make changes to these priorities through an act of Congress. For example, HERA required for the first time that state housing agencies consider both the energy efficiency of proposed LIHTC developments and their historic character in awarding credits. Currently, the LIHTC program is primarily responsive to local rather than national housing priorities.

It would be possible for the federal government to use LIHTC as one of a number of tools to advance other items on a national housing agenda. Using the program to support green building, as was done through the HERA legislative changes, is one example. Among others that are often mentioned—and that many states have already begun to factor into their state allocation plans without the being instructed to do so through federal legislation—are transit oriented development (high-density, walkable, mixed-use developments near public transit) and stabilizing communities hit hardest by foreclosures. Some advocates have also called for using tax credits to promote inclusive communities by increasing socioeconomic, racial, and ethnic diversity within neighborhoods.

There are, however, significant drawbacks to responding to short-term concerns or rapidly changing priorities through federal legislation. Many of our discussants felt that the relative simplicity of the program is what has made LIHTC successful. As cumbersome as it is to add LIHTC program rules at the federal level, it is just as difficult to simplify or remove program directives. Thus, over time, it is possible that an activist policy agenda for LIHTC at the federal level might constrain state actions, increase states' administrative burdens, and reduce local flexibility, while still failing to keep pace with changing federal priorities. A central feature of the LIHTC program to date has been the authority it delegates to states to pursue objectives through Qualified Allocation Plans developed in a public process. Many of the items that advocates have suggested be built into the program at the national level have, over time, been adopted by many states. A good example is the elevation of a housing preservation agenda in many states without a change in federal requirements.

Investor Demand and Tax Credit Pricing

Despite a precipitous drop in investor demand for tax credits as the broader financial crisis unfolded in late 2008 and 2009, and despite generally challenging rental market conditions in the wake of the worst recession since the Great Depression, existing LIHTC rental properties appeared to have fared better in terms of vacancies than many other segments of the real estate industry. Nevertheless, the dramatic drop in tax credit demand caused significant disruptions in the production and preservation of low-income rental housing in 2009 and moving into 2010. Weak demand for tax credits caused the price of tax credits to fall sharply in 2008 and 2009, creating gaps in the financing of properties that had already received allocations. Since the crisis, however, tax credit prices have risen significantly in many markets. Nevertheless, a pricing gap has persisted that is larger than it was before the crisis between investment hotspots like New York City and smaller metros and non-metro areas.

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Because it revealed a weakness in the LIHTC funding mechanism, the financial crisis has spurred a number of creative suggestions for changes in LIHTC investor markets and regulation. These suggestions are designed either to make the credits more attractive to existing investors, or to broaden the investor base. Some, if successful, would accomplish both.

How broad should the LIHTC investor base be? Before the financial crisis the investor pool had narrowed to Fannie Mae, Freddie Mac, and a handful of large banks. This contraction coincided with the period of peak tax credit pricing which yielded the maximum affordable housing investment per tax credit dollar. But, this narrow investor pool was vulnerable in the crisis when Fannie Mae and Freddie Mac as well as almost all national banks became unprofitable and lost their appetite for tax credits simultaneously.

There are two points of view concerning the future investor base for the LIHTC program. One view holds that banks and other financial services companies are the best suited of all investors to investing in tax credits. Those who hold this view reason that both

because the 15-year tax credit recapture period is a basic element of LIHTC and investor exit is difficult, tax credit investments are best suited to financial institutions which have a low cost of capital, are used to underwriting real estate risk, and expect to invest in long-term assets with relatively fixed returns. Under this argument, general corporations, for example, are a poorer choice because they lack these attributes, and as a result their hurdle rate is likely to be higher and their capacity to underwrite the real estate risk less well developed. Moreover, banks are willing to pay a premium for low income housing credits to score well on Community Reinvestment Act (CRA) exams. With a higher hurdle rate of return and lack of regulatory reasons to accept lower returns, general corporations are not typically willing to bid as much on tax credits. At lower prices, the government receives less affordable housing per dollar of tax expenditure. The industry proposal to allow owners of existing tax credits to carry them back for five years on their 2009-11 tax returns was an attempt to help these traditional investors return to the market sooner and keep their appetite for new tax credits high.

The second point of view is that the financial crisis demonstrated the need for a more diversified investor base, and that a narrow, specialized investor pool limited to a small number of firms in a single sector is too fragile and too subject to market volatility. Furthermore, to the extent that CRA concerns dictate investment decisions among existing investors, the uneven geographic coverage of CRA assessment areas jeopardizes LIHTC's future as a national program. Especially since the exit of Fannie Mae and Freddie Mac, which were not subject to the same incentives as banks to purchase tax credits on properties in their assessment areas but were under regulatory pressure to meet the nation's affordable housing needs, smaller metropolitan and rural areas have struggled mightily to attract LIHTC investors. Proposals to restore demand from the traditional investor base and lift pricing outside coastal metros include CRA reform that gives banks credit for LIHTC investments even if made outside their assessment areas, and/or a future role for the two government-sponsored enterprises (GSEs) or their successors in the LIHTC market.

Another action to broaden the investor base would be to change tax regulations to allow a broader group of investors to participate. Proposals range from the industry request that passive activity loss rules be relaxed for chapter S community banks and other pass-through entities and closely held corporations of a certain size, to proposals to convert LIHTC into a retail investment program for individuals similar to mutual funds.²⁵

An often cited advantage of bringing in smaller investors is that they might have social motivation to invest in affordable housing projects in their own communities. Some of our discussants expressed doubt that this would be the case, however. One noted that various accounting and SEC rules tend to restrict the number of investors interested in LIHTC. Others noted that tax credit investments are complex and hard to underwrite, and felt that individuals and small institutions would be more likely to invest in national or regional LIHTC pools than in local projects. One mentioned that the costs for origination and ongoing reporting for individual investors are high, and that transitioning properties at the end of an investment term is more difficult when there are large numbers of individual investors. Similarly, some argued that individual investors are not likely to have the sophistication and financial depth to demand strong underwriting or to rescue troubled properties, and so deal quality might decline and syndicators would have to provide the bulk of property oversight. Still, their demand might encourage inclusion of properties in smaller metro and rural areas in regional and national syndication pools.

How can LIHTC be redesigned to mitigate "tax liability" risk? Before the financial crisis investors may have been discounting their tax liability risk, which is the risk that they might not have enough tax liability over the 10-year use period to receive the full benefit of their investment. When the financial crisis hit, the resulting price volatility nearly caused the market for tax credits to collapse and with it production under the nation's premier affordable housing production program. Going forward there are several concerns about the potential lingering effect of tax liability risk on prices and demand.

²⁵ Galloway (2009).

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First, now that current investors are sensitized to tax liability risk, even as more financial firms are returning to profitability and the demand and pricing for tax credits is rising, prices still may not reach the level they did during the heyday.

Second, the current configuration of the program was not robust enough to withstand a financial crisis which wiped out investors' tax liability. Many of our informants noted, though, that it is unrealistic to expect the LIHTC program, however reconfigured, to be unaffected by another severe financial crisis in the future. Still, this leaves the nation's low-income production and preservation system vulnerable to disruption unless actions that can be implemented quickly are taken by Congress to address the situation if it develops again. The Tax Credit Assistance and Exchange programs represented such efforts on the part of Congress in 2009.

Third, the tax liability risk associated with the program stands in the way of attempts to broaden the investor base for housing tax credits especially because the program has a 10-year use provision. According to our interviewees, most potential investors new to the LIHTC program are reluctant to project their tax liability more than three to five years into the future. Thus, the program's 10-year use provision is an impediment to increasing demand by expanding the pool of potential investors. Many of our informants felt that in order for new investors to enter the market, LIHTC would have to be more competitive with newer energy efficiency and other business tax credits which have much shorter use and recapture periods.

There are a number of proposals for mitigating tax liability risk. The industry consensus proposal to allow new purchasers to carry back tax credits for up to five years is one of the most popular. The five-year carry back would effectively shorten investors' tax planning horizon to five years, though recapture liability would still last for fifteen. Supporters of the carry back feel that it has the potential to both support demand among existing investors and diversify the investor base. Other proposals to mitigate tax liability risk include shortening the ten-year period of the credit, making the compliance period and the credit period equal (to eliminate recapture entirely), making the credit refundable,

developing an efficient process for credit resale, or developing structured financial products which split tax credit investments into shorter terms. Of these, shortening the period of the credit is the most controversial because it would have revenue consequences for the federal government. All of these proposals would have the added benefit of making the housing credit more competitive with other syndicated business tax credits.

Can the housing tax credit be made more liquid? Tax credits as presently structured are long-term, illiquid investments, and this is one reason for the current narrow investor pool. The number of funding sources involved in a typical LIHTC deal, the complexity of the reporting and compliance requirements of these sources, the lack of standardized documents and financial structures, and the heterogeneity of the properties and locations themselves all make underwriting LIHTC investments costly and idiosyncratic. These attributes impede the development of a liquid secondary market and reduce interest in resale unless the portfolio is of large enough scale to make due diligence worthwhile or there is a credible guarantor. Developers, syndicators, and investors are usually specialists, and until recently, most investors expected to hold their tax credit investments for the full term. In fact, when properties do get into serious trouble, limited partner investors are more likely to replace the project sponsor than vice versa, and investors who leave early are more likely to do so due to a recapitalization event than because they decide to resell their credits. The pricing process, which is part fixed-income model, part real estate model, and often part regulatory compliance model, depends on individual offers and bids. Though it is highly competitive, it is not transparent to broader markets and there is no clearinghouse for tax credit transactions. Moreover, though there are similarities, each transaction is unique, with its own delineation of rights and responsibilities between the general partner sponsor and the limited partner investors.

However, resale of tax credits and the transfer of recapture liability are certainly possible and in fact are built into the syndication process. The stream of investor benefits is largely predetermined, and the investor's share of residual value is typically limited by partnership documents, 30-year affordability restrictions, and non-LIHTC soft financing that accrues over time and becomes due at sale. Because of this, a housing credit

investment in some ways behaves more like subordinate debt than equity, though the mix between tax credits and tax losses changes abruptly after year ten and affects investors' incentives during the five-year recapture tail. After ten years, investors do not receive any more tax credits, but are still eligible to take deductions for depreciation and other losses, based on their share of ownership. Unlike the tax credits, though, operating losses lower an investor's net accounting income.

Given that tax credits provide a mostly fixed income stream with a value separate from the market value of the housing, there is an incentive to repackage them into derivative products, even though ownership of the tax credits cannot be legally separate from ownership of the housing. If a truly liquid secondary market could be created, the ability to sell credits easily would greatly reduce tax liability risk and might make LIHTCs attractive to a wider range of investors. Even if a tax credit secondary market was not centralized and was thinly traded, structuring tax credit income streams into time-based tranches would let more risk-averse investors accept a lower yield in exchange for tax credits from stabilized, leased up properties and a shorter time commitment. Despite the appeal of developing a secondary market as a non-government solution to current problems in the LIHTC program, though, interviewees warned that numerous complex tax and accounting issues could impede its formation.

To facilitate a secondary market, some have suggested that resellers could give buyers a guarantee against recapture liability and other LIHTC-specific risks. For example, one interviewee suggested that the two GSEs or their successors could be required to issue guarantees on all newly issued credits to restore liquidity to the overall market. Others, however, were concerned that if purchases of investments in LIHTC housing included a third-party guarantee it would dilute the private market discipline and investor involvement they felt was important to maintaining compliance and financial viability. One expressed concern about the risk of excessive market concentration if only one or two guarantors were active in the market.

Is there any way to address geographic differences in demand? In previous years demand for tax credits was high enough that project sponsors were able to sell their tax credit equity anywhere in the country and at attractive prices. In high-cost areas competition for credits was intense enough that state allocating agencies could require supportive services or deeper income targeting as a condition of receiving an allocation of credits. During the financial crisis, however, even with the Tax Credit Assistance and Exchange programs established by ARRA, there was a shortage of demand for tax credits in many areas.

In some parts of the country investor demand has recovered significantly, while in other parts prices are still considerably lower than before the crisis. These several tiers of price and demand have led to concerns about pricing outside the footprint of large national banks.

Before the crisis, Fannie Mae and Freddie Mac, both directly and by signaling interest to other investors in multi-investor funds, had been driving the bulk of demand for tax credits in rural areas, the smaller metros in the Midwest, and second-tier metros outside major banks' CRA assessment areas. LIHTC investments fit well in the GSEs' portfolios, as they were mission-constrained to invest in real estate. With the roughly forty percent of market demand that the two GSEs made up disappearing indefinitely, it is not clear where the industry will find new CRA-indifferent investors with real estate underwriting knowledge and an appetite for specialized long-term investments.

There are a number of proposals to deal with reviving tax credit demand in areas with weaker demand for them. These are mostly the same as those which attempt to make the tax credit more attractive to all investors. Of the consensus proposals put forward by the industry, the proposal to relax passive loss rules for some subchapter S and C corporations is the one most focused on bringing in new investors and improving demand outside of major metros. In rural areas many community banks are chapter S corporations, and proponents hope that these corporations will be motivated to invest in

(and in the case of banks, receive CRA credit for) affordable housing in their communities.

One reviewer noted that, although bringing community bank investment into the program would be helpful, these banks are not large enough to restore LIHTC demand. Instead, to draw on large banks in the existing investor pool, one remedy that has been suggested is to redefine CRA examination procedures so that LIHTC investments outside current assessment areas are scored more favorably. Broader CRA reform that expanded coverage to nonbank financial institutions such as insurance companies could also affect geographic demand by broadening the investor pool. However, another reviewer pointed out that current CRA footprint areas are typically areas with strong real estate markets, and even with CRA reform, investing in weak and tertiary markets will likely continue to demand a risk premium in the form of lower LIHTC prices.

Some have suggested rethinking the credit allocation formula to take area construction costs and local housing shortages, as well as population, more fully into account, so that more credits are funneled to coastal states with high housing costs. However, most of our industry interviewees felt this would be politically difficult, and furthermore that support for the LIHTC program in Congress depends critically on its wide geographic scope. They were reluctant to consider a change away from the current per capita allocation formula which provides uniform benefits to all states. In addition, areas with lower housing costs often also have shortages of affordable rental housing.

Asset Management and Oversight

Ranking somewhere in immediacy between policy questions about program design and industry reactions to the fallout from the financial crisis are practical concerns about ongoing asset management and reinvestment in the LIHTC program. All housing deteriorates over time and requires both regular maintenance and periodic infusions of capital to remain suitable for its intended purpose. Though our informants held a wide

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²⁶ Roberts (2009).

²⁷ See for example Nelson (2002) and Korb (2009).

variety of opinions about the best approach, they agreed on the importance of mechanisms to ensure continued funding for LIHTC capital needs. A related question is how the financial crisis has affected the ability of syndicators and investors to step in and rescue troubled properties. Finally, an increasing number of properties are reaching the end of their first 15-year affordability term, and there is widespread concern about how incentives and regulations in the LIHTC program affect long-term preservation choices.

Do program regulations and incentives effectively support operating costs and future capital needs of LIHTC properties? A report by the Congressional Research Service²⁸ asks whether, given that the LIHTC program rewards developers for initial capital expenditures rather than ongoing management and preservation, developers may not have sufficient incentives to press for adequate cash flows to fully fund replacement reserves and operating costs. Similarly, states may prefer to spread capital thinly, devoting most property cash flows to the repayment of soft debt and accepting lower reserves in exchange for improved affordability or a larger number of projects. Many of our informants were concerned that long-term capital funding for LIHTC properties was insecure. One felt that replacement reserves for LIHTC properties have been consistently under budgeted, and that more properties would have experienced financial difficulties because of overly optimistic initial projections had it not been for the favorable trend in interest rates since the inception of the program. Fully funding reserves to cover capital costs in the out years is less critical outside the LIHTC program because owners often can increase rents and cash flows enough to borrow more against the property to address capital needs when they occur.

Examining this same issue from a different perspective, an analysis by Khadduri²⁹ finds that capital needs for LIHTC properties climb after the tenth year in service and properties will usually need a capital infusion between years 10 and 20 to remain viable. While escalating capital needs around 10 to 20 years are not unusual because physical plant depreciates and major expenditures often hit during these periods, the capital to

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²⁸ Jackson (2007).

²⁹ Khadduri and Wilkins (2008).

meet them is generally not available through refinancing the way it usually is in marketrate properties, unless the property is transitioned to higher market rents.

Thus, under current program norms, most LIHTC properties will need additional support after the first round of tax credits if they are to remain viable for 30 years with affordability restrictions. This can be accomplished through recapitalization with new tax credits or some other source of funding. An alternate method would be to provide a richer initial allocation of credits for new projects. For example, it has been suggested that LIHTC underwriting rules could be modified to anticipate capital needs either by requiring front-end funding of substantial reserves or more rapidly amortizing debt, and operating cost problems could be avoided by requiring an operating expense cushion high enough to withstand income and expense shocks. This would, however, mean that the same number of credits would support either less up-front construction and fewer new or rehabilitated LIHTC units, or shallower income targeting. States may prefer thinly budgeted reserves, planning on another round of tax credit funding to meet future capital needs when they occur.

Is there adequate provision made for asset management during the initial 15-year compliance term? Asset management is best defined as the capacity to avert financial difficulties and keep properties in adequate repair and to take action when a property falls out of compliance due to financial difficulties or other problems. The requirements for successfully resolving problems—the legal right to take over a failing property from the general partner and sufficient reserves for short-term liquidity—are negotiated in the original project documents. The cost of providing ongoing asset management was typically folded into syndicators' fees. Syndicators negotiated asset management fees upfront, but the fees did not necessarily reflect the true market cost of the asset management function and, because they were paid out of limited project cash flows, often were accrued to be paid at sale or refinancing.

Since the financial crisis, as some syndicators have failed or are in financial trouble, investors have become more wary about whether asset management is adequately funded.

Large bank investors are increasingly acting as sole investors in tax credit properties rather than investing in syndicated pools. Typically, uncertainty about the strength of ongoing asset management from existing syndicators causes investors to require larger financial reserves. Some industry practitioners have called for more realistic pricing of asset management services, and have suggested that third-party asset management may become more common.

Are incentives aligned for the best outcomes at the end of the initial compliance period? Most industry participants laud the LIHTC program's public-private partnership structure precisely because it aligns private and public incentives to successfully produce affordable rental housing. Since 1990, tax credit properties have been subject to an additional 15-year period of extended affordability restrictions after the initial 15 year period, but investor incentives to oversee tax credit properties are diminished after year 15. There are mechanisms in place, somewhat improved by HERA, to facilitate transfer of tax credit properties to mission-motivated nonprofit entities. Nonetheless, experience with older production programs suggests that properties in areas with high market rents are, not surprisingly, among those most likely to exit the program before the end of the full 30-year term. HUD is currently conducting a study on expiring use LIHTC properties that should shed light on this issue.

When tax credit benefits and oversight responsibility end, most limited partner investors prefer to divest LIHTC interests rather than hold them as assets on their books. At the owner's request, state agencies have up to a year to find a mission-motivated buyer willing to purchase the property at a formula-determined price, and failing this, owners can opt out of the extended affordability period. This "qualified contract price" may not affect the disposition of many properties, however. In many cases states have required that developers waive this right. In other cases the market value of LIHTC properties may not be higher than the qualified contract price anyway. According to one reviewer, additional fees and requirements imposed by states are also a disincentive to pursuing the qualified contract price option. Another felt that the qualified contract price is typically

³⁰ Finkel, Hanson, and Hilton (2006).

overstated and that reform is needed to ensure that appraised values take into account both 20-year capital needs and historical operating expenses.

Though most preservation challenges are still in the future, many are occurring now, and many LIHTC properties currently nearing the end of their original compliance period are likely to need recapitalization with additional tax credits. ³¹ But the processes of ownership transfer and recapitalization are challenging. For example, general partner project sponsors and limited partner investors who have worked well together during the initial 15 year compliance term may find their interests diverging as economics and concerns about residual property value supplant tax considerations just at the time when partners must take active decisions about a property's future. ³² There are a number of other potential barriers to LIHTC recapitalization. In some cases investors must pay exit taxes on sale when their cumulative tax losses exceed the amount of capital invested, and if not originally planned for this cost can be a roadblock for acquiring purchasers. State and local governments may have provided gap financing in the form of soft debt which accrues over time and is due at sale, and they may be reluctant to extend or roll over this debt. ³³

As in all real estate transactions, the information available to different parties is asymmetric, but with local governments involved the situation is even more complex. Owners have the best understanding of the value of their properties at both affordable and market rents as well as the likely costs of ongoing preservation. While this may place state agencies at a disadvantage when negotiating property transfers, they may have the power to restrict owners' choices and in other ways work with owners to achieve the outcomes the state agencies want. If states make it too difficult for owners to lift affordability restrictions, however, the eventual result could be a loss of affordable housing due to poor maintenance and deteriorating properties.

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³¹ Schwartz and Meléndez (2008).

³² Smith and Pratt-Otto (2003).

³³ Khadduri and Wilkins (2008).

With many outcomes possible and three interested parties potentially at loggerheads—sellers, potential buyers, and state housing agencies—there is disagreement about who should bear the cost of information discovery. Some argue that state housing agencies, in their role as facilitators, should improve their capacity to evaluate capital needs for expiring use properties and should analyze property revenues and expenses, and that this information should be provided to the state at the owner's cost. Others argue that the transaction costs for information discovery should be borne by the buyer.

Conclusion

Despite the falloff in investor demand due to the financial crisis, LIHTC is widely regarded as a successful and resilient program. The program has engendered an industry of specialist for-profit and nonprofit developers, syndicators, investors, and consultants. It is now the nation's primary program for the production of subsidized rental housing. Nonetheless there are a number of long-term issues facing the program. Even given the national success of the program and its widespread popularity, there remain differences of opinion about whether the federal tax expenditures devoted to LIHTC are targeted deeply enough, are flexible enough to create mixed income developments, and should be directed to pursuing spatial goals including transit-oriented development, inclusionary development in rapidly growing and moderate and higher income areas, and anchoring neighborhood revitalization. Interest persists in finding ways to make the LIHTC program work more easily with other federal housing programs to serve national housing policy goals. At the same time, the disruption in investor demand has led to questions about the nature of the investor base, the length and structure of the tax credit, and whether the program lends itself to the development of a secondary market. Finally, as more properties near the end of their initial affordability restrictions, there are questions about how best to transition and recapitalize expiring use properties.

References

- Apgar, W.C. (1990). "Which Housing Policy is Best?," *Housing Policy Debate* 1(2): 1-32.
- Cummings, J. L. and D. DiPasquale (1999). "The Low-Income Housing Tax Credit: An Analysis of the First Ten Years." *Housing Policy Debate* 10(2): 251-307.
- DiPasquale, D., D. Fricke, and D. Garcia-Diaz (2003). "Comparing the Costs of Federal Housing Assistance Programs." *Federal Reserve Bank of New York Economic Policy Review* (June): 147-166.
- Ellen, I.G. (2008). "Spillovers and Subsidized Housing: The Impact of Subsidized Rental Housing on Neighborhoods." In *Revisiting Rental Housing: Policies, Programs, and Priorities*. N.P. Retsinas and E.S. Belsky. Washington, DC, Brookings Institution Press: 144-158.
- Ellen, I. G., K. M. O'Regan, and I. Voicu (2009). "Siting, Spillovers, and Segregation: A Reexamination of the Low-Income Housing Tax Credit Program." In *Housing Markets and the Economy: Risk, Regulation, and Policy*. E. L. Glaeser and J. M. Quigley. Cambridge, Massachusetts, Lincoln Institute of Land Policy: 233-267.
- Ernst & Young (2009). Low-Income Housing Tax Credit Investment Survey.
- Finkel, M., C. Hanson, R. Hilton, et al. (2006). Multifamily Properties: Opting In, Opting Out and Remaining Affordable, U.S. Department of Housing and Urban Development Office of Policy Development and Research.
- Freeman, L. (2004). Siting Affordable Housing: Location and Neighborhood Trends of Low Income Housing Tax Credit Developments in the 1990s. Census 2000 Survey Series, Brookings Institution.
- Galloway, I. (2009). Create a More Robust Market by Attracting Individual Investors. Innovative Ideas for Revitalizing the LIHTC Market, Federal Reserve.
- Glaeser, E. L. and J. Gyourko (2008). *Rethinking Federal Housing Policy*. Washington, DC, American Enterprise Institute for Public Policy Research.
- Goetz, E. G. and K. Chapple (2010). "You Gotta Move: Advancing the Debate on the Record of Dispersal." *Housing Policy Debate* 20(2): 209-236.

- Horn, K. and K. O'Regan (2010). "The Low Income Housing Tax Credit and Racial Segregation in Metropolitan Areas." Presented at American Real Estate and Urban Economics Association, Washington DC, June.
- Jackson, P. J. (2007). The Low-Income Housing Tax Credit: A Framework for Evaluation, Congressional Research Service.
- Joint Center for Housing Studies of Harvard University (2009). The Disruption of the Low-Income Housing Tax Credit Program: Causes, Consequences, Responses, and Proposed Correctives.
- Khadduri, J., K. Burnett, and D. Rodda (2003). Targeting Housing Production Subsidies: Literature Review, U.S. Department of Housing and Urban Development Office of Policy Development and Research.
- Khadduri, J., L. Buron, and C. Climaco (2006). Are States Using the Low Income
 Housing Tax Credit to Enable Families with Children to Live in Low Poverty and
 Racially Integrated Neighborhoods? Abt Associates Inc.
- Khadduri, J. and C. Wilkins (2008). "Designing Subsidized Rental Housing Programs: What Have We Learned?" In *Revisiting Rental Housing*. N. P. Retsinas and E. S. Belsky, Brookings Institution Press/Joint Center for Housing Studies: 161-190.
- Korb, J. (2009). The Low-Income Housing Tax Credit: HERA, ARRA and Beyond.
 Center for Real Estate, Massachusetts Institute of Technology. Master of Science:
 106.
- Malpezzi, S. and K. Vandell (2002). "Does the Low-Income Housing Tax Credit Increase the Supply of Housing?" *Journal of Housing Economics* 11(4): 360-380.
- McClure, K. (2006). "The Low-Income Housing Tax Credit Program Goes Mainstream and Moves to the Suburbs." *Housing Policy Debate* 17(3): 419-446.
- McClure, K. (2010). "Are Low-Income Housing Tax Credit Developments Locating Where There Is a Shortage of Affordable Units?" *Housing Policy Debate* 20(2).
- Murray, M. P. (1999). "Subsidized and Unsubsidized Housing Stocks 1935 to 1987:

 Crowding Out and Cointegration." *Journal of Real Estate Finance and Economics* 18(1): 107-124.
- Nelson, K. P. (1994). "Whose Shortage of Affordable Housing?" *Housing Policy Debate* 5(4): 401-442.

- Nelson, K. P. (2002). "Housing Needs and Effective Policies in High-Tech Metropolitan Economies." *Housing Policy Debate* 13(2): 417-468.
- Quigley, J. M. (2007). Just Suppose: Housing Subsidies for Low-Income Renters.
 Revisiting Rental Housing: A National Policy Summit, Joint Center for Housing
 Studies of Harvard University.
- Roberts, B. (2009). Modifying CRA to Attract LIHTC Investments. Innovative Ideas for Revitalizing the LIHTC Market, Federal Reserve.
- Schwartz, A. and E. Meléndez (2008). "After Year 15: Challenges to the Preservation of Housing Financed with Low-Income Housing Tax Credits." *Housing Policy Debate* 19(2): 261-294.
- Sinai, T. and J. Waldfogel. (2005) "Do Low-Income Housing Subsidies Increase the Occupied Housing Stock?" *Journal of Public Economics* 89: 2137-2164.
- Smith, D. A. and S. Pratt-Otto (2003). "The Post-Mature Affordable Housing Partnership." *Affordable Housing Finance*.
- Walker, C. (2010). Affordable Housing for Families and Neighborhoods: The Value of Low-Income Housing Tax Credits in New York City. Enterprise Community Partners and Local Initiatives Support Corporation.
- Williamson, A.R, M.T. Smith, and M. Strambi-Kramer (2009). "Housing Choice Vouchers, the Low-Income Housing Tax Credit, and the Federal Poverty Deconcentration Goal." *Urban Affairs Review* 45(1): 119-132.