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AFFORDABLE HOUSING CREDIT STUDY

A COMPREHENSIVE LIHTC PROPERTY PERFORMANCE REPORT

November 2023

AFFORDABLE HOUSING
CRedit
Study

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DEDICATION

Fred Copeman is indelibly linked to the low-income housing tax credit program and the development of affordable housing in the United States. During his 20-plus year tenure at Ernst & Young LLP, later for nearly a decade at CohnReznick, and subsequently at Boston Financial, Fred helped bolster investor support for the Low-Income Housing Tax Credit (LIHTC) program, not least of all by creating a first-of-its-kind study of the performance of LIHTC properties and funds in 2002.

For many years, this report was referred to fondly as “the Copeman study,” and it is emblematic of Fred’s contributions to the affordable housing industry.

The Tax Credit Investment Services team had the distinct privilege of learning from and working with Fred Copeman. We humbly carry on Fred’s legacy of candid openness, intellectual curiosity, and innovation. This report is dedicated to Fred Copeman, a lifetime affordable housing advocate.

This report is the tenth in a series of periodic reports issued by CohnReznick LLP that addresses the performance of properties financed with federal low-income housing tax credits (housing tax credits). To compile and analyze the data required for the assessment, CohnReznick requested the participation of every active federal LIHTC syndicator and the nation's largest institutional direct investors. Twenty-six housing tax credit syndicators and five direct investors participated in the survey. A complete list of study participants, as well as leading industry associations that provided valuable feedback, appears on the Acknowledgments page. This effort would not have been possible without the support of these organizations. CohnReznick analyzed data collected from more than 30,650 housing tax credit properties. For a more extensive discussion of the methodology employed to collect and analyze property data, please refer to Appendix A. We are grateful to the housing credit industry for its continuing support of CohnReznick's campaign to promote a deeper understanding of the housing tax credit program, its strengths, and the critical role it plays in the development of affordable housing.

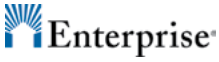
CohnReznick LLP
November 2023

DISCLAIMER

CohnReznick has used information gathered from the housing credit industry participants listed on the Acknowledgments page of this report to compile this study. The information provided to us has not been independently tested or verified and may include estimations, approximations, and assumptions. We have relied exclusively on the study participants for the accuracy and completeness of the information contained herein. Accordingly, we cannot guarantee the accuracy or completeness of any of the information contained herein.

Any information contained in this report is not intended as a thorough, in-depth analysis of specific issues. Nor is it sufficient to avoid tax-related penalties. The report has been prepared for informational purposes and general guidance only and does not constitute legal or professional advice. You should not act upon the information contained in this report without obtaining specific professional advice particular to your individual situation. No representation or warranty (express or implied) is made as to the accuracy or completeness of the information contained in this publication, and CohnReznick LLP, its partners, employees and agents accept no liability, and disclaim all responsibility, for the consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this report or for any decision based on it. Reproduction of any of the information contained herein for any purpose is strictly prohibited.

ACKNOWLEDGMENTS



GALLERY

Several of the images you'll see throughout this report were graciously provided by our data providers, showcasing examples from their own affordable housing portfolios. Learn more about each property in this "gallery".

Property Name: PATH Hollywood Villas
Syndicator: Aegon Asset Management
Developer: PATH Ventures
Los Angeles, CA / 60 Senior Units

Property Name: Verona Flats
Syndicator: Berkadia Affordable Housing Solutions
Verona, NJ / 95 Family Units

Property Name: Collins Park Apartments
Syndicator: Boston Financial
Developer: Related of Florida
Miami, FL / 124 Senior Units

Property Name: Belmont Heights
Investor: Bank of America
Developer: The Michaels Development Company
Tampa, FL / 559 Family & Senior Units

Property Name: East Haven Apartments
Syndicator: CAHEC
Developer: Mountain Housing Opportunities
Swannanoa, NC / 95 Family Units

Property Name: The Meadows
Syndicator: Cinnaire
Developer: Cinnaire Solutions & Wisconsin Community Action Partnership
Eau Claire, WI / 32 Family & Workforce Units

GALLERY

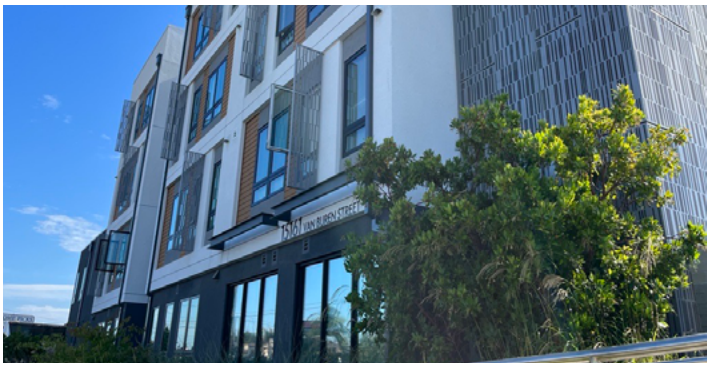
Property Name: John Arthur Flats
Syndicator: CREA
Developer: Pennrose LLC
Cincinnati, OH / 57 Senior LGBTQ+ Units

Property Name: Movietown
Syndicator: Enterprise Housing Credit Investment, Inc.
Developer: West Hollywood Community Housing Corporation
West Hollywood, CA / 76 Senior Units

Property Name: The Bedford
Syndicator: Hudson Housing
Developer: Housing and Services, Inc.
Bronx, NY / 108 Supportive Housing Family & Senior Units

Property Name: Sunny Garden Apartments
Syndicator: Hunt Capital Partners, LLC
Developer: Alliance Property Group, Inc.
La Puente, CA / 95 Senior Units

Property Name: MLK Library Apartments
Syndicator: Merchants Capital
Developer: General Capital Group
Milwaukee, WI / 93 Family Units



Property Name: Casa Paloma
Syndicator: Merritt Community Capital Corporation
Developer: American Family Housing & Veloce Partners
Midway City, CA / 71 Homeless & Family Units

GALLERY

Property Name: CenterPointe South Street Project
Syndicator: Midwest Housing Equity Group
Developer: CenterPointe, Inc.
Lincoln, NE / 32 Special Needs Units

Property Name: Casa Suenos (Fruitvale Transit Village Phase IIB)
Syndicator: National Affordable Housing Trust
Developer: BRIDGE Housing & The Unity Council
Oakland, CA / 181 Family & Homeless Units

Property Name: Maywood Supportive Living
Syndicator: Grow America (fka: National Development Council)
Developer: Celadon
Maywood, IL / 100 Senior Assisted Living Units

Property Name: Winston Commons
Syndicator: PNC Real Estate / Tax Credit Solutions
Developer: Woda Cooper Companies, Inc.
Pontiac, MI / 54 Family Units

Property Name: Cornerstone at Seaside Heights
Syndicator: R4 Capital Ltd.
Seaside Heights, NJ / 91 Senior Units

Property Name: The Residences at Renaissance Phase II
Syndicator: RBC Community Investments
Developer: Laurel Street Residential
Charlotte, NC / 150 Family Units

GALLERY

Property Name: 425 Grand Concourse
Syndicator: Red Stone Equity Partners LLC
Developer: Trinity Financial & MBD Community Housing Corporation
Bronx, NY / 227 Family Mixed-Income Units

Property Name: Seven on Seventh
Syndicator: Raymond James Affordable Housing Investment
Developer: Green Mills Group & Broward Partnership for the Homeless
Fort Lauderdale, FL / 72 Family, Special Needs, and Homeless Units

Property Name: Kindlewood Apartments
Syndicator: VCDC
Developer: Piedmont Housing Alliance & NHT Communities
Charlottesville, VA / 106 Family Units

Property Name: 17 Mississippi Avenue SE Apartments
Syndicator: WNC
Developer: The NHP Foundation
Washington, DC / 41 Family Units

EXECUTIVE SUMMARY

The federal low-income housing tax credit (LIHTC) is the most important program in the United States for creating and rehabilitating affordable housing. The National Council of State Housing Agencies (NCSHA) estimates that more than 3.6 million affordable apartment units have been financed under the housing tax credit program[1], which have provided homes for millions of low-income families, seniors, veterans, Native Americans, farmworkers, and people with disabilities. CohnReznick estimates that the housing credit program produced roughly 130,000 affordable rental homes annually in years 2018 to 2022. No other local, state, or federal program comes close to the housing credit program's level of production.

CohnReznick produces a comprehensive industry track record through surveys of housing tax credit equity-financed property owners. The surveyed portfolio contained more than 30,600 properties, of which 19,200 are generally within their initial 15-year compliance periods and actively owned/managed by syndicators and investors. Historical information was drawn from the entire 30,600 property set, while the 2021-2022 information was reported on the 19,200 cohort. Of those, approximately 72% (by equity amount) had reached stabilized operations by year-end 2022, while the remaining 28% were still under construction or lease-up.

Through its 37-year history, the housing tax credit program has established an impressive record for building affordable housing and delivering promised returns to investors. Most properties financed with housing tax credits are fully occupied, with healthy financial performance and extremely low foreclosure rates. Remarkably, despite the pandemic-related public health and economic challenges of the last several years, the data show that the housing tax credit portfolio once again proved to be resilient. While performance remains robust overall, starting in 2022, however, some indicators signal that the portfolio is not completely immune from the broader economic headwinds that the national economy is facing in the post-pandemic era. In this report, we have brought the industry-wide performance as well as operating data current through 2022.

Remarkably, despite the pandemic-related public health and economic challenges of the last several years, the data show that the housing tax credit portfolio once again proved to be resilient. While performance remains robust overall, starting in 2022, however, some indicators signal that the portfolio is not completely immune from the broader economic headwinds that the national economy is facing in the post-pandemic era.

[1]Housing Credit 2022 FAQs National Council of State Housing Agencies (NCSHA). https://www.ncsha.org/wp-content/uploads/Housing-Credit-FAQs-2022.pdf

HOW DID THE AFFORDABLE HOUSING INDUSTRY FARE IN 2021-2022?

Development Performance

As of December 31, 2022, our data providers collectively identified approximately 2,550 properties in either the construction or lease-up phase, referred to as the development phase by the Affordable Housing Investors Council (AHIC). Due to the sheer volume of data, we did not collect the most granular construction-related data on individual properties. Instead, we used the watch list representation to reveal how housing credit developments fared in 2021-2022. Investors and syndicators risk-rate properties according to defined performance measures to help ensure close monitoring of problem or "watch list" properties. Watch list criteria can vary; however, virtually all respondents have adopted the AHIC criteria as a baseline for measuring underperformance.

Watch list percentages rose across properties in all stages of development in 2021-2022 compared to the prior survey periods. As of December 31, 2022, properties in lease-up reported the highest watch list representation of 28.6%, followed by pre-stabilized properties (19.4%) and properties under construction (17.0%). In comparison, 12.2% of properties that achieved stabilization were on the watch list. Most of the lease-up and pre-stabilized properties began construction in 2020-2021 during the height of the pandemic. Their designated underperformance is likely a result of construction-related matters rather than challenges with market absorption, given the overwhelming need for affordable housing in markets nationwide.

The fact that the development phase properties had a more pronounced tendency to be on the watch list is consistent with the long-term trend. The pace at which the percentage of pre-stabilized properties on the watch list rose confirmed our suspicion that the affordable housing industry was not immune to the challenges of the broader real estate industry in the past few years. Starting with lockdowns and numerous restrictions, followed by supply chain disruptions and labor shortages, the extent of widespread construction delays and cost overruns was unheard of previously in the construction industry. Adding to the perfect storm is the interest rate spike, which further exacerbated the pressure the projects, their developers, and stakeholders felt.

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The "Development Performance" chapter provides a detailed analysis. The affordable housing industry, once again, worked collaboratively and nimbly to defend against broad challenges.

- While the AHIC risk rating criteria are comprehensive for stabilized properties, for watch list properties in the development phase, the criteria are largely limited to those properties that struggle with a delay greater than 90 days, cost overruns, or other challenges. Focusing on the construction delay solely, all data providers incorporated additional underwriting protective clauses to mitigate the pandemic impact, the most common being a three-month cushion in construction duration during the height of the pandemic. In practice, C-rated properties that reported a three-month delay would otherwise be at least six months behind schedule without such a cushion.

- The IRS provided much-needed deadline extensions[2] to relieve the compliance risk pressure.
- For investors, LIHTC investments benefit from various built-in cushions, such as the downward-timing adjustor that is designed to make investors yield neutral in the event of a shortfall in initial year credits.

Stabilized Performance

In 2022, the surveyed stabilized properties reported, on a median basis, 97.2% physical occupancy, 1.38 debt coverage, and more than $700 per unit per annum net cash flow (cash flow available after paying for operating expenses, mandatory debt service, and required replacement reserve contributions).

- Unsurprisingly, occupancy remained very strong, given the pent-up demand for affordable housing nationwide. The national median physical occupancy rate has been consistently high and within a 96.4% to 97.9% range. In 2022, only 7.6% of the portfolio was less than 90% physically occupied due to reasons that were most often property-specific, such as ineffective management, high crime, or deferred maintenance.
- At the outset of the COVID-19 pandemic in the United States in early 2020, there was a great fear that government-mandated lockdowns and the resulting spike in unemployment rates among nonessential workers would immediately drive down rent collection among housing credit properties. Thankfully, while rent collection rates were down modestly, the worst fears never materialized to the degree initially projected.

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- Most pandemic-related eviction moratoriums and emergency rental assistance programs concluded in 2021. In 2022, the spread between economic and physical vacancy losses (which highlights rent skip or collection problem-related losses, as well as concessions) was 120 basis points, which increased from the 80-basis point spread in 2018 and 2019. With the widened spread, the nationwide median economic occupancy rate remained at 96%. While a historically high 17% of the portfolio reported below 90% economic occupancy, only 3.9% reported below 80% economic occupancy. As more fully discussed under the "Rent Collection Losses" chapter, we attribute the better-than-expected rent collection loss phenomenon to two factors:
  - The demand for affordable housing remained very strong in virtually every part of the country. Income-eligible tenants often must wait for a lengthy period before being placed into an affordable housing unit and, therefore, tend to work very hard to avoid losing it, as proved by the historically low turnover rate and bad debt expenses.
  - We applaud the federal, state, and local governments for enforcing eviction moratoriums and providing relief funds to avoid what could have been a catastrophic tenant displacement event. At the same time, we acknowledge that the eviction moratoriums were a double-edged sword, creating stress on property operations and the financial health of property management and development companies, particularly small operators. We are cautiously optimistic that the national housing tax credit portfolio will not experience a rent collection cliff effect

[2]IRS Notice 2022-52 further extends housing credit program deadlines https://www.cohnreznick.com/insights/irs-notice-2022-05-extends-housing-credit-program-deadlines

as the country moves into a post-pandemic housing market that is not supported by eviction moratoria or emergency rental assistance.

- Approximately 12.2% of the national stabilized housing tax credit portfolio was on the watch list in 2022, rising from 8% as of 2020. While a notable movement, it is important to note that consistent with the prior years, less than 2% of the stabilized portfolio severely underperformed and were risk-rated D or F in 2022. Over 10% was risk-rated C in 2022 (compared to about 6.5% in 2020), meaning property performance required attention but was generally manageable and showed no risk of foreclosure.

  We found operating expense spikes to be one of the main contributing factors for the rising watch list among the stabilized properties. From 2021 to 2022, operating expenses grew by 12.1% among the watch list properties, an even faster pace than the 8.2% growth rate reported among all stabilized properties.

  For many years, the affordable housing industry has utilized a 2% income/3% expense inflation trending assumption to underwrite housing tax credit properties. The 100-basis point spread proved to be a supportable assumption overall, but 2022 represented an outlier year. The industry has witnessed an operating expense increase of 8.2% between 2021 and 2022; the most rapid since we began reporting this data in 2015. The fact that expenses grew much faster in 2022 was one of the leading factors that drove more properties to operate below breakeven and, thereby, an increasing watch list. The operating expense results confirmed our suspicions that there would be a "catch-up" period in 2021 and 2022, where properties address deferred maintenance items built up throughout the pandemic. Additionally, insurance costs increased at a historically high rate, as property and casualty rates have increased nationwide across all real estate classes, in part due to extreme weather conditions.

- While an operating deficit is one of the reasons why a property may land on the watch list, it is one of the most quantifiable and common reasons. In this context, 23.2% of the national portfolio reported having incurred an operating deficit in 2022. One may wonder what accounted for the delta between the 12.2% on the watchlist and 23.2% below breakeven since strictly following the AHIC risk rating criteria, one would expect these two statistics to be more closely aligned.

- Some data providers utilize watch list "overrides" to either remove an underperforming property from the watch list or add an otherwise performing property to the watch list; the latter is rarer than the former. Using the single criteria of below breakeven operations alone, we focused on override usage to remove or exclude underperforming properties from the watch list.

- Overridden properties were, on average, 9.5 years into their 15-year compliance life, indicating a willingness on behalf of syndicators to override AHIC risk ratings for underperforming properties as they age. Of the overrides, 43% were on properties beyond the credit delivery period, and 22% were further beyond the initial 15-year compliance period.

- We believe two reasons drive the tendency to override risk ratings on older properties: the credits have been claimed, and depreciation, the primary remaining investor benefit, is not at risk. While we understand the reasoning behind overriding AHIC criteria on properties post-credit period, the fact remains that underperforming properties, especially those operating below breakeven, will still generate deficits that must be funded. Another common explanation from survey respondents for watch list override was that specific properties,

especially those with deep income or special needs targeting, were underwritten by design to operate around breakeven and to rely on funded operating reserves. As such, below-breakeven operations are by design instead of reflecting operational surprises.

Should we be concerned?

As noted above and more fully discussed throughout this report, our data research confirmed that the affordable housing industry has faced challenges in construction, cost overruns, and operating expense spikes. While performance metrics worsened, the subset suffering from severe underperformance remained very low, as evidenced by the fact that only 2.5% of the national portfolio were considered severe underperformers, i.e., risk-rated D or F.

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Remarkably few housing tax credit properties have fallen victim to foreclosure throughout the program's history. The respondents to CohnReznick's survey report a 0.50% cumulative foreclosure rate, with no new foreclosure reported in 2021 or 2022.
The affordable housing industry's low foreclosure rate is primarily attributable to relatively few housing tax credit properties suffering from severe underperformance. Furthermore, housing credit syndicators expend effort to minimize the financial impact to investors, evidenced by the fact that properties were in their 11th year of tax credit compliance, on average, when lost to foreclosure.

The respondents to CohnReznick's survey report a 0.50% cumulative foreclosure rate, with no new foreclosure reported in 2021 or 2022.

Finally, beyond their profound, positive impact on local communities, housing credit investments have proven to be a safe and sound investment option for institutional investors. On a weighted-average basis, survey respondents reported a positive 5.0%-7.5% variance between actual and projected yields, meaning that investors have received their promised returns.

What's next?

In 2020-2022, an average of $21.8 billion in equity was invested in housing credit-financed developments annually. Over the last three years, the housing credit industry has endured unprecedented challenges to its operations, impact – and, at times, viability. Thankfully, the challenges have not proven to be insurmountable and, by all measures, have not resulted in a reduction in investment. Equity volume has increased over the last few years largely due to the strength of the multifamily rental market and an increased interest in affordable housing as an impact investment vehicle. As in other challenging periods, the housing credit program's enduring resilience continues to be attributable to asset performance, multidisciplinary practitioners, and bipartisan support. However, it remains unknown how the industry will weather the various challenges that it – and the commercial real estate market at large – now face:

- **Lingering effects of the COVID-19 pandemic on construction** – The high cost of land, labor, and building materials continues to challenge housing credit developments, which are not

immune to challenges felt throughout the rental market. The price of construction has increased as much as 35% since the start of the pandemic[3]. Projects have absorbed cost increases through additional funding provided via the American Rescue Plan Act and the expanded 4% credit use with the enactment of the 4% floor, yet rising costs remain a significant challenge. We cannot afford to have developments that simply do not pencil out.

- **Widening housing affordability gap** – Housing costs remain high relative to pre-pandemic levels. Coupled with pandemic-related household income losses and the end of the federal Emergency Rental Assistance program, housing affordability has decreased precipitously since our last report. According to the Joint Center for Housing, between 2019 and 2021, the number of cost-burdened renter households – defined as those spending more than 30% of their income on housing – increased by 1.2 million to a record 21.6 million[4]. The same study reports that for every 100 renter households who earn less than 50% of area median income (AMI), only 55 units are affordable and available. Closing the housing affordability gap is increasingly a priority for local, state, and federal policymakers, but the complexities of the problem are numerous, and the housing credit program cannot address them alone.

- **Basel III / Global minimum tax** – Advocates are working to make sure that the housing tax credit receives favorable treatment under forthcoming guidance issued by the Organisation for Economic Co-operation and Development (OECD) on the 15% global minimum tax (GMT). Aiming to improve international taxation rules, the GMT will require large multinational corporations to pay a "fair share" of tax in each country where they operate and obtain profits. Guidance issued in February 2023 indicated that housing credit investments that are consolidated and are accounted for using the equity method of accounting will not negatively affect the calculation of the 15% effective tax rate[5]. Final guidance is expected in 2024.

- **Government-Sponsored Enterprises' (GSE) participation in multi-investor funds** – In recent years, the question has been raised as to whether the Federal Housing Finance Agency's conservatorship of Fannie Mae and Freddie Mac and Treasury's senior preferred stock holdings make them tax-exempt controlled entities under Code Sec. 168(h). Congressional lawmakers and housing syndicators have asked the U.S. Treasury to clarify that GSEs are not tax-exempt controlled entities. A negative determination from the IRS would comfort some investors that the GSEs' participation in multi-investor funds would not result in a potential loss of bonus depreciation, historic rehabilitation or energy investment credits. The GSEs' participation in multi-investor funds is central to its strategy to meet the unique needs of rural housing markets.

- **Rising interest rates** – The Federal Reserve Board increased its benchmark interest rate, the fed funds rate, by .25% to a range of 5.25% to 5.50% – a 22-year high in July 2023. While the Federal Reserve Board continues to manage inflation and other developments in the economy and foreign markets, higher interest rates put pressure on housing credit returns, effectively depressing housing credit pricing that is not absorbed uniformly across all markets. A rising rate environment also puts pressure on affordability and overall production as the cost of financing increases and dampens demand for multifamily loans and commercial real estate construction loans.[6]

[3] Joint Center for Housing Studies of Harvard University. The State of the Nation's Housing 2023. Page 39
[4] Ibid
[5] Treasury Welcomes Clear Guidance on Pillar Two Global Minimum Tax, Tax Credit Protections | U.S. Department of the Treasury
[6] The Fed - The July 2023 Senior Loan Officer Opinion Survey on Bank Lending Practices (federalreserve.gov)

- **Rising insurance premiums** – Climate risk and high building costs are increasing insurance premiums. Some markets are experiencing as much as a 20% increase in insurance premiums due to catastrophic climate-related events. Where insurance is available, coverage may be less than needed to fully protect the property, particularly in events related to wind, rain, or fire.

Recent efforts to strengthen and support the housing credit market and its underlying properties should also be recognized and embraced:

- **Affordable Housing Credit Improvement Act (AHCIA)** – Since its initial introduction in 2016, the AHCIA has gained strong bipartisan support. Key provisions included restoring the 12.5% annual increase to the 9% housing credit allocation (after the temporary increase expired at the end of 2022), expanding access to 4% housing credits, and more efficiently using private activity bond financing by reducing the bond financing threshold from 50% to 25%, and other provisions intended to increase production, support hard-to-reach areas and populations, and streamline program rules.

- **Inflation Reduction Act (IRA)** – The landmark Inflation Reduction Act passed in August 2022 contained $370 billion of tax credit enhancements and program incentives to accelerate private clean energy investment, particularly in low-income communities. Much of the IRA is aligned with the administration's Justice40 initiative, which requires that 40% of the overall benefits of climate and clean energy investments go to disadvantaged communities. As part of the IRA, the U.S. Department of Housing and Urban Development (HUD) was allocated $2 billion for the Green and Resilient Retrofit Program (GRRP), which provides owners of HUD-assisted multifamily housing with funding to reduce carbon emissions, improve utility efficiency, incorporate renewable energy

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sources, and make properties more resilient to climate hazards. Similarly, the EPA's $27 billion Greenhouse Gas Reduction Fund (GGRF) will fund a variety of housing-related initiatives, including the decarbonization of existing buildings, grid-interactive appliance electrification, and residential solar facilities. While the GGRF is not focused exclusively on affordable housing production, grant recipients such as Community Development Financial Institutions (CDFIs) and green banks and development finance agencies are committed to making sure that funding will benefit the long-term sustainability and operability of the affordable housing stock.

- **More conscious efforts around DEI and ESG** – Both the essentiality of housing in the wake of the pandemic shock – and the massive shortage of affordable housing nationally – have prompted widespread interest[7] in the affordable housing industry. Since 2020, more investors in the real estate industry have been looking for opportunities aligned with diversity, equity, and inclusion (DEI) and environmental, social, and governance (ESG) objectives. Whether through minority and emerging developer support, more participation in affordable housing from healthcare and other mission-driven organizations, or investors requiring ESG goals and progress to be measured, the interest heightened in recent years.

Elevated inflation, high-interest rates, and other economic factors have continued to pressure the market. We remind readers that several factors continue to support the housing tax credit program's strong track record:

[7]Global Investor Intentions Survey 2021 | CBRE

EXECUTIVE SUMMARY

- **The growing need for affordable housing:** As impactful as the program is, its production power is limited by statutory authorization. Housing tax credit production is, therefore, unable to keep up with the rising demand for affordable housing. Virtually all housing tax credit properties are fully occupied net of normal turnover, many with lengthy waiting lists. From an operating performance perspective, it is not uncommon to see a favorable variance between the actual and underwritten vacancy rate assumptions, which cushions against unexpected spikes in operating expenses or other factors that could otherwise stress a property's operating performance.

- **The efficiency brought by the public-private partnership (P3) structure:** As will be more fully described in the Introduction, the housing tax credit program is the most efficient capital subsidy for creating affordable housing at scale. The program does so by leveraging private capital and operating under a sophisticated P3 model, where stakeholders are aligned to achieve common goals.

- We see the industry's **collaborative efforts to enhance underwriting and asset management** quality through the progression of the industry's collective operating performance statistics during the past decade. Properties with debt coverage ratios (DCRs) of less than 1.00, often referred to as below breakeven, or DCR underperformance has declined from 32.2% in 2008 to a low of 11.8% in 2020 before rising to 21.9% in 2022. Uncertainties aside, the industry showed its nimbleness, adaptivity, and collaboration during the challenging times to advance production and manage risks through solid underwriting and asset management practices. CohnReznick is proud of and committed to supplying the industry's benchmarking data to help further this trend.

INTRODUCTION

Congress created the low-income housing tax credit program in 1986 as part of a comprehensive federal tax code reform. Adopted amidst dramatic tax code changes, the Mitchell-Danforth Task Force significantly improved the program in 1989 and made it permanent in 1993. The program has enjoyed strong bipartisan support in the U.S. Congress. Strong support from Democrats and Republicans alike is largely attributable to the program's design, built upon public-private partnerships, affordability goals that target the working poor, and funding through tax (vs. budget) expenditures.

The program is the most successful resource for creating, rehabilitating, and preserving affordable housing in the United States. The National Council of State Housing Agencies (NCSHA) estimates that more than 3.6 million affordable apartment units have been built under the housing tax credit program[8], which have provided homes for millions of low-income families, seniors, veterans, Native Americans, farmworkers, and people with disabilities.

As of this report's date, the Affordable Housing Credit Improvement Act of 2023 (AHCIA) enjoys strong bipartisan support. The bill aims to, among other improvements, increase housing credit allocations by restoring the 12.5% cap increase on the 9% credit allocations that expired in 2021 and lowering the 50% test threshold for bond-financed 4% credit properties to 25%. The AHCIA is estimated to incentivize the building of approximately 1.9 million additional affordable rental homes over the next decade, and generate more than $333 billion in wages and business income, nearly $115 billion in additional tax revenue, and almost 3 million jobs.[9]

The housing tax credit program is already a remarkable success story. In some ways, the discussion surrounding the performance of the national housing credit property portfolio had become predictably favorable to readers of our biennial reports, many of whom became familiar with the reasons behind the continued strong performance. Explanations included an extreme shortage of affordable housing nationwide, improved operating expense underwriting, and continued refinement and sophistication of professional property management and asset management oversight.

Over the last three years, the housing credit industry has endured unprecedented challenges. Thankfully, the challenges have not proven to be insurmountable, and, by all measures, have not resulted in a reduction of production or a material deterioration of the asset quality.

Before delving into the latest trends observed on the nationwide housing tax credit portfolio, it is helpful to examine how the program works.

How do housing tax credits work?

The IRS sets rules for the housing tax credit program through the Internal Revenue Code (IRC), Section 42, while the program's administration resides primarily with the housing credit-allocating agencies[10]. Ultimately, the housing credit-allocating agencies have the authority to award housing credits to projects pursuant to a set of highly transparent

[8] Housing Credit 2022 FAQs National Council of State Housing Agencies (NCSHA). https://www.ncsha.org/wp-content/uploads/Housing-Credit-FAQs-2022.pdf

[9] The Affordable Housing Credit Improvement Act of 2023, ACTION Campaign, May 2023.

[10] Each of the fifty states, the District of Columbia, Guam, U.S. Virgin Islands, Puerto Rico, and the City of New York have housing credit allocating agencies State HFA and Associate Member Directory — NCSHA

procedures. Because of the local administration, the program has proven to be highly flexible and responsive to the changing housing needs of each state, district, and U.S. territory.

The housing credit allocating agencies allocate two types of housing credits: the 9% credit and the 4% credit. As a permanent tax credit program, Section 42 of the IRC establishes that the formula for the annual volume cap of 9% credits will be based on population. In 2023, the housing credit cap for each state, district, and territory is $2.75 times the population, with a minimum of $3,185,000[11]. By using tax-exempt private activity bonds to finance housing credit developments, developers are entitled to an allocation of 4% credits.

Due to the limitations placed on the annual volume cap of 9% credits, developers must compete for credits. Competition for 9% tax credits is often scored using a point system reliant on criteria defined by housing officials in a publicly available qualified allocation plan (QAP). In many states, the ratio of submitted applications for 9% tax credits to the credits the state distributes is 3:1. Because of the highly competitive application process, many developers must submit and resubmit applications, modifying their development plans to better align their project proposal with stated policy goals, ultimately improving the competitiveness of their project, before receiving a credit reservation.

Credit awards often exceed a developer's tax liabilities (particularly not-for-profit affordable housing developers). Developers monetize the housing credit and other tax benefits to raise the equity capital needed to build affordable housing developments. Developers will assign limited partnership ownership rights and the rights to the future stream of tax benefits (housing credits and losses) to an investor in exchange for capital; the arrangement is memorialized in a partnership agreement. The private investor will receive tax credits at an agreed-upon rate for roughly 10 years after the affordable housing development is completed. The affordable housing property must be maintained in accordance with the rules of the housing tax program through a 15-year compliance period for the investor to keep all the tax credits. If the property fails to provide safe, affordable housing to income-qualified tenants, the investor could lose unclaimed tax credits and be forced to repay previously claimed tax credits.

Investors choose between two primary investment approaches in the housing credit equity market: direct or syndicated investments. Under a direct investment model, an investor directly owns a limited partner or non-managing member interest in a partnership that in turn, owns an underlying property; the developer or an affiliate typically assumes the general partner or managing member role. The direct investment approach is generally feasible only for investors with sufficient internal resources dedicated to acquiring, underwriting, and asset-managing housing tax credit investments. A handful of large institutional investors consequently favor direct investment. In recent years, though, we have witnessed increasing participation from regional or local banks driven by their existing developer client relationships, strong Community Reinvestment Act (CRA) motivation in neighborhoods that they serve, and desire to cross-sell bank products.

Syndicated investments, on the other hand, are sourced, organized, and managed by third-party intermediaries known as syndicators. In the syndicated model, investors own the limited partner or non-managing member interests in funds organized by the syndicator. The fund, in turn, owns the limited partner or non-managing member interests in underlying property partnerships or LLC. The two-tier structure provides scale and specialty for investors' participation and risk diversification. Based on CohnReznick's survey, we estimate that roughly 70% of all housing credit investments were acquired through syndication in recent years.

[11] U.S. Department of Treasury, Internal Revenue Service, Notice 2023-22

How are housing credit properties financed?

For most of the past 20 years, the demand for housing credit investments has exceeded the supply. The demand for credits drove the price at which they trade from $0.42 per $1.00 of housing tax credits in the early years of the program to close to $1.00 per $1.00 before a downward shift from the Tax Cuts and Jobs Act of 2017 and the resulting lower corporate tax rate. With tax reform enacted and renewed investor demand, tax credits traded in a relatively narrow band between $0.89 and $0.92 for most of 2018 and 2019. The perceived risk at the outbreak of COVID-19 dropped tax credit pricing by approximately 3 cents nationally in 2020 to a national median of $0.88, which remained relatively stable through the first half of 2023.

Nevertheless, the generally steady progression in housing credit prices has changed the "capital stack" in financing these developments. It is not uncommon for 9% housing credit projects to be financed with 70%-80% investor equity, with the balance coming from conventional mortgage financing and, in some cases, "soft" financing from government lenders.

This unique combination of capital sources allows housing credit properties to be financed with low "must-pay" hard debt. Ultimately, the limited use of leverage allows developers to rent housing credit-financed apartments to tenants who could otherwise not afford to live in safe, decent, affordable housing. For this reason, the housing credit program is referred to as a capital subsidy.

How does the program's structure efficiently use the resources?

The housing tax credit program has proved to be the most efficient capital subsidy for creating affordable housing at scale because state allocating agencies are statutorily obligated to award only enough housing tax credits to make potential developments financially feasible, and the agencies have become very effective at making sure that the projects to which they award housing credits are not over-financed.

In addition to the underwriting that housing credit projects undergo at the credit agency level, these developments are underwritten by lenders, investors, and the syndicators who acquire, structure, and asset-manage the investments for institutional investors. These players typically have sophisticated real estate underwriting platforms that initially supported conventional multifamily or other real estate assets. By leveraging their existing underwriting platforms, recruiting talented real estate professionals, and using similarly rigorous underwriting criteria (while acknowledging the uniqueness of this asset class), the affordable housing industry has made significant progress in accurately forecasting rental income and operating expenses.

In addition to generating tax equity, housing tax credit investments attract private capital from debt providers that would otherwise be reluctant to lend to affordable housing projects. While the debt coverage ratio, typically 1.15-1.20, affords a modest buffer to break even, the lenders that operate in this space understand that the probability of severe underperformance is very low, as illustrated by the program's long-term track record.

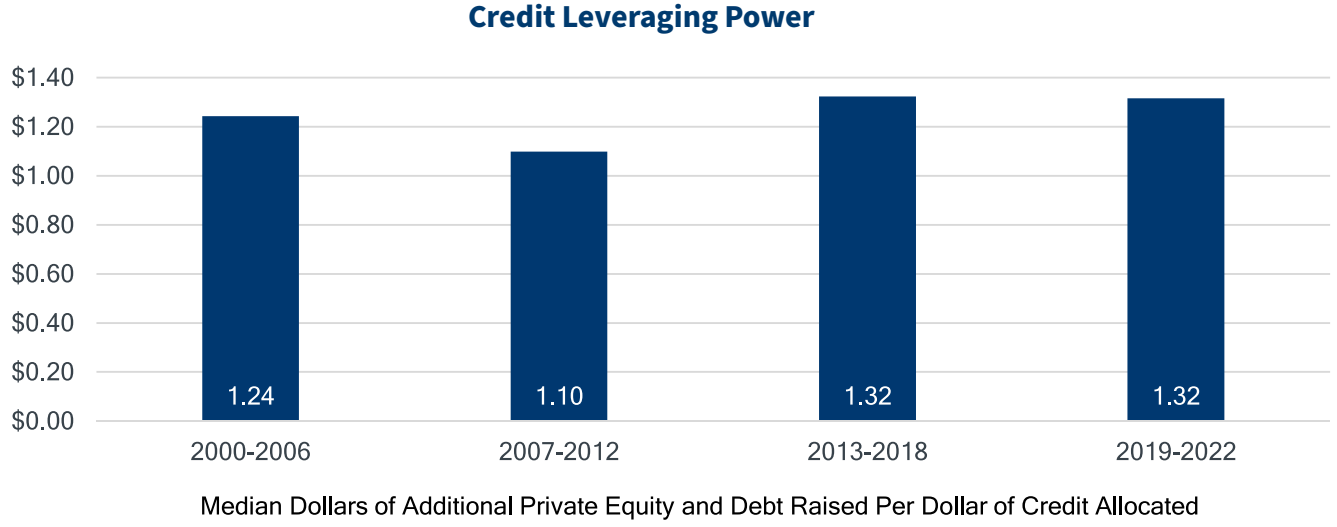
Over time, numerous mechanisms have been built into the development and management processes to hold different participants accountable for their performance, such as payment and performance bonds from general contractors, development completion guarantees, operating deficit guarantees and various tax credit guarantees from developers, and compliance and long-term use restriction requirements for all parties.

How much does the housing tax credit program cost?

Unlike most other tax expenditures, the cost of the housing tax credit program can be calculated with precision because the program's funding authority is subject to a volume cap. When the Congressional Joint Committee on Taxation estimated the costs of more than 230 tax expenditures for fiscal years 2020-2024, the housing tax credit program did not rank among the 25 most expensive tax expenditures for the federal government[12].

More importantly, the cost of the housing tax credit program cannot be fully understood without the following context:

- Housing tax credit investments attract private capital from equity investors and debt providers that might otherwise be reluctant to invest in or lend to affordable housing projects. The following graph illustrates how each dollar of housing tax credit has translated into additional dollars of private funding sources since 2000[13].
- By the design of the program, underwriting and asset management responsibilities (and therefore costs) are effectively shared by syndicators, investors, and lenders.
- The program's proven track record, including a 0.50% cumulative foreclosure rate, speaks to the extremely low "bad" debt cost of government tax expenditure.



Who invests in housing credit properties?

Since the mid-1990s, the equity market for housing tax credit investments has been predominantly composed of large, publicly traded companies, most of which are in the banking and financial services sector. However, as investors and regulators have become increasingly confident in housing tax credit properties' financial performance, the housing tax credit program has become more dependent on the banking sector as a highly reliable source of equity to meet its capital needs. The concentration of

[12]Estimates of Federal Tax Expenditures for Fiscal Years 2020-24 (JCX- 23-20), Joint Committee on Taxation, Nov. 5, 2020.

[13]The ratio was calculated by dividing the total dollars of hard debt and net equity in a property's capital stack by the total dollar amount of credits allocated to that property. All soft debt was considered public funds to simplify this analysis; however, this assumption understates the funding provided by credits because many soft debts like deferred developer fees, seller notes, and other forms of debt are from private sources.

bank investment has been a largely favorable development because banks, for example, filled most of the equity gap created when Fannie Mae and Freddie Mac last exited the housing credit market in 2007 and 2008.

CohnReznick estimates that approximately $24.5 billion of capital was committed to housing tax credit investments in 2022 and that the CRA-motivated capital was the source for approximately 82% of that amount. While included in the remaining 18%, the "duty-to-serve" investors, Fannie Mae and Freddie Mac, are in their own category. These Government-Sponsored Enterprises (GSEs) have a federal mandate to invest in underserved markets that would otherwise not receive adequate investment attention. Their re-entry into the equity market has brought more diversification and stability to the investor base. As of the date of this report, Fannie Mae[14] and Freddie Mac had an approved annual investment volume of $850 million each.

Multiple factors make housing tax credit investments attractive to banks:

- **Increasing after-tax earnings and lowering the effective tax rate:** Housing credit investors are effectively purchasing a financial asset through a stream of tax benefits (consisting of tax credits and losses associated with depreciation and mortgage interest deductions). Investors do not anticipate receiving cash flow distributions because housing tax credit properties are generally underwritten to perform slightly above breakeven, and developers or syndicators are generally the recipients of any remaining cash flow. Substantially all the investors' returns are expected to be derived from tax benefits.

  Banks typically report stable earnings from year to year and are thus predictable federal taxpayers, having sufficient taxable income against which to offset with losses and tax credits. The housing tax credit is earned over 15 years but is claimed over an accelerated 10-year time frame, beginning in the year the property is placed in service and units are occupied. The ideal housing credit investor is a company with a track record of consistent growth in earnings that is a regular taxpayer. This has been the profile of the U.S. banking industry for most of the past 30 years, except for rare recession-driven disruptions.

- **Satisfying CRA lending and investment test objectives:** Banks are obligated, under the current CRA regulations, to make loans, provide services, and make investments in low- to moderate-income neighborhoods in the areas in which they take deposits. As a regulatory matter, banks are obligated to operate in a "safe and sound" manner, which requires them to avoid investments that represent a potential loss of capital. The strong track record of housing tax credit investments has historically been an ideal match for bank investors with a conservative focus. There are limited qualified equity investments under CRA regulations, and many of these have less attractive yield and/or risk profiles than housing credit investments. Housing credit investments appear to be a clear investor favorite among the available investment options. While the CRA regulations are under reform as of this writing, we expect CRA to continue to be a primary driver for affordable housing activities.

- **Achieving a "reasonable"/superior risk-adjusted rate of return:** The banks that CohnReznick surveyed have advised us that on a risk-adjusted basis, the yields generated by their housing credit investments are superior to most of their available community development investment alternatives. This is partly because banks enjoy a lower cost of funds than other investors, which widens the spread between that cost and the rate of return offered by housing credit investments.

[14]Fannie Mae Increases Commitment to Low-Income Housing Tax Credit Market

- **Enhancing community relations and searching for cross-selling opportunities:** Notwithstanding their CRA objectives, U.S. banks have become sophisticated housing tax credit investors and have learned to leverage their equity investments to sell other products and services to the development community. Thus, we increasingly see banks cross-selling other services, such as construction financing, letters of credit, permanent loans, and other products, to the properties in which they invest.

For non-CRA-motivated investors, effective tax management, risk-adjusted return, and social responsibility objectives are among the top reasons for participating in affordable housing investments. An encouraging trend in recent years has been the increased participation from healthcare and other non-traditional investors as they look to promote housing and healthcare or other ESG-related objectives.

Where are housing credit properties?

Housing credit properties are in all 50 states and the U.S. territories of Guam, Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands, and American Samoa.

As an incentive for providing affordable rental housing in impoverished communities and high-cost areas, housing credit investments receive a basis boost if situated in federally designated qualified census tracts (QCTs) or difficult development areas (DDAs), or state designated areas. QCTs are areas designated by the U.S. Department of Housing and Urban Development (HUD) where either 50% or more of the households earned less than 60% of the area median income (AMI), or the poverty rate was at least 25%. A DDA is a HUD-defined area with high construction, land, and utility costs relative to the AMI. State designation provided state credit allocation agencies with more flexibility to direct resources to projects needing additional capital support to become financially feasible.

Who lives in housing credit properties?

Every year, housing officials, typically at the state level, reserve housing tax credits for developments that will build or rehabilitate rental units affordable to households earning no more than 60% of the AMI. The 60% AMI limit was lifted to 80% AMI under the Consolidated Appropriations Act of 2018 under the average income minimum set-aside where housing credit units could serve households with incomes of up to 80% AMI as long as the overall property remains at 60% or less of AMI.

While 60% AMI is the typical upper-income limit for tax credit residency, according to HUD's LIHTC database – which provides supplemental data about rent and income ceilings, tenancy makeup, and locational aspects of the national housing tax credit portfolio:

- 53% earned less than 30% of AMI, and another 31% earned between 30% and 50% of AMI.
- 36% had at least one member over the age of 65.
- properties specifically targeting disabled and homeless tenants represented 25% and 11% of the national housing credit portfolio, respectively[15].

Many states have designed their qualified allocation plans to target specific populations that are deemed to be at risk. The housing tax credit program continues to serve the country's most vulnerable people.

[15] Low-Income Housing Tax Credit Database, U.S. Department of Housing and Urban Development, accessed Oct. 21, 2023.

Who is responsible for the LIHTC program?

Regulatory compliance with the housing credit program is shared between the IRS and the housing credit agencies. The housing finance agencies enforce the compliance rules stipulated in Section 42 of the IRC. The IRS may also conduct an audit and compliance review activities.

As a matter of their fiduciary duty to investors, syndicators also help ensure that properties within their portfolio remain in compliance with the housing tax credit program. Syndicators have compliance personnel on staff and may engage third-party compliance specialists to review initial tenant files, conduct annual unit inspections, and review a sampling of tenant files annually.
HUD does not enforce the statutory or regulatory compliance of Section 42 of the IRS code. Starting in 2008, as required under the Housing and Economic Recovery Act (HERA), housing credit allocating agencies began submitting demographic and economic data (race, ethnicity, family composition, age, income, use of rental assistance, disability status, and monthly rental payments) of tenants living in housing credit units to HUD.

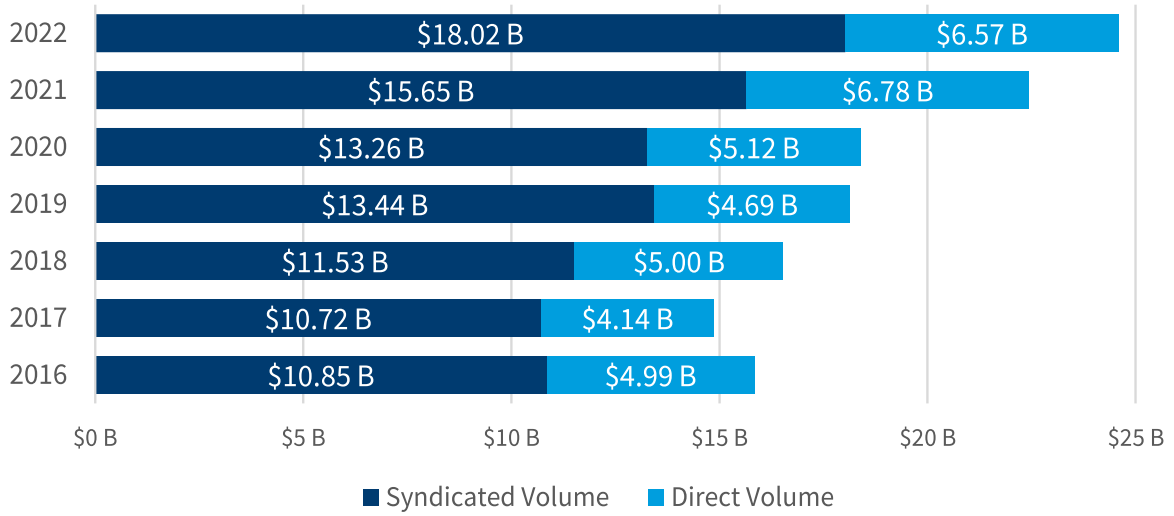
FUND INVESTMENT PERFORMANCE

Fund investment options

In 2020-2022, an average of $21.8 billion in equity was invested in housing credit-financed developments annually, of which 71.6% was invested through syndicators.

As noted, syndicators are fund managers who provide the expertise in pairing affordable housing development opportunities with tax equity investors in a scalable fashion. There are two primary investment options when working with a syndicator: **proprietary funds** and **multi-investor funds**.

Annual Equity Volume: Syndicated vs. Direct



Proprietary fund investments are designed to manage the equity capital of a single investor. Multi-investor funds, as their name suggests, look more like mutual funds since they are organized to raise capital from a group of investors, up to 20 or even more. Investors typically seek out proprietary funds with a desire for a higher level of control over the location and characteristics of the properties they finance. The principal advantage of a multi-investor fund is risk-sharing with other investors.

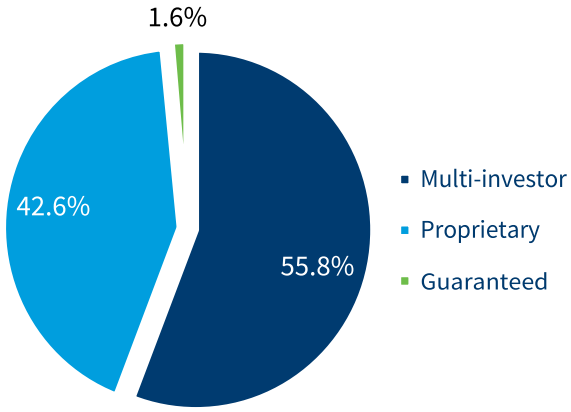
Investors also have a third option – they could invest in either a proprietary fund or a multi-investor fund and have their investments (i.e., usually expressed in the form of credits) guaranteed by a creditworthy guarantor. Historically, one of the principal benefits of investing on a guaranteed basis was more favorable accounting treatment. In 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-01, which authorized the proportional amortization method of accounting for qualified housing tax credit investments. In today's market, guaranteed investments are somewhat limited, in part due to the proportional amortization method essentially putting guaranteed and non-guaranteed investments on the same footing for accounting purposes and in part because of the stable performance reported by housing tax credit funds without such a guarantee, as well as the challenge to underwrite guarantors. That said, some investors prefer such an execution given the additional comfort offered.

FUND INVESTMENT PERFORMANCE

Included in our survey are approximately 1,900 housing tax credit funds that were closed between 2000 and 2022, characterized by the following:

- Between 2000 and 2022, approximately 55.8% of the surveyed fund equity was executed through multi-investor fund offerings. The surveyed sample reflected a modest under-representation of proprietary investments and guaranteed investments due to some data providers not consistently reporting on those investments.

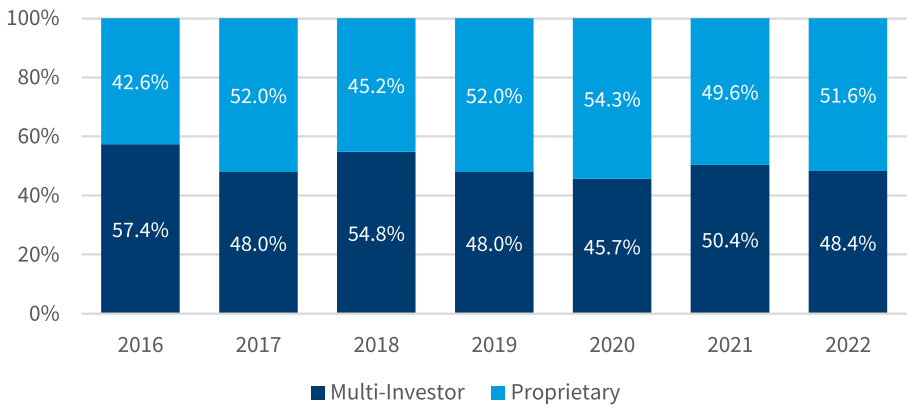
Portfolio Composition By Fund Type



- Investment decisions that influence fund composition have become much more complicated over the years. That said, there are some observable trends from historical data. There tends to be a shift toward proprietary investing when market demand is weakest. This dynamic is best illustrated by the 2008-2009 recessionary period when approximately 70% of the syndicated equity were proprietary investments. At the height of the recession, most remaining housing credit investors were almost entirely focused on meeting their Community Reinvestment Act (CRA) obligations and deployed their capital predominantly through proprietary fund executions. As the market rebounded and investors regained confidence about housing tax credit investments and their own tax appetite, multi-investor fund investing began to dominate the market again in 2009 by a varying margin over proprietary investing.

  The following chart shows the breakdown between multi-investor and proprietary funds in recent years.

Syndicated Equity Volume: Multi-Investor vs. Proprietary

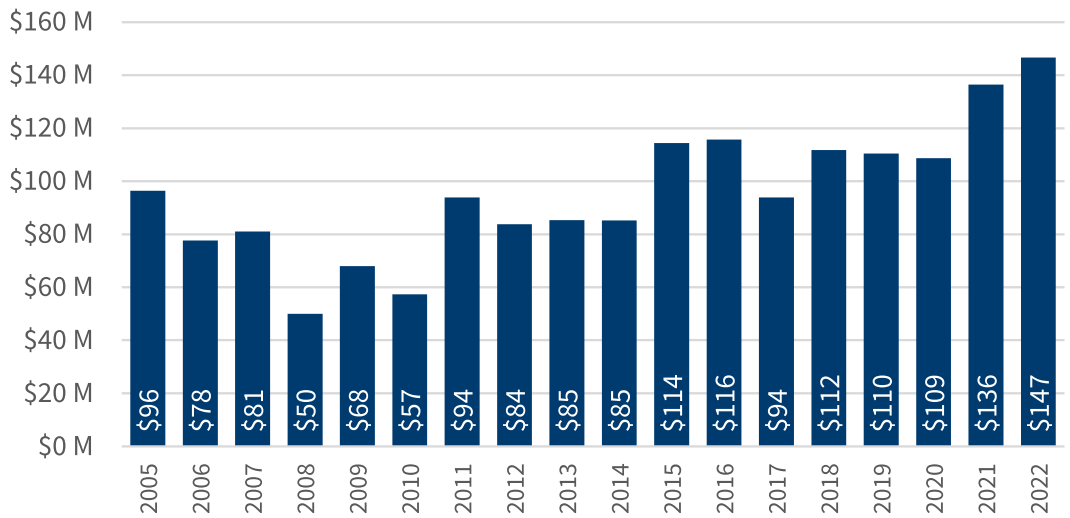


FUND INVESTMENT PERFORMANCE

- On a median basis, surveyed multi-investor funds closed in 2016-2022 raised over $120 million in total equity. The fact that multi-investor funds are typically larger and accommodate multiple investors drives the difference in multi-investor and proprietary fund sizes.

- The size and characteristics of multi-investor funds evolve over time. Multi-investor funds generally increased in size in the lead-up to the 2008-2009 recession. In 2008, when proprietary funds dominated the equity market, the median multi-investor fund was just under $50 million. In the following years, however, the multi-investor fund market has rebounded, and the average fund size has once again been at prerecession levels. In 2022, the median multi-investor fund was closed with approximately $147 million in equity. Of note, the industry saw a larger share of funds exceeding $250 million in 2022 compared to the prior years.

Multi-Investor Fund Size Trend



- In recent years, multi-investor funds have increasingly used tiered pricing to accommodate specific CRA investments. In the past, property investments in "CRA Hot" markets (where many banks have overlapping CRA demand, and thus credit pricing is higher than average) proved challenging to place in a multi-investor fund because of the impact on yield. Tiered pricing affords investors the traditional multi-investor fund benefit of risk diversification, with the added proprietary fund benefit of asset selection for CRA purposes. In the past five years, we have observed over two-thirds of the multi-investor fund offerings to contain the popular tiered pricing structure.

How do investors receive their returns?

How investors receive their returns can best be addressed by understanding investors' motivations. Second to the favorable CRA consideration that applies to banking institutions, investors are attracted to housing tax credit investments by their risk-adjusted returns. In today's market, housing tax credit investment funds offer around a 4%-7% after-tax return, which might not sound that attractive at first glance compared to other alternative investments. However, it is important to note that these are safe, predictable, long-term performing assets that can be favorable on a risk-adjusted basis and for long-term tax management planning purposes.

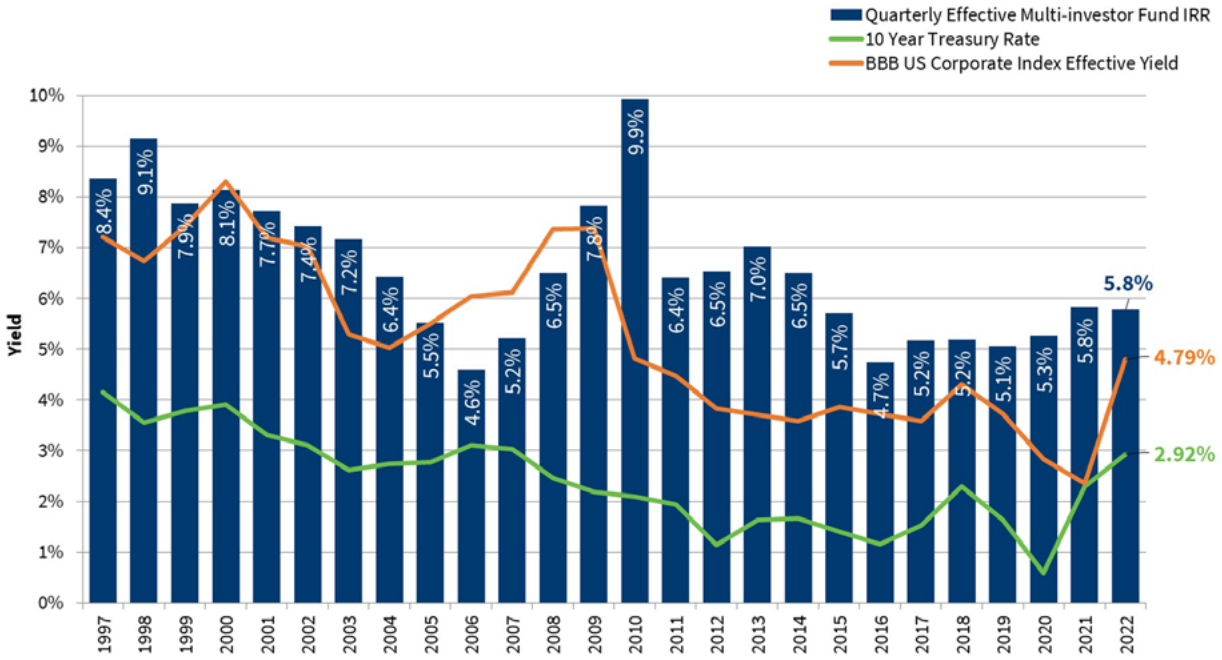
Also, in the last several years, we have witnessed heightened emphasis on corporations' environmental, social, and governance (ESG) commitments. Given how affordable housing naturally helps achieve ESG objectives, it is no surprise that affordable housing investments will attract more ESG-motivated investors.

Investors cannot purchase federal housing tax credits. Instead, housing tax credit investors are real estate owners, and memorialize their return through tax benefits delivered on IRS Partnership Tax Return 1065 Schedule K-1s. In addition to housing tax credits delivered over 10 years (or, as a practical matter, most likely over 11-12 years due to initial partial-year delivery), investors receive a distribution of taxable losses and, sometimes, backend capital losses at disposition. Because tax credits offer a dollar-for-dollar reduction in tax liability, while taxable losses are a deduction, taxable losses are typically valued using the standard corporate tax rate. Since loss delivery tends to be more volatile than credits, and more losses could stem from heavier hard-debt leverage or less favorable operating results, investors typically favor credits as the driver of their returns. Therefore, investors often mandate a minimum proportion of their investment returns to be derived from credits. Additionally, for investors who have not converted to the proportional amortization method of accounting, a loss-heavy investment tends to be much less desirable, given the impact to above-the-line losses in such investors' financial statements.

How do investors set their return expectations?

How investors set their return expectations can be more art than science. Like other industries, return expectations reflect the classic supply and demand theory. In an environment where investor demand for housing tax credit investments is robust, credit prices tend to be higher, resulting in lower investment returns. For example, during the pre-recessionary period in 2006-2007, investment returns were the lowest of that decade. Conversely, during the post-recessionary period in 2010, when the market was rebounding, the market witnessed near double-digit returns. The high-return environment attracted a cohort of non-bank investors (who previously passed on housing credit investments due to their return not meeting their hurdle rate) to fill a void of equity supply.

Multi-Investor Fund Yield Trend



Because there are no close alternatives to housing tax credit investments due to investment timeline and other reasons, a historically popular way for corporate investors to benchmark yield from housing tax credit investments is against the 10-year Treasury rate. The spread between the two in the past 10 years fluctuated between 250 and 550 basis points. While a widening spread generally means that housing tax credit investments present a more attractive risk-adjusted investment vehicle, Treasury tends to move faster than housing tax credit investment yields. Therefore, a widened spread does not necessarily translate into increased demand or investor acceptance of a lower investment yield.

While the industry-standard calculation of investment returns is the function of the amount and timing of tax credits and loss benefits, other components of returns that are less straightforward to quantify but cannot be neglected. The first is favorable consideration under the Community Reinvestment Act's investment test or regulatory return, which supports steady demand and buffers housing tax credit investments from drastic market changes such as recession and tax reform uncertainty. It is not uncommon for a corporate investor to lower its return expectation to secure its desired CRA investments or for an investor to keep investing for CRA despite not being able to use tax benefits immediately. Another consideration is lending or other corporate profit-earning opportunities that could be valued holistically with the equity opportunity. Occasionally, an investor may be willing to accept a lower yield based on profitability from other cross-sold products.

Have housing tax credit funds delivered their promised returns?

Yield variance measures the difference between the originally projected yield at investment closing and the current yield projection based on actual performance. A positive variance indicates a greater than originally projected yield. We removed housing credit funds with credit enhancement from this analysis because guaranteed funds are structured with mechanisms that help ensure investors' predictable return (or credit stream). We excluded from the industry aggregate performance calculation funds where less than 50% of the underlying property equity had reached stabilization because they tend not to have meaningful actual performance information to report.

Until 2017, taxable losses were valued in a stable corporate tax rate environment. However, the Tax Cuts and Jobs Act (TCJA) of 2017 impacted the economic performance of existing housing credit investments in two significant ways:

- TCJA reduced the corporate tax rate from 35% to 21% in 2018. The corporate tax rate reduction directly impacts the underlying value of taxable losses generated by housing credit investments. Accordingly, the return for funds composed of investments closed with a 35% (or higher than 21% during the tax reform uncertainty period) tax rate assumption will be depressed by the reduced value of losses.
- The TCJA imposed a limitation on the amount of "business interest" that may be deducted in any taxable year, with the exception that the taxpayer that operates a "real property trade or business" (RPTOB) may make an irrevocable election to opt out of the business interest limitation. Such an election will result in the partnership following the alternative depreciation system; the potential longer-than-initially-projected depreciation period can also impact the investors' projected tax benefits and returns.

To address this additional layer of complexity, we worked with data providers to isolate yield variance attributable to the performance of the underlying assets, also known as **"performance-based yield variance,"** from yield variance inclusive of the impact of tax reform, also known as **"economic-based yield variance."** We focused our analysis on performance-based yield variance since it best captures the industry's track record in underwriting and managing housing tax credit investments.

The following table shows the industry-wide yield variances on a weighted average basis (where yield variances for individual funds are aggregated and weighted by equity), measured through 2018-2022.

On a weighted-average basis, survey respondents reported a positive 5.0%-7.5% variance between actual and projected yields. Multi-investor funds reported a positive 3.0%-5.5% yield variance, while proprietary funds reported a positive 8.0%-12.0% yield variance. Investors have been receiving their promised returns through housing tax credit investments.

Performance-Based Yield Variance

		All Funds	Multi-investor	Proprietary
Yield Variance (as of Year vs. Closing)	2022	7.4%	5.4%	10.2%
	2021	7.4%	4.3%	11.9%
	2020	7.0%	5.1%	9.7%
	2019	5.2%	3.1%	8.2%
	2018	5.3%	3.2%	9.3%
Industry Benchmarks		**5.0% - 7.5%**	**3.0% - 5.5%**	**8.0% - 12.0%**

FUND INVESTMENT PERFORMANCE

While the overall fund yield variance stats are helpful, they can only be fully comprehended within the proper context. Of note:

- Proprietary funds, in general, have reported larger yield variances than their multi-investor counterparts. The magnitude of the variance between the two fund types was partially affected by how syndicators define "original" yields for proprietary funds, which tend to be less specified at closing than a multi-investor fund. Given the different methodologies syndicators employ to track proprietary investment performance data, we focused on multi-investor fund performance only for the remainder of this report.

- Over the years, the incidence of funds reporting negative yield variance has gradually declined. The small subset of funds behind were marginally (3.4%) behind in achieving their respective target yields on a median basis. The fact that those early vintage funds reported larger positive yield variance is unsurprising, as some will have benefited from residual proceeds upon property disposition.

Positive vs. Negative Yield Variance

- Perhaps not intuitive to those unfamiliar with the industry, funds that failed to deliver the target returns to investors did not report a worse performance at the property level compared to the overall dataset. This result is because investor yields are comprised of tax loss benefits and credits, and therefore, unlike commercial real estate or other cash flow-driven investments, there tends not to be a direct correlation between property performance and investment returns. In many ways, yield can be maintained naturally or artificially by pre-negotiated investment provisions. A more favorable yield can be generated, for instance, by an underperforming portfolio of properties generating higher losses.

- Achieving projected yields is a significant objective for housing credit investors; however, the individual components of yield computation have a bearing on their calculation. As an industry best practice and added protection for investors, in recent years, some funds have built-in yield maintenance provisions that subordinate the receipt of syndicators' load or cash flow split to the funds' delivering the target returns to investors and, therefore, increase the funds' competitiveness in the eyes of investors. In addition, many recent funds have utilized bridge financing to help maintain investor yield and manage capital calls. Finally, a backend distribution mechanism may include yield protection clauses.

While not representing the housing tax credit industry's track record, economic-based yield variance highlights the difference between actual and originally projected returns. The younger a fund is, and the more heavily leveraged (and therefore loss-heavy), the more likely the fund will report a more significant economic yield shortfall. For funds closed between 2011 and 2016, respondents reported a -29.4% weighted-average economic-based yield variance. (For a rough comparison, as noted previously, the weighted-average performance-based yield variance from 2000-2022 was a positive 6%-8%.)

Have housing tax credit funds delivered their promised credits?

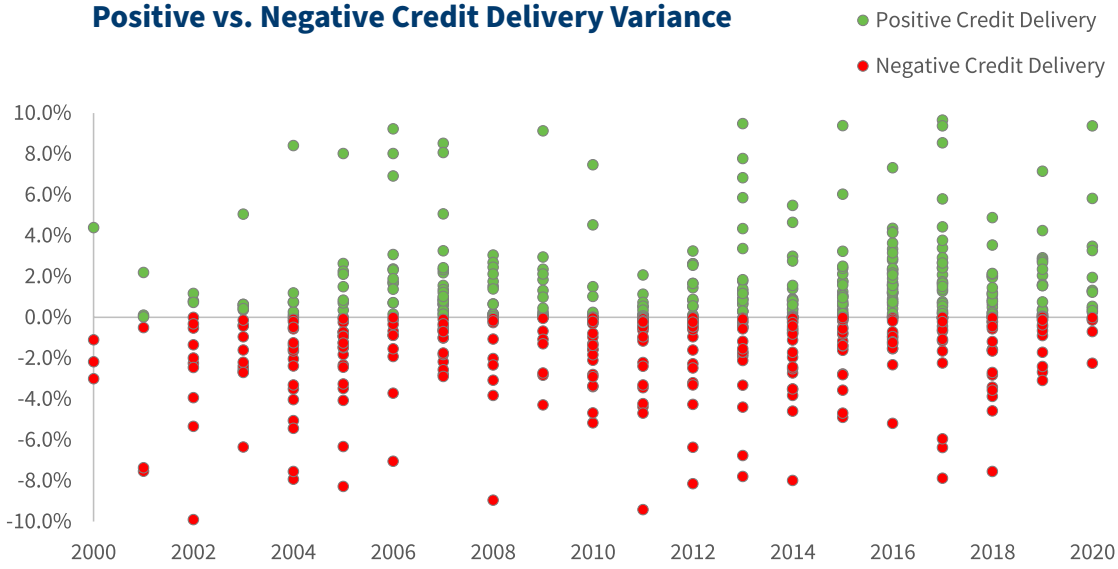
The average housing credit investment derives approximately 75% of its net investment benefits from housing credits, with the balance originating from taxable loss benefits. Because housing tax credits are calculated based on qualified development costs, a property's future delivery of total tax credits is largely predictable.

On a weighted-average basis, surveyed funds have delivered (or are projected to deliver based on actual performance) 99.5% to 99.8% of the originally projected total housing tax credits. In addition,

Total Credit Delivery Variance

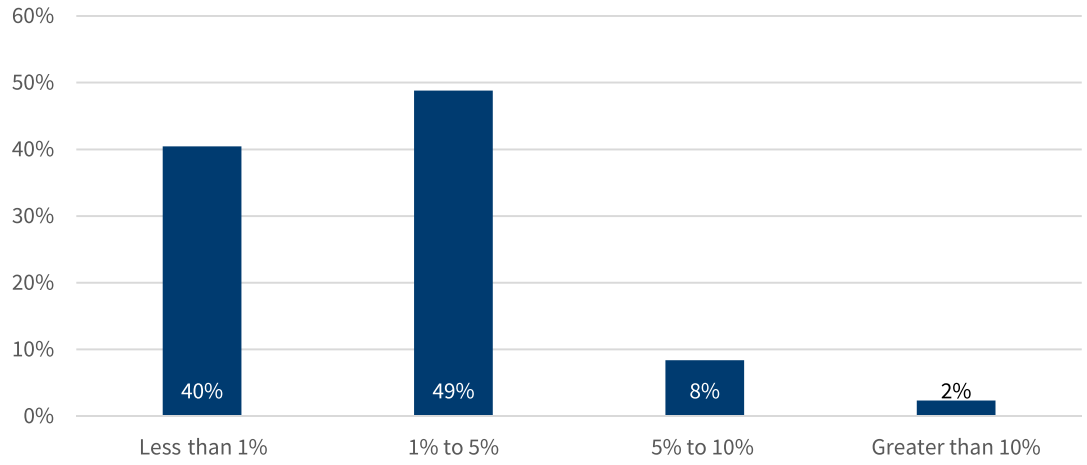
		All Funds	Multi-investor	Proprietary
Total Credit Delivery Variance (as of Year vs. Closing)	2022	(0.2%)	(0.1%)	(0.4%)
	2021	(0.2%)	(0.2%)	(0.4%)
	2020	(0.4%)	(0.3%)	(0.7%)
	2019	(0.5%)	(0.6%)	(0.2%)
	2018	(0.2%)	(0.7%)	(0.3%)
Industry Benchmarks		**(0.5%) - (0.2%)**	**(0.7%) - (0.1%)**	**(0.7%) - (0.2%)**

Positive vs. Negative Credit Delivery Variance



multi-investor funds reported having delivered 99.3% to 99.9% of the projected tax credits, while proprietary funds reported a 99.3% to 99.8% delivery rate.

Magnitude of Negative Total Credit Delivery Variance



While, on average, approximately half of the surveyed multi-investor funds reported a shortfall in total credits, we note that only 1.4% of those experienced a 10% or greater total credit delivery shortfall. Since initial-year credit delivery is a function of qualified development costs and a property's initial occupancy, the timing of tax credit delivery during the lease-up period is more likely to create credit delivery variances. Negative credit delivery variances are generally an indication of some combination of the following: construction delays, overly optimistic lease-up projections, and changes in portfolio composition post-closing. The negative variances in credit delivery in the early years are frequently dealt with through the adjuster mechanisms in the lower-tier partnership agreements, which reduce capital contributions and act to moderate any negative impact on yield resulting from delayed credit delivery.

Since proprietary funds tend to be less specified at closing, we again focused on initial years' credit delivery on multi-investor funds. Overall, the industry was 12%-13% behind in delivering the initial years' credits.

Initial Years' Delivery Variance - Stabilized Multi-investor Funds closed between 2013-2020

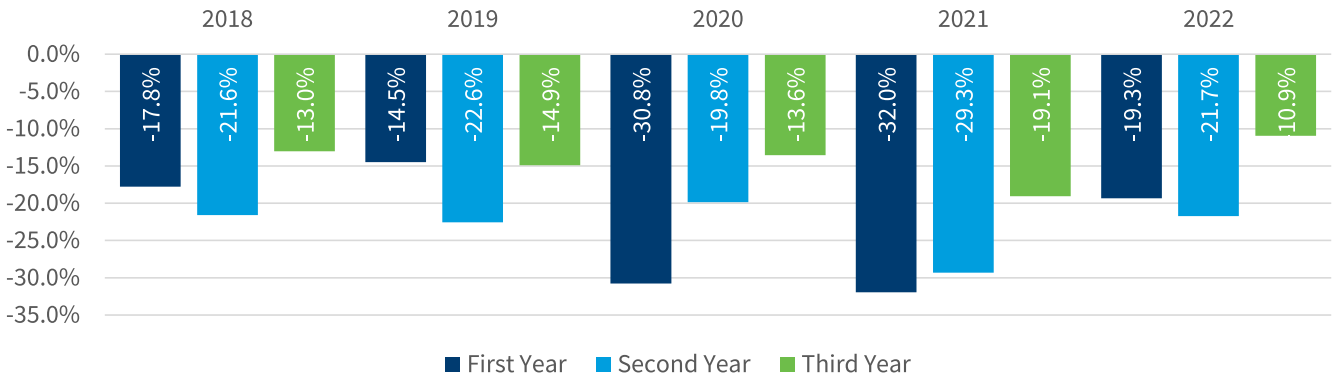
		First Year	Second Year	Third Year	First 3 Years Aggregate
Initial Years' Credit Delivery Variance (as of Year vs. Closing)	2022	(15.3%)	(18.5%)	(11.4%)	(13.3%)
	2021	(14.8%)	(17.8%)	(10.4%)	(12.7%)
	2020	(17.5%)	(14.5%)	(11.4%)	(12.3%)
	2019	(12.7%)	(18.9%)	(11.6%)	(12.7%)
	2018	(13.4%)	(18.4%)	(10.6%)	(11.8%)
Industry Benchmarks		**(17.5%) - (12.7%)**	**(18 9%) - (14 5%)**	**(11 6%).- (10 4%).**	**(13.3%) - (11.8%)**

Survey respondents, in general, have historically overestimated their delivery of tax credits in the first few years. However, our data suggest that initial-year credit delivery shortfalls, while common in the program's early years, have become less pronounced over time. For example, funds closed before 2005 collectively missed their initial year credit delivery forecast by over 25%, while the negative variance has reached roughly 13% since 2005. This trend is mainly due to a higher specificity at fund closing and more

sophisticated underwriting and asset management practices we observed across many data providers to help ensure the timely delivery of projected benefits to investors.

During the pandemic challenges, many have suspected how the widespread construction delays have affected the initial credit delivery track record. As noted previously, we excluded from the industry aggregate performance calculation funds where less than 50% of the underlying property equity had reached stabilization because they tend not to have meaningful actual performance information to report. That said, we took a closer look at all funds closed between 2019 and 2022 (provided that initial years' credit delivery information was trued up through year-end 2022) to assess how the prevalent closing and construction delays have impacted initial years' credit delivery. Funds closed during this period would have had a large portion of their projects under construction during the pandemic. The data confirmed that these funds reported a worse than average track record in initial years' credit delivery.

Initial Years' Credit Delivery Variance
by Year Close, All Multi Funds



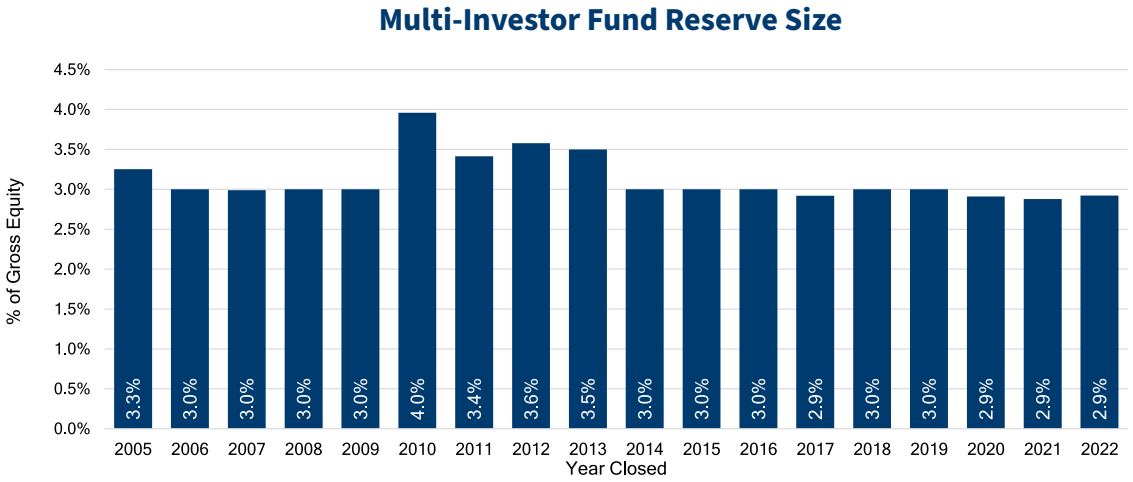
Have housing tax credit funds delivered their promised losses?

It has yet to become an industry practice to collect and report on loss variances, given the focus on investment return and credit delivery. However, being able to manage taxable loss variances proactively will nonetheless help with effective tax planning.

How critical are fund reserves?

Most housing tax credit funds are structured with upper-tier reserves in addition to capitalizing reserves at the project entity level. Historically, multi-investor housing tax credit funds were structured with reserves that represented, on average, between 3.0% and 4.0% of the gross equity proceeds. This convention means that a $100 million fund will set aside roughly $3 million to $4 million as a reserve. While there is no magic behind the standard reserve coverage, it is estimated to be sufficient to cover fund-level expenses and asset management fees payable to the syndicators while leaving at least 1.0%-1.5% available for project-level deficit funding that could not be resolved at the project-entity level. The reserve funding also reflects investors' confidence in the affordable housing industry. For example, following the 2008-2009 financial crisis, investors collectively required fund reserves to be increased from 3% to 4%. Over the following years, investors have accepted a 3% reserve. During the height of the COVID-19 pandemic, the property and fund level reserves served to ease the investor and stakeholder's concern over the sustainability of the affordable housing properties.

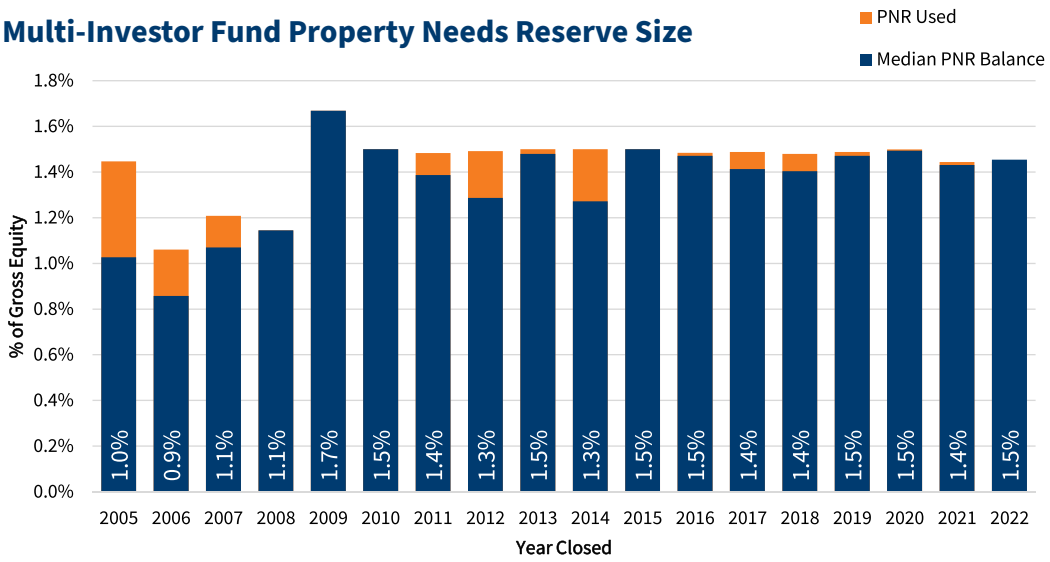
FUND INVESTMENT PERFORMANCE



Many fund working capital reserves were structured so that such reserves can be used to pay asset management fees to the syndicators but only to the extent that at least 1.0%-1.5% remains earmarked for project-level deficit funding. In the past decade, many syndicators have incorporated the Affordable Housing Investors Council's (AHIC's)[16] recommendation to segregate working capital reserves into several buckets, including a minimum of 1.5% in the project needs reserve. Additionally, some syndicators built their asset management fees into investor capital calls instead of being payable from the reserves. For those who chose this approach, their working capital needs reserve would be smaller than average.

Maximum reserve refers to the size of the reserve once fully funded. Early in the industry's history, fund reserves were fully funded at closing. In an increasingly yield-compressed market, many syndicators have attempted to defer calling investor capital to fund working capital reserves to maintain yield. Consistent with AHIC's guidance, we recommend full funding of at least the project needs reserve within five years of fund closing[17]. Available reserve refers to what is available plus what remains to be funded to measure the extent of reserve usage.

Property needs reserves remained largely intact. On average, roughly 19% of the funds, aged 10.7 years old as of 2022, had tapped into the property needs reserve. Given the age of the funds that reported withdrawing



[16] Upper tier reserve guidelines, Affordable Housing Investors Council (AHIC), April 2009.
[17] Ibid.

from the property needs reserve, we suspect that some withdrawals might have been related to early reserve releases. Despite minimal historical usage, the property needs reserves nonetheless provided investors with peace of mind during the COVID-19 pandemic that brought property operation uncertainty.

Few funds reported that their working capital reserves are expected to be insufficient prior to the end of the initial 15-year fund cycle, which speaks to the fact that in general, syndicators and investors have been carefully managing their reserves.

What other fund performance metrics an investor should be aware of?

In addition to quantifiable fund performance metrics such as internal rate of return (IRR) and credit delivery variances, investors typically look for ease of execution, attentive and customized investor services, quality, and timely investor reporting. For example, an investor will likely be discouraged by a fund manager who struggles with keeping up with the promised property specification or closing timetable. A highly mission-driven investor who desires to stay closer to their communities will likely have some preferences toward syndicators who focus more on delivering community impacts.

DEVELOPMENT PERFORMANCE

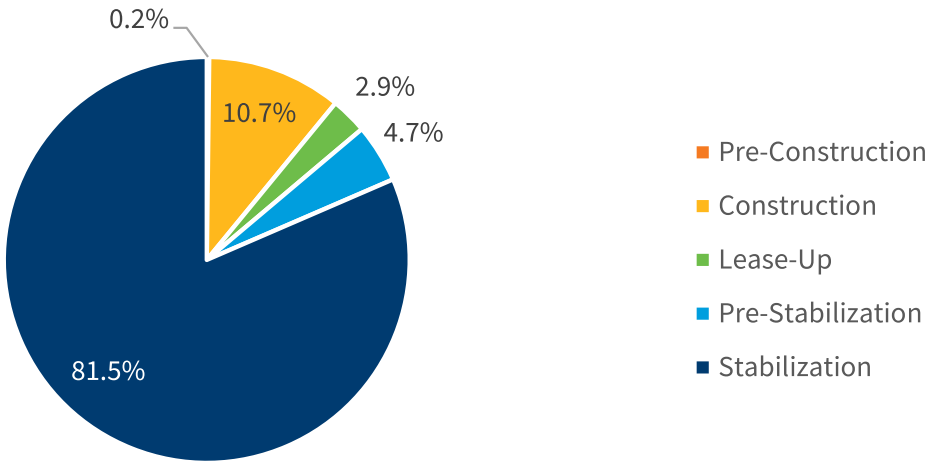
The COVID-19 pandemic brought unprecedented challenges for all industries across the globe. The construction industry, in very short order and to some degree still now, witnessed what many consider the most challenging times in its history. Starting with lockdowns and numerous restrictions, followed by supply chain disruptions and labor shortages, the extent of widespread construction delays and cost overruns was almost unheard of. Adding to the perfect storm is the interest rate spike, which further exacerbated the pressure the projects, their developers, and stakeholders felt.

The following chapter reveals how low-income housing tax credit developments sustained the pandemic challenges in the last couple of years, any lessons learned, and best practices established that could have lasting applications.

As of December 31, 2022, our data providers collectively identified approximately 2,623 properties that were in either the construction or lease-up phase (or collectively referred to as the development phase by the Affordable Housing Investors Council (AHIC)), representing approximately 13.7% of the total properties under management. 68.3% of those were new construction and 31.7% were rehabilitation of existing properties.

On average, a 100-unit new construction development takes ~15 months to complete from start to finish. Affordable housing developments are ultimately multifamily residential developments that benefit from government incentives, which bring additional complexities and, sometimes, costs. In addition to the tax credit-specific compliance requirements, other local government, lender, and investor-imposed requirements may affect the subject's development and operation. Generally speaking, the development phase still tends to be the riskiest. Therefore, investors and lenders spend significant time and effort underwriting the development risks, involving the development team's experience and track record, the financial guarantors' creditworthiness, the reasonableness of the proposed construction budget and timeline, and any environmental, engineering, or other considerations.

Development Status Breakdown



DEVELOPMENT PERFORMANCE

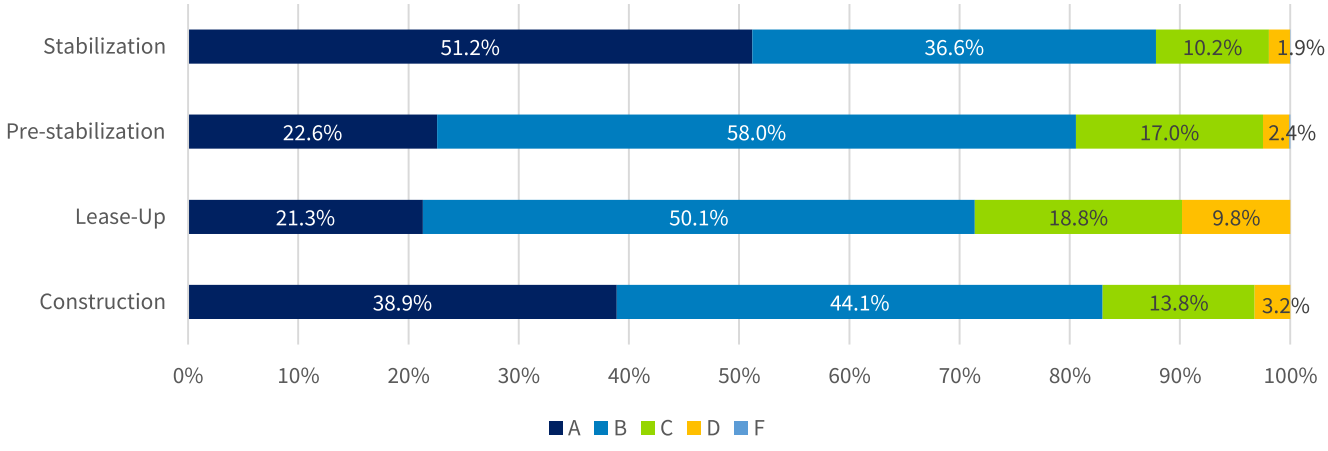
All data providers maintain a watch list that tracks properties through defined performance measures to help ensure close monitoring of "problem" properties. Watch list criteria can vary from respondent to respondent; however, all respondents (syndicators and investors) have adopted the criteria established by the AHIC as a baseline for measuring performance. Risk ratings are assigned to properties based on these criteria using an "A through F" grading scale. Properties rated "C" or worse are considered watch list properties. For properties in the development phase, AHIC risk rating criteria encompass the following categories, with quantifiable metrics attached to each grading scale wherever applicable[18].

- Construction/lease-up timing, e.g., a delay greater than 90 days and 180 days would cause a property to be risk rated C and D, respectively, and be placed on the watch list.
- Development budget adequacy, e.g., a 10% to 15% overrun with identified sources to cover the shortfall would be risk rated C, while a 15% to 20% cost overrun with no identified source would be elevated to a D rating.
- Construction loan take-out
- Permanent loan conversion
- Program compliance
- General contractor performance
- GP/Sponsor/Developer/Management performance
- Recapture risk

Practically, it is not uncommon for a struggling property to experience challenges in more than one category listed above, and failing one of the categories could cause a property to be placed on the watch list. While the AHIC risk rating guidelines undoubtedly have become the affordable housing industry's gold standard among the investor and syndicator communities, it is no secret and no surprise that "overrides" occur. Ultimately, despite how comprehensively and clearly defined the AHIC guidelines are, the complexity of affordable housing investments requires professional judgment that may not easily fit into a box.

Out of the 2,623 properties in the development phase as of December 31, 2022, 17.9% were on the watch list. Properties in lease-up reported the highest watch list representation of 28.6%, followed by pre-stabilized properties (19.4%), properties under construction (17.0%) and stabilized properties (12.2%). Notably, while properties in lease-up had the poorest watch list story, many were under construction during the height of the pandemic challenges. Anecdotally, many of those properties suffered from construction-related issues that led to lease-up delays.

Risk Rating by Development Status

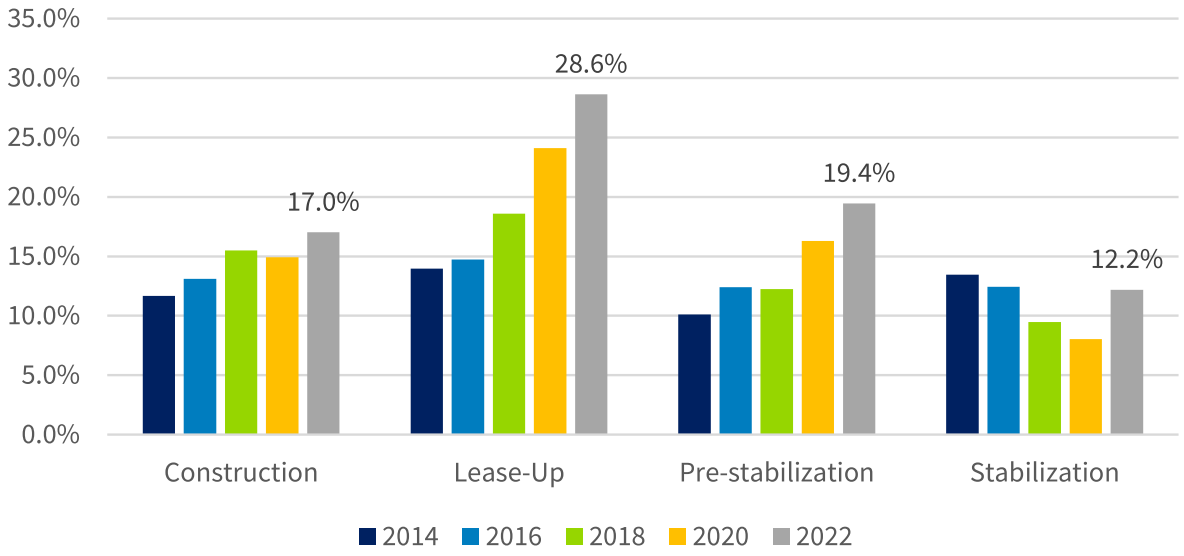


[18]ahic_risk_rating_grid___development_phase.pdf

DEVELOPMENT PERFORMANCE

An overwhelming portion of the watch list properties received a C rating indicating that while the property is unlikely to meet the original projections, the risk is expected to be manageable. For example, out of the 457 development stage properties that were on the watch list as of 2022 year-end, 355 were risk rated C, 102 were risk rated D and none received an F rating (immediate risk of recapture).

Historical Watch List by Development Status



The fact that the development phase properties had a more pronounced tendency to be on the watch list is consistent with the long-term trend. The pace at which the percentage of pre-stabilized properties on the watch list rose confirmed our suspicion that the affordable housing industry was not immune to the challenges of the broader real estate industry in the past few years.

A delay in construction or lease-up will lead to a delay in initial credit delivery. As noted in the "Fund Investment Performance" chapter, funds closed in 2019 and 2022 that have had a large portion of their projects under construction during the pandemic reported a worse than average track record in initial years' credit delivery.

We suspect that a varying degree of overrides still exist. In addition, all data points represented in this report were derived from properties that successfully reached the closing stage with an equity investor. Anecdotally, we suspect a small fraction of developments had to return their credit allocations completely (vs. swap for a later allocation) due to the lack of feasibility.

The affordable housing industry, once again, proved itself to be nimble and collaborative. The IRS provided much-needed deadline extensions to relieve the compliance risk pressure.

All data providers incorporated additional underwriting protective clauses to mitigate the pandemic impact, the most common being a three-month cushion in construction duration during the height of the pandemic. In essence, C-rated properties that reported a three-month delay would otherwise be at least six months behind schedule without such a cushion. Beyond adding three months to the construction timeline, many

data providers have adopted a combination of the following:

- Require the general contractor to provide COVID-19 personal protective equipment and safety protocols.
- Require at the minimum a will issue letter prior to closing to minimize permitting delays.
- Review the general contractor's work in progress log, staffing plan, and subcontractor relations to evaluate whether they may be overly extended.
- Require a high ratio of construction contract to be bid out and to some degree, bought out to reduce the risk of cost overruns.
- Conduct various stress testing to assess the possible financing gaps and identify mitigants such as construction loan extension options and cash developer fee holdbacks.

While the worst may be over, unfortunately, some of the challenges remain, such as material cost increases, labor shortages, and natural disasters. Some general contractors and developers may be still under financial stress. For investors, LIHTC investments benefit from various built-in cushions such as the downward timing adjustor designed to make investors yield neutral in the event of a shortfall in initial year credits. Solid underwriting practices are still a necessity to mitigate the ongoing challenges. On the other hand, while construction costs are unlikely to come down, we began to observe the impact from innovative construction materials and methods, as well as a greater emphasis on energy efficiency that will generate long-term payoffs.

RENT COLLECTION LOSSES

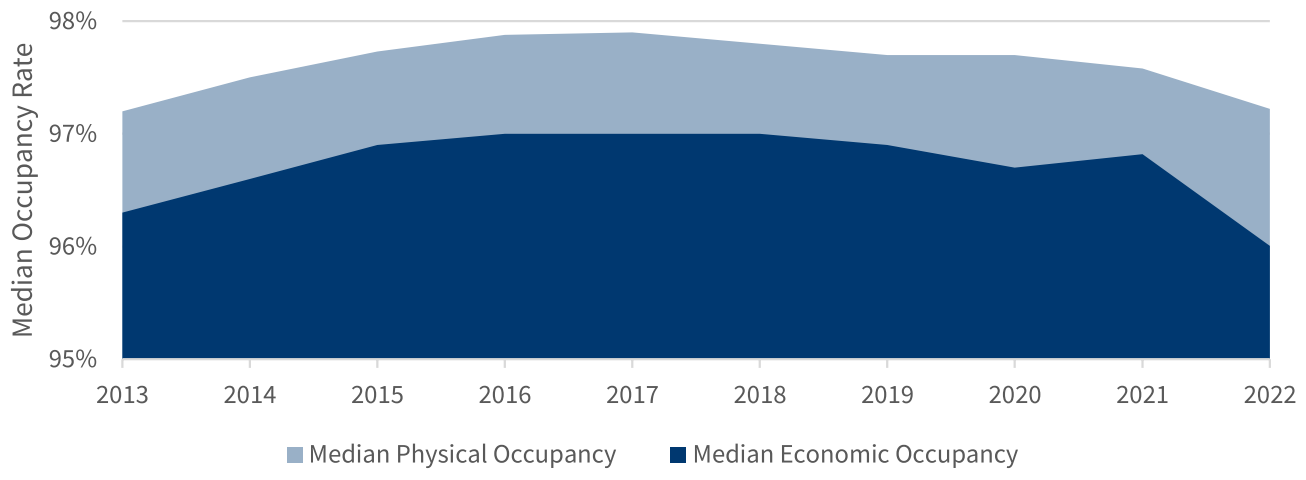
Industry professionals generally underwrite housing tax credit property investments assuming that the stabilized economic occupancy rate will be at least 93%, or 95% if the property is 100% subsidized or located in a very strong rental market. The assumed economic vacancy rate considers, on top of losses due to the periodic turnover of units and the ability to re-lease such units (known as physical vacancy losses), losses from rental concessions, rent skips or collection problems (known as economic losses). While physical occupancy may be calculated at 95% or higher, historical performance data confirm that it is a sound underwriting practice to assume an additional 1%-2% of economic losses beyond physical vacancy losses.

Because data providers did not consistently track economic occupancy, CohnReznick could not gather such information until 2013. Median economic occupancy rates among the national portfolio exhibited improving trends since 2013. In addition, the spread between physical and economic occupancy rates generally narrowed since 2013.

At the outset of the COVID-19 pandemic in early 2020, there was a great fear that a resulting lockdown and spike in unemployment rates among nonessential workers would immediately drive down rent collection among housing credit properties. Early sensitivity analyses projected 30%-40% decreases in rent collection associated with pandemic-related closures and layoffs. Investors and lenders requested monthly occupancy and collection loss updates to monitor portfolio performance closely. Property owners and operators were prepared to tap into the property and fund-level reserves to mitigate operating deficits and sustain operations through the challenging times.

In 2022, the national housing tax credit portfolio reported a median of 97.2% and 96.0% physical and economic occupancy rates, respectively. The 120-basis point spread was the highest since 2013, primarily driven by higher bad debt. In the meantime, 16.9% of the portfolio reported a less than 90% economic occupancy rate, compared to a historical low of 9% in 2016.

Occupancy Rate Spread



RENT COLLECTION LOSSES

While rent collection rates were down modestly in 2020-2022, the worst fears never materialized to the degree initially projected. There are several factors attributed to this fortunate outcome:

- The federal government enacted eviction moratoriums as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act in March 2020; that moratorium ended in July 2020. The Centers for Disease Control continued the federal eviction moratorium in September 2020. While a U.S. Supreme Court ruling struck down the federal eviction moratorium in August 2021, eviction moratoriums and new protections for renters were enacted at the state and local levels. It is also assumed that because of the widespread closure of courts and resulting backlog of cases, eviction rates also decreased because of procedural interruptions.

- Additionally, the American Rescue Plan Act (ARP) enacted several housing emergency programs, including $46 billion of funding for the Treasury Department's Emergency Rental Assistance (ERA) programs. Since 2021, ERA and other state and local programs have enabled income-eligible renters to pay rent and utility expenses. Anecdotally, many housing credit property owners recovered built-up rent receivables as renter assistance programs started disbursing funds in 2021.

- A significant portion of the tenants occupying housing tax credit apartment units also benefit from rental assistance, either project-based or tenant-based subsidy. Tenants at non-subsidized housing credit units are responsible for the entirety of their rent, even if their income fluctuates. In the case of rental assistance, tenants contribute no more than 30% of their adjusted gross income toward rent and utilities, with the balance covered by the rental assistance contracts or mobile vouchers. When rental assistance is in place, tenants can earn zero income and rely exclusively on the subsidy for rent payments.

Notably, during the COVID-19 pandemic-related shutdowns and spiking unemployment rates in 2020, general partners and investors viewed subsidized properties more favorably because the government guaranteed some if not all of tenants' monthly rent payments. Economic occupancy among this cohort exceeded non-subsidized properties by 90 basis points on a median basis in 2020. Despite some delays in tenant recertification and subsidy payouts, subsidized properties tend to have fewer rent skips, fewer unit turnovers, and lengthy waiting lists that can be used to fill available units quickly.

The demand for affordable housing remained very strong in virtually every part of the country. Income-eligible tenants often must wait for a lengthy period before being placed into an affordable housing unit and, therefore, tend to work very hard to avoid losing it, as proved by the historically low turnover rate and bad debt expenses. According to the National Low Income Housing Coalition, a person working full-time needs to earn $23.67 per hour to afford the fair market rent of $1,231 per month for a one-bedroom apartment. This amount exceeds an estimated median 60% area median income (AMI) rent of $706 for a one-bedroom housing credit property, greatly incentivizing low turnover in housing credit properties. In summary, we applaud the federal, state, and local governments for enforcing eviction moratoriums and making relief funds available to avoid what could have been a catastrophic event in terms of tenant displacement. Research from Princeton University's Eviction Lab determined that in 2021 alone, 1.36 million eviction cases were prevented through federal, state, and local government measures[19].

At the same time, we acknowledge that the eviction moratoriums were a double-edged sword, creating stress on property-level operations and the financial

[19]Preliminary Analysis: Eviction Filing Patterns in 2021

health of property management and development companies, particularly small operators.
We are cautiously optimistic that the national housing tax credit portfolio will not experience any cliff effect in rent collection drops as the country moves into a post-pandemic housing market that is not supported by eviction moratoria or emergency rental assistance. While the ERA programs are not set to close until September 30, 2025, the National Council of State Housing Agencies (NCSHA) found that 73% of states have exhausted all available pandemic-related emergency rental assistance, 13% are not sure how long they will be able to accept applications, and another 7% will close their application portals in the next six months, according to results of its 2023 survey[20].

We believe we may be starting to see the impact of the conclusion of pandemic-era housing stability measures as the median economic occupancy of housing credit properties declined to 96.0% in 2022, its lowest level in 10 years. The softening in economic occupancy is slightly less favorable than the 96.3% reported in 2013, when parts of the country were still in the last leg of economic recovery resulting from the Great Recession. Similarly, the percentage of housing credit properties reporting less than 90% economic occupancy increased to 16.9% in 2022, up from 14.0% the year before and the highest rate on record.

Signs of strain extend to subsidized housing credit properties. Subsidized housing credit properties maintained an economic occupancy rate of 97.0% in 2021, while unsubsidized housing credit properties improved to 96.5% (from 96.1% in 2020). However, we noted that economic occupancy levels declined for both subsidized and unsubsidized properties to 96.2% and 96.0%, respectively, in 2022.

Based on our assessment of the broader multifamily housing market, indicators point to a balanced but softening market. Low unemployment, increased mortgage rates, and historically low inventories of for-sale housing are bolstering renter occupancy across all classes. At the same time, increased inflation, recessionary concerns, and 1.0 million new units of supply expected to come online over the next 18 months raises fundamental market concerns regarding vacancy and turnover.

[20]States are Using Fiscal Recovery Fund for Affordable Housing

STABILIZED OPERATING PERFORMANCE

This section presents the national, stabilized housing credit portfolio's performance via the following key operational and financial metrics:

- **Physical occupancy:** Defined as the number of occupied units divided by the total number of revenue-producing units at a property. The annual physical occupancy rate is equal to the monthly average over the stabilized period in the year. Physical occupancy underperformance is defined as properties operating at less than 90% physical occupancy for the year.

- **Economic occupancy:** Defined as annual collected rent (net of vacancies, concessions, and bad debt collection losses) divided by annual gross potential rent. Economic occupancy underperformance is defined as properties operating at less than 90% economic occupancy for the year.

- **Debt coverage ratio (DCR):** Defined as net operating income (minus required replacement reserve deposits), divided by mandatory debt service payments. DCR underperformance is defined as properties operating with less than 1.00 DCR for the year, simultaneously referred to as "operating below breakeven."

- **Per unit cash flow:** Defined as the cash flow available after making mandatory debt service payments and required replacement reserve contributions, divided by the total number of units within the property. Per unit cash flow underperformance is defined as properties with operating deficits or less than $0 in per unit cash flow.

- **Risk rating:** Risk rating using criteria and scale defined by the Affordable Housing Investors Council (AHIC) criteria[21] which serves as a consistent baseline for measuring performance.

In addition to analyzing these performance metrics for the national surveyed portfolio, CohnReznick presented the dataset by category, including **by property location, property age, property size, tenancy type, credit type, development type, availability of subsidy, and level of hard debt.**

Operating performance and expense metrics can be found at the CohnReznick Affordable Housing Credit Study Tool:

AFFORDABLE HOUSING CRedit Study TOOL
CohnReznick

About the properties

Our database includes more than 30,600 housing credit properties, of which 19,200 were considered "active," meaning that they are generally within their 15-year compliance periods and actively owned/managed by syndicators and investors. It is on those 19,200 that the 2021-2022 information was reported. Of the roughly 19,000 active properties, 15,652 were stabilized as of 2022-year end, representing 81.5% or 72.1% of the total active properties on a property count and equity basis, respectively. Properties with partial years of stabilized performance were removed from the dataset for the given year(s); otherwise, annualized figures could skew the DCR and cash flow results. The following table illustrates the overall sample size used for this report.

[21] Risk rating guidelines instruction, Affordable Housing Investors Council (AHIC), 2017

STABILIZED OPERATING PERFORMANCE

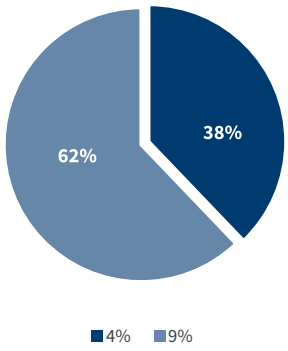
Overall Portfolio Composition

	Survey Total	Active Properties	Stabilized Properties	Percent Stabilized
Number of Properties	30,655	19,207	15,652	81.5%
Number of Units	2,422,948	1,633,468	1,272,717	77.9%
Number of LIHTC Units	2,300,378	1,572,969	1,221,124	77.6%
Housing Credit Net Equity	$204,667,534,621	$159,007,300,000	$114,690,800,000	72.1%

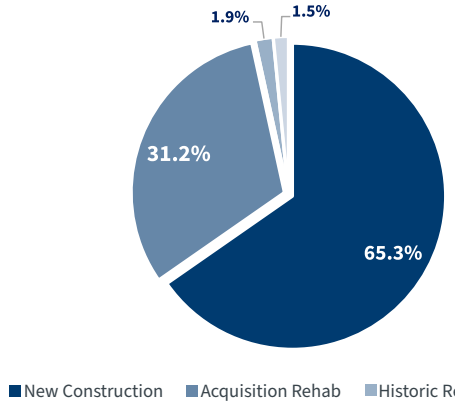
The national housing credit portfolio as of year-end 2022 was predominantly 9% credit properties, representing 66% of the total properties. Approximately 50% of the portfolio reported some level of project-based rental assistance. Greater than two-thirds of all the housing credit properties had no age restriction, while 30% were reserved for senior households age 55-plus or 62-plus. The remaining properties served special needs and other unspecified populations. The average housing credit property in the national portfolio was 82 units and eight years old.

Portfolio Composition

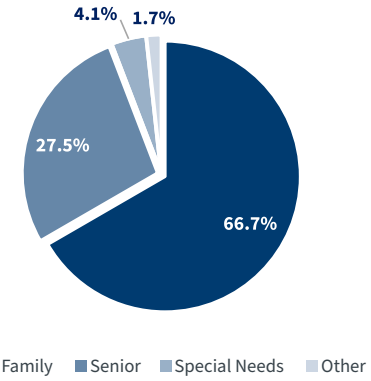
by Credit Type



by Development Type



by Tenancy Type



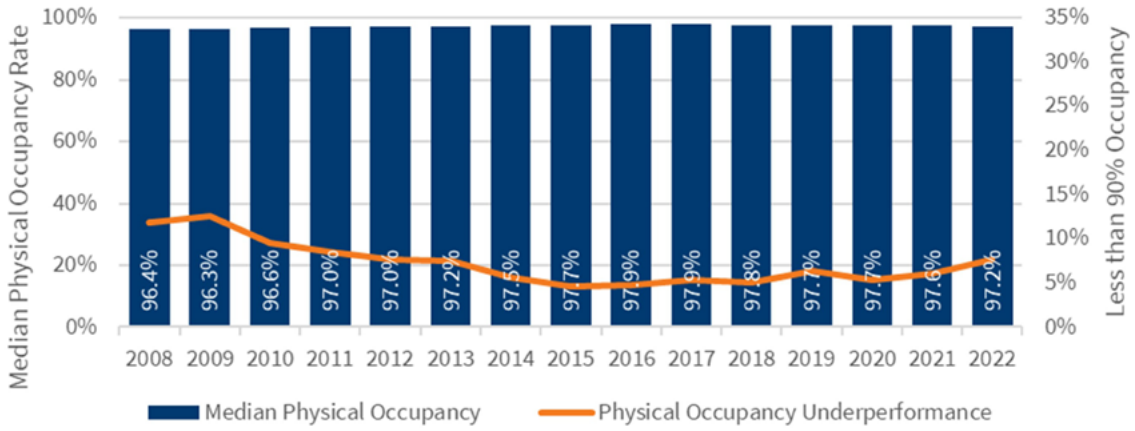
National occupancy trend

Since we have been collecting data for this study, nearly all units financed with housing tax credits have been occupied. Nationwide median physical occupancy has remained upward of 96% since 2008, reaching 97.9% in 2016 and 2017, and retreating modestly to 97.2% in 2022. In the broader apartment industry, property managers generally consider an occupancy rate greater than 95% fully occupied. The national median physical occupancy rate for units financed with housing tax credits has always clustered in the 96%-98% range, confirming, year after year, the pent-up demand for affordable housing in virtually all parts of the country.

In addition, the incidence of physical occupancy underperformance (defined as properties reporting a less than 90% physical occupancy) has decreased over the same period, falling from 11.9% (by equity) in 2008 to 7.6% in 2022. This means that about approximately 93% of all the surveyed properties

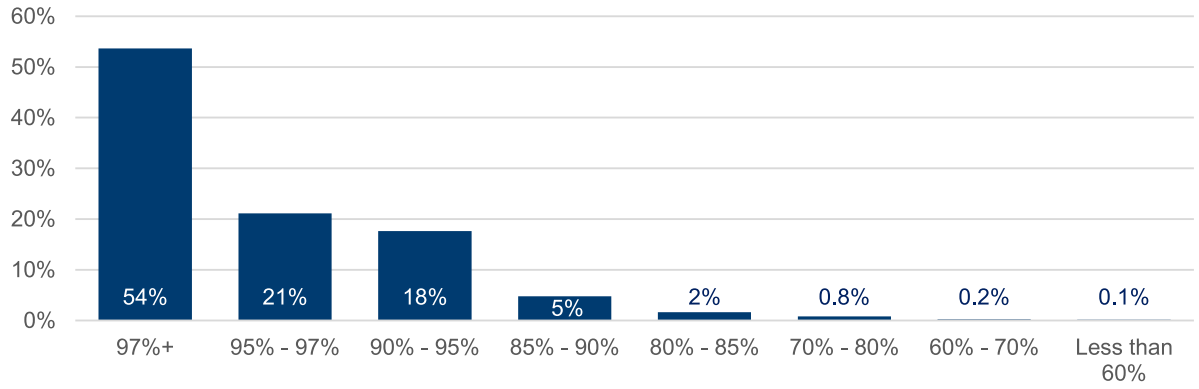
in our dataset reported occupancy greater than 90% in 2022. Underperforming properties that reported occupancy issues tended to struggle for reasons not related to demand but rather specific challenges such as poor design, ineffective management, or deferred maintenance.

National Physical Occupancy Trend



Of the housing tax credit properties with below-average performance, most are still in relatively strong condition. As noted, only 7.6% of housing tax credit properties were less than 90% occupied in 2022. Among the subset of underperforming properties, most reported physical occupancy rates between 80% and 90%. Only 1.2% of the surveyed stabilized properties were considered severe underperformers and reported less than 80% physical occupancy.

Physical Occupancy Distribution
All Stabilized Properties -2022



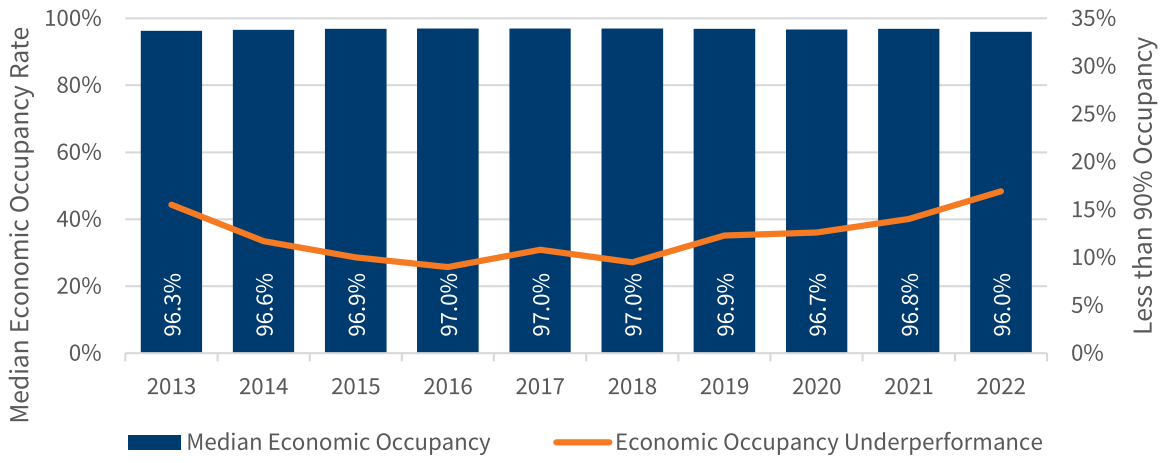
National economic occupancy

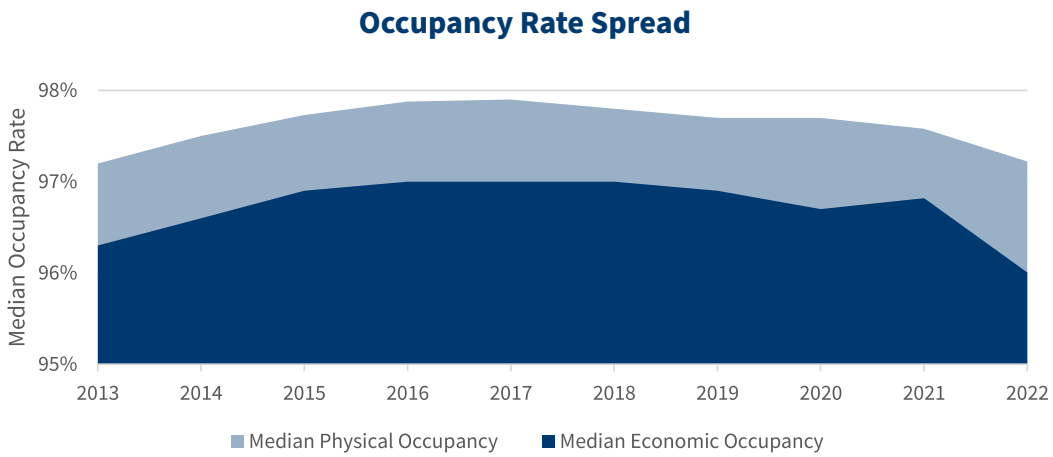
Historically, housing tax credit properties also performed well regarding the rent collected compared to the rent potential, also known as "economic occupancy." A property's income depends on more than simply whether its units are fully occupied. Property managers must also be able to collect the rent from those units' tenants. Industry professionals generally underwrite housing tax credit property investments assuming that the stabilized economic occupancy rate will be at least 93%, or 95% if the property is 100% subsidized or located in a strong rental market. The assumed economic vacancy rate considers the periodic turnover of units, the ability to re-lease such units, and losses from rent skips or collection problems. While physical occupancy may be calculated at 95% or higher, historical performance data confirm that it is a sound underwriting practice to assume an additional 1%-2% of economic losses beyond physical vacancy losses.

Because data providers historically did not consistently track economic occupancy, CohnReznick could not gather such information before 2013. As shown below, nationwide economic occupancy rates have been robust and in line with the general underwriting assumption of a 5%-7% total vacancy losses.

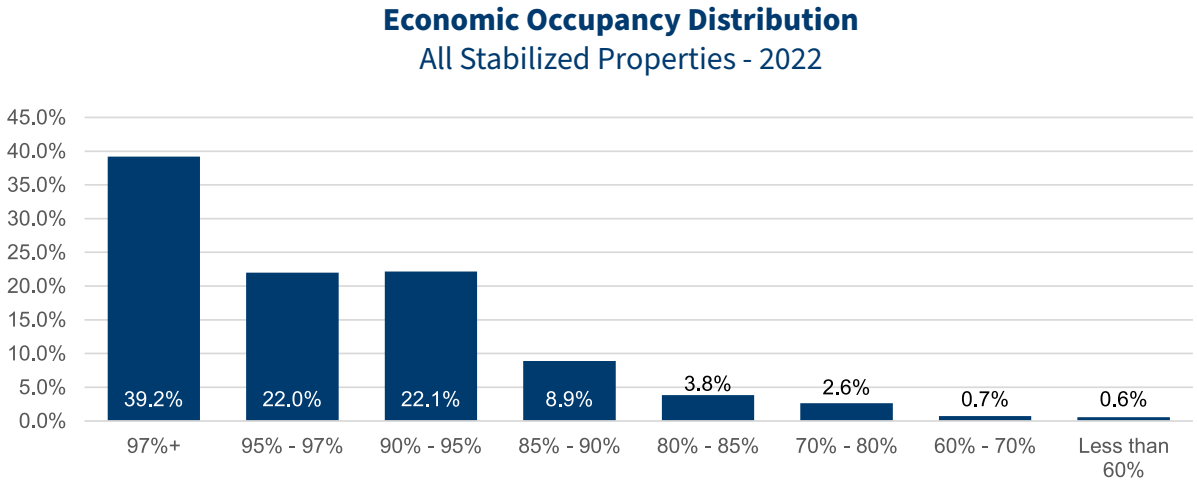
As more fully described in the "Rent Collection Losses" chapter, the rent collectability issue was on the minds of many during the height of the COVID-19 pandemic. How would housing credit properties fare in 2021 and 2022 as lockdowns, stimulus checks, and eviction moratoriums came and went? In 2022, reporting 97.2% and 96.0% nationwide median physical and economic occupancy rates, respectively, the housing credit industry saw a widened spread between the two rates. The 122-basis point spread was wider than the average 86-basis point spread average between 2013 and 2021.

National Economic Occupancy Trend





Despite the divergence in 2022, the spread demonstrates very powerfully how the demand for affordable housing units continues. The percentage of properties reporting economic occupancy less than 90% shrank to 9.5% in 2018, down from 15.5% in 2013. However, due to factors discussed previously, economic occupancy underperformance increased to 16.9% in 2022. Consistent with prior years, only 3.9% of the stabilized portfolio had economic occupancy rates below 80% in 2022.



National debt coverage ratio

Housing credit properties are also in a good position, on a median basis, to make their debt payments. The median debt coverage ratio (DCR) was 1.38 for surveyed housing tax credit properties in 2022.

Most lenders' underwriting standards require that a housing credit property generate net income that produces a DCR of at least 1.15-1.20 as a condition of retiring a property's construction loan and converting to long-term permanent financing. A property's DCR represents the net income produced by the property divided by the amount of its mandatory debt service payments. For example, a property that reports $140,000 of net income and $100,000 of annual mandatory debt service will have a 1.40 DCR.

A strong DCR means that the property receives more income than needed for its expenses, including debt. The surplus can replenish reserves, pay deferred developer fees or soft loans, and put the development in a stronger, safer financial position.

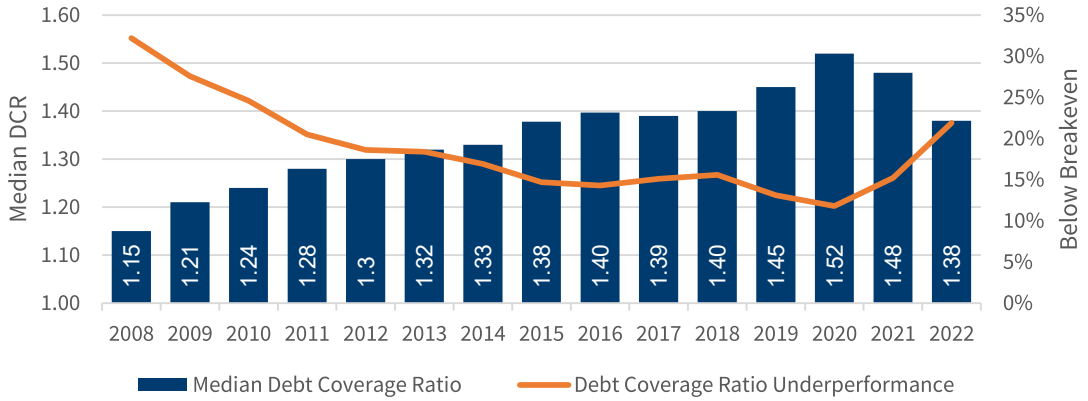
STABILIZED OPERATING PERFORMANCE

The median DCR of 1.38 in 2022 represents a decline from the 1.52 all-time high in 2020. Historical perspective is important to contextualize the 2022 results.

The median DCR hovered around 1.15 for almost a decade between 2000 and 2008. Only following the global financial crisis and the historically low interest rate environment did median DCR performance reach the high-water marks seen in the last decade.

This analysis includes only properties with loans that require regular payments. It does not include properties that are financed with no debt or are financed with only "soft" debt. Soft debt refers to mortgage loans made by government agencies or other lenders that require current payments only to the extent that the property has sufficient cash flow (or in some cases, do not require any payments until the maturity of such loans even if there is surplus cash flow). Roughly 19.5% of the properties (by both property count and investor net equity) in our stabilized surveyed population were financed exclusively with soft debt.

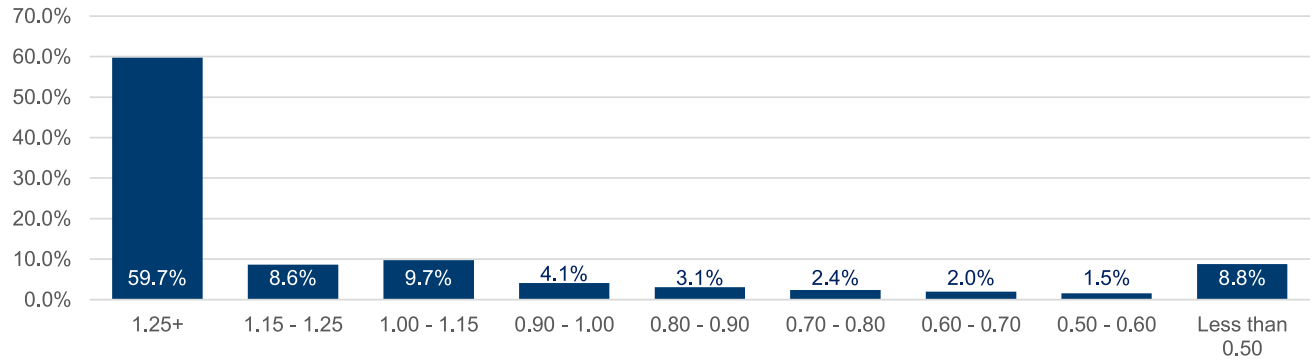
National Debt Coverage Ratio Trend



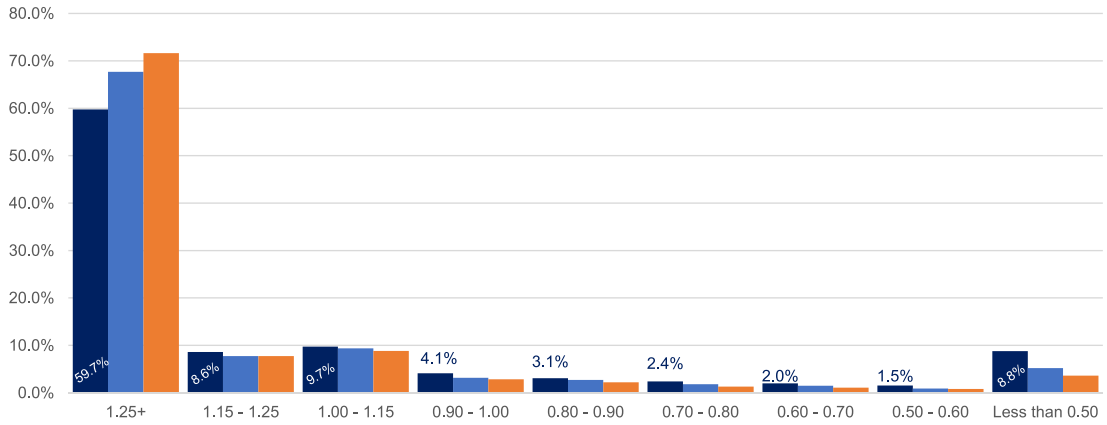
DCR underperformance, meaning properties with DCR less than 1.00, declined from 32.2% in 2008 to a low of 11.8% in 2020. DCR underperformance degraded in each of the last two years and was 21.9% in 2022.

In 2022, 14.7% of the national housing tax credit portfolio reported less than a 0.80 DCR (up from 9% in 2020); and 8.8% reported less than a 0.50 DCR (up from 3.6% in 2020). This means that more properties are having more pronounced difficulty servicing their debt.

Debt Coverage Ratio Distribution
All Stabilized Properties - 2022



Debt Coverage Ratio Distribution
All Stabilized Properties - 2020-2022

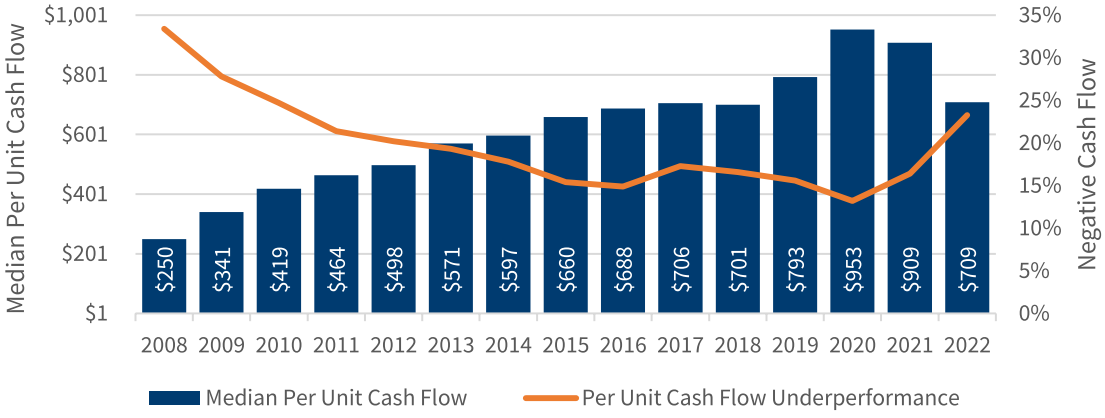


National per unit cash flow

Housing credit properties also produce healthy annual cash flow. Median cash flow is based on a larger number of properties than median DCR because, as noted earlier, properties that were financed only with soft debt were not included in our calculation of median DCR.

After paying hard debt service and making required replacement reserve deposits, the median per unit cash flow was $709 per unit in 2022. Consistent with the DCR trend, per unit cash flow is down in 2021 and 2022, although it still nearly tripled the $250 per unit median cash flow reported in 2008. While not depicted in the following graph, between 2000 and 2008, housing tax credit properties reported minimal cash flow, averaging between $200 and $250 per unit per year.

National Per Unit Cash Flow Trend



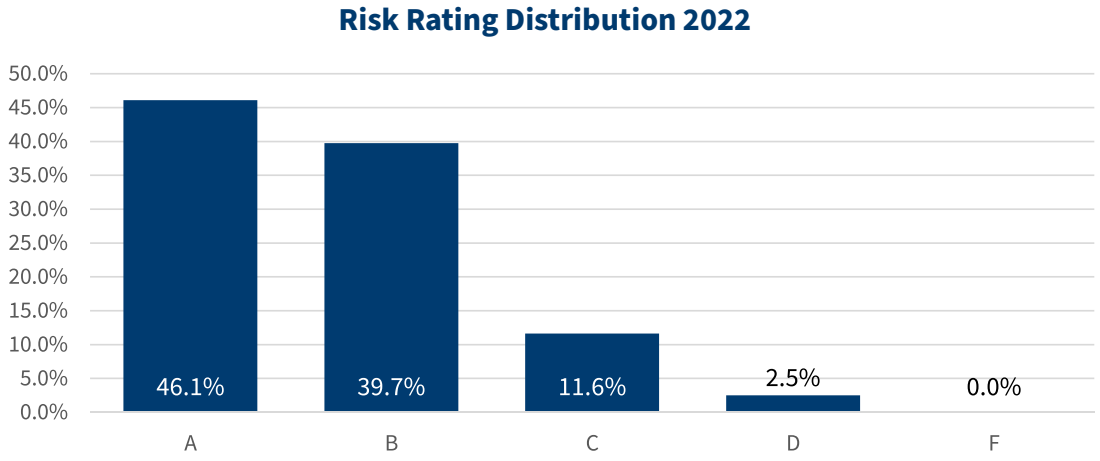
Robust cash flows are good news for housing tax credit properties; however, these properties are still tightly budgeted. By design, state finance agencies must allocate only enough credits to make properties financially feasible. Because the median tax credit property comprises 85 units, the total sum of positive cash flow per property – also on a median basis – is approximately $60,000 per year.

Cash flow is not necessarily distributed to the partners that own a tax credit property. Instead, any excess cash flow is typically run through the cash flow waterfall specified under the property's partnership agreement to pay deferred developer fees, asset management fees, and soft loans. A 1.38 median DCR and a $709 median per unit cash flow across the national affordable housing tax credit portfolio means that there is a moderate margin for error when a property experiences an unexpected expense spike, stagnant rent growth, or any constraints.

National watch list distribution

Syndicator and investor watch lists track properties through a set of defined performance measures to help ensure that "problem" (aka watch list) properties are closely monitored. Watch list criteria can vary from syndicator to syndicator; however, virtually all respondents have adopted the Affordable Housing Investors Council (AHIC) criteria[22] as a baseline for measuring underperformance. Risk ratings are assigned to properties using an "A" through "F" grading scale. Properties rated "C" or worse are considered watch list properties.

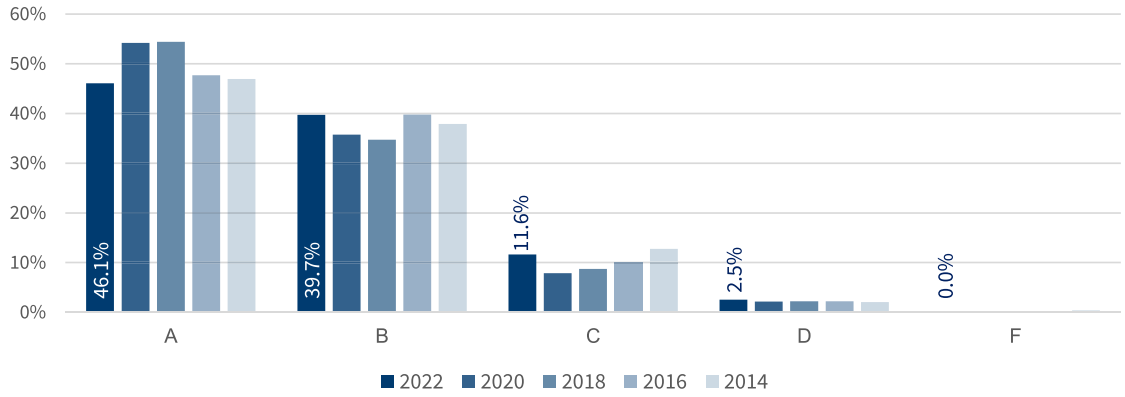
In aggregate, 14.2% of the surveyed portfolio were on the watchlist as of 2022 year-end, having received a C, D or F rating. The 2022 watch list percentage was up from the prior years. While a notable movement, it is important to note that consistent with the prior years, less than 2% of the stabilized portfolio were risk rated D or F in 2022, meaning, in general, severe underperformance. Over 10% was risk rated C in 2022 (compared to about 6.5% in 2020), meaning requiring attention but generally manageable and no risk of foreclosure.



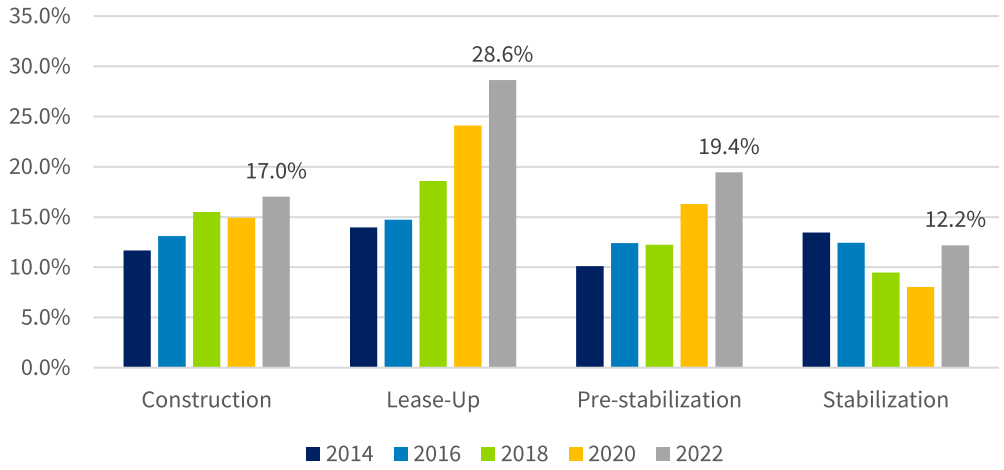
Properties in lease-up or construction as of Dec. 31, 2022, in particular, reported watch list percentages of 28.6% and 17.0%, respectively. This dynamic confirms that very generally speaking, the construction and lease-up periods tend to be the riskiest phases of development and proper underwriting is the best defense against unpleasant surprises. Please see the "Development Performance" chapter for more details.

[22] Risk rating guidelines instruction, Affordable Housing Investors Council (AHIC), 2017.

Risk Rating Distribution History



Historical Watch List by Development Status

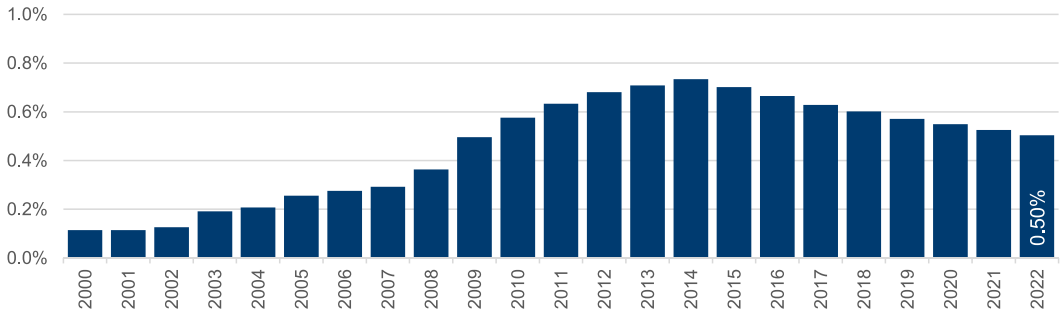


National cumulative foreclosure rate

CohnReznick asked survey respondents to report the number of properties lost to foreclosure, including circumstances in which a deed may have been tendered in lieu of foreclosure. Respondents reported a 0.50% cumulative foreclosure rate, measured by the number of foreclosed properties divided by the total number of properties in respondents' portfolios. None of the survey respondents reported any incidence of foreclosure or deed in lieu of foreclosure during years 2021 and 2022.

STABILIZED OPERATING PERFORMANCE

Cumulative Foreclosure Rate
by property count



We have been producing this data point for over 15 years, and the less-than-1% foreclosure rate has proven to be a very meaningful data point for regulators who rate the risk of housing tax credit investments. The favorable risk rating affects the amount of capital that regulated financial institutions like banks are required to hold in reserve to offset the risk of their investments. The low foreclosure rate of housing tax credit properties is also important for investors seeking credit approval to make equity investments in housing tax credit transactions.

While housing tax credit properties have a cumulative foreclosure rate of just 0.50%, the annual rate of foreclosure has been even lower than the cumulative rate – typically less than 0.1% in any year since 2000.

Given the mechanisms afforded by housing credit properties to offset underperformance discussed previously, conventional apartment properties are much more likely to suffer foreclosure.

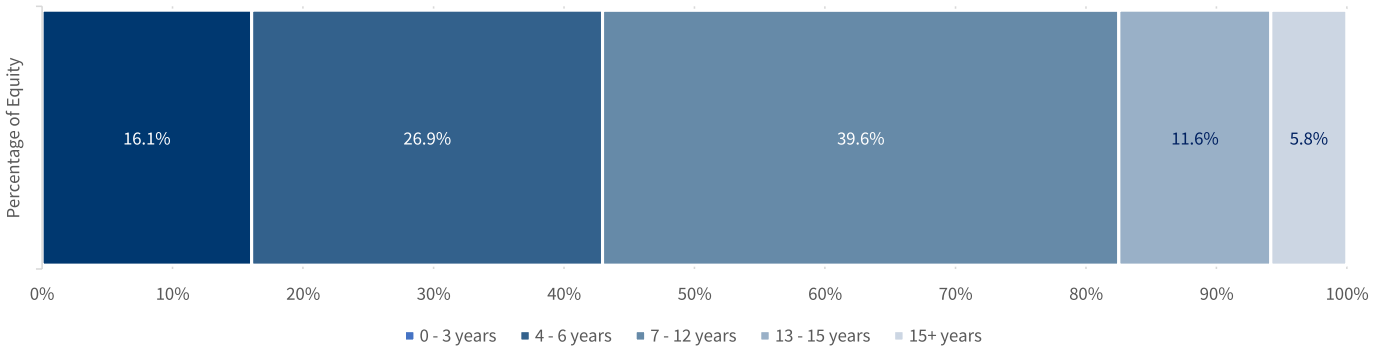
Please refer to the "Foreclosure" chapter for a more detailed analysis.

STABILIZED OPERATING PERFORMANCE BY CATEGORY

Performance by property age

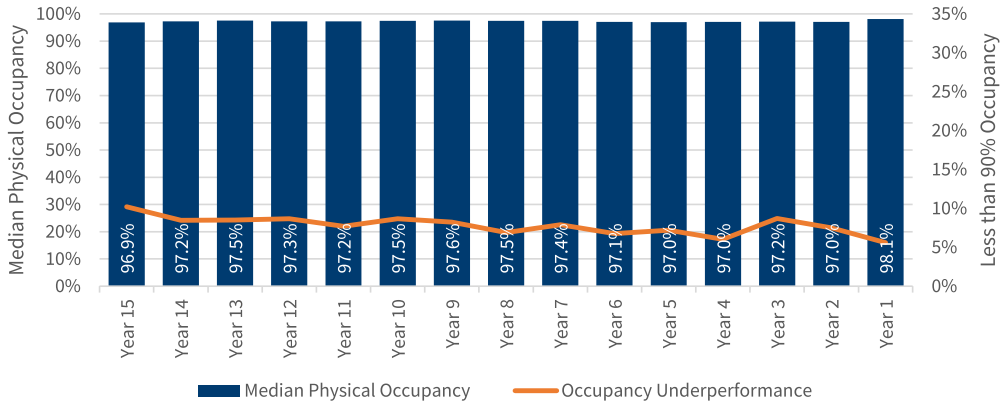
Most properties in the national dataset were between four and 12 years old. More than 90% of the stabilized properties in the portfolio were within their 15-year compliance period. While all properties were included in the national median calculations, we focused on those within their tax credit compliance period.

Portfolio Composition by Property Age



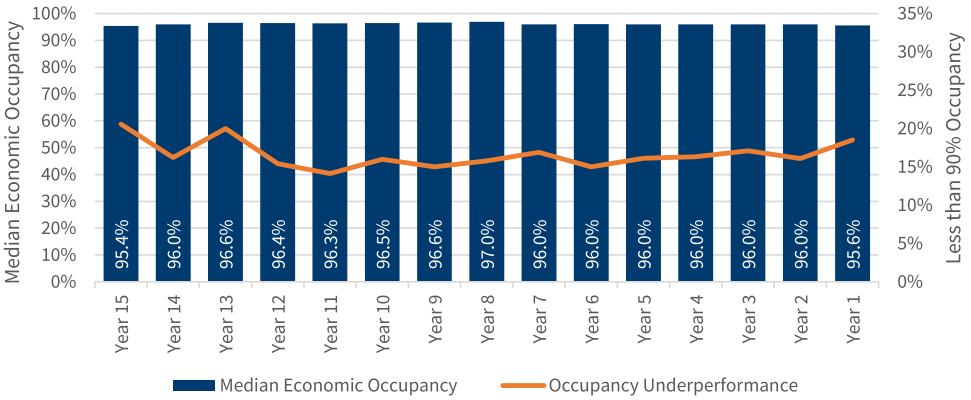
Physical and economic occupancy rates generally tend to decrease slightly over time as properties in the portfolio age. This is likely because deferred maintenance in later years contributes to additional turnover and vacancy losses. In some cases, a property may have to offer concessions as newer, more attractive housing options become available.

Physical Occupancy by Property Age



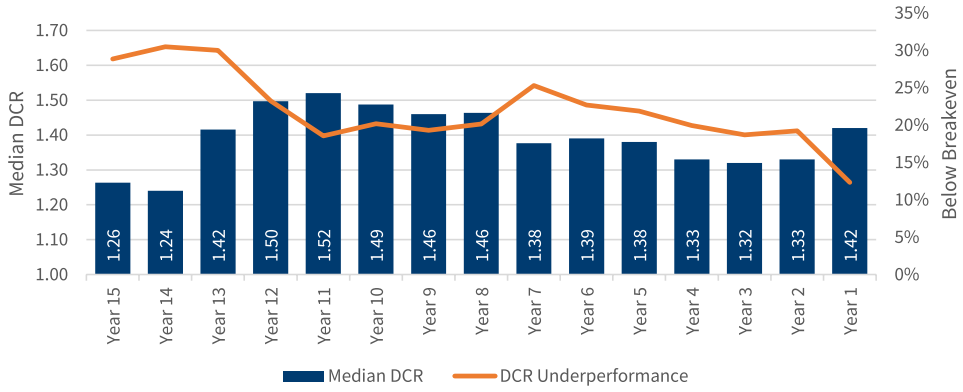
STABILIZED OPERATING PERFORMANCE BY CATEGORY

Economic Occupancy by Property Age

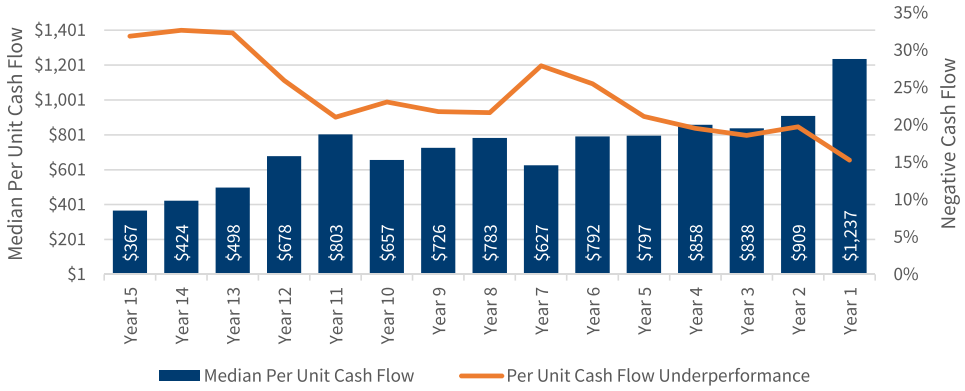


At no point do the data show median DCR approaching breakeven. Per unit cash flow underperformance followed a similar trend to occupancy. As properties age, repairs and maintenance expenses may rise, additional capital improvement may be required, and the developer and investor will start to negotiate their exit strategies.

Debt Coverage by Property Age



Per Unit Cash Flow by Property Age



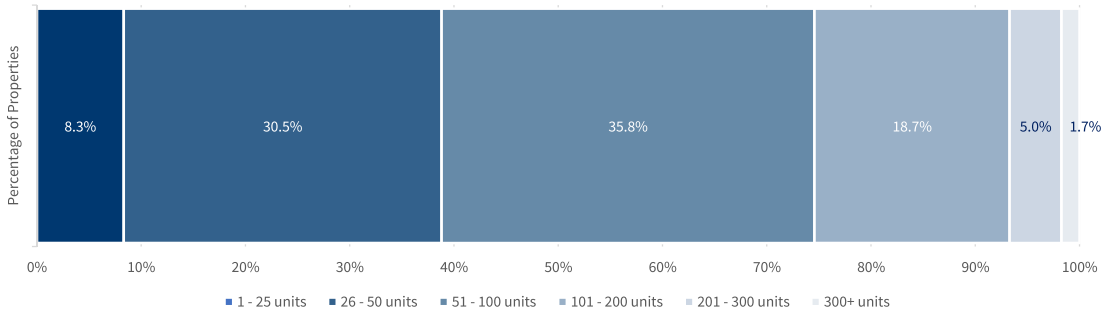
STABILIZED OPERATING PERFORMANCE BY CATEGORY

The data show properties perform similarly up until year 12, at which point performance begins to decline and underperformance rates increase.

Performance by property size

The following graph illustrates the composition of the national portfolio by property size (number of units). Nearly two-thirds of the overall portfolio are properties containing 100 units or fewer; the average property contained 85 units.

Portfolio Coverage by Property Size

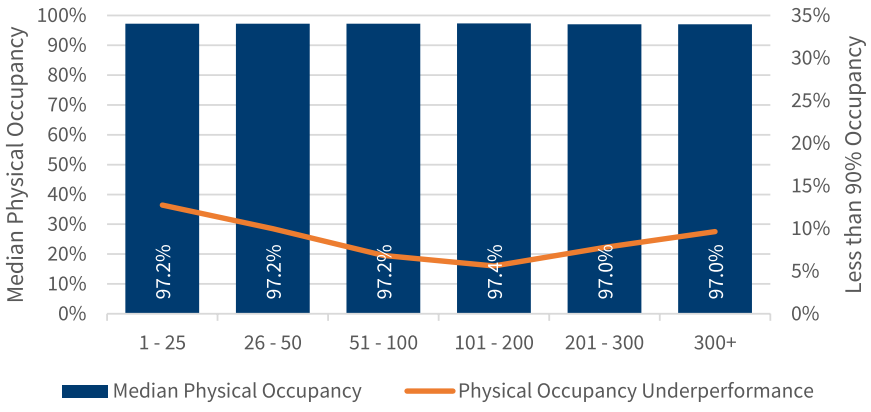


The distribution of median physical occupancy rates was uniformly favorable for properties containing up to 200 units, which reported at least 97.4% occupancy. Properties containing more than 200 units reported the lowest, nonetheless a strong 97.0% median physical occupancy rate. We found that 8.8% of the properties (measured by net equity) with 200-plus units were mixed-income developments that consist of at least 15% market-rate units.

The median economic occupancy distribution generally trended downward as properties increased in size, except properties containing over 300 units. Properties containing one to 25 units exhibited 96.9%, the highest economic occupancy among the categories, while properties containing 201 to 300 units reported the lowest 95.0% median occupancy rate.

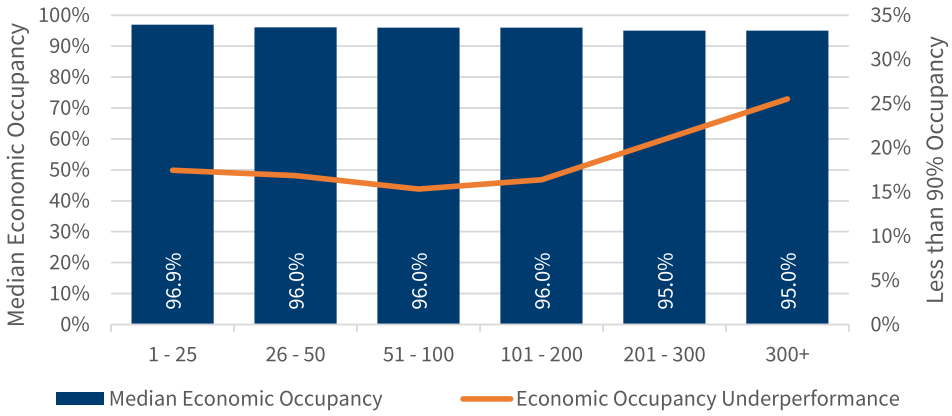
Occupancy underperformance was generally more pronounced among the smallest and largest properties, hitting a “sweet spot” among the average-sized properties. Properties containing 101 to 200 units reported the lowest physical and economic occupancy underperformance. For most calculations of underperformance in this report, we measured as a percentage of net equity. However, since larger-scale properties would carry more weight than smaller ones (due to the additional equity needed to construct), underperformance in this section is calculated by the number of properties instead of net equity.

Physical Occupancy by Property Size



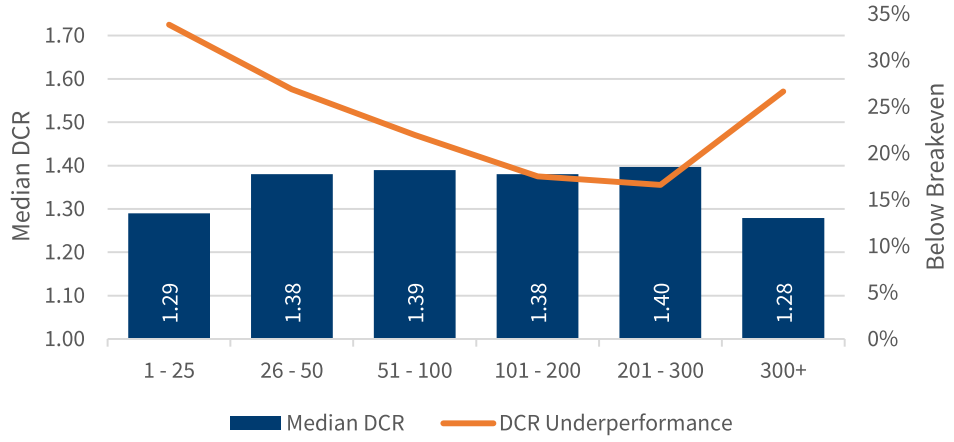
STABILIZED OPERATING PERFORMANCE BY CATEGORY

Economic Occupancy by Property Size

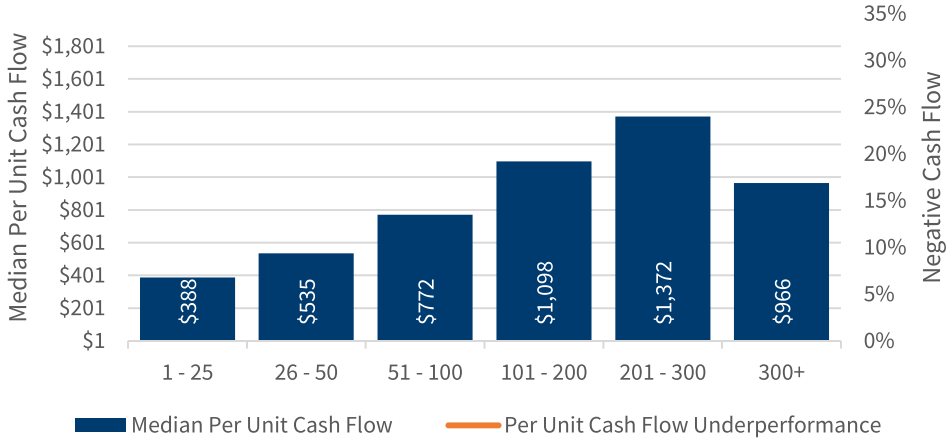


Both median DCR and per unit cash flow generally trend upward as the number of units increases up to 300 units. DCR and cash flow underperformance follow the same trend. DCR peaked at 1.40 among properties sized between 201 and 300 units, with those above 300 apartment units per property reporting the lowest median DCR of 1.28. Median per unit cash flow ranged widely from $338 per unit per annum (PUPA) to $1,372 PUPA.

Debt Coverage Ratio by Property Size



Per Unit Cash Flow by Property Size



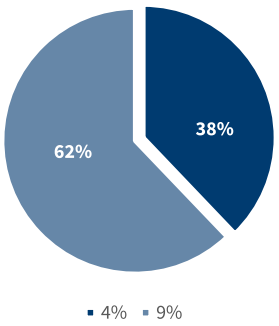
Properties with fewer units must distribute their fixed costs over a more limited base of apartment units relative to their larger peers, which can lead to lower DCR and per unit cash flow. Besides economies of scale, however, many other factors tend to collectively influence this trend, such as a property's location and age.

Performance by credit type

There are two types of low-income housing tax credits under Internal Revenue Code (IRC) Section 42: 9% credits and 4% credits available to properties that are financed with tax-exempt bonds, or the acquisition costs of existing buildings. While the actual value of any property's housing credits can vary based on several factors, 9% and 4% credits are designed to subsidize 70% and 30% of the low-income unit costs in a property.

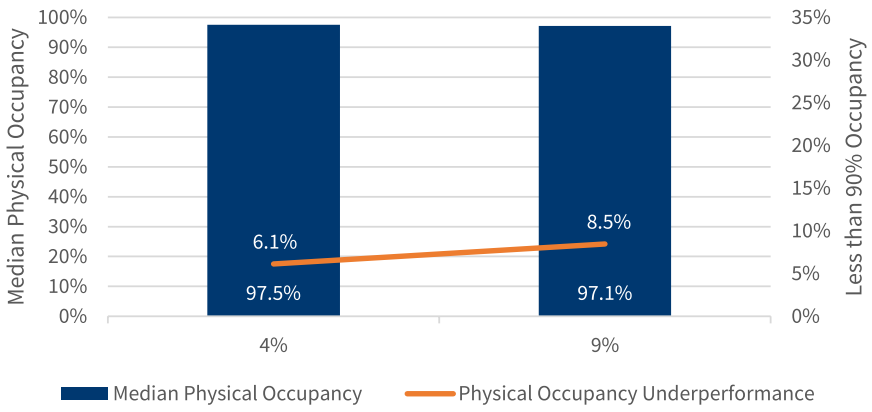
The following graphs illustrate the composition of the national portfolio by credit type. Notably, the 9% credit properties in the portfolio averaged 61 units, while the 4% properties averaged 125 units.

Portfolio Composition by Credit Type



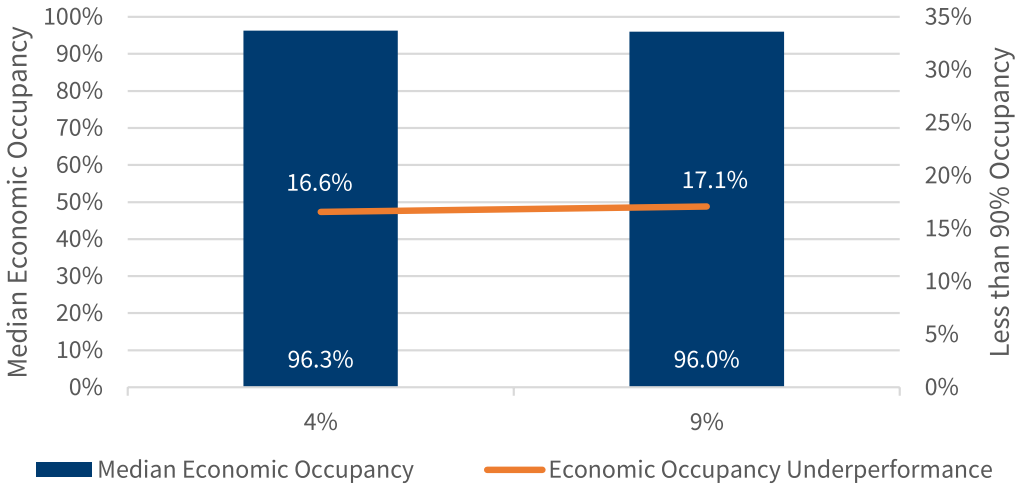
As a general matter, 9% credit properties generate more investor equity and thus have a more modest level of hard debt financing. Conversely, tax-exempt bond financed properties that qualify for 4% credits generate significantly less tax credit equity and thus require higher debt levels (albeit at lower tax-exempt interest rates).

Physical Occupancy by Credit Type



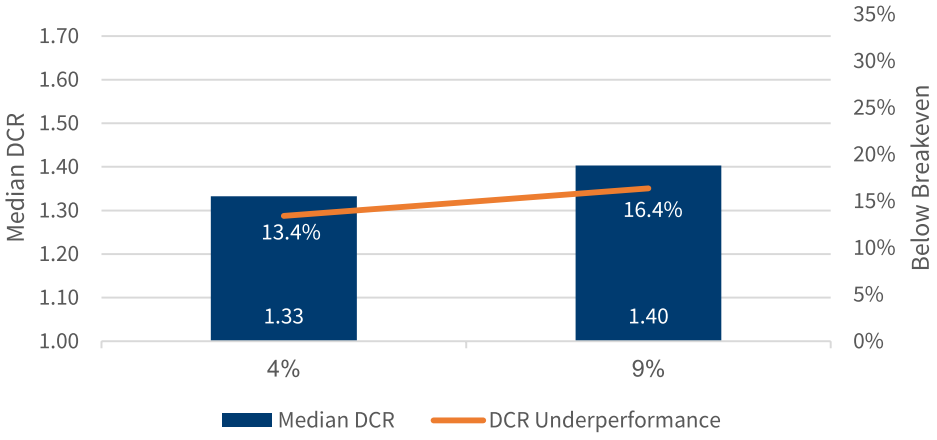
STABILIZED OPERATING PERFORMANCE BY CATEGORY

Economic Occupancy by Credit Type

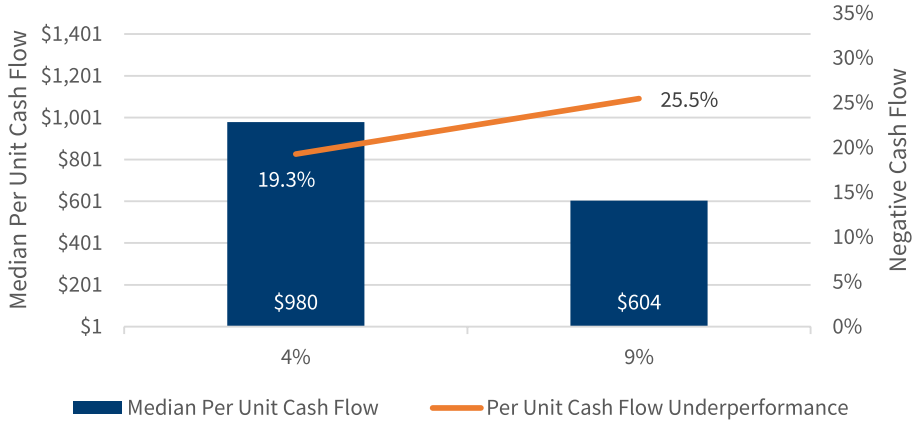


The 4% credit properties marginally outperformed their 9% counterparts from a physical and economic occupancy perspective.

Debt Coverage Ratio by Credit Type



Per Unit Cash Flow by Credit Type

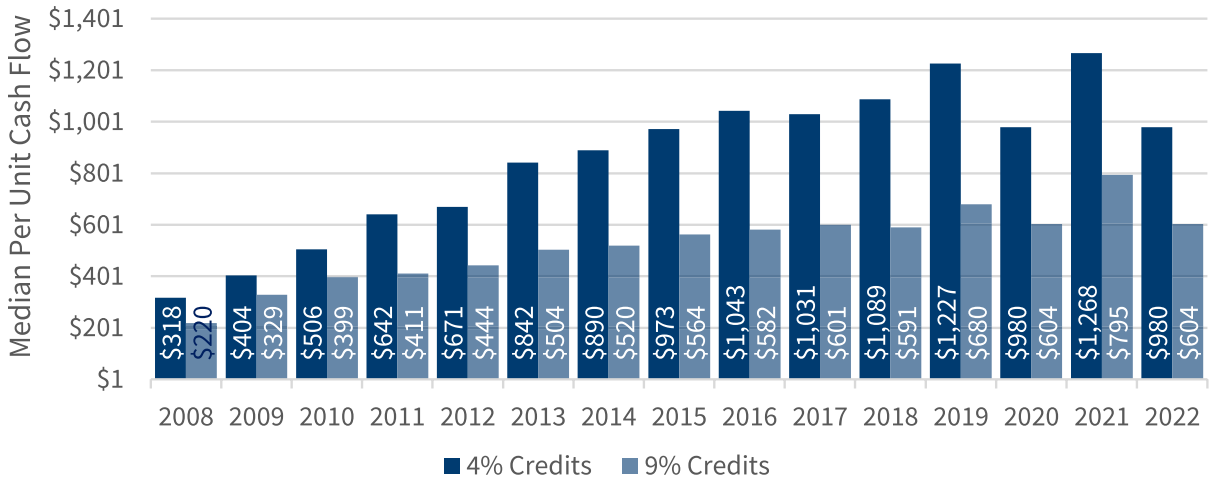


STABILIZED OPERATING PERFORMANCE BY CATEGORY

Even though 4% credit properties typically require more hard debt financing than their 9% credit peers, the 9% credit properties exhibited median debt coverage ratios only slightly higher than the 4% credit properties.

While we have not observed significant differences between 4% and 9% credit property DCR performance, the 4% credit properties we surveyed have reported consistently higher cash flows than their 9% credit counterparts. Indeed, the spread between the two categories' median per unit cash flow has grown from roughly $100 in 2008 to approximately $375 in 2022.

Per Unit Cash Flow by Credit Type

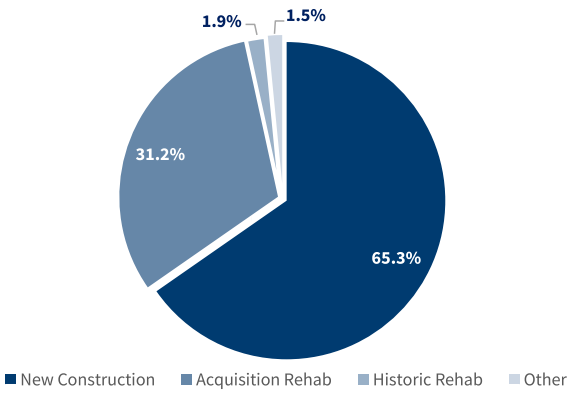


We attribute this largely to the fact that a significant portion of 4% credit properties also benefit from some form of operational subsidy or rental assistance, thus increasing the revenue potential. Also, as noted, 4% credit properties are generally larger and can allocate their fixed costs over a broader base of units, which can create higher per unit cash flow. On the flip side, when a large-scale 4% credit property underperforms, the deficits tend to be larger and therefore harder to cover.

Performance by Development Type

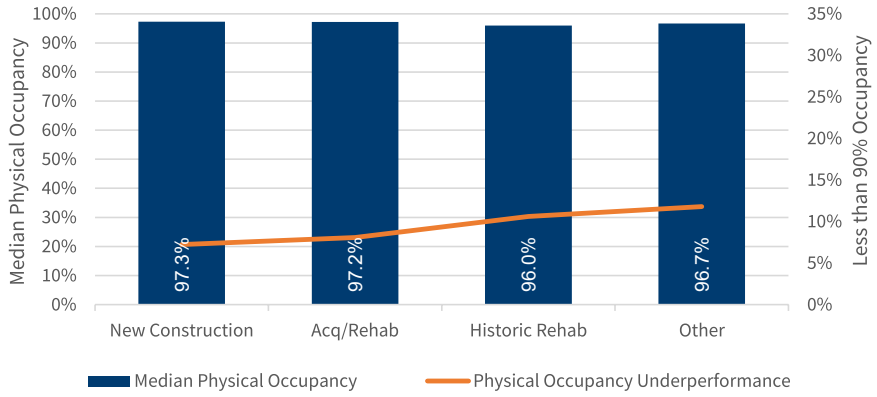
Housing credit properties generally fall into one of the following development types: new construction, acquisition rehabilitation, or historic rehabilitation. Property types that did not directly fit any of the

Portfolio Composition by Development Type



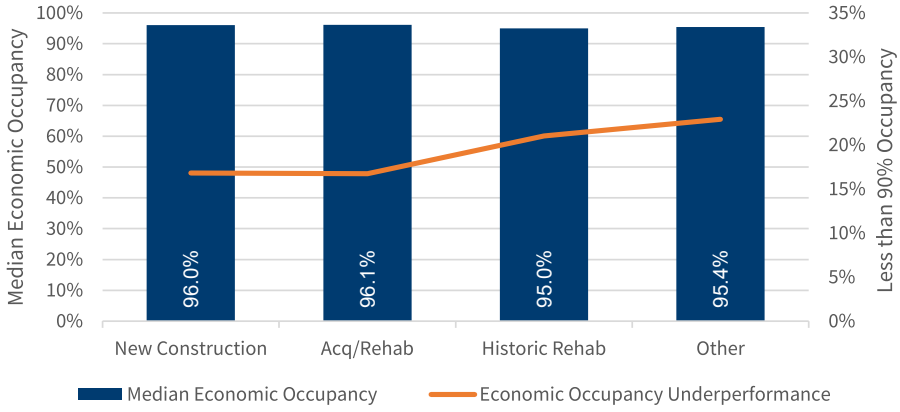
preceding categories were designated “other.” Newly constructed properties accounted for 65.3% of the net equity surveyed, and rehabilitated properties accounted for 31.2% (including 1.9% of total net equity of historic structure rehabilitations). The remaining 1.5% of the portfolio were mixed or unspecified development types.

Physical Occupancy by Development Type



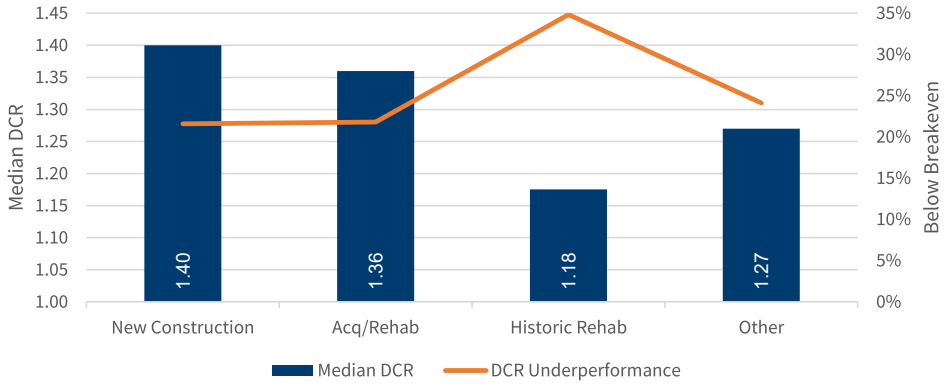
New construction properties reported the highest median physical occupancy among all development types at 97.3%. Acquisition rehabs followed close behind at 97.2%.

Economic Occupancy by Development Type



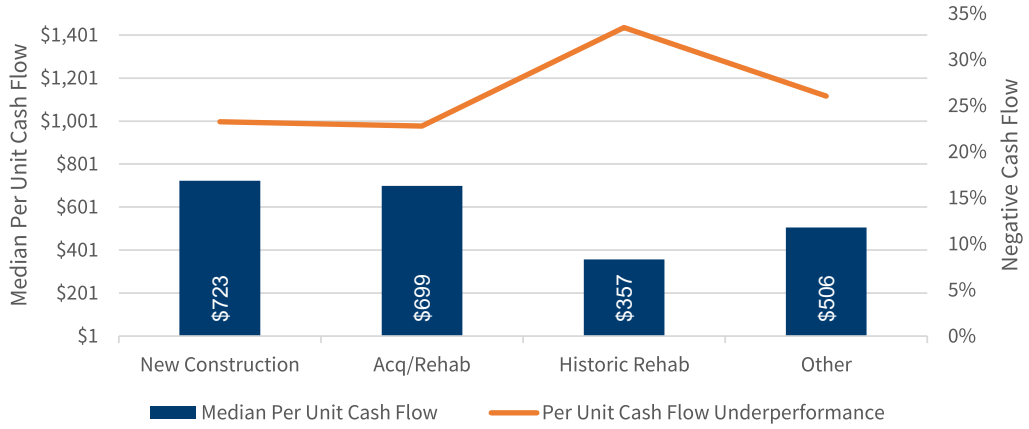
The data suggest that historic rehabs relative to other development types tend to underperform from an occupancy perspective. For example, historic rehab properties were 96.0% physically occupied and

Debt Coverage by Development Type



roughly 95.0% economically occupied, both of which were below the respective national medians. While historic rehab performance was less favorable than the national median, the sample size is relatively small, consisting of fewer than 400 properties (or 1.9% of the surveyed portfolio in terms of net equity), and thus can be more impacted by a small number of outlier properties than other property types.

Per Unit Cash Flow by Development Type

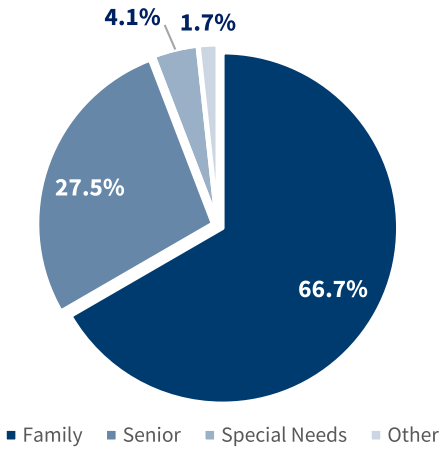


New construction properties reported the highest median DCR and per unit cash flow of all the development types at 1.40 and $723, respectively. Conversely, historic rehabs reported the lowest median DCR and per unit cash flow. Operating expense data show that historic rehab properties, on a median per unit basis, generate higher operating expenses, including higher administrative, insurance, and utility expenses, which can depress operating performance relative to the other development types if not accounted for in initial underwriting.

Performance by Tenancy Type

Housing credit properties generally fall into one of the following tenancy types: family, senior, or special needs. Tenancy types that did not directly fit any of the preceding categories were designated “other.”

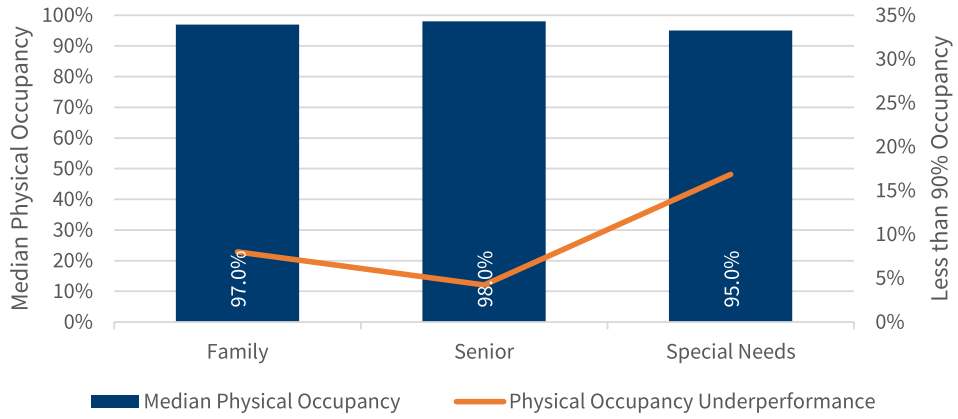
Portfolio Composition by Tenancy Type



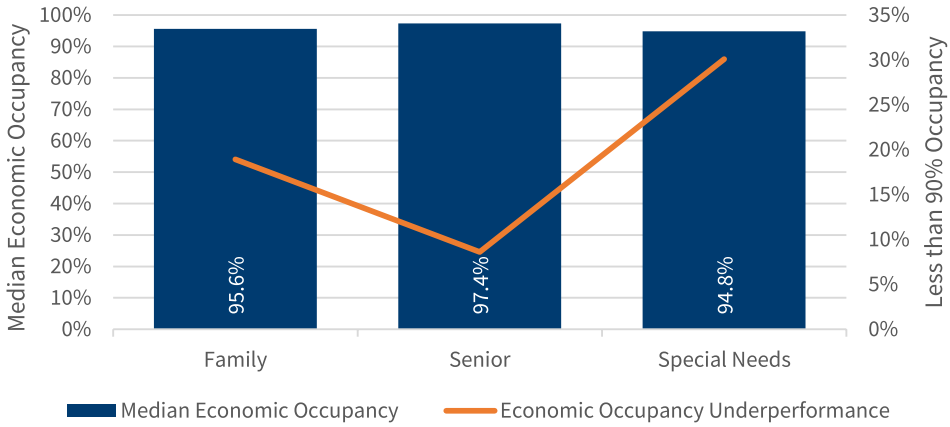
STABILIZED OPERATING PERFORMANCE BY CATEGORY

Consistent with prior studies, properties with senior-restricted tenancy, representing approximately 27.5% of the portfolio, reported the highest physical and economic occupancy rates. The median physical and economic occupancy rates ranged from 95.0% to 98.0% for all tenancy types.

Physical Occupancy by Tenancy Type

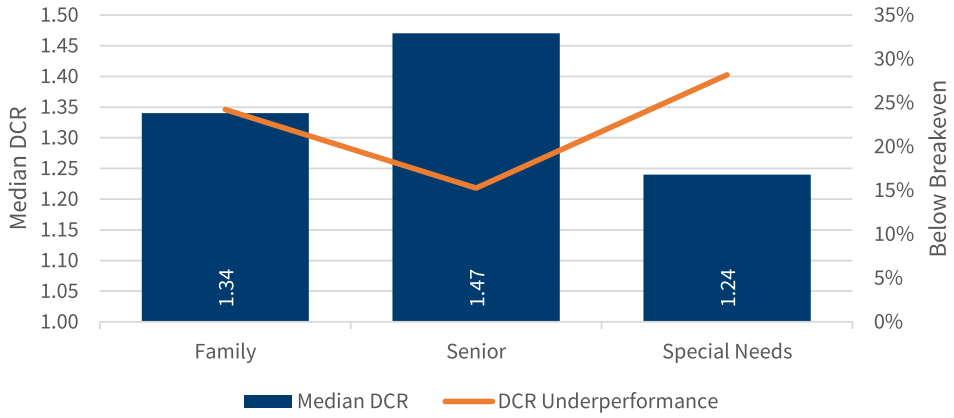


Economic Occupancy by Tenancy Type

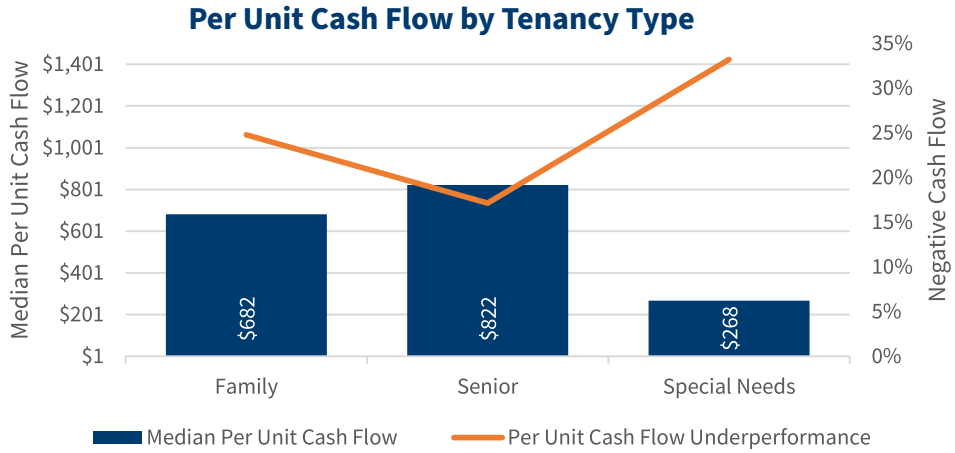


Special needs properties exhibited slightly higher incidence of occupancy underperformance than all other tenancy types, which generally reported low levels of physical and economic occupancy underperformance.

Debt Coverage Ratio by Tenancy Type



STABILIZED OPERATING PERFORMANCE BY CATEGORY



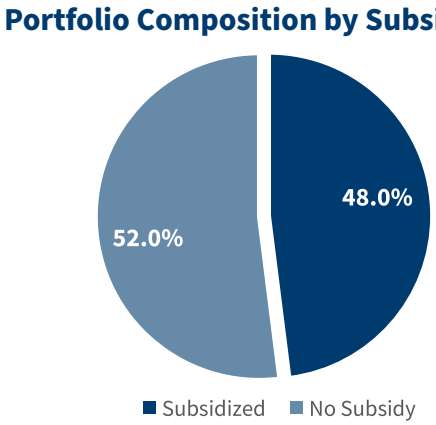
From a median DCR and per unit cash flow perspective, senior properties outperformed both family and special needs properties.

Special needs properties reported the lowest median DCR, 1.24, and the lowest median cash flow of $268. DCR and cash flow underperformance is most favorable among senior properties, ranging from 15.3% to 17.1%. Family and special needs properties' DCR and cash flow underperformance was higher than the senior cohort, ranging from 24.2% to 33.2%.

Special needs properties exhibited significantly higher administrative, salary, R&M, and utility expenses, which is not surprising given the additional operational scope required at many special needs properties. The higher expense can depress operating performance relative to the other tenancy types if not accounted for in initial underwriting.

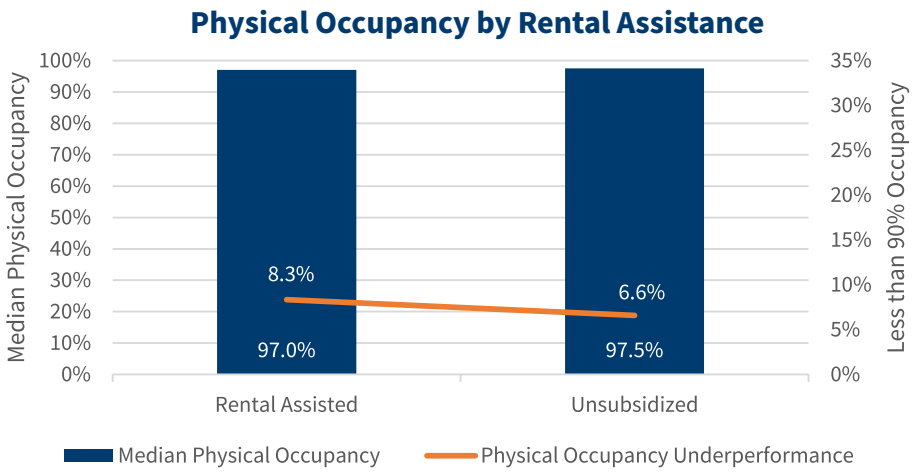
Performance by Availability of Rental Assistance

We considered all properties that have all or a portion of their units covered under a subsidy contract to be subsidized for purposes of this report. As a percentage of total equity, subsidized properties account for 48% of the overall portfolio.

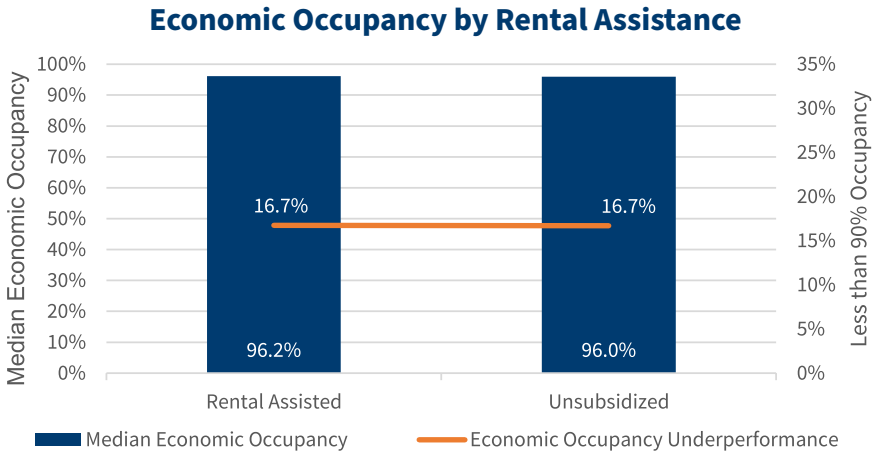


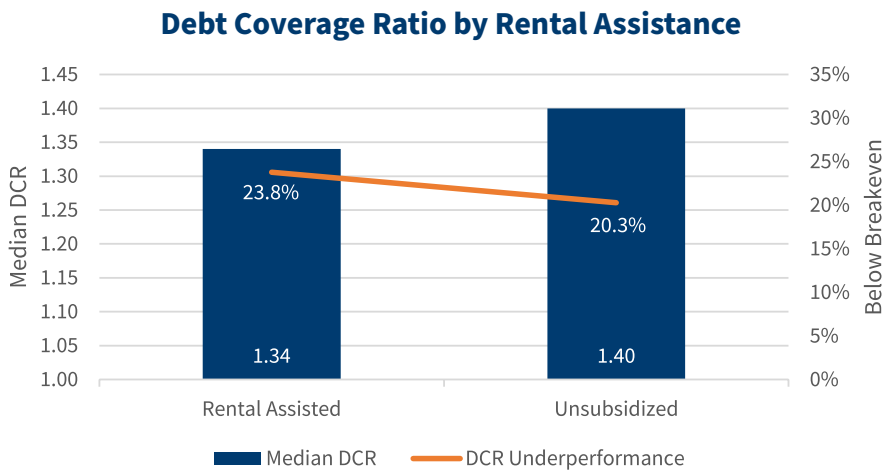
Although rental assistance is often viewed as a valuable feature of housing credit properties (and sometimes even a critical component of a property's overall feasibility), it does not appear to significantly impact property occupancy rates. Despite the widespread need for affordable housing, non-subsidized properties perform just as well as subsidized properties in terms of physical occupancy.

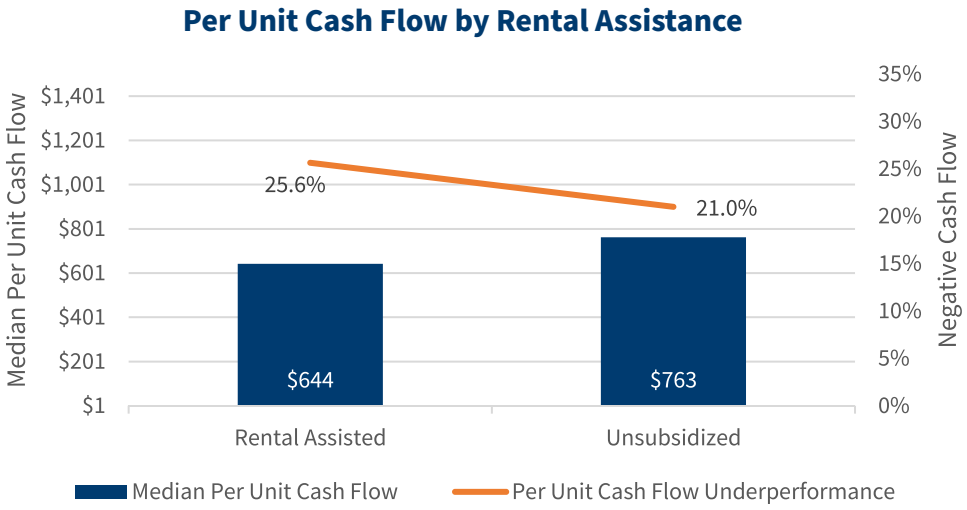
STABILIZED OPERATING PERFORMANCE BY CATEGORY



It is worth noting that during the COVID-19 pandemic, when unemployment rates soared, subsidized properties were viewed more favorably by general partners and investors because the government guaranteed some or all of tenants' monthly rent payments. At housing credit properties without subsidies, tenants are responsible for paying their entire rent, even if their income changes. On the other hand, at subsidized properties, tenants only must pay up to 30% of their adjusted gross income toward rent and utilities, with the remainder covered by rental assistance contracts. This means that tenants can rely solely on the subsidy to make rent payments, even if they have no income. In terms of economic occupancy, subsidized properties outperform non-subsidized ones by 20 basis points on average. This could be because subsidized properties have fewer instances of skipped rent payments, fewer unit turnovers, and long waiting lists that can quickly fill any vacancies.

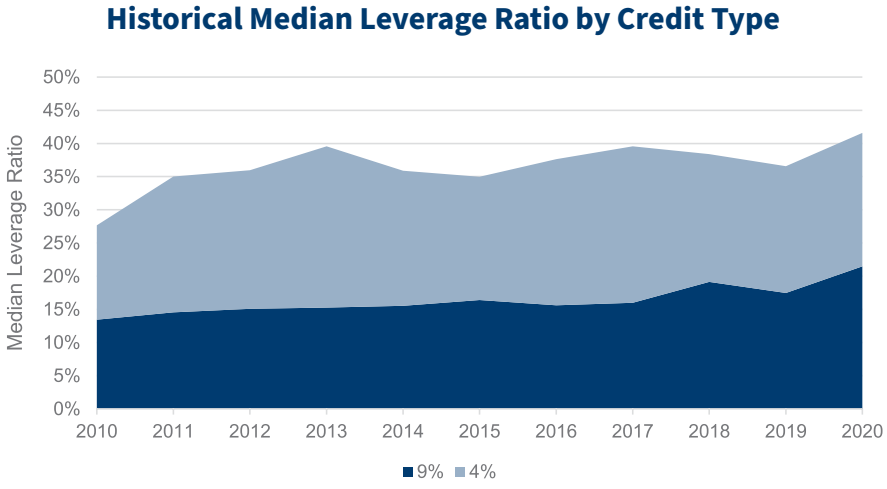






Performance by Hard Debt Leverage Ratio

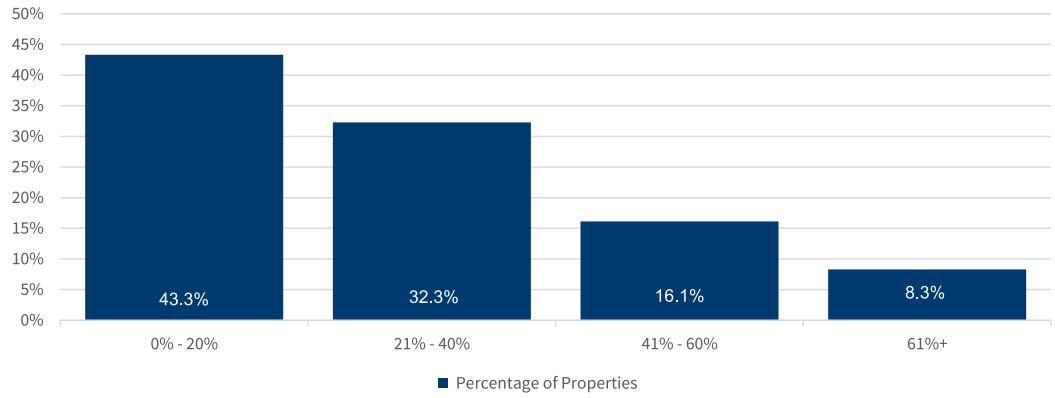
Periodic pricing shocks aside, the long-term upward trend among housing tax credit prices has coincided with receding median hard debt ratios. However, soft debt has become harder to secure, and in recent years properties have required more hard-debt financing.



Recent trends notwithstanding, most of the overall portfolio reported hard debt leverage ratios of 40% or less. In 2022, the median hard debt leverage ratio rose slightly above the 40% threshold. The hard debt leverage ratio measures the portion of a property's total development costs financed with hard debt, i.e., those requiring a fixed amount of periodic debt service payments.

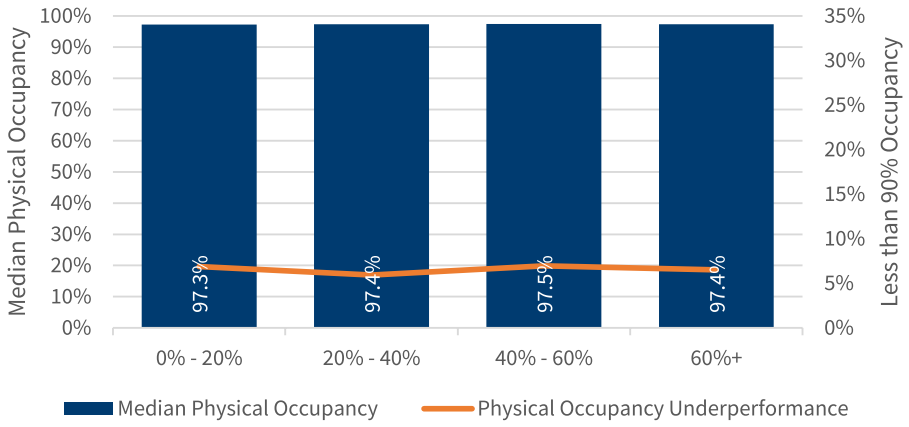
STABILIZED OPERATING PERFORMANCE BY CATEGORY

Portfolio Composition by Hard Debt Ratio

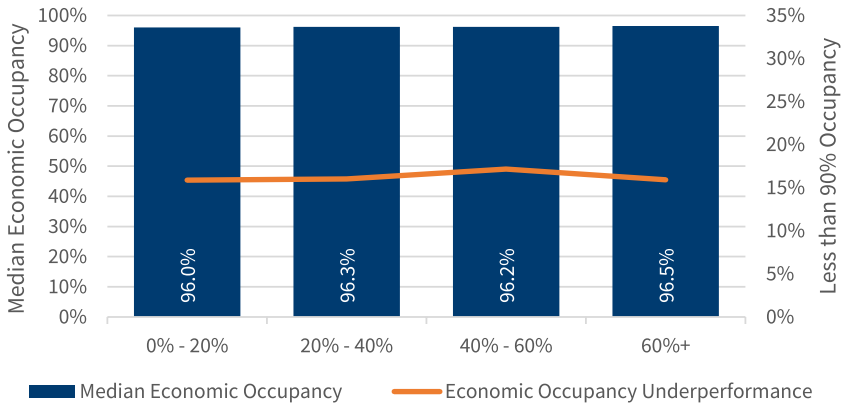


Economic occupancy rates were clustered in tight bands between 97.3% and 97.5% for all four hard debt ratio ranges. Thus, the data suggest that a property's hard debt ratio has little bearing on its occupancy performance.

Physical Occupancy by Hard Debt Ratio



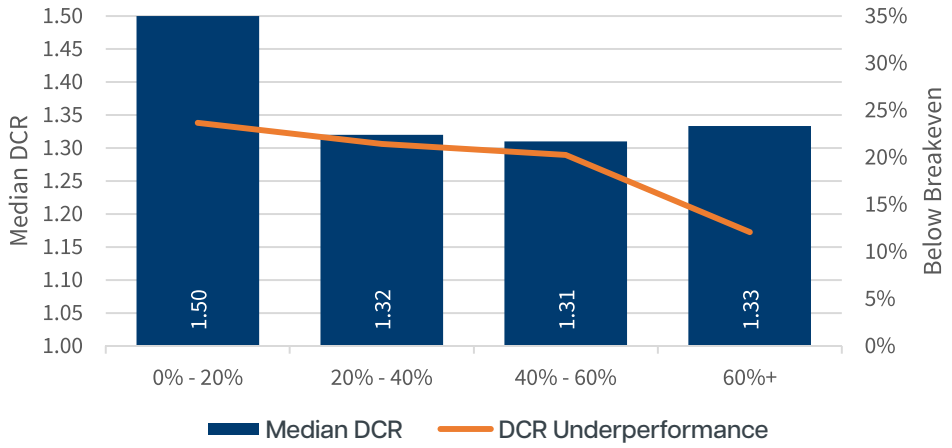
Economic Occupancy by Hard Debt Ratio



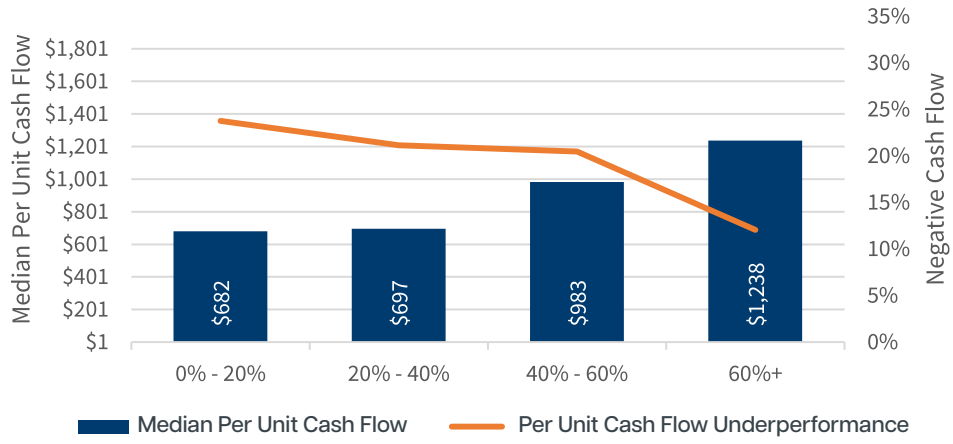
STABILIZED OPERATING PERFORMANCE BY CATEGORY

Properties with less than 20% leverage reported the most favorable median DCR results in 2022. The most heavily leveraged segment reported a strong median DCR of 1.33 and, in fact, the highest median per unit cash flow of $1,238 in 2022.

Debt Coverage Ratio by Hard Debt Ratio



Per Unit Cash Flow by Hard Debt Ratio



The most highly leveraged properties also tended to be the largest by unit count. Properties with less than 20% leverage reported 65 units per property on average, versus 133 units among the 60%+ leveraged properties. Additionally, the most highly leveraged developments are likely to be 4% credit properties, which, if performing smoothly, could more easily generate significant cash flows.

Performance by Location Type – Metropolitan/ Non-Metropolitan Counties

CohnReznick utilized the Rural-Urban Continuum Codes from the U.S. Department of Agriculture (USDA)[23] as applied to official U.S. Census Bureau data to consistently define location types. The Rural-Urban Continuum Codes classify metropolitan counties by the population size of their metro area and nonmetropolitan counties by degree of urbanization and adjacency to a metro area. The official metro and nonmetro categories were subdivided into three metro and six nonmetro categories. Each county in the U.S. is assigned one of the nine codes:

Metropolitan Counties

code	description
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population

Nonmetropolitan Counties

4	Urban population of 20,000 or more, adjacent to a metro area
5	Urban population of 20,000 or more, not adjacent to a metro area
6	Urban population of 2,500 to 19,999, adjacent to a metro area
7	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area

The nine codes allow the ability to break county data into more refined groups, beyond metro and nonmetro. Still, for purposes of this report, we focused solely on the metro and nonmetro designations.

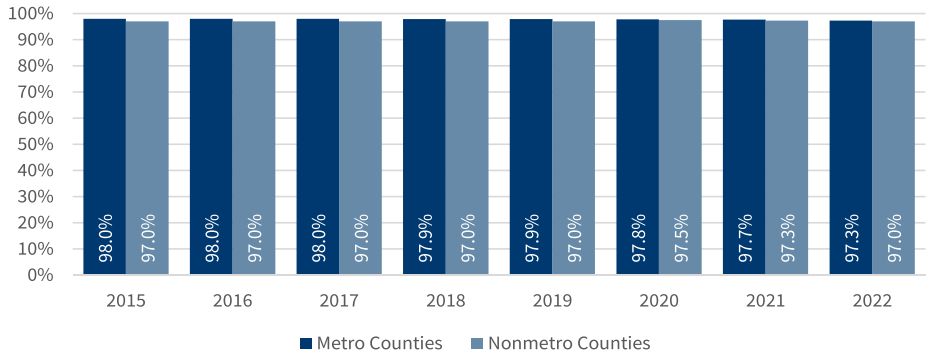
The data show that housing credit properties in metro counties historically accounted for roughly 80% (by property count) of the overall portfolio. There were also significantly more metropolitan housing credit units than nonmetropolitan because, on average, metro housing credit properties contained 93 units, while nonmetro properties contained 55 units. While the smaller scale in rural developments is expected given the demographic patterns, it also presented some challenges in attracting efficient capital.

Historically, the data show a 90-100 basis point variance between properties located in metro and nonmetro counties in terms of median physical occupancy; however, the difference narrowed in 2022 to only 30 basis points. Similarly, there was a 100-basis point variance between properties located in metro and nonmetro counties in terms of median economic occupancy over the past few years, which narrowed to 10 basis points in 2022. Thus, while metro counties consistently were on par with the national median economic occupancy rate, nonmetro counties lagged slightly behind until recently.

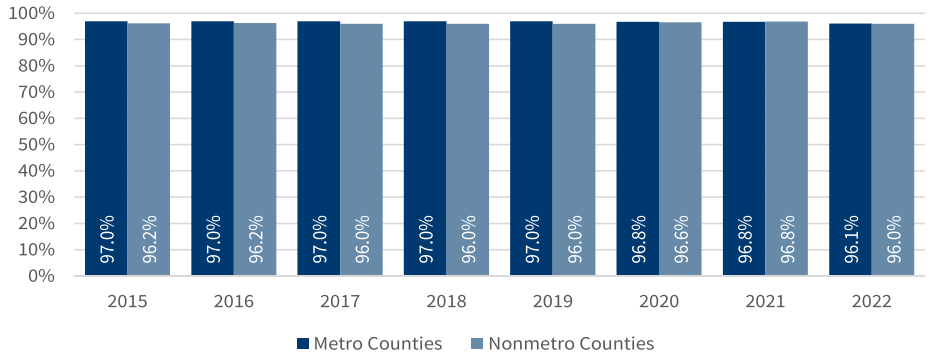
[23] Rural-Urban Continuum Codes, U.S. Department of Agriculture Economic Research Service, last updated Dec. 10, 2020.

STABILIZED OPERATING PERFORMANCE BY CATEGORY

Physical Occupancy by County Type



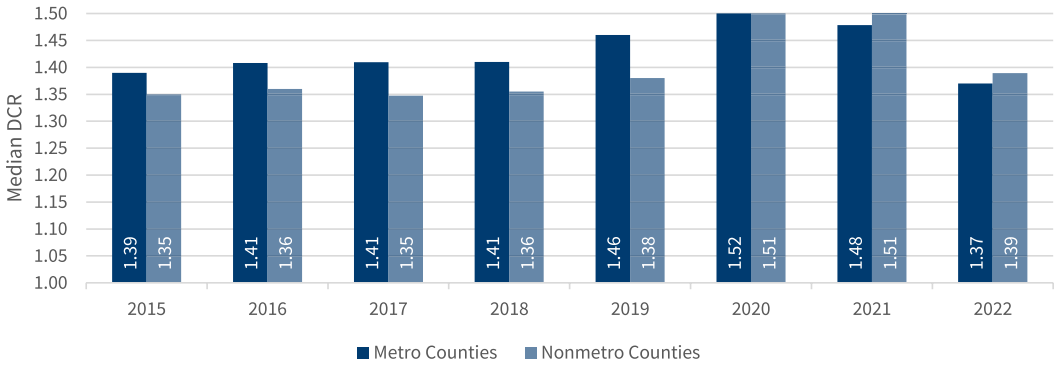
Economic Occupancy by County Type



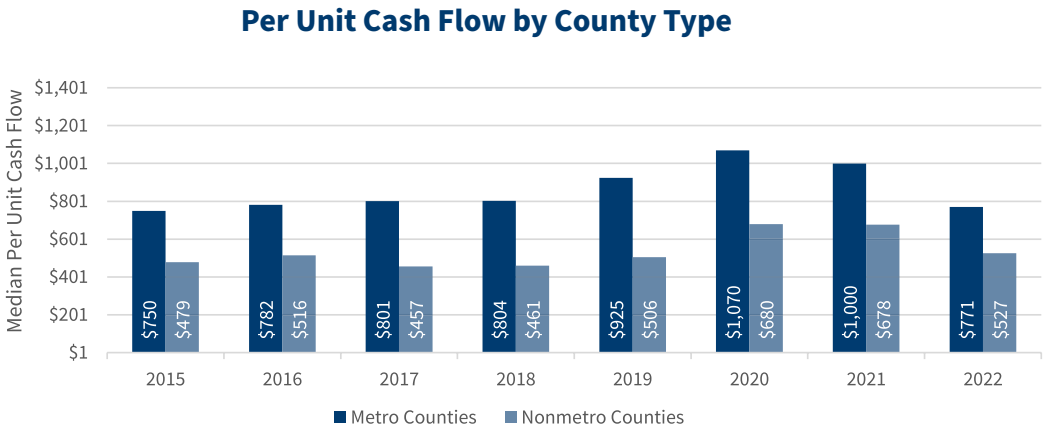
A few vacant units at smaller properties can quickly lower occupancy into underperformance territory. Since nonmetro properties were significantly smaller than metro properties, and therefore more sensitive to individual unit vacancies, it is not surprising that the median physical and economic occupancy rates trailed their metro counterparts and national medians.

Similar to occupancy, nonmetro median DCR historically trailed behind metro counties, but in 2022 the nonmetro properties outperformed the metro properties. However, unlike occupancy and DCR, nonmetro median per unit cash flow continued to underperform the metro median per unit cash flow.

Debt Coverage Ratio by County Type



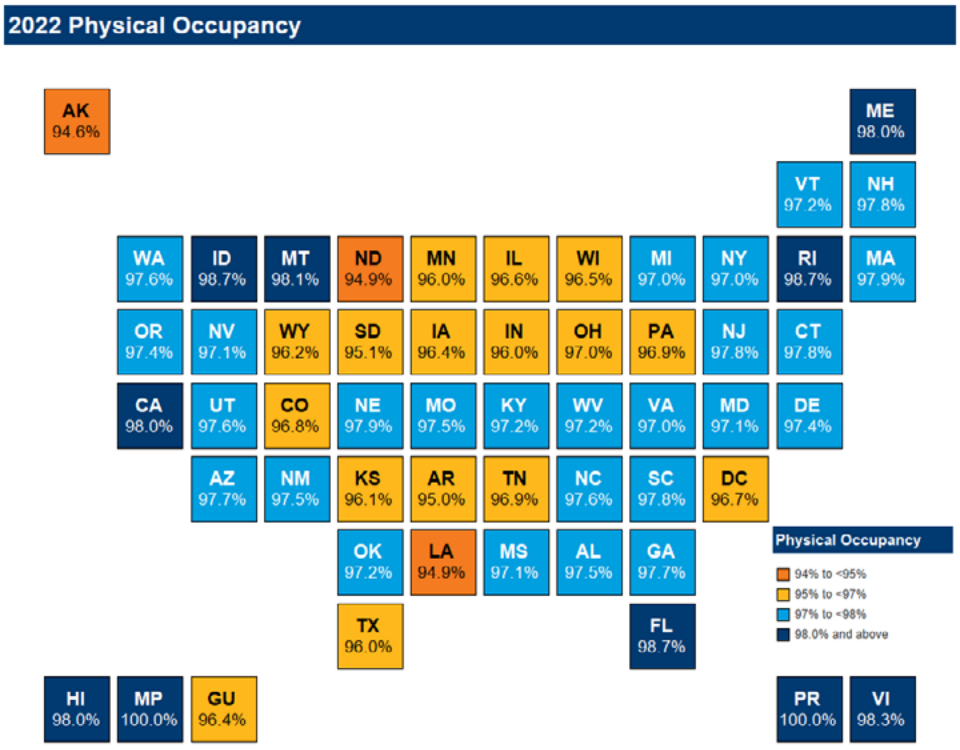
STABILIZED OPERATING PERFORMANCE BY CATEGORY

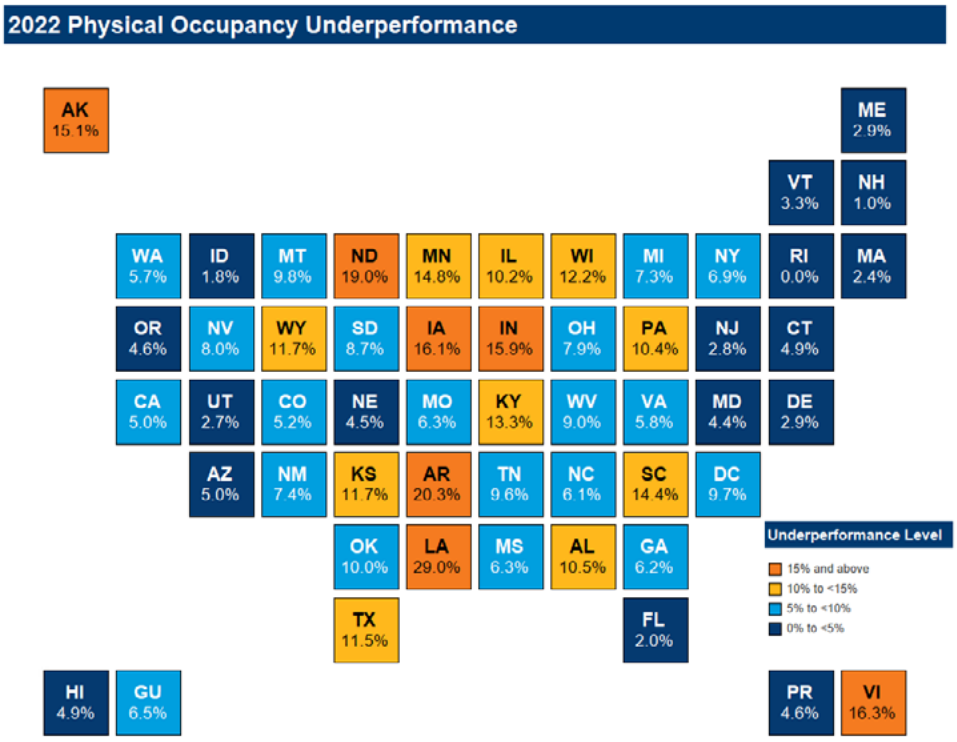


There is an unmet and rising demand for affordable housing in every part of the country. While sharing similar challenges with distressed urban neighborhoods, rural communities also struggle with their own unique constraints. To that end, there have been numerous policy studies and initiatives to create solutions to address rural development-related challenges, a complete analysis of which is beyond the scope of this report. For example, many states have incorporated into their respective qualified allocation plan a set-aside for rural housing. The housing tax credit program, combined with other federal subsidies, has been the main tool used by rural communities to provide decent, clean, and much-needed affordable housing. In an environment of continued federal budget constraints, preserving and expanding the affordable housing tax credit program is increasingly critical.

Performance by State

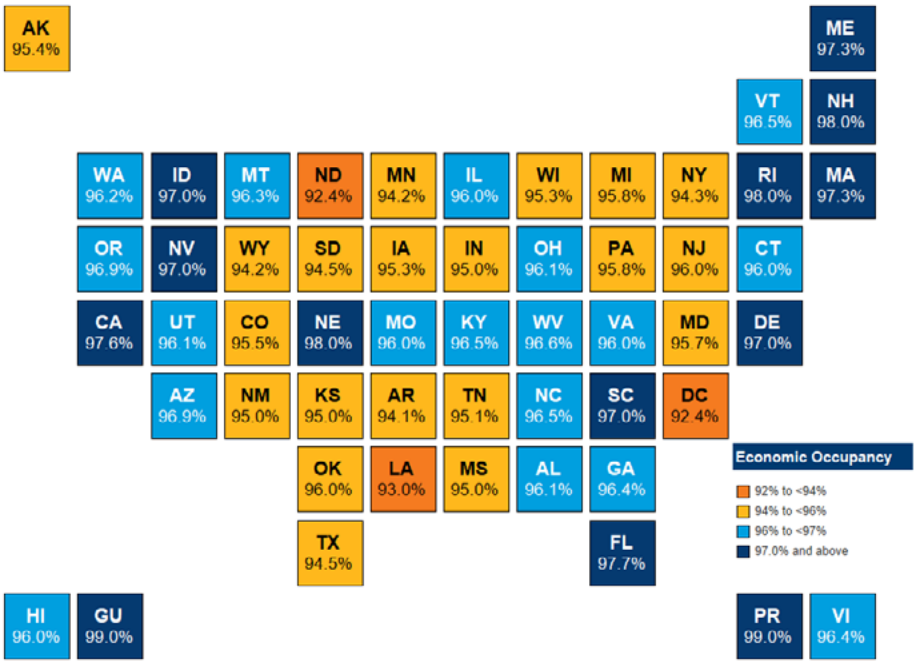
The following maps illustrate state performance metrics for 2022. More detailed state- and county-level operating and performance data can be found at the Affordable Housing CRedit Study Tool. In 2022, median physical occupancy rates among surveyed stabilized housing credit properties on a statewide level ranged from 94.6% to 100.0%. In terms of economic occupancy, the surveyed results ranged from 92.4% to 99.0%.



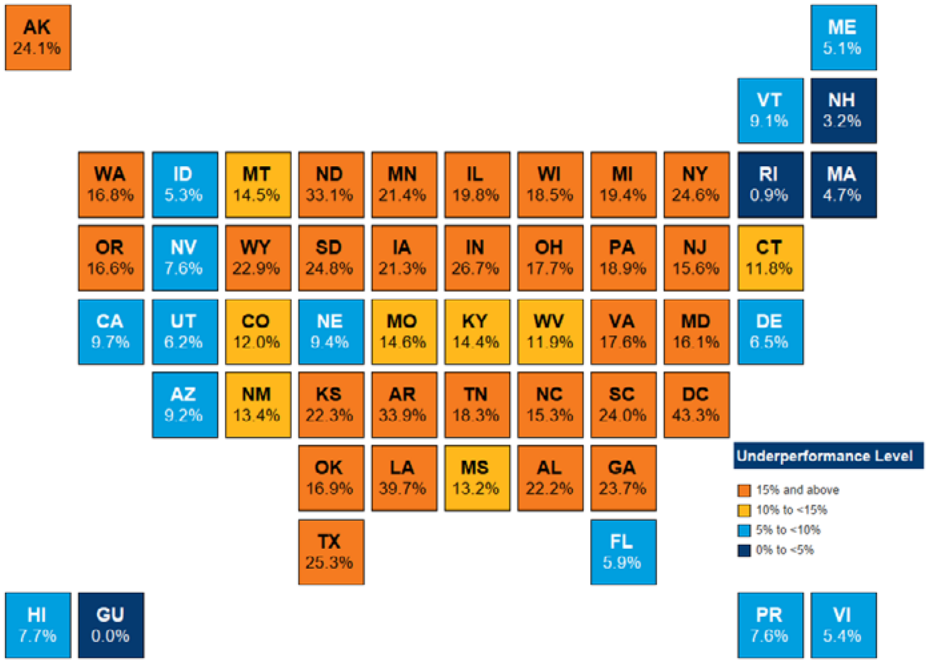


STABILIZED OPERATING PERFORMANCE BY CATEGORY

2022 Economic Occupancy

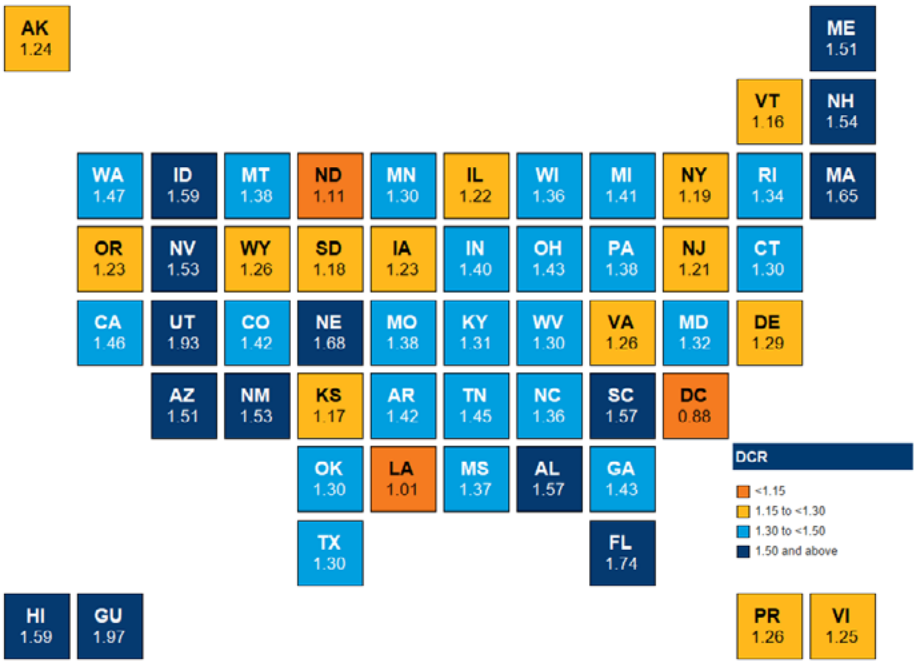


2022 Economic Occupancy Underperformance

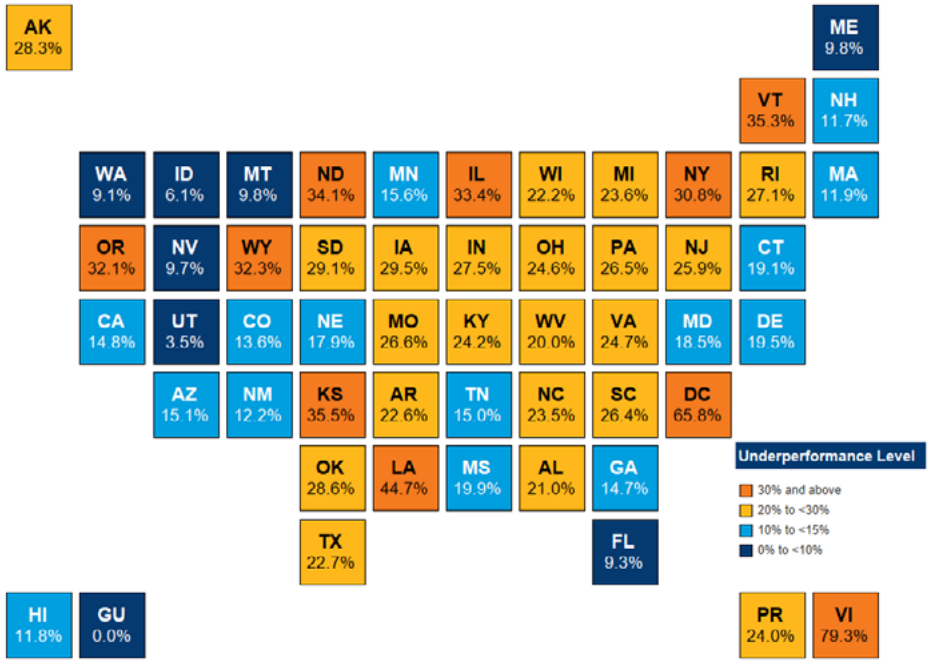


STABILIZED OPERATING PERFORMANCE BY CATEGORY

2022 DCR

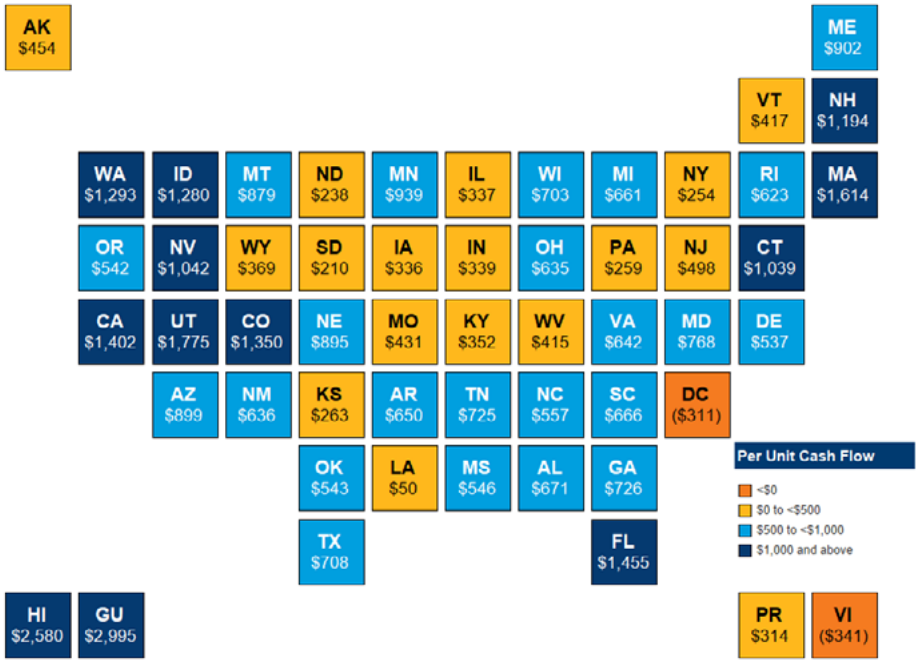


2022 DCR Underperformance

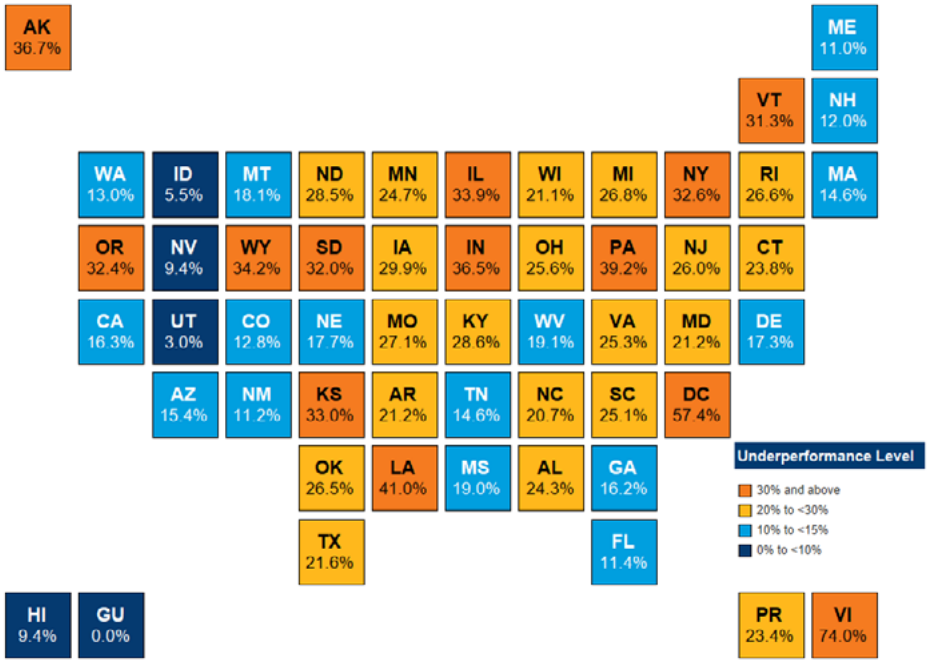


STABILIZED OPERATING PERFORMANCE BY CATEGORY

2022 Per Unit Cash Flow



2022 CF Underperformance

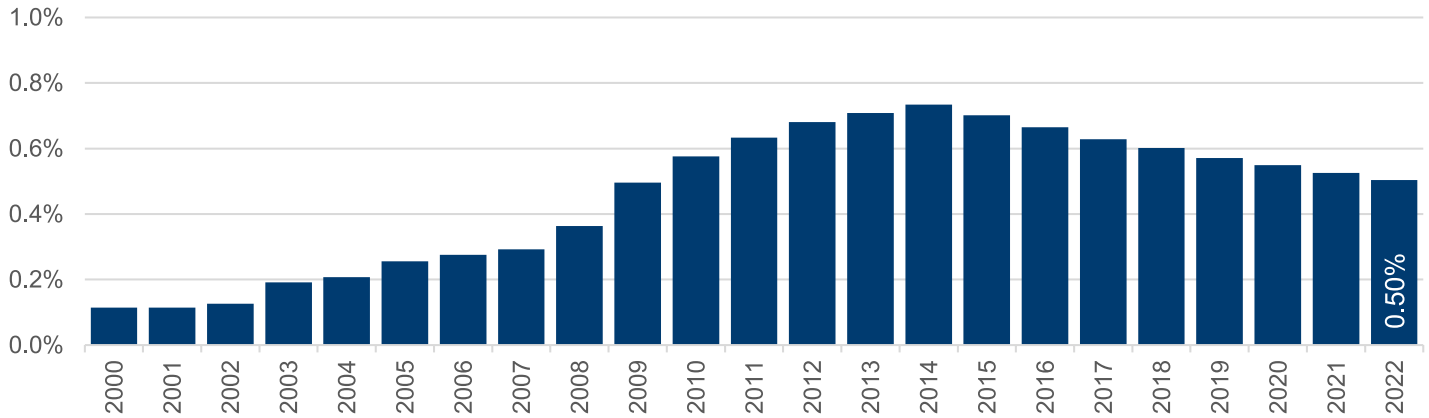


FORECLOSURE

A lender's ultimate recourse for dealing with a distressed property is foreclosure. CohnReznick asked survey respondents to report the properties lost to foreclosure in their respective portfolios, including circumstances in which a deed may have been tendered in lieu of foreclosure. Respondents reported approximately 170 foreclosure incidences, resulting in a **0.50% cumulative foreclosure rate** since the inception of the housing credit program. **None of the survey respondents reported any incidence of foreclosure or deed in lieu of foreclosure during years 2021 and 2022.**

The following graph illustrates the cumulative foreclosure rate across the survey respondents' collective portfolio since 2020. While always remarkably low, the rate continues to decrease in recent years because of more new housing credit property investments made each year and significantly fewer new occurrences of foreclosure.

Cumulative Foreclosure Rate
by Property Count



The affordable housing industry's low foreclosure rate is primarily attributable to relatively few housing tax credit properties suffering from severe underperformance. Further, underperforming properties can fund their operating deficits through management fee deferral, operating deficit guarantee and reserves, or advances from the general partner or syndicators. In instances of property underperformance, housing tax credit property owners have various options to support or recapitalize their properties financially.

Since the consequences for owners are very harsh, they are highly motivated to keep their properties in compliance with housing tax credit program rules and avoid foreclosure at all costs. If an owner forfeits title to a housing tax credit property because of foreclosure or by tendering a deed in lieu of foreclosure while the property is still within its initial 15-year compliance period, the transfer will, in most cases, trigger the recapture of the project's tax credits. Generally speaking, a recapture event causes investor limited partners to lose any future housing credits not yet earned and have to repay up to one-third of the tax credits previously claimed from the foreclosed property, plus additional interest and penalties. The totality of the financial loss to investors may or may not be covered by a recapture guarantee backstopped by the guarantors of the transaction, depending on the circumstances.
We have been producing foreclosure data for over 20 years. The less than 1% foreclosure rate has proven to be a very meaningful data point for regulators who rate the risk of housing tax credit investments.

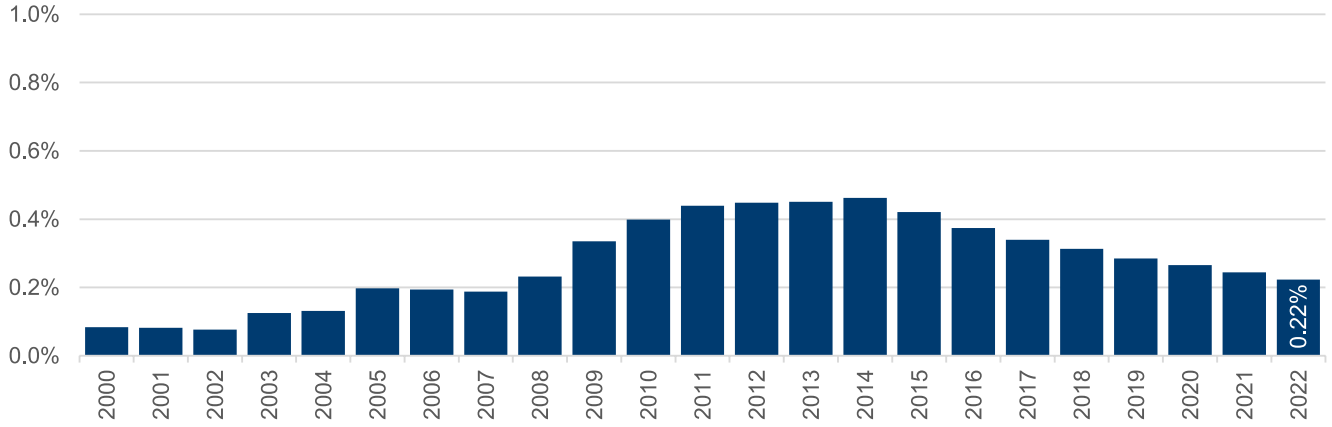
The favorable risk rating affects the amount of capital that regulated financial institutions like banks must hold in reserve to offset the risk of their investments. The low foreclosure rate of housing tax credit properties is also crucial for investors seeking credit approval to make equity investments in housing tax credit transactions.

The number of foreclosures may be understated because CohnReznick could not obtain data from syndication firms that have left the industry or become inactive for one reason or another. CohnReznick has reason to believe, given its tenure in the affordable housing industry, that property foreclosure has been higher among these defunct firms than the rest of the industry. Nevertheless, CohnReznick believes that including defunct syndicators' data would not materially affect our conclusion regarding the overall safety of housing tax credit investments. Moreover, the firms we surveyed represent the core of the housing tax credit industry. The care with which they finance and manage their investments is an important part of why the cumulative foreclosure rate continues to be this low.

We calculated the cumulative foreclosure rate utilizing the total number of properties in survey respondents' collective portfolios, rather than the total number of properties the respondents had ever syndicated or in which they have invested to date. Since CohnReznick began collecting data in 2008, any properties that were disposed prior may not be represented in the overall dataset. As such, including a larger base of properties could at least partly offset the impact of missing data from defunct syndicators.

While housing tax credit properties have a cumulative foreclosure rate by property count of just 0.50%, the cumulative rate by net equity is even smaller. For example, when the total foreclosed net equity is divided by the total net equity reported to us in the national database, the cumulative foreclosure rate is only 0.22%.

Cumulative Foreclosure Rate
by Net Equity



How do affordable and conventional housing compare?

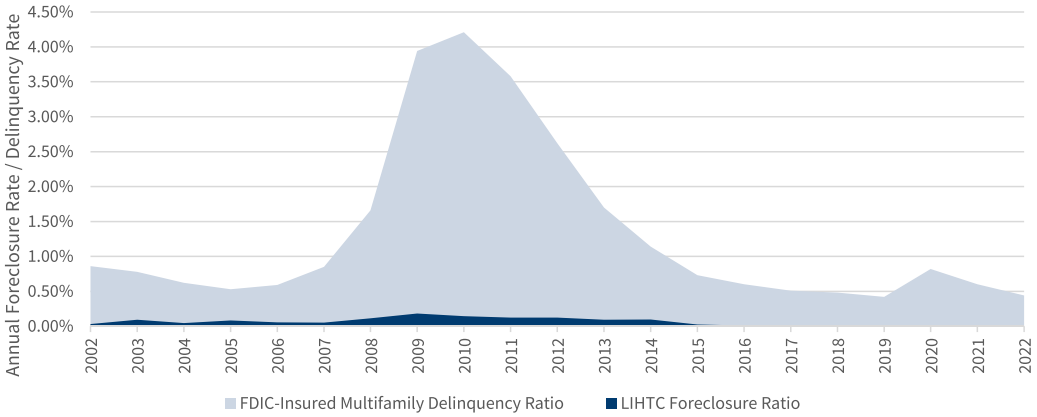
Given the pent-up demand for affordable housing, the effective leverage and oversight under the public-private partnership model, and the various mechanisms afforded by housing credit properties to offset underperformance, conventional apartment properties are much more likely to suffer foreclosure.

In the past, CohnReznick attempted to collect loan delinquency rates on housing tax credit properties, however, such information was not consistently reported amongst the data providers. Instead, the chart below shows the annual housing tax credit foreclosure rates compared to the rate at which conventional

multifamily loans were seriously delinquent by more than 90 days or in foreclosure, as reported by FDIC-insured institutions[24].

Further, the annual foreclosure rate is even lower than either cumulative rate – typically less than 0.1% in any year since 2002.

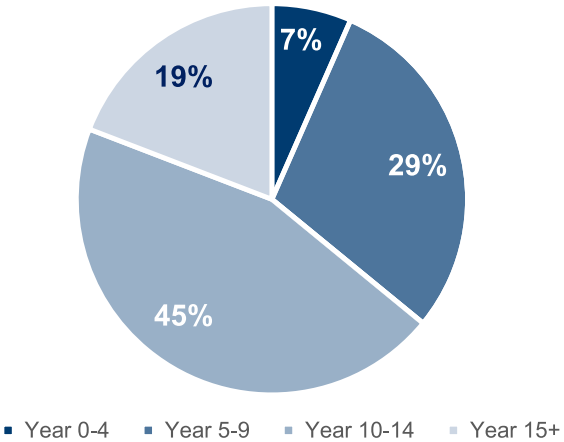
Annual LIHTC Foreclosure Rate vs. Conventional Multifamily Delinquency Rate



When do foreclosures tend to occur?

Of the approximately 170 reported incidences of foreclosure, 71% were during the period 2008–2014; 6% were between 2014 and 2020. While the data illustrate a relative spike in foreclosure activities during 2008-2014, it is important to note that the median age of a foreclosed property was in its 11th year of tax credit compliance when lost to foreclosure. Properties lost to foreclosure in 2008-2014 were underwritten 15-20 years ago when the industry's collective underwriting and asset management quality was understandably not close to today.

Year of Foreclosure

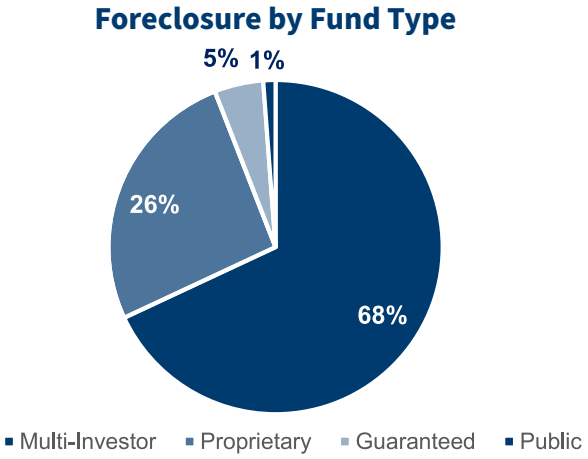


The fact that the median age of a foreclosed property was in its 11th year is not a coincidence. Foreclosure timing is often the result of housing credit syndicators' efforts to minimize the financial impact on investors. Syndicators will often encourage their general partners to fund a property's deficits above and beyond their guarantee obligations to make sure that it limps along through the credit delivery period, thereby minimizing the impact to investors. In addition, it is not uncommon for syndicators to tap into fund level reserves to alleviate property issues, and further come out of pocket to keep a deal afloat.

[24] Federal Deposit Insurance Corporation (FDIC) Quarterly Banking Profile
https://www.fdic.gov/analysis/quarterly-banking-profile/index.html

Do foreclosed properties share any common traits?

The following are various presentations of the foreclosed portfolio among the following categories: fund type, credit type, hard debt ratio, size, and others. While the data show no discrete combinations of factors that statistically predict foreclosure, there are characteristics that have produced more foreclosures than others.



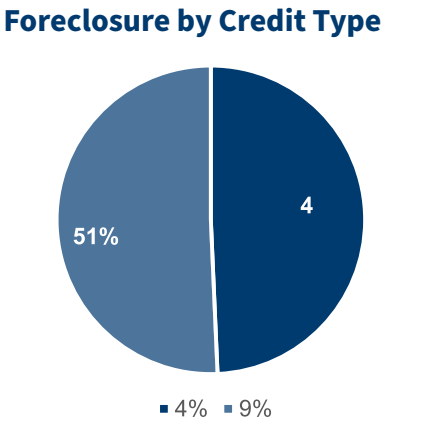
Foreclosures by fund type

Over 68% of the reported foreclosures were closed into multi-investor funds. Foreclosures in proprietary funds account for approximately 26% of the foreclosed portfolio and guaranteed and public funds account for less than 6%. The breakdown of foreclosure by fund type is illustrated in the graph above.

The incidence of proprietary fund foreclosures is notably lower than multi-investor funds, despite the data illustrating that the underlying properties in proprietary funds do not differ materially from a composition perspective (size, tenancy, leverage, etc.), nor do they outperform their multi-investor counterparts.

We suspect that the main driver behind the low foreclosure rate among proprietary fund investments is the added motivation of a single investor to support troubled properties to minimize any impact on neighborhoods they serve.

Foreclosures by credit type



FORECLOSURE

Despite accounting for just over 30% of the total surveyed housing credit portfolio, 4% credit projects reported nearly half (49%) of the total number of foreclosures.

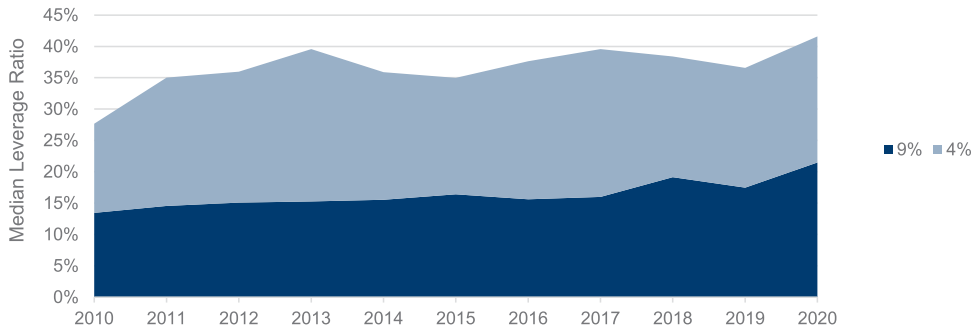
Four percent credit projects tend to be larger, 125 units per property on average vs. 60 units on average at 9% credit projects. The 4% credit properties in the foreclosed portfolio were on average 190 units, much larger than the typical 4% project in the national portfolio. Thus, the number of apartment units foreclosed is significantly higher among the 4% cohort.

As a general matter, 9% credit projects are more heavily financed by investor equity and thus have a more modest level of hard debt service. Tax-exempt bond projects that qualify for 4% credits generate significantly less tax credit equity and thus require higher debt levels (albeit at lower tax-exempt interest rates). Median annual 4% vs. 9% hard debt leverage ratios in the national portfolio since 2010 were 40% and 19%, respectively. The foreclosed subset of the national portfolio reported 48% and 31% leverage for the respective 4% and 9% credit property types.

As noted elsewhere in this report, 9% and 4% credit properties perform relatively identically from a physical and economic occupancy and median DCR perspective. However, 4% credit properties produce nearly double the median per unit cash flow of their 9% counterparts.

But 4% credit properties' larger size (125 units on average vs. 60 at 9% projects) and higher leverage can be trouble when operating issues arise. As a result, deficits tend to be larger and more difficult to fund.

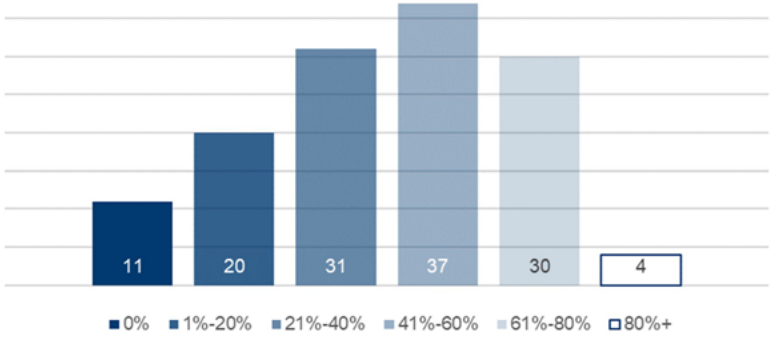
Historical Median Leverage Ratio by Credit Type



Foreclosure by hard debt level

The data show that there is a strong correlation between higher leverage and foreclosure. No leverage category in the graph below has historically been immune to foreclosure, but the number of foreclosures generally increases as the hard debt burden increases.

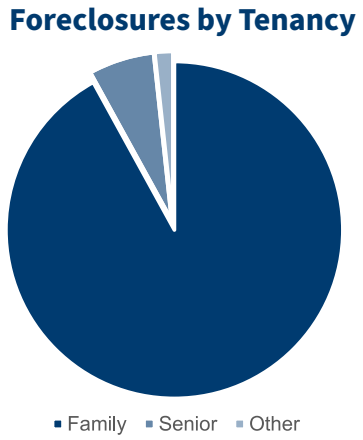
Foreclosures by Hard Debt Level



While foreclosure incidence increases as leverage increases, the relationship is even more striking due to the fewer properties in the higher leverage categories. For instance there are fewer than 350 properties in the national portfolio with greater than 80% hard debt leverage, four of which foreclosed. More than 70 foreclosures occurred among properties with between 21% and 60% hard debt leverage, although those are among a portfolio of more than 10,000 properties nationwide.

Foreclosures by tenancy

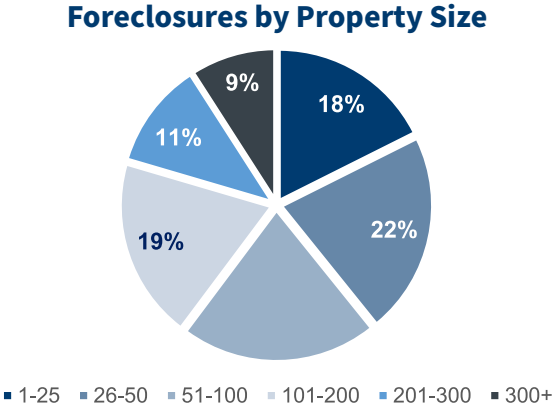
The vast majority (92%) of all reported foreclosures occurred among properties with family tenancy. Only 8% of reported foreclosures were either senior or other tenancy. The following graph illustrates the tenancy-type-specific instances of foreclosure.



Consistent with prior studies, properties with age-restricted tenancy, representing approximately 27% of the overall portfolio, reported the strongest median physical and economic occupancy rates and debt coverage ratios. Given their exemplary historical performance, it is not surprising that senior projects report so few instances of foreclosure relative to family properties.

Foreclosures by property size

While economies of scale could support performance, surprisingly, the smallest properties (under 25 units per property) did not report the most foreclosures. Foreclosures were most concentrated among properties with between 26 and 50 units, accounting for 22% of the total foreclosed portfolio.



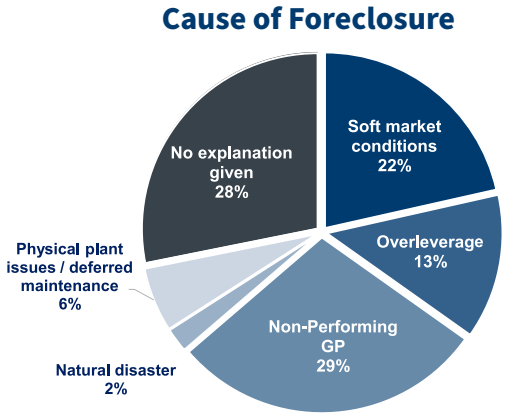
Unit size alone is not necessarily an indicator of foreclosure risk, although one must consider the number of properties in the national portfolio in each subset. For example, while there are nearly 29,000 active properties in the portfolio with 200 units or less, there are less than 2,100 properties with greater than 200 units. If we could calculate the foreclosure rate by property size, we would expect the largest properties to have the least favorable foreclosure rates.

Foreclosure rate of mixed-income properties

Fifteen percent of the foreclosed properties in the dataset had a market rate component (greater than 15% of total units are non-LIHTC). Including market rate units in a housing tax credit development has many benefits from a social impact and underwriting perspective. However, some mixed-income properties have difficulty attracting market-rate tenants at the desired rent levels, especially with soft local market conditions. In our experience, we prefer to see that market rents underwritten in a mixed-income property at 10% below market as an underwriting practice.

What are the leading causes of foreclosure?

We also requested that respondents provide the leading cause of each foreclosure. The level of detail provided varied, and there were often multiple interconnected causes for foreclosure. For instance, a soft market could create higher than projected vacancies, leading to increased turnover operating expenses and deficits. We also viewed multiple instances of "non-performing general partner" tied to other property issues. Where possible, we simplified the description of the cause of foreclosure to the core issue.



The top leading cause of foreclosure indicated by respondents was non-performing general partner, accounting for 29% of all responses. The data show that 28% of the foreclosures with no cited cause had leverage ratios of greater than 40%, perhaps indicating that overleverage was the cause of some of them.

Foreclosure is by no means the sole cause of credit recapture. Tenant compliance issues, downed units, and natural disasters (among others) can result in credit recapture if left uncorrected. Nevertheless, we focus on foreclosure because it is the most easily tracked and measured negative outcome.

While it is not within the scope of this study to trace what happens post-foreclosure, foreclosure typically terminates a property's Land Use Restriction Agreement which contains the rent and occupancy restrictions. However, the lender or new owner is required to comply with the so-called "decontrol period," a three-year period that is designed to minimize any disruptive impact to existing tenants by prohibiting the owner from either evicting income-qualified tenants other than for good cause or increasing the rent beyond the state agency's limit.

INCOME AND EXPENSE

Once stabilized, many factors can influence a property's operating performance: the ability to achieve the projected rents and to annually increase rents (typically set at 2% for underwriting purposes); the property's occupancy rate; and the property manager's ability to manage the property's operating expenses to minimize unexpected variances. Since a typical housing tax credit property is underwritten at an initial 1.15 - 1.20 DCR, generally a smaller operating margin for error than market-rate properties, any preceding factors could significantly influence a property's operating performance.

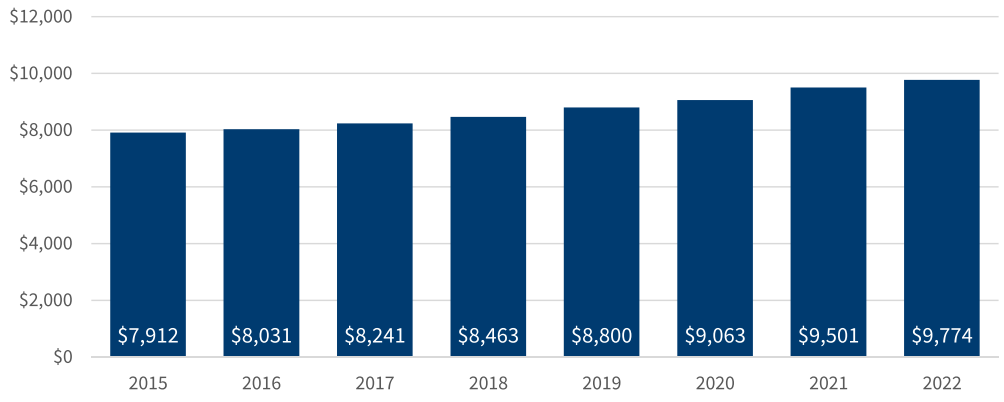
As of December 31, 2022, our data providers collectively identified ~15,650 stabilized properties on which revenue and operating expense data was collected. The following chapter highlights some trends observed at the national level. **For market-specific information, we encourage readers to visit the CohnReznick CreditTool, which provides county-level operating detail and metrics.**

National revenue trend

For this report, we defined revenue as the combination of net rental income (gross potential rent less vacancy loss and rent concessions) and other income. For a typical housing tax credit property, most of a property's net revenue is derived from rental (and rental subsidy, if applicable) income. Several key factors drive a property's rental income and its growth, including, most importantly, 1) whether a property can lease its units at the projected rents, or must offer concessions to remain competitive in the market; 2) whether the U.S. Department of Housing and Urban Development (HUD) published area median income, which determines the maximum rent a housing tax credit property could charge (unless the units are otherwise subsidized under other programs), and the market conditions support a 2% annual rent increase; and 3) how long does the property manager take to turn over and re-lease a vacant unit?

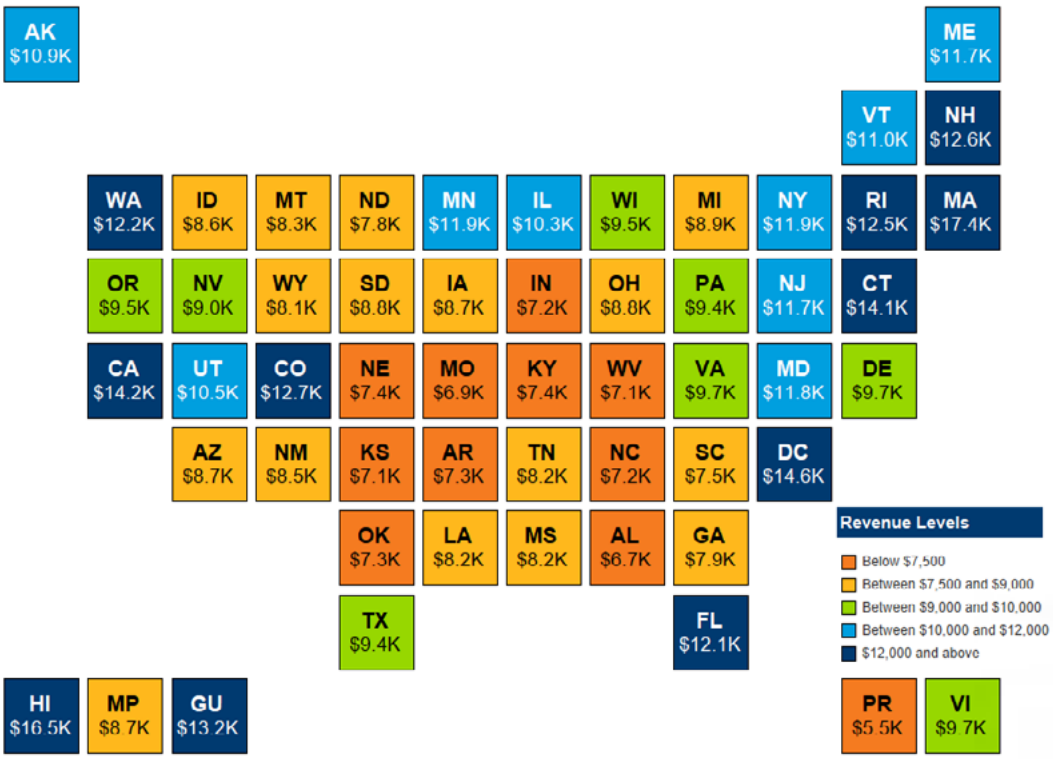
The following graph illustrates the median net revenue of the national housing credit portfolio since 2015. In 2022, the national housing credit portfolio recorded $9,774 per unit in revenue on a median basis. This suggests that an "average" housing tax credit tenant pays about $800 a month in rent, representing a significant saving over a comparable unrestricted market rate unit that could be charging rents in the neighborhood of ~$1,500.

Median Revenue Per Unit



On a statewide median basis, properties in California, Connecticut, the District of Columbia, Hawaii, and Massachusetts reported the highest net revenue in 2022, exceeding $16,000 per unit. Hawaii and Massachusetts, in particular, reported a large share of subsidized housing tax credit units, which partly explained why revenue per unit was on the high end, besides the market factor.

2022 Median Per Unit Revenue by State



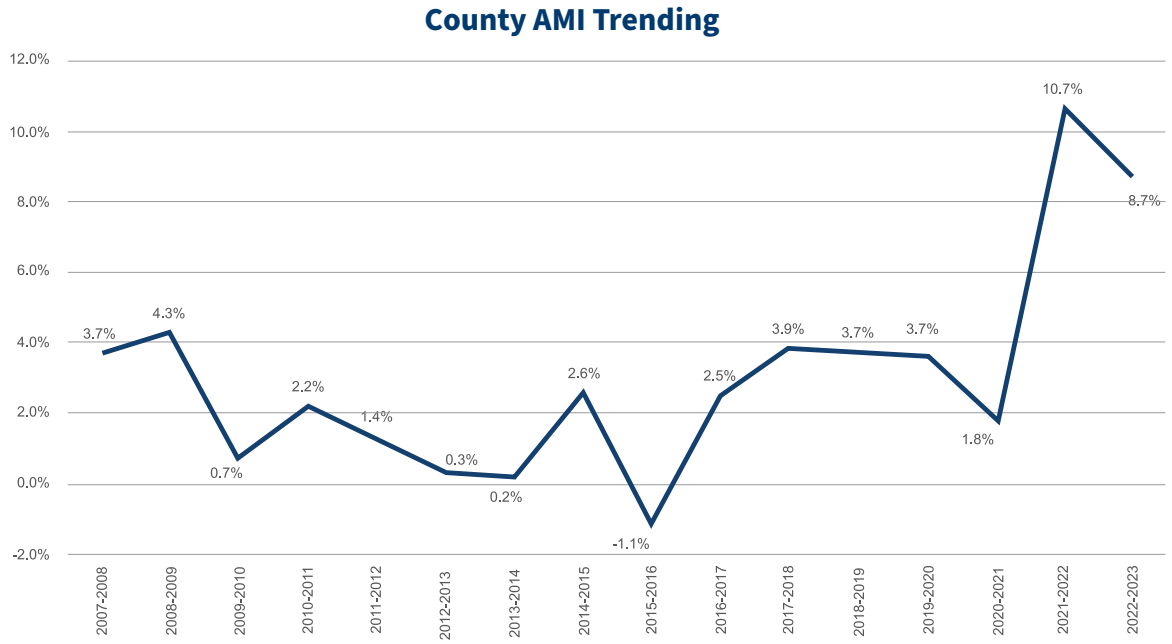
AMI methodology

Area median income (AMI) is calculated annually by HUD for every metropolitan area and region in the nation. HUD refers to the figure as MFI, or median family income, based on a four-person household. AMI calculates rent and income limits for LIHTC properties with restrictions typically ranging from 30% to 60% AMI (or 80% under the average income set-aside).

Between 2011 and 2022, HUD based its median family income estimates on data from the Census Bureau's American Community Survey (ACS), with a three-year lag between the ACS estimates and the year the income limits were in effect. For example, 2022 estimates were based on the 2019 ACS data and adjusted for inflation using the consumer price index (CPI) change. CPI is based on the applicable ACS year and a Congressional Budget Office estimate of the December CPI for the income limits effective year. The CPI adjustment is applied nationally, meaning all areas of the country use the same CPI adjustment and can significantly impact income limit growth.

Due to the significant data collection challenges faced by the Census Bureau in 2020 due to the COVID-19 pandemic, they could not release data for that year. To address this issue, in 2023, HUD used the 2021 ACS data instead, considering it more current than the unavailable 2020 data.

Between 2021 and 2023, there have been significant increases in AMI levels across the country impacting rent and income limits.

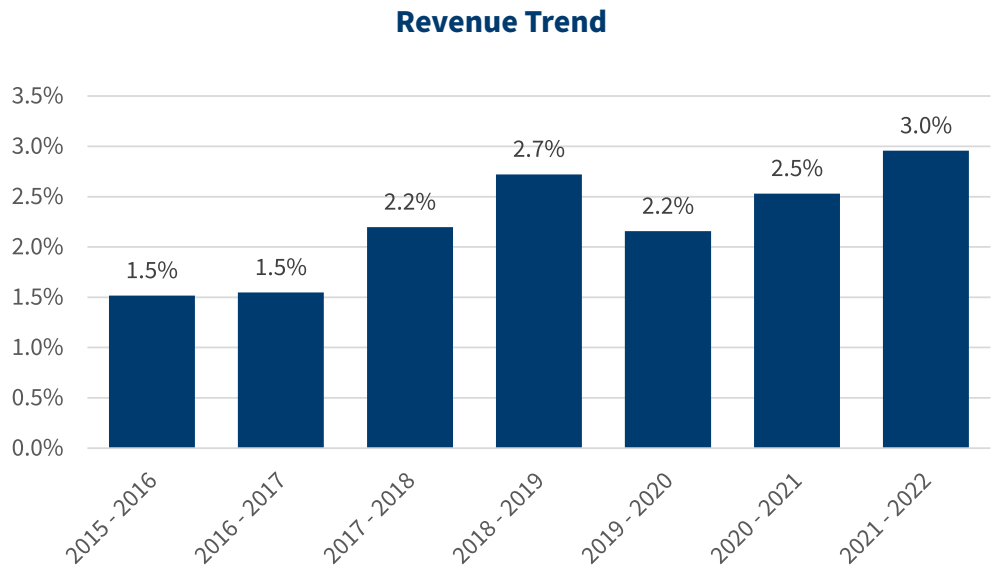


With AMI governing the maximum allowable rents a housing credit unit could charge, market and marketability factors will determine whether a particular unit could maximize its rent potential. The need for affordable housing continues to grow, making maximum allowable rents achievable for much of the country.

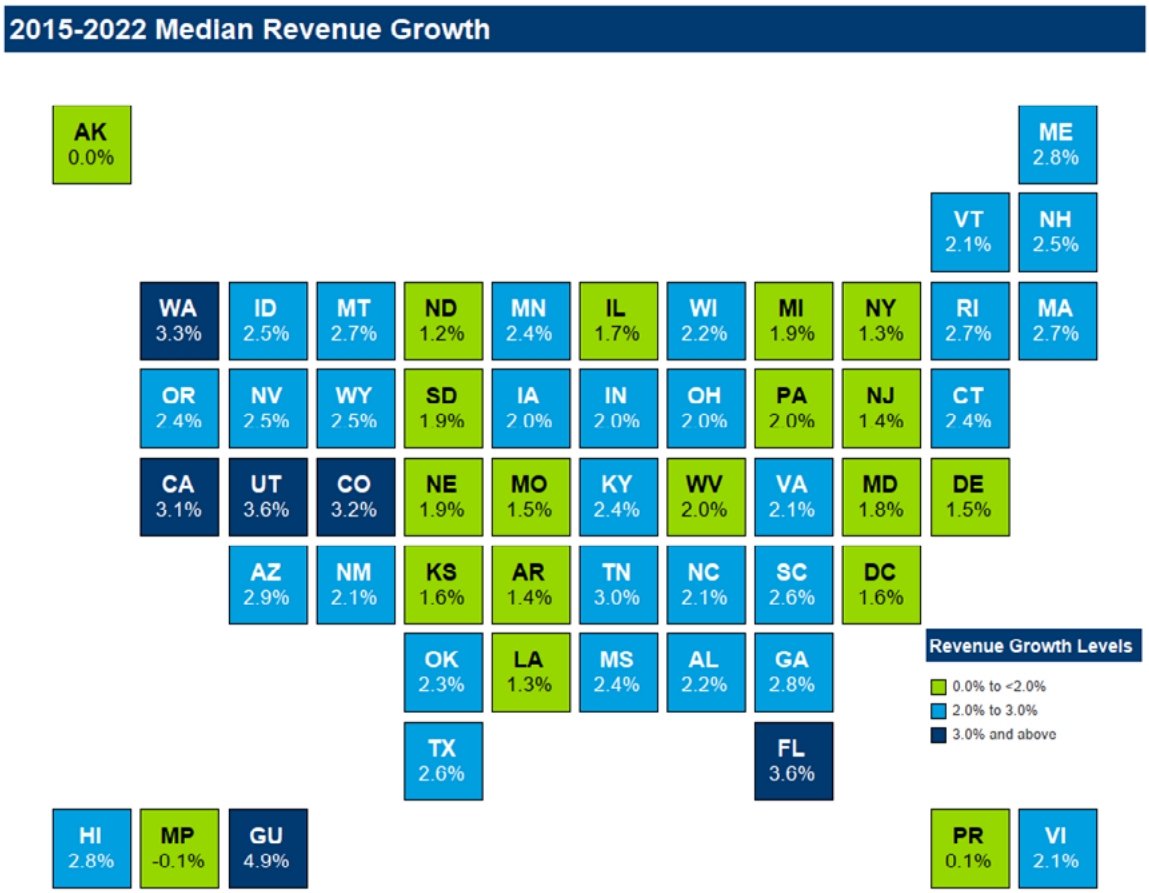
Further, while rents on strict LIHTC units are formulaically built off HUD-published AMIs, units receiving rental assistance can collect rents beyond the maximum rents as approved by the subsidy contract providers.

Revenue growth trend

The preceding graphic illustrates the median net revenue among all the national housing credit portfolio properties. However, it is more precise to quantify individual properties' year-over-year net revenue growth rates. When CohnReznick performed that analysis, the median annual revenue growth rate among the properties in the national portfolio was 2.2% since 2015, which is slightly ahead of the 2% industry standard for rent inflation.



Not surprisingly, many high net revenue states also reported the most robust revenue growth trends from 2015 to 2022.



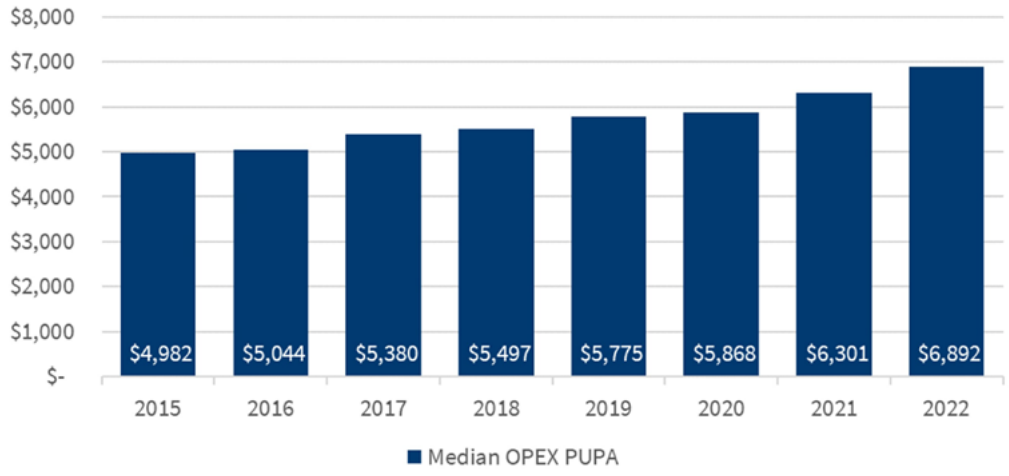
National operating expense trend

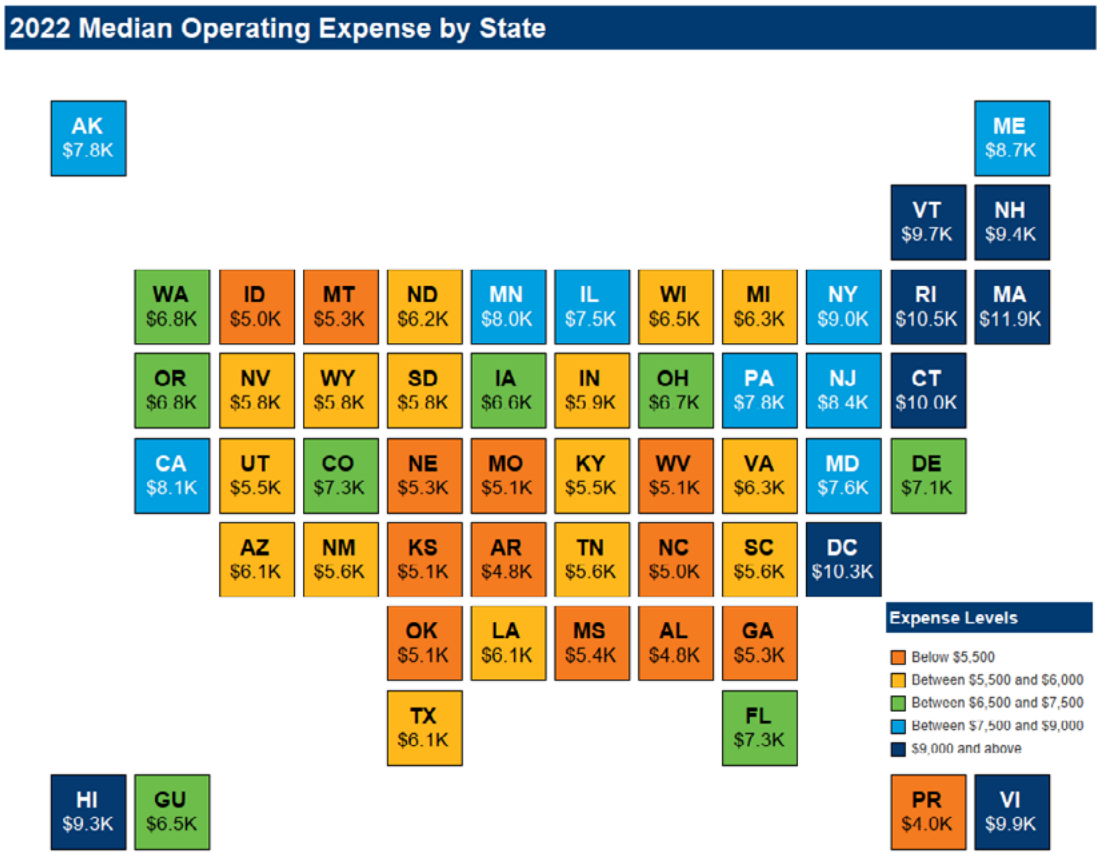
In 2013, CohnReznick began requesting property operating expense information from data respondents. Data was requested in the custom format each data provider uses to track income and operating expenses. Since there are many methods of categorizing expenses, considerable effort was spent understanding and segregating charts of accounts into comparable categories.

On a national median basis, total 2022 operating expenses (not including replacement reserve contributions) across the surveyed portfolio were $6,797 per unit per annum (PUPA). Replacement reserve contributions typically range from $250 to $400 PUPA. Inclusive of a $300 per unit per annum in replacement reserve contributions would increase 2022 total operating expenses to $7,097 per unit on a national median basis.

Similar to revenue, the more precise way to capture the growth rate of operating expenses in the national portfolio is to calculate the year-over-year expense growth at all individual properties and then calculate the median of those results. When CohnReznick performed that analysis, the median operating expense growth rate among the properties in the national portfolio was 3.5% since 2015, tracking closely to the 3% industry standard for underwriting operating expenses. From 2021 to 2022, the industry has witnessed the most rapid expense increase of 8.2% since we first reported this data in 2015.

Operating Expense Trend





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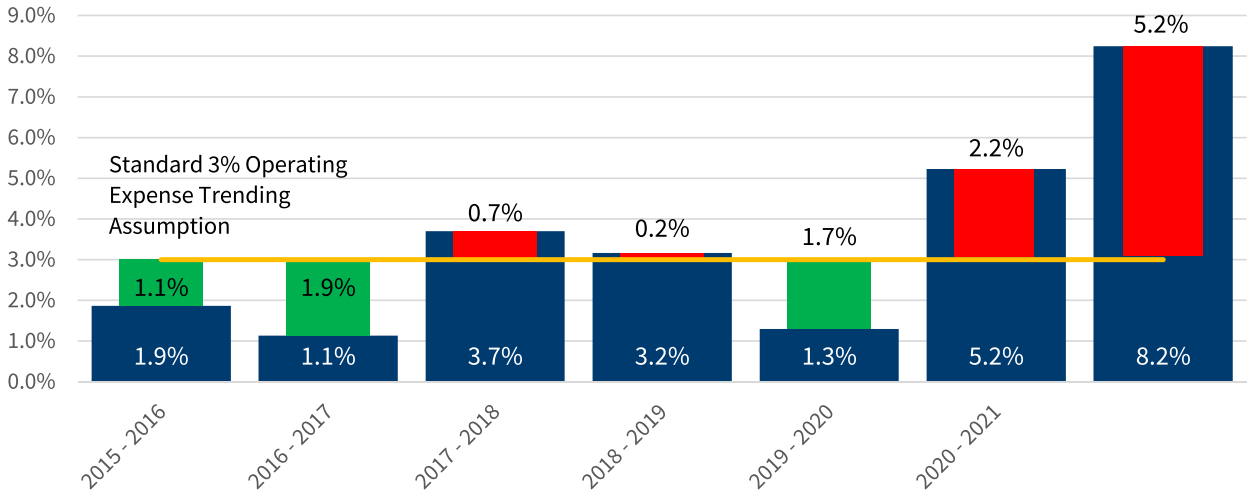
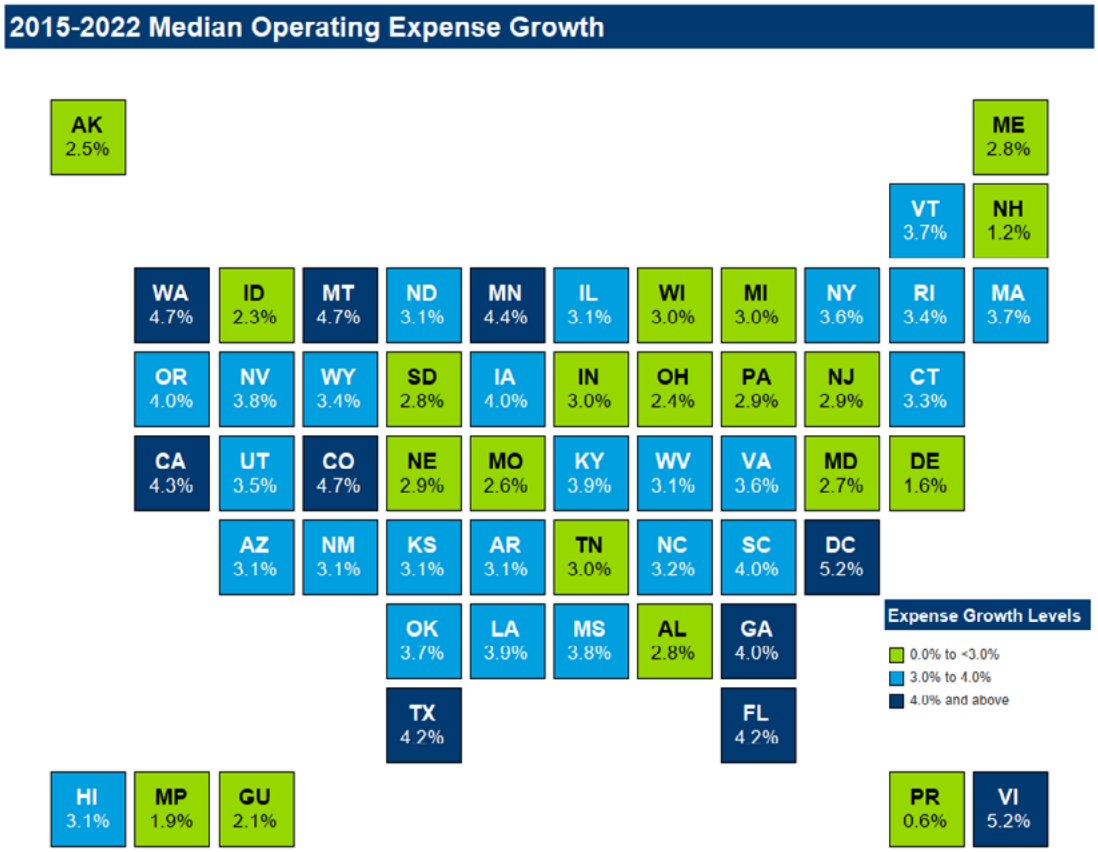
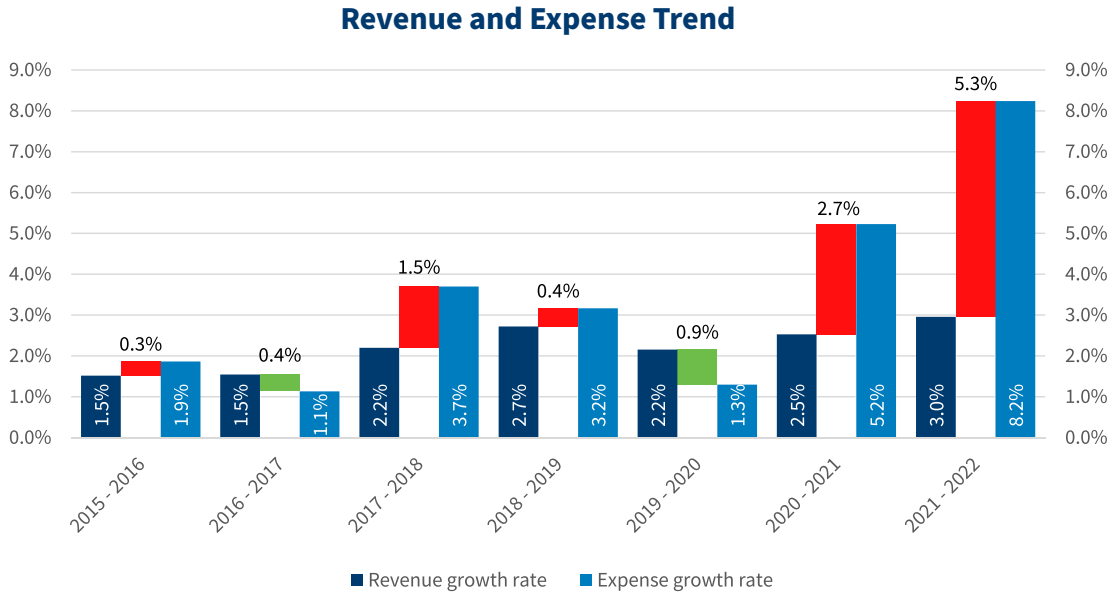
Operating Expense Trend



INCOME AND EXPENSE



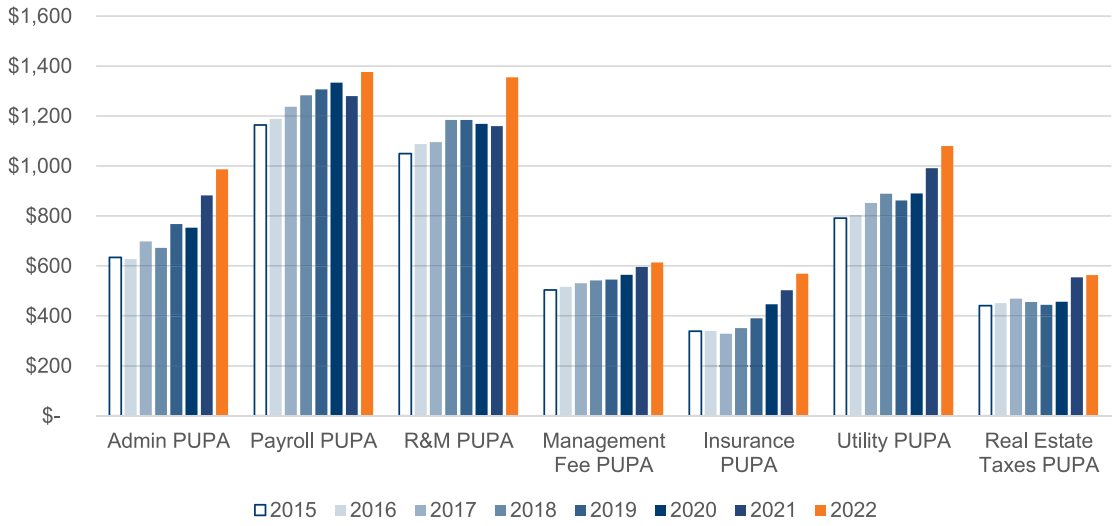
For many years, the industry has utilized 2% income/3% expense inflation trending assumptions for underwriting housing tax credit properties. The 100-basis point spread proved itself to be a supportable assumption, but 2022 represented an outlier year. The fact that expenses grew much faster in 2022 was one of the leading factors that drove more properties to operate below breakeven and thereby, an increasing watch list.



INCOME AND EXPENSE

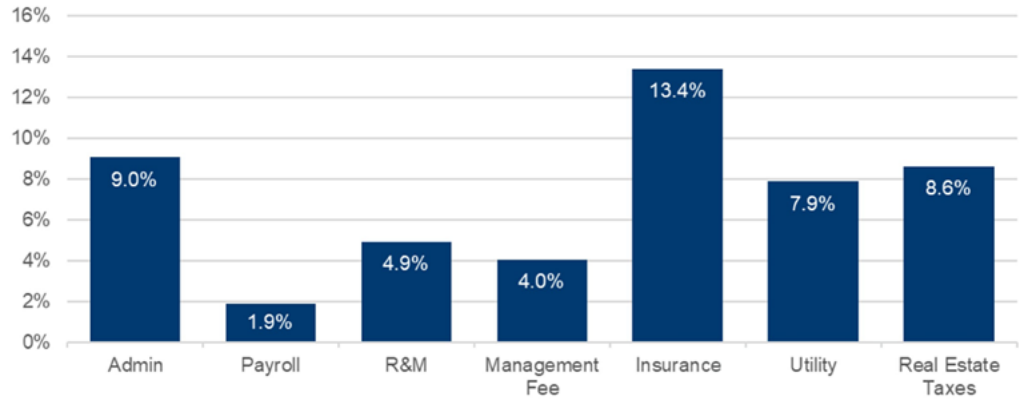
We focused further on operating expense data across seven main categories: administrative, payroll, management fees, repairs and maintenance (R&M), insurance, utilities, and real estate taxes, with the goal of understanding which categories are driving the overall increase. Generally speaking, affordable housing properties incur larger administrative expenses, and lower real estate and payroll expenses relative to market rate properties.

Operating Expense Trend by Category



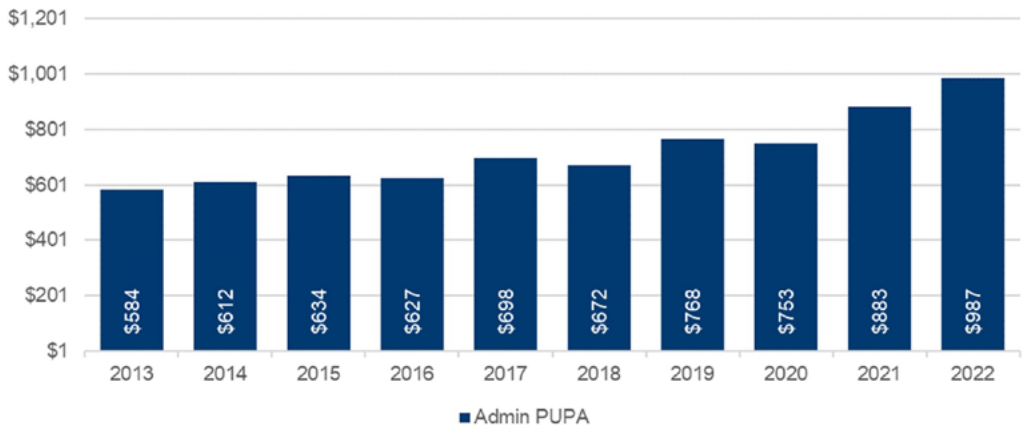
Of the seven expense categories, the four fastest-growing expenses are insurance (13.4% annually from 2020 to 2022), administrative (9%), property tax (8.6%), and utilities (7.9%).

Expense Trend
by Category 2020-2022



Administrative: Administrative expenses in the context of housing credit properties primarily include general administrative operating expenses, professional fees, marketing costs, and bad debt. Some survey respondents included office salaries in this line item; however, as part of the data normalization process, we have moved office salaries to the "payroll" line item.

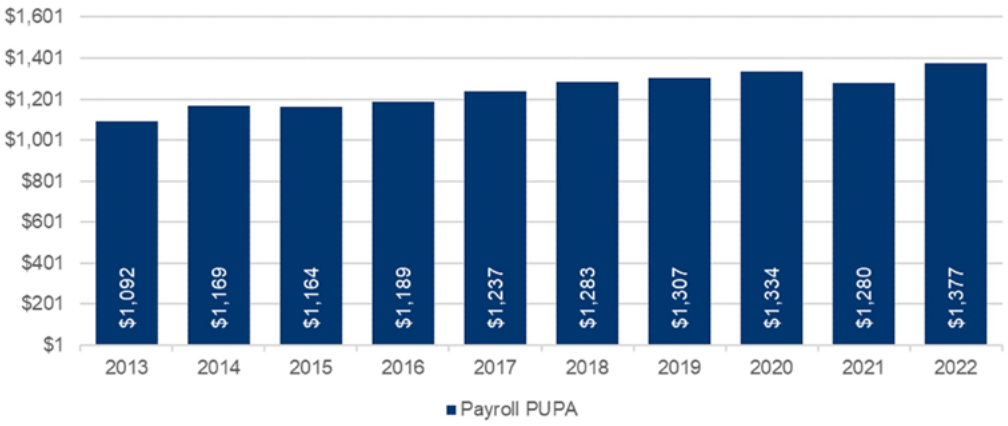
Administrative Expense Trend



Administrative expenses accounted for approximately 14.3% of total gross operating expenses on average across the national housing credit portfolio in 2022. In addition, the median national per unit administrative expenses have increased by an average of 6.3% annually since 2013 but decreased by 2% in 2020. The 2020 trend in administrative expense was attributable to a reduction in legal costs (tenant evictions) and office expenses during COVID-19, where tenant eviction moratoriums were in place, and employees worked remotely. From 2020 to 2022, administrative expenses "caught up" more with the historical trend, reaching $987 per unit on a national median basis in 2022.

Payroll: Payroll expense includes office and maintenance personnel payroll, employee health insurance and benefits, workers' compensation, and payroll taxes. Some survey respondents included maintenance payroll under "repairs and maintenance;" as part of the data normalization process, we have moved it to the "payroll" line item.

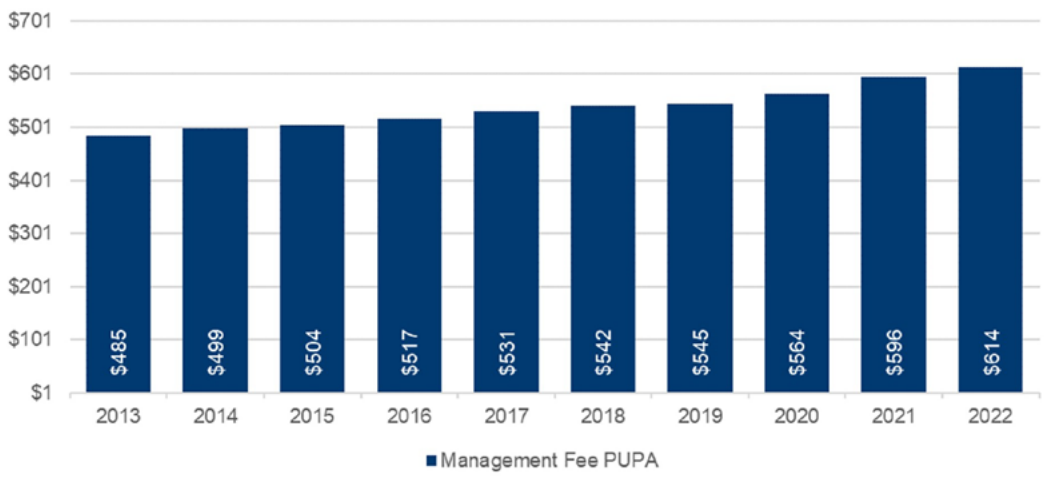
Payroll Expense Trend



Payroll expenses accounted for approximately 20.5% of total gross operating expenses on average across the national housing credit portfolio in 2022. In addition, median national per unit salary expense has increased by 2.7% annually since 2013.

Management fees: Property management fees are memorialized in the management agreements, which typically range from 4.5%-7% of effective gross income.

Management Fee Expense Trend

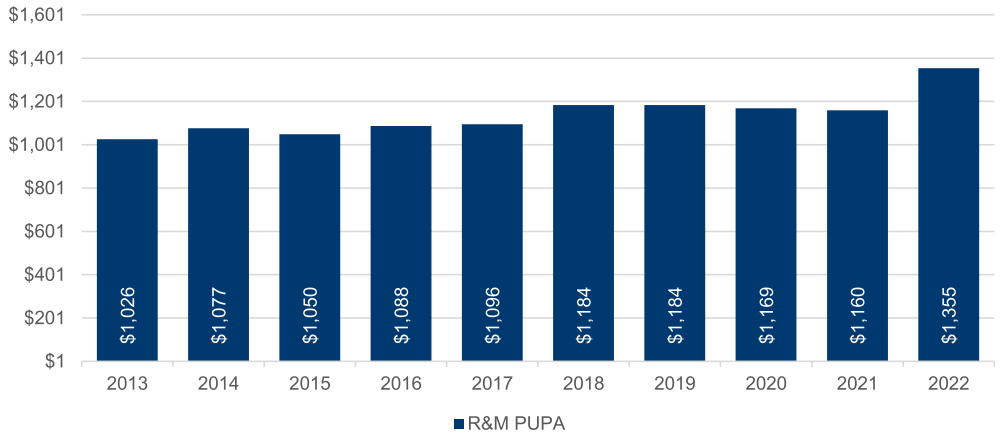


Repairs and maintenance: The repairs and maintenance expense at a given property can be difficult to pinpoint for several reasons. As a technical matter, the property's replacement reserve account should be the source for financing the cost of replacing capital items. Practically, however, it is not uncommon for properties to finance capital expenditures (particularly lower-cost items like air conditioners) from operations and categorize them as repairs and maintenance expenses.

We have relied on the data providers' judgment and discretion to scrub the repairs and maintenance expenses reported to us to control for capital improvements. Ideally, the repairs and maintenance line would reflect only ordinary and necessary expenses to maintain a property's physical plant. We suspect this expense line would be lower if all capital items were replaced with property replacement reserve account funds. As noted, we have categorized the salary and benefit costs of maintenance staff under "payroll."

Repairs and maintenance expenses accounted for approximately 20.2% of total gross operating expenses on average across the national housing credit portfolio in 2022. Median national per unit repairs and maintenance expenses have increased by 3.3% annually since 2013 but decreased by 1.3% between 2019 and 2020. The 2020 trend supports the anecdotal evidence we have heard from our data providers, who represented that repair and maintenance expenses during COVID-19 were less due to fewer unit turnovers, and a reluctance among tenants to report items needing repair. The 2021-2022 data confirmed our suspicion that there would be a "catch-up" period in 2021 and 2022 where properties address deferred maintenance items built up through the pandemic.

Repair & Maintenance Expense Trend



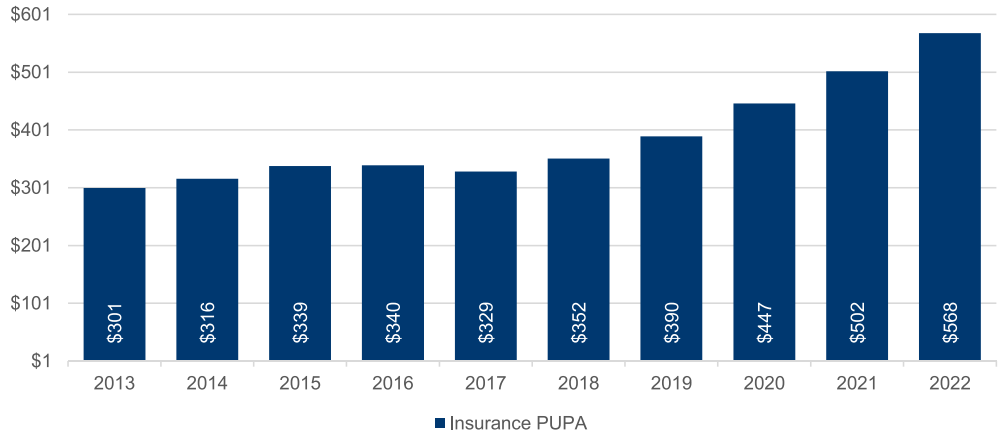
Insurance: The single biggest driver of the cost of property insurance is a property's physical location and the inherent relative risk of that physical location. As noted, insurance was the fastest growth category amongst all expenses, increasing by 7.5% annually since 2013.

Increasing insurance cost is not unique to the affordable housing portfolio, as property and casualty rates have increased nationwide across all real estate classes, in part due to extreme weather conditions. Premiums and deductibles for policies required by mortgage lenders for multifamily properties across the country have been increasing at an unmanageable pace over the past two years. Severe natural disasters fueled by climate change are becoming increasingly frequent and have ripple effects throughout the industry. Weather-related payouts have left some insurers insolvent, while others are avoiding high-risk states, resulting in higher rates and less coverage for property owners. Additional shifts in how insurers rate the risk of crime have impacted affordable properties with increases in liability policies and deductibles. In some cases, insurers even decline to write coverage for affordable developments altogether.

Multifamily developers in California, Florida, Louisiana, and Texas are seeing 100% or more increases. According to a report from Yardi Matrix released March 2, 2023[25], rates for property insurance in Florida – even in non-coastal areas – will rise 40%-50% in 2023, and 100% increases are not uncommon. Those increases are in addition to 15%-30% rate hikes in 2022. Florida in particular has faced challenges with increased litigation related to property insurance claims, which contributes to rising insurance costs.

Rising premiums, higher deductibles, and reduced coverage lower net operating income and put pressure on the debt service coverage ratio as well as an increase in the cost of capital making projects less feasible.

Insurance Expense Trend



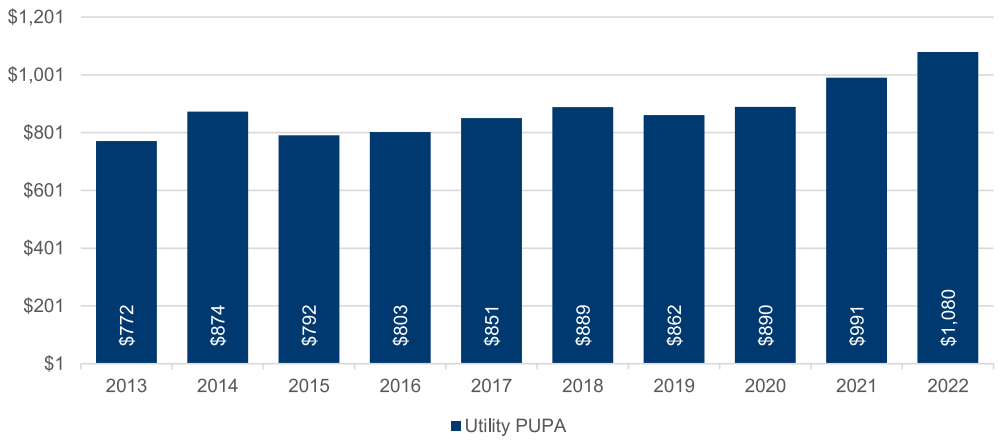
Utilities: Utility expenses can be one of the most variable operating expenses from one year to the next and from one property to the next. The scope of utilities expected to be paid for by the property can vary from one property to the next. Therefore, the data are reflective of owner-paid utilities. In this context, a property's utility expenses are determined first by which utilities are the owner's responsibilities and then the cost of said utilities.

In contrast, tenants' share of utility expenses do not run through a property's operating statement and are estimated through Utility Allowances. Utility Allowances are the estimated utility burden on tenants to make

[25]Yardi Matrix: Rising Climate-Related Insurance Costs Challenge Property Owners

sure that tenants' total burden does not exceed 30% of income. Utility allowances vary by property and utility structure, i.e., some properties will include all utility expenses in the rent and others only include water, sewer, and trash expenses. Local housing authorities typically publish utility allowance schedules annually, including utility cost estimates by utility source, bedroom count, and sometimes building design. The estimates are based on utility consumption of Section 8 properties. Utility allowances for LIHTC properties are often based on the housing authority schedules and can significantly decrease a property's net rents. Therefore, new construction LIHTC properties will often get a utility study completed to lower the property's utility allowance and, thus, increase rents.

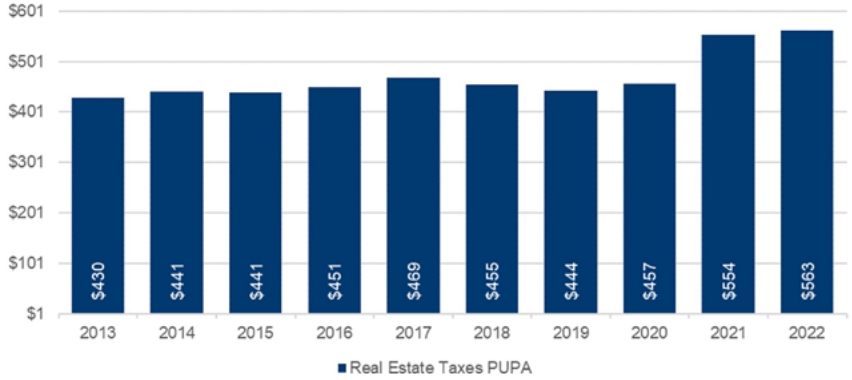
Utility Expense Trend



Utility expense has accounted for approximately 16.3% of total gross operating expenses on average across the national housing credit portfolio in 2022. Median national per unit utility expense has increased by 4.0% annually since 2013 and increased by 5.2% annually since 2016.

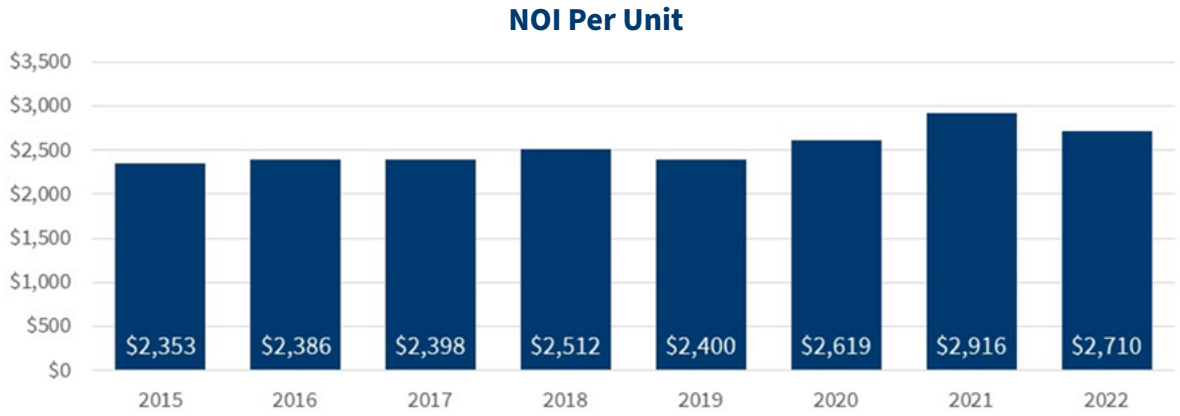
Real estate taxes: Real estate tax expense accounted for approximately 10% of total gross operating expenses on average across the national housing credit portfolio in 2022. Median national per unit real estate taxes expense has increased by 3.3% annually since 2013.

Real Estate Taxes Expense Trend



National net operating income trend

Net operating income (NOI) is the net rental revenue and net of all operating expenses incurred from operations. NOI does not include the impact of mandatory debt service, depreciation, or replacement reserve funding. A healthy NOI is a critical metric that speaks to the property's ability to pay its mortgage lenders, keep up with maintenance and tenant needs, and preserve the value for its owners.



Median NOI among the national housing credit portfolio was $2,710 PUPA in 2022.

Takeaways

Our years of research concluded that the few key reasons behind the housing tax credit industry's strong performance included an extreme shortage of affordable housing across the country, improved operating expense underwriting, and continued sophistication of property management and oversight through the public-private partnership model. In the end, rents tend to be much easier to project than expenses since rents are formulaic (plus market and marketability) driven. Operating expenses, on the other hand, tend to fluctuate more mildly between the actual and budget. Due to the rent restrictions, LIHTC properties are designed to operate with a smaller margin than market rate properties, and, therefore, could be more severely impacted by those unfavorable variances. While we will not have an expansive discussion on the best practices to help mitigate these variances in this report, we point out the following:

- The importance of front-end due diligence during the underwriting stage cannot not be overly emphasized. Historical data has proven that with more sophisticated underwriting practices, the industry has collectively returned stronger operating metrics, in part through better projected and managed operating expenses.

- There are various advocacy efforts to combat the rising insurance cost and insurability matter that could devastate some properties and their owners. We also have begun to see some payoff from technology-driven innovations as well as energy efficiency. We encourage the industry stakeholders to continue to collaborate and innovate.

- The affordable housing industry has long established an industry-standard in terms of operating deficit coverage, in the form of a six-month operating reserve (in terms of operating expenses, replacement reserve contributions, and mandatory debt services) and a six-month operating deficit guarantee (which typically expires after three to five years of stabilization). These protective measures have proven to be very helpful during challenging times.

APPENDIX A: STUDY METHODOLOGY & DATA APPENDIX

This report is the tenth in a series of studies undertaken by CohnReznick concerning the LIHTC program. In March 2023, CohnReznick transmitted data requests to all active housing credit syndicators known to the firm and the nation's largest direct housing credit investors. Direct investments are investments made by a single corporate investor directly into a project partnership as opposed to investing through a fund managed by a third-party syndicator. Investor respondents were asked to provide data limited to direct property investments to mitigate what would otherwise be a large overlap of properties' data assembled from participating syndicators' portfolios.

While our database includes more than 30,600 housing credit properties, over 19,200 were considered currently "active" meaning that they are generally within their 15-year compliance periods and actively owned/managed by syndicators and investors and on which 2021-2022 information was reported. CohnReznick believes that the properties included in our database exceed 70% of the housing credit properties placed in service since the inception of the program that are being actively asset-managed by syndicators and/or investors. We suspect that the gap between our dataset and 100% of all properties is largely a result of defunct syndicators, as well as properties placed in service in the earlier years of the housing credit program that have reached the end of their compliance periods, have been disposed of, and have "cycled out" of the program. Additionally, direct investments account for a portion of our dataset than we would have expected because of incomplete information. We believe that the sample size represented in the study provides a statistically meaningful basis for our analysis and findings.

Data collection

A participant solicitation email and data collection template were sent to participating organizations in March 2023. Respondents were initially asked to return the data collection template no later than July 2023. All contacts, whether made by telephone or by email, were recorded in response contact logs.

APPENDIX A: STUDY METHODOLOGY & DATA APPENDIX

The following shows the main data points requested from each participating investor and syndicator. Instructions were attached to each collection field to minimize interpretation and to confirm each participant's fund-level assumptions. Contact information for CohnReznick professionals was supplied along with the collection template for questions related to the data request. Where applicable, audited financial data were requested and were represented as having been furnished in that form. However, CohnReznick did not perform any independent validation as to whether the data were indeed audited.

DEFINITIONS FOR DATA FIELDS IN PROPERTY TABS

Static Data

CohnReznick Property ID	Property ID that will be populated or used by CohnReznick.
Your Database ID (Number)	Provide the unique identification from your database which permits future identification, if in number format.
Your Database ID (Text)	Provide the unique identification from your database which permits future identification, if in text format.
Property Name	Provide the name of the property.
Street Address	Enter the street address of the property.
City	Enter the city of the property.
State	Enter, or select from the dropdown list, the capitalized two-letter state abbreviation. Valid data includes 50 states plus DC for District of Columbia, PR for Puerto Rico, VI for US Virgin Islands, and GU for Guam.
5-digit ZIP code	Enter the five-digit ZIP code.
County	Enter the county of the property.
Credit Type	Select either 4% or 9%.
Minimum Set Aside	Select from: 40/60, 20/50, Average Income, 25/60.
Total Development Cost	Enter total development cost per cost certification.
Total LP Net Equity (Federal LIHTC only)	Enter total net equity contributed for federal LIHTC credits only. Do not combine state or any other credits. Use closing projected amount and enter the full dollar amount (eg. $2,000,000 instead of $2 million).
Total Projected Federal LIHTC to LP	Enter total federal LIHTC credits projected to be delivered to LP at closing. Do not combine state or any other credits.
Development Type	Select from: New Construction, Acq/Rehab, Historic Rehab, and Other.
Tenancy Type	Select from: Family, Senior, Special Needs, and Other. Enter "Special Needs" for properties predominantly serving special needs population.
Developer Type	Select from: For Profit, Non-Profit, Joint Venture.
Total Number of Units	Enter the total number of units.
Total Number of LIHTC Units	Enter the total number of LIHTC units, including manager's unit that is treated as tax credit unit for the applicable fraction purposes.

APPENDIX A: STUDY METHODOLOGY & DATA APPENDIX

DEFINITIONS FOR DATA FIELDS IN PROPERTY TABS

Static Data

Project-based Rental Assistance (Yes/No)	Formulaic column based on number of units receiving rental assistance. If this data (number of units receiving rental assistance) is not available, enter “Yes” for properties benefiting from project-based rental assistance either partial or full. Enter “No” if there are no project-based rental subsidies.
Number of Units Receiving Project-based Rental Assistance	Enter the total number of units that received project-based rental assistance. Do not include those that are occupied by tenants with mobile vouchers.
“Hard Debt (Yes/No)”	Enter “Yes” if the property is financed with hard debt. Enter “No” if the property has no hard debt.
Hard Debt Leverage Ratio	Enter % (hard debt / total development costs).

Variable Data

Property Status	Enter Project Status as of 12/31/2020. Select from: Pre-Construction, Construction, Lease-up, Pre-stabilization (leased-up but not yet stabilized), Stabilization (converted to perm loan and met the "stabilization" milestones specified in the LPA), Disposition, Foreclosure, Deed-in-lieu, and Other.
Closing Date	Enter the approximate date when the property was closed.
Placed in Service Date	Enter the approximate date the property was placed in service. Please provide the expected PIS date if not yet in service. If there are multiple buildings on a property with multiple PIS dates, enter the year when the first building was placed in service.
Date Stabilized	Enter the approximate date when the property was stabilized.
Physical Occupancy	Enter the physical occupancy rate for the year specified. For projects that did not have a full year of stabilized operation, enter the occupancy rate during the stabilized period only.
Economic Occupancy	Enter the economic occupancy rate for the year specified, based on audited financials. Economic occupancy is defined as actual collected rental income divided by gross potential rental income.
DCR (all hard debt)	Enter the debt coverage ratio for the year specified, based on audited financials. Debt coverage ratio is defined: (net operating income - required replacement reserve contributions) / mandatory debt service payments. Leave the cell blank if property has no hard debt.
Net Cash Flow Per Unit Per Annum	Enter the per unit cash flow for the year specified, based on audited financials. Per unit cash flow is defined: (net operating income - required replacement reserve contributions - mandatory debt service payments) / total number of units. For projects that did not have a full year of stabilized operation, enter the annualized per unit cash flow during the stabilized period only.
AHIC Watch List (Yes/No)	Enter "Yes" if the property is on your organization's current watch list based on AHIC standards.
AHIC Rating	Enter the property's corresponding AHIC rating: A, B, C, D, F
Operating Expenses	Each template has been customized to use each data provider's custom chart of accounts for reporting operating expenses. Please note, however, that CohnReznick will group expenses into seven core categories: Administrative, Salary, Repair and Maintenance, Management Fee, Insurance, Utilities, and Property Tax.
Net Revenue	Enter the net revenue: net revenue is defined as gross potential revenue (including rental and other income), less vacancy losses.

APPENDIX A: STUDY METHODOLOGY & DATA APPENDIX

DEFINITIONS FOR DATA FIELDS IN PROPERTY TABS

Variable Data

Gross Operating Expense	Enter the gross operating expense: these include the sum of admin, salary, R&M, management fee, insurance, utilities, property tax, etc. Please exclude any capital expenditures.
Net Operating Income (NOI)	Please enter net operating income: Net operating income (NOI) is net rental revenue, and net of all operating expenses incurred from operations.
Fund Name	Provide the name of the fund each property belongs to. Ensure that fund names are consistent between the fund and property tabs.
CohnReznick Fund ID	Column filled out by CohnReznick.
Fund Type	Select from: Direct, Proprietary, Multi-investor, Guaranteed, Public. Ensure the fund types are consistent between the fund and property tabs.
Fund Interest	Column to identify split properties that are owned by multiple funds. If Property X was split equally among 2 funds, denote two funds in the same line in Fund 1 and Fund 2, with interest of 50%/50%. The Fund Interest should always add up to 100%.

DEFINITIONS FOR DATA FIELDS IN FUND DATA TABS

Static Data

Fund Name	Provide the name for the fund or a unique identification number from your database which permits future identification. Ensure that fund names are consistent with fund names provided in the property tab.
Fund Type	Select from: Direct, Proprietary, Multi-investor, Guaranteed, Public.
Year Closed	Enter 4-digit year of fund closing.
Total Gross Equity	Enter the gross ILP equity amount projected at closing. Use the full dollar amount (i.e., $2,000,000 instead of $2 million).
Total Net Equity Projected to be Invested in Properties	Enter the net equity amount projected at closing.
Calculated Fund Load	Fund load is automatically calculated based on total gross equity and total net equity.
Original Projected IRR	Enter IRR projected at fund closing with necessary adjustment for property removal/addition, using tax rate assumptions used for closing, e.g., 35%.
Total Projected LIHTC at Closing	Enter the total federal LIHTC projected at fund closing.
Total Projected Other Credits at Closing	Enter the total other credits, i.e., any other credits other than federal LIHTC, projected at fund closing.
Originally Projected 1st Year LIHTC	Enter the first year federal LIHTC projected at fund closing. Do not combine state or any other credits.
Originally Projected 2nd Year LIHTC	Enter the second year federal LIHTC projected at fund closing. Do not combine state or any other credits.
Originally Projected 3rd Year LIHTC	Enter the third year federal LIHTC projected at fund closing. Do not combine state or any other credits.

APPENDIX A: STUDY METHODOLOGY & DATA APPENDIX

DEFINITIONS FOR DATA FIELDS IN PROPERTY TABS

Variable Data: IRR, Credit, Reserve

Fund Status	Select from Active and Dissolved.
Performance Current IRR	Enter the most currently projected IRR as of 12/31/2022, as if tax reform had not occurred; aka: the Performance Current IRR.
Economic Current IRR	Enter the most currently projected IRR as of 12/31/2022 including all the implications of tax reform (actual tax rates and impact of RPTOB election); aka: the Economic Current IRR.
Total Projected LIHTC Current	Enter the actual, or currently projected, federal LIHTC.
Total Projected Other Credits Current	Enter the actual, or currently projected, total other credits, i.e., any other credits other than federal LIHTC.
Total Actual 1st Year LIHTC Current	Enter the actual, or currently projected, first year federal LIHTC. Do not combine state or any other credits.
Total Actual 2nd Year LIHTC Current	Enter the actual, or currently projected, second year federal LIHTC projected. Do not combine state or any other credits.
Total Actual 3rd Year LIHTC Current	Enter the actual, or currently projected, third year federal LIHTC projected. Do not combine state or any other credits.
Current Working Capital Reserve Balance as of 12/31/2022	Enter the current balance for the working capital reserve as of 12/31/2022. Include all reserves except for the reserve that is specifically restricted to fund property deficits.
Current Property Needs Reserve Balance as of 12/31/2022	Enter the current balance for the property needs reserve as of 12/31/2022. If there are no reserves restricted for funding property deficits, enter $0.
Property Needs Reserve Withdrawn Through 12/31/2022	Enter the property needs reserve withdrawn through 12/31/2022.

DEFINITIONS FOR DATA FIELDS IN FORECLOSURE DATA TAB

Name of Developer	Enter the name of the general partner, or the developer.
Year of GP Removal	If applicable, provide the year when the general partner was removed.
Year of Foreclosure	Enter the year when the property was foreclosed.
Reason For Foreclosure	Enter the reason for foreclosure.
Total Recaptured and Lost Federal LIHTC	Enter the sum of the recaptured federal LIHTC amount and the future federal LIHTC amount that was foregone due to the foreclosure.
Was the LP covered by recapture guarantee? (Yes/No)	Enter "Yes" if the investors were covered by recapture guarantee; otherwise, enter "No."
Describe negative financial impacts to the investors	Describe negative financial impacts to the investors in terms of IRR, penalty, etc.
Describe negative financial impacts to you as syndicator	Describe negative financial impacts to your organization as syndicator. Describe how much you had to contribute from your own pocket in your effort to save the property. Describe your funding source.

DATA PROCESSING

The receipt of a completed survey questionnaire and any relevant comments made by the respondents were recorded in the contact logs. An automated feature was used to make sure that the respondents' chart of accounts is up to date. CohnReznick also goes through an iterative process with detailed response tracking to keep a historical log of information and details on specific properties and funds. All questionnaires were first analyzed for data completeness and systematic errors for reasons such as misinterpretation. If questionnaires were returned with incomplete data, respondents were contacted immediately to determine the possibility of providing missing data and, in limited circumstances, the consequences of participants being unable to accommodate the entire data request. Other follow-up activities were conducted to help verify data integrity. Upon completion of the first-round processing, data were compiled, filtered, and normalized.

Each data element provided was then uploaded to an Access database maintained by CohnReznick.

The database was built in a completely confidential manner to make sure that no individual data points or groups of individual data points could be attributed to any data provider. The data were loaded into the database to help ensure the consistency of field data types and to allow for flexible and repeatable calculation.

Data entered into the database were checked for arithmetical errors and flagged for any large discrepancies between the current and previous years' data for trend warnings. Based on industry standards and a lengthy programmatic filtering system designed by CohnReznick, outliers that could skew the study results were screened and later removed from the affected calculations. Based on predefined data outputs and calculation definitions, CohnReznick ran queries and wrote scripts to perform calculations and group datasets (e.g., linking ZIP Codes to applicable counties) for segmentation analysis. Aggregated data and outputs were re-exported into a Microsoft Excel template for further testing and quality control analysis.

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ABOUT US

The Tax Credit Investment Services Group

CohnReznick's Tax Credit Investment Services (TCIS) is a dedicated business unit within CohnReznick that provides strategic advisory and due diligence services to help institutional investors make informed decisions on acquiring and managing tax-advantaged investments. TCIS provides advisory services related to equity market conditions, investment options, investment due diligence, regulatory requirements, and investment impacts to financial statements. TCIS also provides advisory services focused on best practices in due diligence, asset monitoring, and counter-party risk management, designed to enhance community investment strategies, policies and procedures, and portfolio management efforts.

In addition to the professional experience of TCIS team members, the group's clients benefit from the knowledge and experience of hundreds of CohnReznick audit, tax, and consulting professionals working on investment tax credit transactions on a daily basis.

For more information about TCIS, please visit our website.

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