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Center for Sustainable Business

10 YEARS OF BUILDING BETTER BUSINESS FOR A BETTER WORLD

Sustainability Value Creation in Affordable Housing that Adheres to the Multifamily Impact Council's Framework

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NYU STERN CENTER FOR SUSTAINABLE BUSINESS

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INTRODUCTION

The Center for Sustainable Business (CSB) at NYU Stern School of Business worked with the Multifamily Impact Council (MIC) to quantify how multifamily property owners create financial value by implementing impact-driven practices that are aligned with the Multifamily Impact Framework™. The study found that affordable and moderate-income multifamily housing is not only a resilient, risk-adjusted asset class, but investors can further enhance net operating income (NOI) by layering resident services on top of baseline affordability and investing in decarbonization. CSB research demonstrates that practical interventions such as flexible rent splitting programs, housing support plans, telehealth access, resident service provision, and partnerships with housing placement organizations can measurably improve financial outcomes by extending lengths of stay, reducing turnover and eviction costs, lowering vacancy rates, and shrinking bad-debt expenses. On the capital side, retrofitting existing buildings with solar panels yielded payback periods of roughly 5–10 years and meaningfully cut operating costs. The researchers also posit that financial benefit achieved by stacking multiple practices across MIC framework principles (housing stability, health and wellness, economic mobility, resident engagement, and climate resilience) can deliver more than optimizing any single intervention in isolation.

BACKGROUND

The Multifamily Impact Council was created to increase the flow of private capital into the U.S. affordable rental housing market and establish multifamily impact investments as a distinct asset class for institutional investors. To achieve this objective, the MIC established the Multifamily Impact Framework™ - the industry's first common standard of impact investing principles and reporting guidelines for multifamily properties in the United States. Working with six MIC members, CSB gained insight into five of the seven MIC Framework principles[1]. The principles covered were affordability, resident engagement, housing stability, economic health and mobility, health and wellness, and climate and resilience.

CSB developed the Return on Sustainability Investment (ROSI™) methodology to help identify, prioritize, and track sustainability-driven returns. The methodology and, for some industries, associated monetization tools, support quantifying the full range of costs and benefits for sustainability initiatives, including intangibles, both in terms of current performance and scenario planning. MIC believes that adherence to all of their principles creates impact for residents while also creating value for investors. The ROSI approach was chosen for this analysis as the methodology identifies financial benefits along a range of value drivers which include risk management, operational efficiency, stakeholder engagement, supplier relations, talent management, sales and marketing, customer loyalty, media coverage and innovation (revenue from new sources). While there are many financial measures that are used in affordable housing and real estate more broadly, the analysis of company data in this study included the net operating income (NOI) impact of adherence to the MIC principle wherever this was feasible. NOI was chosen as it measures the profitability of income-producing properties.

[1] MIC Principles Framework 3.0 (2025)

METHODOLOGY

CSB applied the ROSI Framework as a methodological approach with the goal of giving property owners and investors clearer insights into the financial returns of specific interventions to enable informed decision-making and resource allocation. CSB began by reviewing desk research on affordable housing and then worked with six MIC member companies, each identified by MIC, to review how their impact driven activities aligned with the MIC framework and were also driving financial performance. CSB attempted to cover as many MIC principles as possible based on data availability from these participating companies. The breadth of topics and the differences in data availability between case studies called for a variety of analytical tools ranging from correlation and regression statistical analysis, to scenario modeling and the financial analysis of rent rolls. The analysis techniques were selected based on the research question that each company case focused on, and the amount and type of data that was provided. In doing so, CSB has created company case studies that demonstrate the findings from adopting and applying aspects of MIC's Impact framework across five of its seven principles namely resident engagement, housing stability, economic health and mobility, health and wellness, and climate and resilience. Further description of the methodologies used can be found with the corresponding principle and case study in the following sections.

HIGH-LEVEL FINDINGS

The study found relationships between impact practice implementation and financial value drivers of longer lengths of stay, increased physical and economic occupancy rates, reduced turn costs and reduced operating expenses among others. As an example, for one company, residents who were rent splitting, which is paying their monthly rents in two installments instead of all at once, had longer lengths of stay by 3 months. These findings are useful for property managers and investors to use as they finetune existing affordable housing strategies, or design affordable housing investment and management strategies for the future. The findings of the individual company case studies are summarized below in Table 1.

Table 1: Summary of Case Study Findings

MIC Principle	Case Study Scope	Key Findings	Potential NOI Impact
Housing Stability 	The value of rent splitting initiatives	Residents who used rent splitting services had longer lengths of stay by @ 3 months than those who did not	• Less frequent turn costs • Higher rental income • Lower bad debt costs
Housing Stability and Economic Health and Mobility 	The value of housing support programs (extended rent payment timelines)	There is a net financial benefit for property owners when residents eligible for Section 8 assistance are supported with housing support plans (HSPs)	• Consistent subsidies • Avoided legal fees • Lower bad debts • Lower vacancy costs • Lower apartment turnover costs

		versus when residents are not supported with HSPs.	
Housing Stability 	The value of working with organizations that find housing for residents who may not meet typical application requirements	Properties that use placement services that offer support can accelerate the path to income stabilization while housing the most vulnerable.	● Higher rental income ● Lower eviction costs ● Lower bad debt ● Lower marketing costs
Health and Wellness 	The value of providing telehealth services	Residents who used telehealth services had longer lengths of stay resulting in slightly higher operating efficiencies.	● Lower turnover costs ● Lower vacancy and related costs
Resident Engagement 	The value of resident service coordinators/ supported resident services[2] in enhancing resident engagement	**Company 1** The analysis shows how residents' sense of wellbeing connects to property financial outcomes and drives engagement with events/programs, though not uniformly across all wellbeing dimensions.	● Higher rental income Lower bad debt costs
		Company 2 Resident Services Coordinators are positively associated with better resident and financial outcomes at a weak to moderate level, suggesting that they are a contributor to resident engagement and financial impact.	● Higher rental income ● Lower vacancy costs ● Lower apartment turnover costs Lower bad debt costs
Climate and Resilience 	The value of solar panel initiatives	Solar panels improve operational efficiency and, in this case, had a payback period around 5 years with government incentives and 10 years without.	• Lower operating costs
	The value of greenhouse gas	A modeled new construction property had 2.7 times more embodied carbon than	• Lower operating costs

[2] Includes third-party service providers of resident services

	emissions saved from retrofitting standing properties vs. constructing new ones	retrofitting a standing property. Retrofitting reduces utility costs. New construction offers utility efficiency by as much as 68%, depending on the design, but has a higher embodied carbon footprint.	

DETAILED FINDINGS

Affordability Principle

Affordable housing has been proven to be a solid investment. There is a persistent and unmet need for affordable housing, and supply is highly constrained[3]. A company's ability to meet this persistent need by developing affordable housing supports high occupancy over time, contributing to financial value. Affordable housing is also resilient across economic cycles. A 2024 study of impact investing strategies in U.S. commercial real estate[4] found that affordable housing demonstrated resilience across economic cycles compared to market rate housing, with revenue per available square foot remaining higher than market rate apartments which is a compelling case for investors.

The MIC Framework defines affordability along a spectrum of impact beginning with the Federal Housing Finance Agency (FHFA) definition of affordability which is where 100% of the renters in a property are paying no more than 30% of their income for rent. It goes further to define an impact threshold that states that in order for a property or portfolio to meet the MIC's minimum threshold of affordability, 50% or more of the units must be affordable to renter households who make 80% AMI or less in standard markets, 100% AMI or less in cost-burdened markets, or 120% AMI or less in very cost-burdened markets, using the FHFA definition of cost-burdened and very cost-burdened markets.

CSB relied on desk research for a baseline level of understanding of how affordability creates value. Given that some real estate data companies derive metrics such as occupancy rates from publicly available data sources, which may be inaccurate, CSB determined that an analysis of credible existing affordability research reports would be preferable to directly comparing primary company data to derived data within submarkets.

An additional study on moderate income rental housing, using data from the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index found that moderate income rental housing, which they define as "a large, institutional-grade multifamily asset occupied by tenants earning between 60% and 120% of the Median Family Income (MFI) in the metropolitan area where it is located", compared favorably to other common asset classes in terms of its return and had a lower variation in total returns from year to year (risk) in the 10 years leading up to the second quarter of 2021[5]. They found that the multifamily assets that they classified as

[3] Affordable Housing: Stable Returns With Positive Social Impact (Bommarito & Maher, n.d., Accessed 09 January 2026)
[4] Impact investing: the continued resilience of US affordable housing investments | Real estate | Nuveen Institutional (Manware & West, 2024)
[5] Performance of moderate income rental housing (Roberts & Wegmann, Accessed 09 January 2026)

moderate-income rental housing (MIRH) achieved an average unleveraged return of 9.4%, and that over the time period studied two-thirds of the time the total annual return averaged 9.4% +/- 2.6%. MIRH also outperformed otherwise similar "above MIRH assets" where rents were above 80% of AMI, whose returns averaged 7.86%, lower than the overall NCREIF Property Index Apartment sub-index (8.37%). The report also mentions that the MIRH assets "somewhat counterintuitively exhibited slightly lower occupancy rates than above-MIRH assets". The report also noted that MIRH assets over the time period studied required higher capital expenditures (1.5% on average) than above-MIRH properties (0.88%) but noted that these higher capital requirements were offset by the assets' higher income and total returns.

Another paper, An Alpha in Affordable Housing?[6] analyzing detailed rental and property data from the U.S. (2001–2024), Belgium (2007–2022), and the Netherlands (2018–2022). The researchers found that low-rent properties consistently delivered higher net returns than high-rent properties, by 3.86 percentage points annually in the U.S., 3.60 in the Netherlands, and 1.74 in Belgium. CSB's research was focused on the U.S., but these numbers outside of the U.S. are interesting as a perspective of what has been possible in other geographies.

The principle of affordability is the foundation of the MIC Framework. It is that essential prerequisite that creates housing for residents that allows them to spend no more than 30% of their income on housing. While it is the foundation, the six additional principles of resident engagement, housing stability, economic health and mobility, health and wellness, climate and resilience and good business are essential in maximizing the impact that is created for residents, and, it is believed, in turn for investors. The next step in the study was to explore five of those additional principles to understand their potential financial outcomes.

Adding Impact Beyond Baseline Affordability-Resident Services Provision

While affordable housing as an asset class has proven to be a sound investment, there are numerous practices and services that properties can put in place to enhance the resident experience, prevent resident eviction, improve physical resilience and, in turn, enhance NOI. The MIC Multifamily Impact principles of housing stability, health and wellness, economic health and mobility, resident engagement, and climate and resilience were explored and are described in the following sections. It became apparent through the study that maximized NOI benefit is likely achieved by stacking multiple practices that are associated with the framework principles, as opposed to focusing on just one principle. The company case studies do not touch on all of the potential practices that are available within each principle, and not all of the practices that were explored are a good fit for every market, but it was clear that companies should aim to cover all principles using practices that are best suited to their residents and the markets in which they operate.

Housing Stability Principle

The housing stability cases studied saw increased lengths of stay for residents who used rent splitting, reduced vacancy and eviction costs for a set of properties that provided Housing Support Plans to residents, and increased occupancy rates when using supported resident placement services.

[6] An Alpha in Affordable Housing? (Van Nieuwerburgh, Stijn, Sven Damen, and Matthijs Korevaar,2025)

The MIC framework defines Housing Stability as being achieved when a resident is not behind on rent or financially burdened to make rent payments, has not moved in the past twelve months for financial reasons, and is not forced to rely on housing shelters or doubling up with another household. The minimum impact threshold from MIC is that corporate impact plan(s) and investment strategies must include specific activities that seek to increase housing stability at the property and portfolio level by increasing lengths of stay, and reducing turnover rates, bad debt costs, and evictions for non-payment. CSB worked with a number of MIC member companies exploring the financial benefits of practices that improve housing stability.

Rent Splitting

Most rental accounting systems are built on monthly rent payments with late fees if full payment does not arrive by the rent payment due date. Rent splitting services allow residents to divide monthly rent into separate payments, in line with the way in which many individuals are paid from their place of work. CSB analyzed length of stay data provided by an MIC member company that works with a nonprofit organization that assists the company in enabling rent splitting. This nonprofit service enables rent splitting to be provided to residents free of charge by working with properties to enable these split payments within their financial systems. Other services exist that require residents to pass credit checks and charge fees. These hurdles may hinder participation in rent splitting programs for lower income households so it is important to be aware of alternatives.

Data was provided for 517 residents and the length of stay for those using rent splitting at some point during their tenure was 2.9 months longer than for those who did not. It was noted that the program had only been in place for under a year for some of the locations that the data was pulled from, so it is possible that longer lengths of stay are possible as the programs mature.

Table 2: Likely Outcomes, NOI Impact and Action Steps from Providing Rent Splitting Initiatives

Practice	Likely Outcomes	Potential NOI Impact	Value Creation Actions
Providing rent splitting pathways	Improved economic occupancy	● Higher rental income ● Reduced bad debt costs ● Less frequent turn costs	Implement rent splitting through company's own accounting system Offer twice-monthly rent payment services to residents, ideally free of charge to encourage participation Metrics to Track ● Rent splitting adoption rate ● Lease renewal ● Vacancy rates

Housing Support Plans (HSPs)

Housing support plans are a way to support residents who are behind on rent and who make a good-faith effort to get back on track. Residents struggling to pay rent receive a lease violation

notice and an offer to participate in a Housing Support Plan or HSP[7]. A resident will typically be supported with a lower-than-contracted rent amount for a timeframe that is mutually decided between the company and the resident. Each HSP is customized to a resident's circumstance and need, and usually results in them staying housed after completion of the plan. CSB worked with an MIC member company that has a goal to ensure all residents have access to the same opportunities, considerations and services after a lease violation has occurred. Upon a resident agreeing to participate in an HSP, the relevant property and case management staff reach out to the resident and complete a housing action plan and a housing contract.
CSB conducted a financial cost-benefit analysis across six of this company's properties to compare the net financial impact when residents eligible for Section 8 assistance are supported with HSPs versus when residents are not supported with HSPs. On average, these properties, located in California, each have 111 units, and have ~10% of units on HSPs. CSB's analysis showed that investing in housing support plans not only helps the company stay aligned with its mission but also can result in a net financial benefit by protecting revenues and avoiding eviction expenses.

CSB used financial metrics including actual resident-paid rental revenue, housing subsidies and various expense items, and operating metrics such as the number of housing support plans extended, number of move outs etc. for 2023 and 2024, to calculate the net benefit to the company by backing out estimated costs from the estimated revenue for each period under the relevant scenarios. The scenarios were based on assumptions from the company's practices such as the length of plan and the amount of time that the resident typically stays after completing the plan. The range of the impact when residents were supported varied from a net loss of ~2% to a net benefit of ~13% of NOI in 2023 and net benefit of ~2% to ~4% of NOI in 2024. The company's ability to earn rental subsidies consistently throughout the year, and avoid eviction-related legal fees and apartment turnover costs (as residents stay housed) largely contributed to the benefit.

In a second analysis, CSB stress tested a key assumption of the number of resident moveouts after completing the HSP by increasing it from nil (in the first analysis) to 25%. It found the range of impact on NOI varied from a net loss of ~4% to a net benefit of ~10% of NOI in 2023 and from a net loss of ~2% to a net benefit of ~2% of NOI in 2024 across the properties when residents were supported with HSPs. The ability to earn rent subsidies more consistently, albeit at lower levels, and avoiding eviction-related legal fees largely contribute to the benefit. There is, however, the cost of turning over an apartment and vacancy costs for the residents that leave after coming off of an HSP.

By conducting this analysis, CSB has created a tool (to be released shortly after this report) that can help property owners determine an optimal length of an HSP that balances resident stability with financial sustainability on their properties. Companies will be able to use it to evaluate cost–benefit impact of extending support under different durations. This can help determine the optimal tenure that balances resident stability with financial sustainability.
Companies that are implementing HSPs should track metrics that will help determine the financial benefits and how to improve the plans. Suggestions include:

- **Program Metrics:** Monitor key performance indicators tied to HSPs (e.g., number of plans initiated, completion rates, outcomes achieved)
- **Resident Stability:** Track average length of residency for tenants with a history of HSPs to evaluate whether these tenants remain housed longer compared to other residents

[7] Lease support violation process involves working with a resident upon violation of any lease agreement conditions and offering them an HSP if relevant

- **Satisfaction and Retention:** Measure resident satisfaction and lease renewal decisions among tenants with prior HSPs

Table 3: Likely Outcomes, NOI Impact and Action Steps from Offering Housing Support Plans

Practice	Likely Outcomes	Potential NOI Impact	Value Creation Actions
Offering housing support plans to residents (eligible under Section 8 for housing assistance) who are struggling to pay the rent	Reduced resident evictions	● Consistent subsidies ● Avoided legal fees ● Lower bad debts ● Lower vacancy-related costs ● Lower apartment turnover costs	Design an optimal Housing Support Plan for properties using the CSB/MIC HSP calculator** Metrics to Track: ● HSP adoption rate ● Resident Stability ● Resident satisfaction rates ● Lease renewal rates

Placement Services for Vulnerable Populations

While the majority of the services that were analyzed in the MIC study projects focused on services for existing residents, one member company also offered an example of a service provider working to find housing for vulnerable families and provide long-term, upfront support while simultaneously helping companies increase occupancy.

Navigating the affordable housing market can be challenging, particularly for individuals and families who are most vulnerable to being unhoused. While HUD has its own tool, the HUD Exchange Housing Search Assistance Toolkit[8] for case managers and housing advocates, some nonprofits also fill this role. CSB analyzed data provided by one MIC member company and one of their partners to understand how working with organizations that support more vulnerable populations can also be financially beneficial to properties. The partner helps to solve financial and resident challenges for property partners to help them feel secure in broadening the profile of residents that they house. The services provided help residents find housing while in turn helping properties reach income stabilization faster and more securely in markets with lower occupancy rates. The need for these services is not as widespread in markets like New York City which fills vacancies quickly, but can be helpful in markets with lower occupancy rates.

Property managers may feel ill-equipped to work effectively with residents who require additional case management and organizations like this provider can bridge the gap. They can increase economic occupancy and reduce bad debt by offering emergency rent (in the case of this provider it is up to 3 months of emergency rent over a two-year period). Residents supported by the provider have 2 years of customer service/case management, including services and assistance that are tailored to their specific needs, which supports property managers. The provider offers up to $5,000 in funds for risk mitigation in the event that damage occurs to a unit while it is occupied by a resident who they support. Finally, the provider offers

[8] Housing Search Assistance Toolkit - HUD Exchange (US Department of Housing and Urban Development, Accessed 09 January 2026)

mediation services which help to prevent legal fees associated with eviction and allow residents to leave without having an eviction on their record.

The company provided data for the 39 households that were placed using the service. Of these, 33 households had past-due amounts which the service provider was going to support. 18 households took advantage of the rent guarantee that is provided for those residents that are housed, and of those 18, 5 households exhausted the rent guarantee (which is up to 3 months' rent in a 2-year period). These numbers show that there is still some risk, but that risk is reduced through programmatic offerings. It is also important to note that this was a uniquely challenging market, and the property would be serving the same resident population, whether they came through the provider or directly. The key difference is that working with the provider ensures better support for residents and financial assistance for the property during hardships.

Table 4: Likely Outcomes, NOI Impact and Action Steps of Using Supported Resident Matching Services

Practice	Likely Outcomes	Potential NOI Impact	Value Creation Actions
Using supported housing placement services	Increase occupancy rates	Lower bad debt costs	Use services to reduce the risk of housing residents that have difficulty with placement, particularly in challenging markets that have lower occupancy rates

Health & Wellness Principle

The study found longer lengths of stay for residents who took advantage of the free telehealth services that were provided by the company.

The MIC framework defines the principle of Health and Wellness as the incorporation of healthy building design and property management practices that create and maintain living conditions that protect and enhance the health of renters. The framework goes further to state that outcomes of this principle should demonstrate that life and safety issues at each property are addressed promptly and that resident health needs are prioritized within the property or portfolio's Resident Engagement platform. They can also include providing services for residents to help them manage their health outcomes.

Telehealth

CSB worked with an MIC member company that provided access to free telehealth services to residents to understand the financial benefits. The company provided CSB with data on telehealth use, telehealth satisfaction, housing satisfaction and length of stay data. After cleaning a larger data set (taking out observations that had blanks or N/A, for example), for the 153 remaining observations it was found that increased telehealth satisfaction was moderately

correlated with increased housing satisfaction and vice versa, with a correlation coefficient of 0.501.

Length of Stay for Telehealth Users vs. Non-users

There were more complete observations for telehealth use vs. no telehealth use, and the average length of stay for those residents. The data provided showed that telehealth users had a longer length of stay than residents who did not use telehealth services by 3.59 months.

Table 5: Summary of Residents' Telehealth Use and Average Length of Stay

Total Count of Residents	Telehealth Use	Average Length of Stay
144	Yes	43.97
864	No	40.38

While this observation does not show causality, it is interesting because of the implications for NOI. Over time, a longer length of stay means less frequent turn costs, lower marketing costs and lower vacancy cost. The impact of the longer length of stay was calculated to be $290 per resident every 4 years, which may seem small, but given the large number of residents reporting that they do not use the service, this could add up to more meaningful savings, if they were to switch to using telehealth services.

Table 6: Likely Outcomes, NOI Impact and Action Steps from Offering Telehealth Services

Practice	Likely Outcomes	Potential NOI Impact	Value Creation Actions
Offering telehealth services	Longer length of stay	• Lower turnover costs • Lower vacancy and related costs • Lower marketing costs	Invest in telehealth service offerings for residents as part of other resident services offerings

Resident Engagement Principle and Resident Services Coordinators

The findings for the resident engagement principle varied but there are still meaningful considerations for property managers and investors in considering how to best understand and invest in responding to residents' needs. For one group of properties it was found that all else being equal, an improvement in residents' perception of safety inside a building was associated with a 3.09% improvement in occupancy rates and a 5% improvement in rent realization rates. For another set there were insights into how residents' sense of wellbeing connects to property financial outcomes and also drives engagement with events/programs, though not uniformly across all wellbeing dimensions.

The MIC impact principle of resident engagement states that "Meaningful Resident Engagement is characterized by an approach that ensures that the resident services and programs provided

are consistent with resident priorities, goals, and needs, leverage existing community resources, incorporate resident feedback, and build trust between residents and staff."[9] Resident services are an essential part of effective affordable housing. Many nonprofit providers see affordable housing not just as housing, but as a vehicle for essential resident service provision. NeighborWorks resident services are listed as including "child development services and strategies (age 0-5), K-12 education services and strategies, health and well-being services, workforce development, food security services, long-term supportive housing, tax preparation, and eviction prevention and/or financial capability services".[10] Resident services in HUD-assisted multifamily housing includes helping residents access services available in the community and designing programs and services to meet the needs and desires of the residents.[11] While resident services are undoubtedly an important part of supporting residents once they have found housing, the mode of provision and the explicit financial returns of service provision were of interest in this study.

Two of the companies that participated in the MIC study provided resident engagement and resident services data across multiple properties with the goal of understanding the relationship between resident engagement, types of resident services provided, the mode of service provision, and financial metrics such as occupancy rates and rent collection rates or effective rent realized. CSB did not analyze any bespoke case management services being provided by Resident Services Coordinators (RSCs) and hence the findings are limited to the resident programming responsibilities of the RSCs. Given the critical importance of case management, particularly for seniors and residents with disabilities, CSB recommends that future research include an evaluation of RSC-led case management services.

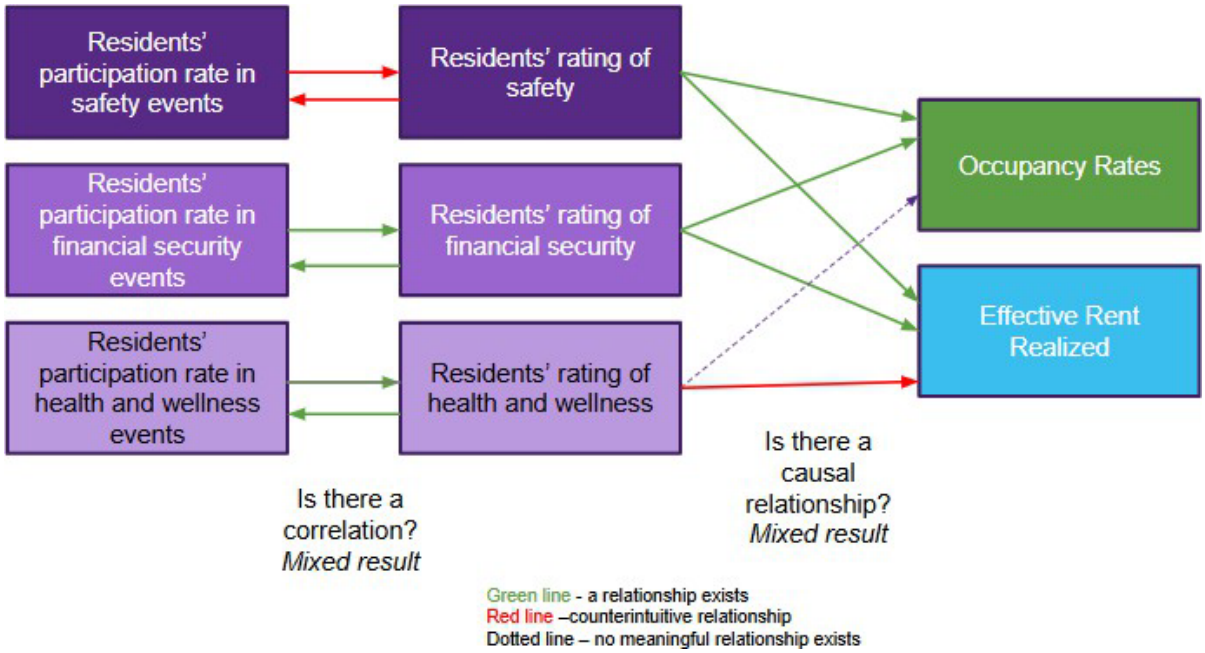
All of the properties in the data that was provided, even those that did not have a designated RSC onsite, offered residents a variety of service-related events. In some cases, services were provided using outsourced service providers, and, in some cases, property managers were responsible for coordinating services events for residents.

Company #01

CSB analyzed operational data provided by an MIC member company across 46 different properties including the number of programs/events organized annually and resident participation rates in the events, and compared them with outcomes such as resident satisfaction scores of their safety, financial wellbeing and health and wellness as reported in an annual satisfaction survey. CSB also compared these resident satisfaction scores with occupancy and rent collection rates to determine if a relationship existed between these variables.

[9] The MIC Multifamily Impact Framework™
[10] Resident Services Funding & Delivery Models Among Affordable Housing Nonprofits (Miller, 2022)
[11] HUD Service Coordinators in Multifamily Housing Program Toolkit (US Department of Housing and Urban Development, Accessed 09 January 2026)

Figure 1: Summary of financial and non-financial variables analyzed



CSB performed a correlation analysis between resident participation in a variety of events and resident ratings of their perception of safety, financial security and health and wellness on the property. It was observed that residents reporting a weaker financial wellness perception correlated weakly (r~0.3) with residents attending financial security events more frequently and similarly, residents reporting weaker health scores correlated moderately (r~0.5) with increased participation in health and wellness programing. These findings support at a high level that companies can maximize participation in events by understanding what residents' needs are. The results are presented in more detail in the following table:

Table 7: Summary of Correlation Analysis of Resident Participation Rates and Resident Scores

Research question	Variable #1	Variable #2	Extent of correlation and polarity	Possible interpretation of results
Do residents' scores relating to **financial wellness** correlate with resident participation rates in financial security events?	Resident participation rate in financial security events	Resident scores relating to financial wellness	0.33 (n=35) Positive	As residents perceive being less financially well off worsens, resident participation rates in financial security events increase
Do residents' scores relating to **feeling healthy** correlate with resident participation rate in health and	Resident participation rate in health and wellness events	Resident scores relating to health and wellness	0.53 (n=35) Positive	As residents perceive being less healthy, resident participation rates in health and wellness events

wellness events?				increase
Do residents' scores relating to **feeling safe inside the apartment** correlate with resident participation rate in safety events?	Resident participation rate in safety events	Resident scores relating to feeling safe inside the apartment	-0.50 (n=35) Negative	As residents feel less safe, participation in safety events decreases
Do residents' scores relating to **feeling safe inside the building** correlate with resident participation rate in safety events?	Resident participation rate in safety events	Resident scores relating to feeling safe inside the building	-0.49 (n=35) Negative	
Do residents' scores relating to **feeling safe inside the building's parking** correlate with resident participation rate in safety events?	Resident participation rate in safety events	Resident scores relating to feeling safe inside the building's parking	-0.36 (n=35) Negative	
Do residents' scores relating to **feeling safe in the neighborhood** correlate with resident participation rate in safety events?	Resident participation rate in safety events	Resident scores relating to feeling safe in the neighbor- hood	-0.29 (n=35) Negative	

CSB also observed that residents' perceptions of their financial security and sense of safety within the building, per responses recorded in the annual survey, showed a statistically significant relationship with key financial outcomes of occupancy rates and effective rent realized. All else being equal, an improvement in residents' perception of safety inside a building was associated with a 3.09% improvement in occupancy rates and a 5% improvement in rent realization rates (only statistically significant variables have been noted here). Similarly, improvement in residents' perception of their financial wellbeing was associated with a 1.07% improvement in occupancy rates and 3% improvement in rent realization.

Table 8: Summary of Regression Analysis of Financial Ratios and Resident Scores

Research question	Dependent variable	Independent variables	Extent of correlation and polarity	Possible interpretation of results
Do residents' rating of	Occupancy Rates	Resident rating of safety:	Linear Regression	All else being equal, a one-

safety, health, and wellness responses have an influence on Occupancy Rates?		● in their apartment ● in their building ● in the parking/outdoor areas ● in their neighborhood Resident rating of health Resident rating of meeting an emergency financial expense within a month	analysis R^2 = .54 (n=35) Equation[12] Statistically significant variables found: Rating of safety in their building (Coefficient: -0.0309; *P* = .023) Resident rating of meeting an emergency financial expense within a month (Coefficient: -0.017; *P* = .017)	unit improvement in scores in resident's perception of **safety inside the building** is associated with a 3.09% increase in occupancy rate and similarly, a one-unit improvement in scores in resident's perception of **financial stability** is associated with a 1.7% increase in occupancy rate. **Non-Significant (statistical) Factors:** Scores on safety in the apartment, outdoors, neighborhood quality, and health were included in the model but their influence on occupancy rates are inconclusive.
Do residents' rating of safety, health, and wellness responses have an influence on effective rent realized?	Effective rent realized	● Resident rating of safety in their apartment ● Resident rating of safety in their building ● Resident rating of safety in the parking/outdoor	**Linear Regression analysis** R^2 = 0.71 (n=35)[13] Only Statistically significant variables found:	All else being equal, a one-unit improvement in scores in resident's perception of safety inside the building is

[12] Regression equation: Y=1.0653+0.015(resident score of safety in apartment)-0.0309(safety in a building)+0.0109(safety in outdoor areas)-0.011(safety in neighborhood)+0.017(score of health)-0.017(score of financial well-being)

[13] Regression Equation Y=1.133-0.025(resident score of safety in apartment)-0.05 (safety in building)+0.01(safety in outdoor areas) + 0.005 (safety in neighborhood) +0.05 (health and wellness) - 0.03 (financial wellness)

		areas ● Resident rating of safety in their neighborhood ● Resident rating of their health Resident rating of meeting an emergency financial expense within a month	Rating of safety in their building (Coefficient: -0.05; *P* = .044) Resident rating of health (Coefficient:0.05; *P* = .009) Resident rating of meeting an emergency financial expense within a month (Coefficient: -0.003; *P* = .006)	associated with a 5% increase in rent realization ratio; a one-unit improvement in scores in resident's perception of health is associated with a 5% decrease in rent realization ratio, and lastly, a one-unit improvement in scores in resident's perception of financial stability is associated with a 3% increase in rent realization ratio **Non-Significant (statistical) Factors:** Scores in safety in apartment, safety in outdoor areas, safety in neighborhood were included in the model but their influence on occupancy rates is inconclusive

Table 9: Likely outcomes, NOI Impact and Action Steps from Enhancing Resident Programs

Practice	Likely outcomes	Potential NOI impact	Value creation actions
Enhancing programs that improve residents' financial wellbeing and feelings of safety	Improved resident scores	Higher occupancy rates leading to higher revenue	Track and measure impacts of resident services to the property, including: • Resident engagement indicators • Asking and tracking residents' reasons for remaining in a property • Financial KPIs at different levels and points of time
Enhancing programs that improve residents' financial wellbeing, health and wellness and feelings of safety	Improved resident scores	Higher rent realization rates leading to lower bad debt costs	

Overall, the analysis shows valuable insights into how residents' sense of wellbeing connects to property financial outcomes and also drives engagement with events/programs, though not uniformly across all wellbeing dimensions. This supports continued resident data collection and analysis over time for a deeper understanding of connections between resident services, residents' sense of wellbeing, and property financial outcomes.

Company #02

Company 2 provided CSB with data from 77 different properties (12 with RSCs, 23 with third-party service providers, and 42 with no RSC or third-party service providers onsite*) for 2024. This analysis does not distinguish between dedicated RSCs and third-party providers; both are categorized collectively as supported resident services. CSB found that supported resident services are positively associated with better resident and financial outcomes, though at a weak to moderate level. This suggests they are a contributor to both resident engagement and financial impact. The table on the next page highlights the relationship between events organized and financial outcomes.

Table 10: Summary of Correlation Analysis Between Events Organized and Financial Outcomes

Practice	Variable#1	Variable#2	Impact	Correlation	Potential NOI Impact
Supporting residents living at properties with programing services	Supported resident services for residents living at properties	Occupancy Rates Rent collection rates	r ~ 0.2	Weak positive correlation with occupancy rates and rent collection rates	• Higher rental income • Lower vacancy costs • Lower apartment turnover costs Lower bad debts
		Lease renewal rates	r ~ 0.3	Weak to moderate positive correlation with lease renewal rates	• Lower vacancy costs Lower apartment turnover costs

Table 11: Summary of Correlation Analysis between Resident Scores and Financial Outcomes

Practice	Variable#1	Variable#2	Impact	Correlation	Potential NOI Impact
Surveying and tracking resident scores on satisfaction, satisfaction pre-renewal and satisfaction with the supported resident services provided	Resident scores of satisfaction with the supported resident services provided	Occupancy Rates	r ~ 0.4-0.5	Moderate positive correlation with occupancy rates	• Lower vacancy costs Lower apartment turnover costs
		Lease renewal rates & Rent collection rates	r ~ 0.3	Weak to moderate positive correlation with lease renewal and rent collection rates	• Lower vacancy costs Lower apartment turnover costs

Suggestions for future tracking

For companies that want to measure the financial impacts of resident services to the property, they can do the following:

Track and measure impacts of resident engagement (participation rates, case turnaround/ resolution rate) and link this to key financial indicators such as occupancy, lease renewal rates at different time intervals. It will be helpful in determining the linkages between resident satisfaction and property performance indicators.

- Number of resident outreach and financial KPIs at different levels
- Case resolution time and resolution rate (%) and financial KPIs at different levels

Examples of questions to include in resident surveys to better understand the connection between services and decisions to renew a lease/remain on a property:

- I feel more satisfied with the property as a result of the RSC and activities organized by them.
- How important are resident services (name some services that are provided) in your decision to renew your lease?

Energy and Water Efficiency

Climate & Resilience Principle

The MIC Framework defines the Climate and Resilience principle as being achieved by taking actions to make the property more resource efficient, reduce greenhouse gas (GHG) emissions, increase the use of clean energy, and improve the resiliency of the property and its residents to climate risks. Minimum impact threshold requirements include that corporate impact plans and investment strategies should include specific commitments to reduce GHG emissions and achieve utility efficiencies at the property and include an assessment of climate-related risk and resiliency features at the property and portfolio level.

CSB gained insight from two of the study's companies in demonstrating the positive financial impact of addressing climate and resilience. In one case, CSB collaborated with a company to analyze the carbon and ongoing NOI implications of retrofitting standing buildings vs. new construction. In the other case, CSB analyzed electricity costs and savings related to solar panel installation.

Carbon and NOI Implications of Retrofitting Standing Properties vs. New Construction

As of 2023, buildings and construction were responsible for 34% of global energy-related emissions.[14] This demand for energy and its resulting emissions have become a focal point for the buildings and construction industry, as it presents not only a challenge but an opportunity for innovation. For real estate investment managers, this opportunity includes implementing efficiency-focused solutions and strategies that impact net operating income (NOI), comply with regulatory requirements, and create sustainable assets for stakeholders.

Retrofitting standing multifamily properties and either preserving affordability or changing from market rate to affordable are investment strategies that companies may choose instead of building new properties. In these scenarios, retrofitting, or the process of altering or adding to existing structures to improve their performance, safety, or efficiency[14], can lower energy and water-related operating costs which affect NOI and internal rates of return (IRR). Retrofits can also be a method of avoiding the embodied carbon emissions of new construction by extending

[14] Construction Retrofitting: A Guide to Modernizing Existing Structures | Procore (Frisa, K., 2025)

the longevity of existing housing stock. Embodied carbon represents the millions of tons of carbon emissions released during the lifecycle of building materials, including extraction, manufacturing, transport, construction, and disposal.[15] As growing state mandates, global benchmarks, and voluntary corporate commitments increase greenhouse gas (GHG) emissions reporting, quantifying the volume and associated costs of assets' embodied and operational carbon emissions has risen in importance for owners looking to demonstrate progress on their goals, which may also be tied to marketing and fundraising efforts.[16]

CSB collaborated with one of the MIC member companies to analyze the differences in embodied carbon and operating efficiency (electric and fuel energy use) between a newly constructed multifamily property and a standing retrofitted property with similar attributes. Given that there were no two physical properties with the same specifications that could be used for a comparison, CSB opted to model a newly constructed property off of an actual retrofitted property. The actual retrofitted property was a mid-rise garden style property located in Prince George's County, MD. The baseline attributes included gross square footage of 187,721 sq ft, four-story buildings and 224 units. In addition to actual energy usage data provided by the company, the Carbon Avoided Retrofit Estimator CARE Tool[17] was used for estimating and comparing the embodied carbon impacts and benefits of reusing and upgrading standing properties or replacing them with new construction, not including demolition costs. The DOE Building Performance Database[18] was also used to determine energy use intensity (EUI).

Embodied Carbon

The modeled new construction property was found to have an **emissions factor more than 2.7 times higher** than the retrofit scenario, resulting in embodied carbon emissions approximately 3,500 tCO2e higher compared to a retrofit property. It is noted that this is higher than seen in some literature which states that new construction embodied carbon is typically 2 times higher than deep energy retrofits.[19]

CSB calculated the **avoided embodied emissions costs** of the lower emissions approach of repositioning existing assets by looking at the avoided internal cost of carbon. If the company sets emissions targets in the future, having a lower emissions portfolio avoids the owner-paid cost for credits to meet goals. In this case, CSB calculated an avoided internal cost of $67,374 using the World Bank's average carbon credit price of $19 per ton CO_2 from 2025.[20]

Operational Efficiency

CSB also compared actual energy cost savings pre- and post-retrofits for the existing property to determine the avoided energy costs for the common areas, with the assumption that in-unit energy costs will be covered by the resident. The analysis indicated sustained electric and fuel usage savings of over 40% year-over-baseline. This is evidence that retrofits create operational efficiencies and lower operating costs, though these retrofits do not typically achieve the same level of operating efficiency as efficiently designed new buildings.

Given that the new construction property for this case was modeled, and that no actual energy

[15] Embodied Carbon 101: Building Materials (Rempher, Esau, and Weir, 2023)
[16] What is embodied carbon in the real estate sector and why does it matter? (GRESB, 2024)
[17] CARE Tool | Carbon Avoided: Retrofit Estimator (CARE Tool, Accessed 09 January 2026)
[18] Building Performance Database (Accessed 09 January 2026)
[19] Retrofit or New Build? - Summary - Net Zero Carbon Guide (Bennett & Leiper, Accessed 09 January 2026)
[20] World Bank State and Trends of Carbon Pricing 2025 (World Bank, 2025)

usage data was available, CSB used The DOE Building Performance Database[18] to examine the energy use intensity (EUI) of new multifamily buildings in Maryland for the corresponding Climate Zone. The new construction building is considered to be fully electric for residents though it is recognized that some heating for common areas may still be gas. As such, "Site EUI" figures, or the amount of heat and electricity consumed by a property as reflected in utility bills[21], were used. It was found that the new property had 68.05% lower energy consumption compared to the retrofit property for 2021-2024, in part due to the assumption that a new construction property would leverage electric equipment versus including natural gas. It was also found that from 2021-2024 the new build's energy costs were about 20% less than the retrofitted property.

Cost-Benefit Impacts

CSB found that the total estimated internal carbon cost—considering embodied and operational emissions—of the modeled new construction property was 2 times higher than that of the actual retrofitted property over a modeled five-year period. The actual retrofitted property was also found to have a lower carbon payback period by 6.8 years compared to the modeled new construction building. The annual costs and savings used to inform these values could be used as inputs into a cash flow analysis to better understand their impacts on NOI and IRR.

Table 12: Likely Outcomes, NOI Impact and Action Steps from Retrofitting Properties or Efficient Building Design

Practice	Likely Outcomes	Potential NOI Impact	Value Creation Actions
Efficient building design or deep retrofits for buildings	Lower monthly energy costs	Lower operating costs	• Utilize the CARE tool and other modeling tools to understand operational efficiency potential and embodied carbon • Use the DOE Building Performance Database to model comparisons between retrofitting standing properties • Run calculations on carbon cost, carbon payback period and efficiency ROI for the retrofit scenario

Solar Installation

Solar installation can lower operating costs for properties by reducing the amount of kWh that are purchased from the grid. CSB analyzed actual data from a property that had solar panels installed in 2021 to determine grid-related savings post-installation. CSB also ran calculations to determine how payback periods would differ if government incentives are used, which they were in this case, versus if incentives are not available or used.

In the case that was analyzed, a low-rise multifamily property with just under 110 units in

[21] The Difference Between Source and Site Energy | ENERGY STAR (Energy Star, Accessed 09 January 2026)

Northern California was able to realize electricity cost savings from the installation of solar panels ranging from 12% in the first year to as much as 79% in the 32-month period that was reviewed. In effect, by decreasing dependency on the grid, the property was assured that it would consistently be paying less than it would have otherwise due to lower usage.

The estimated payback periods were calculated for the property using electricity billing data provided from March 2021 to December 2024. The implementation of the rooftop-installed 131.4 kW-DC solar panel system was in April 2022, with kWhs starting in May 2022. The system was projected to have a 25-year life. **With state and federal incentives, the payback period was estimated at 4.74 years.** Without state and federal incentives, the payback period is estimated at 10.36 Years. The property took advantage of the incentives, including federal tax credits and accelerated depreciation through Modified Accelerated Cost Recovery System (MACRS). Property managers and asset owners should check for the latest available credits at the federal and state level. From a structural perspective, the developer checked that the roof would support the installation over the life span, which may be an obstacle for some properties and add additional costs.

In some billing systems, utilities will provide credits for net metering which is a practice in which solar users can “true up” at the end of a billing year and receive a bill credit for kWh that their solar system sends back to the grid. PGE provides credits of $0.02 to $0.04 per kWh, which is much lower than the bundled price per kWh. It was observed that the property continued to use electricity from the grid, even when it sent kWh generated by the solar panels back to the grid. Variances in usage from the grid versus from the solar panels are affected by kWh generated (cloud coverage, length of daylight) and the timing of power usage.

There are other models of working with solar developers that were identified as well, including proposals to pay the property for use of its roof space for panels while supplying solar energy to residents (lower energy costs for residents who can spend savings elsewhere) and to common areas of the property (lower energy costs for the property) from the kw that are generated. The potential savings to properties that was seen in proposals, though could not be independently verified, ranged from $8,000 on the low end to over $800,000 over the 20-year life of the installation, depending on the solar system size and kw, the current average price, and the allocation to the property common area allocation.

Table 13: Likely Outcomes, NOI Impact and Action Steps from Installing and Using Solar Panels

Practice	Likely Outcomes	Potential NOI Impact	Value Creation Actions
Install and use solar panels	Improve operational efficiency through lower energy costs	Lower operating costs	Investigate a variety of solar panel installation models and select a model that meets the construction type and needs of the property, particularly in areas that have government incentives

CONCLUSION

Affordable and moderate-income multifamily housing investors are increasingly seeking to meet both financial and impact objectives. This study shows that many of the practices that have traditionally been utilized and measured for resident impact creation also help investors meet their financial objectives. The practical interventions described in this report can measurably improve financial outcomes by extending lengths of stay, reducing turnover and eviction costs, lowering vacancy rates, and shrinking bad-debt expenses. Repositioning standing assets with retrofits instead of new construction can significantly reduce embodied carbon, which is increasingly important for investors, and lowering operating costs through installing solar panels on multifamily properties creates long-term value.

Affordable housing has been proven to be a solid investment and affordability is paramount within the Multifamily Impact Framework. Properties should also invest in the other impact areas of resident engagement, housing stability, economic health and mobility, health and wellness, climate and resilience and good business. Maximized NOI benefit is likely achieved by stacking multiple practices that are associated with these framework principles, as opposed to focusing on affordability alone. The report provides tools and methodologies for companies to use to measure these benefits, and to fine-tune approaches, such as tools for determining appropriate lengths for Housing Support Plans.
The data sets that were reviewed for this study were relatively small, ranging from data from a single property data over time to one year of data for 77 properties. It would be useful for the industry to examine larger data sets that cover a longer time frame to be able to draw more widely applicable conclusions, particularly for the analysis of resident services and their impact on resident stability.

Finally, it was observed that there is a wide variety of approaches and services that affordable housing investors and property managers can choose from. Having a consistent standard that more concretely defines the drivers of impact within this broad housing category is helpful to the industry in developing an asset class by defining minimum requirements for demonstrating that affordable properties are best equipped to maximize both impact and financial performance. The MIC Framework provides an example of how to ground the sector around this developing asset class.

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APPENDIX 1: LIST OF EXHIBITS

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