The Power to Stabilize Neighborhoods:

Research on the Impact of Policy Interventions on Low-Income and Middle Neighborhoods After a Macroeconomic Shock

A Post-2008 Literature Review

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Introduction

In support of research underway on evidence-based approaches to stabilizing low- and moderate-income urban and suburban neighborhoods, May 8 Consulting, in consultation with the Reinvestment Fund and 25 leading experts across the nation, identified policy interventions that have been adopted to help stabilize urban and suburban low- and moderate-income neighborhoods impacted by a severe macroeconomic shock, such as the Great Recession in 2008 or the COVID-19 global pandemic in 2020. While the Great Recession and the COVID-19 pandemic both adversely impacted households and neighborhoods, it should be noted that the two events differ substantially in their causes and conditions. Many of the unique challenges posed by the Great Recession, as well as the policy, product, and operational realities in use at that time, are significantly different than the dynamics of the current housing market and economy. That said, the studies in this literature review may still offer useful information regarding interventions regularly deployed to support communities in the aftermath of a significant disruption to the economy.

May 8 is publicly sharing this existing research to assist researchers and practitioners working to stabilize neighborhoods. This literature review gathers recent, high quality, quantitative research that analyzes a number of policy interventions local governments, nonprofits, community organizations, and philanthropy have previously tested to stabilize neighborhoods that may be informative to practitioners. The studies do not tell a coherent narrative about what works and what does not. Instead, they provide isolated evaluations of the impact of specific programs in different geographies over varying time frames. Some of these studies are readily available online, but most sit behind a paywall. If you believe that relevant studies were inadverantly omitted from this report that may offer important guidance for practitioners, please email us at info@may8consulting.com so we can add it to this literature review.

In compiling this literature review, the May 8 team made five key observations:

First, while respected academics and researchers conducted informative and meaningful studies, the research has significant gaps. The vast majority of existing research analyzes a macroeconomic shock's ability to harm neighborhoods rather than the ability of a proactive policy intervention to limit these negative impacts. Even where municipalities design and implement strategies, it is rare that an evaluation of program outcomes is conducted. Experts in the field attribute the limited research to evaluation challenges, which include the lack of reliable data, issues of causation, and the limited density and scale of many programs.

Second, evaluations of some interventions do not offer sufficient evidence to form a generalizable conclusion about whether the program or policy is effective at stabilizing low- and moderate-income neighborhoods. While some studies offer complementary findings, others offer conflicting results. Differences in either program design, implementation, targeting, or duration may explain the variations in findings. The strength of a particular regional housing and job market may explain other differences.

Third, several places, like the cities of Detroit, Michigan, and Cleveland, Ohio, are the focus of dozens of studies. At the same time, evaluations rarely occur of programs implemented in suburban inner ring and exurban communities.

Fourth, some studies show that policy interventions positively influence a neighborhood, but the studies require one or more steps in logic to understand the reasons for the change. For example, a series of studies show foreclosure prevention counseling lowers the number of homeowners who lose their homes to foreclosure. Understanding how foreclosure prevention counseling affects neighborhoods requires reference to studies that show how foreclosures harm communities and how stable homeownership may help neighborhoods.

Fifth, multipronged approaches that invest in interrelated policies, programs, and community-led initiatives within a small geography appear to have the greatest stabilizing and improvement impacts. These approaches tend to include a broad array of the specific policy interventions discussed in this literature review. A separate section within the literature review includes studies of these multipronged programs.

The following interventions were explored:

- Code Enforcement
- Counseling for Foreclosure Prevention
- Demolition of Residential Distressed Properties
- First Look Programs
- Foreclosure Mitigation Programs
- Greening Vacant Lots
- Land Banks and Alternatives to Tax Sale Auctions
- Multi-Pronged Investment Strategies
- Scattered Site Single-Family Housing Rehabilitation
- Significant Targeted Neighborhood Investment
- Access to Mortgage Credit
- Community Land Trusts
- Sideyard Purchase Program
- Tax Policies

We have also added a final section to this literature review that summarizes a key set of studies that define the threat a macroeconomic shock poses to the stability of low- and moderate-income neighborhoods generally, and specifically with respect to recessions, natural disasters, and foreclosures. For those who are unfamiliar with this literature, an exploration of how economic disrputions such as recessions, natural disasters, or foreclosure crises affect neighborhoods may provide helpful background.

Research on the Impact of Specific Policy Interventions on Neighborhoods

Code Enforcement

Studies show that proactive code enforcement with consistent inspections can improve the condition of the municipality's housing stock and reduce the number of unsafe or substandard rental properties. Some evidence supports the ability of minimum vacant building condition standards to trigger new investment, raise surrounding values, and reduce crime.

Studies & Publications	Summary
Andrew Samuel, Jeremy Schwartz, and Kerry Tan, "Licensing and the Informal Sector in Rental Housing Markets: Theory and Evidence," Contemporary Economic Policy (2020).	Using a unique dataset from Baltimore City, the authors find that rental licensing increased the quality of housing while having only modest negative effects on affordability of rents and homelessness. Similarly increasing fines on underground rental units that are not licensed, increases housing quality while raising rent modestly.
Ann Carpenter, Emily Mitchell, and Shelley Price, "Blight Remediation in the Southeast: Local Approaches to Design and Implementation," Federal Reserve Bank of Atlanta Community and Economic Development Discussion Paper Series (November 2015).	The paper examined New Orleans, Louisiana, and Macon, Georgia, as case studies for cities attempting to remedy extensive blight. A lack of data collection and targeting made it difficult to determine whether New Orleans' BlightSTAT and Macon's code enforcement and property improvement campaigns had affected neighborhoods.
Michelle C. Kondo et al., "Correction: A Difference-in-Differences Study of the Effects of a New Abandoned Building Remediation Strategy on Safety," PLOS ONE 10(8) (2015).	The study focused on Philadelphia's Doors and Windows program launched in October 2011 that required owners of vacant buildings on blocks with at least 80% occupancy to install windows and operative doors. The study found that in Philadelphia, between 2011-2013, the program significantly reduced many categories of crime and violence near the buildings. The categories included a 19% reduction in assaults, a 39% reduction in gun assaults, and a 16% reduction in nuisance crimes.
Philip Schaafsma, "*Rental Property Certification Program Review Single-*	This City of Grand Rapids, Michigan study looked at the implications of its 2011 decision to extend code enforcement licensing requirements to

Family and Two-Family Properties," City of Grand Rapids (April 2015). http://www.may8consulting.com/grand-rapids-rental-property-certification-program-study-2015/ accesssed on May 4, 2021.	single-family houses and duplexes. It found that requiring an inspection to obtain a license significantly improved the condition of licensed units. After the initial inspection, the city was over six times less likely to receive a housing complaint from a licensed rental property than an uncertified one. Providing 90 days notice before conducting a proactive inspection resulted in repairs at 68% of rental properties.
"Strategic Property Code Enforcement and its Impacts on Surrounding Markets*,"* Reinvestment Fund (2014). https://www.reinvestment.com/wp-content/uploads/2015/12/Strategic_Property_Code_Enforcement-Report_2014.pdf accessed April 29, 2021.	Study found that the Philadelphia's Doors and Windows program that required owners of vacant buildings on blocks with at least 80% occupancy to install windows and operative doors created $74 million in sales value for surrounding properties and increased the city's transfer tax revenue by $2.34 million. The city achieved compliance rates of 53% for targeted properties through citations, and 62% for properties taken to blight court.
"Ordinance Revisions to City Code Chapter 8.120 Relating to the Rental Housing Inspection Program," City Council of Sacramento Report (2013). http://sacramento.granicus.com/MetaViewer.php?view_id=22&clip_id=3277&meta_id=399614 accessed April 28, 2021.	In this study, Sacramento, California, found that its move from complaint-driven to proactive rental housing inspections reduced the number of rental properties that were dangerous or substandard by 22% from 2008 to 2013.
"*Rental Housing and Health Equity in Portland, Oregon: A Health Impact Assessment of the City's Rental Housing Inspections Program,"* Oregon Public Health Institute. (September 2012) . https://ophi.org/download/PDF/RHIP%20HIA_Final%20Report_web(2).pdf accessed April 28, 2021.	Study looked at the impact of Portland's enhanced inspections program launched in January 2010 in two areas: Outer Southeast and Outer Northeast Portland. In the enhanced model, complaints still initiate inspections. However, inspections that either find a certain threshold of violations in the rental unit or on the property's exterior can then trigger an inspection of additional rental units in the property owner's portfolio. The analysis of rental inspections data showed that complaints made under the enhanced model resulted in 75% more improvements than a complaint made under the standard model. Some of the difference is because units in the enhanced inspections areas typically had more violations per unit than the units in the standard districts. While the standard model led to improvements in 1,391 units, the enhanced model led to improvements in 1,844 units, despite having slightly fewer initial complaints.

Wonseok Seo and Burkhard Von Rabenau, "Spatial Impacts of Microneighborhood Physical Disorder on Property Resale Values in Columbus, Ohio," *Journal of Urban Planning and Development 137*, no. 3 (2011): 337-45.	Study focused on the impact of physical disorder of the immediate neighborhood on property resale values based upon a field survey of housing conditions and sales prices in Columbus, Ohio in 2007. The survey found that the presence of physical disorder on the blocks, such as trash or building deterioration, had a significant negative impact on sales prices of nearby homes. Improving properties had a positive impact for the neighborhood.
Carol Cooley Hickey, "Ensuring Housing Quality: Proactive Minimum Housing Code Inspections of Rental Properties in North Carolina Cities," University of North Carolina at Chapel Hill(2008). http://ghc.illkd.com/wp-content/uploads/2008/04/enhancinghousingquality.pdf accessed April 28, 2021.	A study of five North Carolina city rental inspection programs found that proactive inspections brought thousands of properties up to minimum standards in four years. One of them, Greensboro, brought more than 8,700 rental properties up to code. In addition, the number of complaints about substandard housing made to the city of Greensboro fell by 61% between 2005 and 2007.

Counseling to Prevent Foreclosure

National studies find that foreclosure mitigation counseling prevents foreclosure, contributing to the stabilization of a neighborhood after a macroeconomic shock. For a significant percentage of at-risk homeowners, counseling increases the chance the owner will receive a loan modification resulting in lower monthly payments. Homeowners who received counseling were also less likely to subsequently default and more likely to improve their credit score or lower their debt.

Studies & Publications	Summary
Jerry Anthony and Thomas P. Verghese, "Does Foreclosure Prevention Counseling Work?" *Housing Policy Debate* 29, no. 4 (2019): 627–44.	The study used a national sample of data from the HomeSaver foreclosure counseling program between 2003 and 2005. The findings demonstrated that 39% of participating homeowners avoided foreclosure. A poorer payment pattern before counseling had a high positive correlation with positive outcomes post-counseling.
J. Michael Collins and Maximillian Schmeiser, "The Effects of Foreclosure Counseling for Distressed Homeowners." Journal of Policy Analysis and Management 32 (2012).	The study estimates the effects of default counseling on the probability that troubled mortgage borrowers will lose their homes to foreclosure in the 2000s. Borrowers are more likely to miss loan payments after receiving counseling, but the probability of losing a home to foreclosure drops after counseling.
Marvin Smith, Daniel Hochberg, and William H. Greene, "The Effectiveness of Pre-Purchase Homeownership Counseling and Financial Management Skills," Federal Reserve Bank of Philadelphia (April 2014).	The study evaluated the impact of prepurchase homeownership education and counseling on credit scores, total debt, and payment delinquencies. Using five years of first time owner data, the study found that treatment group participants had a 16.2 point gain in credit score and reduced delinquent payments. In addition, treatment participants who became homeowners lowered their debt by an average of $3,109.
J. Michael Collins and Maximillian Schmeiser, "The Take Up and Outcomes of Foreclosure Counseling for Troubled Mortgage Borrowers," FDIC Center for Financial Research Working Paper (2011).	This paper uses data on non-agency securitized subprime loans made in 2004 to 2006 to assess borrowers' use of a national mortgage default counseling hotline. The results suggest that borrowers in distress are most likely to seek counseling, as well as borrowers with loans located in areas with higher unemployment and declining home values. Counseled borrowers appear to receive lower monthly payments and experience improved loan outcomes compared to uncounseled borrowers with modified loans.

J. Michael Collins, Ken Lam, and Christopher Herbert, "State Mortgage Foreclosure Policies and Lender Interventions: Impacts on Borrower Behavior in Default." *Journal of Policy Analysis and Managemen*t 30. (2010): 216-232.	Based on an analysis of borrowers in default who resided in 22 cross-state metropolitan statistical area pairs in the late 2000s, the study showed state policies regarding judicial foreclosure proceedings and foreclosure prevention initiatives correlated with modest increases in loan modification rates. The study also found that a lender's letter promoting mortgage default counseling aligned with increases in loan modifications, decreases in loan cures, and decreases in foreclosure starts. The letter had a stronger effect in states with judicial proceedings.
J. Michael Collins. and Maximillian Schmeiser, "Estimating the Effects of Foreclosure Counseling for Troubled Borrowers." *SSRN Electronic Journal.* (2010).	This study assessed the impacts of counseling on receipt of loan modifications and keeping one's home in the late 2000s. The study finds some evidence that counseling reduces the probability that a borrower will lose his or her home to foreclosure. Moreover, among borrowers who received a loan modification, counseled borrowers rarely had subsequent defaults. Lastly, the study found that homeowners who receive counseling either when current or in the early stages of default are much more likely to receive a modification or keep their homes than those who receive counseling when seriously delinquent.

Demolition of Residential Distressed Properties

Studies find that demolition of distressed properties increase surrounding home values and reduce nearby abandonment. While vacant lots still depress housing values, their impact was significantly lower when compared to distressed structures. Studies show that demolition may have differing impact depending upon neighborhood type. Studies offered conflicting findings as to whether demolition reduces foreclosures of surrounding properties and crime.

Studies & Publications	**Summary**
Hye-Sung Han and Scott Helm, "Does Demolition Lead to a Reduction in Nearby Crime Associated With Abandoned Properties?" Housing Policy Debate (2020).	The study quantifies the relationship between abandoned building demolition programs and nearby crime for 559 abandoned buildings demolished in Kansas City, Missouri, between 2012 and 2016. It finds that the demolition of abandoned properties does not significantly affect nearby violent and property crime. Instead, a change in crime is attributable to differences in nearby socioeconomic and housing characteristics.
Daniel Kuhlmann, "Fixing Up after Tearing Down: The Impact of Demolitions on Residential Investment," *Journal of Planning Education and Research* (2020).	The study used the results of two property condition surveys and administrative records on demolitions in some of the most distressed neighborhoods in Cleveland, Ohio. It found properties near demolitions were more likely to show signs of improvement between the two surveys conducted in 2015 and 2018 and less likely to deteriorate themselves. The study looked at changes to houses over time, including the presence of boarded or broken windows, dumping or yard debris, and damages to roofs, paint, siding, gutters, and porches.
Joshua Regan and David L. Myers, "Enhancing Community Safety through Urban Demolition: An Exploratory Study of Detroit, Michigan," *Justice Policy Journal* 17, no. 1 (2020).	The exploratory study analyzed crime in Detroit between 2013 and 2014, as well as 2014 to September 22, 2015. These periods represent times before and after the initiation of the city's Blight Removal Task Force, which demolished vacant buildings. The results showed after the demolition initiative there were 10.46 fewer daily criminal acts. Burglary and property crimes significantly decreased, resulting in 9.981 fewer daily crimes.

Ranier vom Hofe, Olivier Parent, and Meghan Grabill, "What to Do with Vacant and Abandoned Residential Structures? The Effects of Teardowns and Rehabilitations on Nearby Properties." Journal of Regional Science 59 (2019):228–49.	Using data listing vacant and razed residential properties for the years 2000–2011 in Cincinnati, Ohio, the study found that while homes located near vacant lots sell at a slight discount of up to 4%, this association is smaller than it is for homes exposed to vacant structures. When a residential demolition is followed by the redevelopment of the vacant lot under the Moving Ohio Forward program, it creates strong appreciation on nearby property values (around 14%). Low-income and middle-income census tracts primarily observed negative spillover effects from foreclosures and vacant buildings, whereas positive spillover effects generated by remodeling occurred in high-income census tracts.
Matthew Larson, Yanqing Xu, Leah Ouellet and Charles Klahm, "Exploring the impact of 9398 demolitions on neighborhood-level crime in Detroit, Michigan," Journal of Criminal Justice 60 (2018).	From 2010 to 2014, the city of Detroit completed a total of 9,398 demolitions. This study explored the association between demolitions and changes in four crime types (i.e., total crime, violent crime, drug crime, and property crime). It found that demolitions had a statistically and substantively meaningful negative relationship with total crime, violent crime, and property crime in 2014. Supplemental analyses also indicate that reductions in crime from 2009 to 2014 were greatest among block groups that experienced at least 21 demolitions.
"Preserving Home Values: Demolition Impact Study for Jackson, Michigan: 2012-2016," Dynamo Metrics (2017). https://demolitionimpact.com/main/static/reports/Jackson_MI_Demolition_Study.pdf accessed on April 28, 2021.	This report estimated the impact of 612 demolitions of distressed properties in Jackson, Michigan, between 2012 and 2016. It found that $7.5 million in Jackson demolitions saved about $30 million in home values, especially in dense, high-value neighborhoods. While vacant lots still depressed housing values, their effects were not as negative as distressed or foreclosed properties.
Stephen Whitaker and Thomas Fitpatrick, "Land Bank 2.0: An Empirical Evaluation." Journal of Regional Science 56, no. 1: (2016) 156–75.	The study assessed whether demolitions of the Cuyahoga County Land Bank (Ohio), or CCLB, completed in 2009 improved neighborhood property values. Before the CCLB acquired a residential property, these houses reduced nearby housing values by 3.4% on average. This negative price effect shrinks both after the land bank acquires a property and once again after it's demolished. The study estimated that without the CCLB, the value of the county's housing stock would have been lower by $190 million dollars over their study period.

"Estimating Demolition Impacts in Ohio: Mid-Program Analysis of the Ohio Housing Finance Agency's Neighborhood Initiative Program," Dynamo Metrics (2016). https://ohiohome.org/savethedream/documents/BlightReport-NIP.pdf accessed on April 28, 2021.	The study analyzed the Ohio Housing Finance Agency's Neighborhood Initiative Program between Q1 2014 and Q2 2016. It measured the impact of demolition activity on home value protection and homeownership preservation. Altogether, OHFA demolition resulted in nearly $121.4 million in home value protection and lower foreclosure rates in the relevant counties.
"Estimating Home Equity Impacts from Rapid, Targeted Residential Demolition in Detroit, MI," Dynamo Metrics (2015). https://static1.squarespace.com/static/55e8c061e4b018cc4b5864bc/t/55f78eeee4b07bf949e5de03/1442287342508/Detroit_DemoStudy_FinalEditedVersion.pdf accessed on April 28, 2021.	The report measured the impact on Detroit's single-family home values caused by the city's Hardest Hit Fund demolition initiative in certain neighborhoods between Q2 2014 and Q1 2015. Results showed that single-family homes within HHF zones increased in home equity by about 13.8% after the initiative, and that each demolition increases nearby in-zone home values by 4.2% and homes out of the zone by 2.1%.
L. Yin and Robert Silverman, "Housing Abandonment and Demolition: Exploring the Use of Micro-Level and Multi-Year Models," International Journal of Geo-Information 4. (2015) 1184-1200.	This study analyzed spatial patterns of abandonment and demolition in Buffalo over the years before and after the City launched its stepped-up demolition efforts (2007-2008). Demolished properties did not significantly affect the housing sale price for the years before or after the City's massive demolition effort. In Buffalo, scheduled demolitions occurred in response to arson, eminent health and safety risks, and acute dilapidation. Consequently, addressing the need for emergency demolitions reduced the City's ability to proactively plan demolitions within the context of a broader neighborhood revitalization strategy. The study also found proximity to and density of vacant and abandoned properties had the greatest negative impact on surrounding housing sales prices.
N. G. Griswold, B. Calnin, M. Schramm, L. Anselin, and P. Boehnlein, "Estimating the Effect of Demolishing Distressed Structures in Cleveland, OH: *2009-2013*,"Western Reserve Land Conservancy. 2014.	Empirical analysis in this study found that residential demolition impacted real estate equity and mortgage-foreclosure rates in the Cleveland, Ohio area between 2009 and 2013. The findings show a clear trend of decreasing mortgage and foreclosure rates in areas where demolition intervention occurred. This is true for the study area as a whole as well as in low, moderate, and high distress neighborhoods.

First Look Programs

Limited studies of First Look Programs that seek to transfer single-family real estate owned (REO) properties to nonprofits and local homeowner buyers rather than investors found that they may reduce negative impacts on neighborhoods, including reducing drops in property values and risk of future tax foreclosure.

Studies & Publications	Summary
Eric Seymour, "From REO to Ruin: Post-Foreclosure Pathways and the Production of Decline in Detroit, Michigan," Housing Policy Debate, 30, no. 3 (2020): 431-456.	This study examined the likelihood of the U.S. Department of Housing and Urban Development (HUD) and government-sponsored entities selling real estate owned (REO) properties in the historically stable neighborhoods of Detroit, Michigan, to investors. In addition, it analyzed the likelihood of tax foreclosure following sales to homebuyers and investors between 2005-2015. Whereas federal entities were less likely to sell homes to investors, all parties sold a high percentage of homes to investors. Once sold to an investor, the probability of tax foreclosure is extremely high.
Lei Zhang, Tammy Leonard, and Resha Dias, "Foreclosed and Sold: An Examination of Community and Property Characteristics Related to the Sale of REO Properties." Urban Affairs Review, 53 (2017).	Using foreclosure data from Dallas County, Texas, the study examined how housing and neighborhood characteristics relate to the possibility of selling a foreclosed property out of REO stock. The research confirms that the negative neighborhood impacts of foreclosed properties remain until the property is resold. Furthermore, negative neighborhood price externalities are more substantial the longer a home stays in REO stock. The findings indicate that homes in low-income minority neighborhoods and homes with property characteristics associated with a need for more preventative maintenance were slower to sell.
Eric Seymour, "Foreclosure, Federal Financial Institutions, and the Fortunes of Detroit's Middle- and Working-Class Neighborhoods." PhD diss., (University of Michigan, 2016). https://deepblue.lib.umich.edu/handle/2027.42/135750 accessed on April 28, 2021.	The study examined the post-foreclosure trajectory of REO properties in the Detroit tri-county area from 2005 to 2013. At base, the authors found that the probability of Detroit REOs sold to an investor declined over time due to First Look programs, and former REOs acquired by investors were more likely than those acquired by owner-occupants to impose a discount on the sale price of nearby properties. REOs in inner- and outer-ring suburbs were more likely sold to owner-occupants. The study also found that HUD's older inventory is closely linked to negative spillovers that were worse in outer-ring suburbs. In the outer-ring suburbs, the estimated discount imposed by each additional HUD-owned home within one-eighth of a mile is roughly 5.5%. REOs acquired

	by investors were more susceptible to tax foreclosure than those purchased by owner-occupants.
Kristopher Gerardi, Eric Rosenblatt, Paul S. Willen and Vincent Yao, “Foreclosure externalities: New evidence,” Journal of Urban Economics, Volume 87 (2015): 42-56 .	This analysis of 15 of the largest metropolitan statistical areas in the U.S. shows that a property in distress affects the value of neighboring properties from the time when the borrower becomes seriously delinquent on the mortgage until well after the bank sells the property to a new owner. Properties with seriously delinquent loans within 0.1 miles are found to decrease transaction prices of non-distressed properties by an average of one percent. The spillovers are found to dissipate rapidly with distance and completely disappear one year after the bank sells the property to a new homeowner. The size of the externality is sensitive to the condition of foreclosed properties, as bank-owned properties in poor condition lower nearby transaction prices by 2.6% on average while those in good condition marginally raise prices.
Keith Ihlanfeldt and Tom Mayock, "The Impact of REO Sales on Neighborhoods and Their Residents," The Journal of Real Estate Finance and Economic*s* 53 (2014).	Using financing and sales data for single-family homes in 10 representative Florida counties from 1996-98 through 2011, the study found that properties sold to investors generated negative externalities at least in the short-term while owner-occupants' properties did not lower surrounding values. The authors attribute these findings to owner-occupants’ acquisition of properties in better overall conditions and their greater likelihood of making rapid and substantial improvements than investors.
Lauren Lambie-Hanson, Wenli Li and Michael Slonkosky, “Institutional Investors and the U.S. Housing Recovery,” Federal Reserve Bank of Philadelphia Working Paper No. 19-45 (2019).	Study examines house price recovery in single family residential markets using property level transaction data and finds that investor’s access to residential properties explains over half of the increase in real house price appreciation rates between 2006-2014. Institutional investor purchases shortened the amount of time distressed foreclosed properties stay in bank ownership. Also found institutional investors are responsible for most of declines in homeownership rates.

Foreclosure Mitigation Programs

These studies explore the effectiveness of several foreclosure mitigation interventions, including court-ordered stays, loans to cover mortgage payments, and required mediation. Research finds that some foreclosure mitigation interventions can reduce foreclosure probability by up to half and lead to higher rates of loan modifications. Laws that require lenders to gain judicial permission before foreclosure do not appear to achieve better outcomes for borrowers. Temporary loans to cover mortgage payments did lower rates of foreclosure. A court-ordered moratorium on foreclosure lowered the foreclosure rate without increasing future default rates.

Studies & Publications	Summary
Stephanie Moulton, Yung Chun, Stephanie Pierce et. al., "Does Temporary Mortgage Assistance for Unemployed Homeowners Reduce Longer Term Mortgage Default? An Analysis of the Hardest Hit Fund Program," (October 2020). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3559794 accessed on April 28, 2021.	This paper uses data on the U.S. Department of Treasury's Hardest Hit Fund (HHF) program to analyze the longer term effects of temporary mortgage payment subsidies on mortgage default. Study compares jurisdictions in HHF and non-HHF states. Results indicate that receipt of HHF leads to a 40 percent reduction in the probability of mortgage default and foreclosure through four years post assistance.
Gene Amromin, Jane Dokko, and Karen Dynan, "Helping Homeowners during the Covid-19 Pandemic: Lessons from the Great Recession," Federal Reserve Bank of Chicago Fed Letter no. 443 (2020).	This paper reviewed knowledge on national homeowner assistance during the Great Recession and explored how to apply it to the COVID-19 pandemic in order to help mortgage borrowers. It concluded that assistance must be tailored to the nature of the crisis – in the case of COVID-19, homeowners need fast and sizable liquidity support – and that payment relief should be simple and avoid moral hazard screenings. It also pointed to the importance of social safety nets in promoting financial resilience.
Lan Deng, Eric Seymour, Margaret Dewar, and June Manning Thomas, "Saving Strong Neighborhoods From the Destruction of Mortgage Foreclosures: The Impact of Community-Based Efforts in Detroit, Michigan," Housing Policy Debate 28, no. 2 (2017): 153–79.	The study examined the effectiveness of community-led efforts against mortgage foreclosures, such as property maintenance plans or grants, on housing market strength in Detroit from 2003-2014 (pre- and post-anti-foreclosure intervention, which generally began in 2008). It focused on 'strong' neighborhoods with stable housing markets before the Recession. Results showed that anti-foreclosure community efforts did strengthen housing prices, specifically when the efforts were well-

	organized and partnered with larger external organizations like the Centers for Disease Control and Prevention.
J. Kim, "How Loan Modifications Influence The Prevalence Of Mortgage Defaults." Macroeconomic Dynamics, 21, no. 1 (2017): 55-105.	This research compared an economy without a loan modification option to one with easy modifications and evaluated these loan modifications' impact on the foreclosure rate. Through loan modification, mortgage servicers can mitigate their losses, and households can improve their financial positions without having to walk away from their homes. When modifying loan contracts is prohibitively costly, the default rate increased 1.5 percentage points in response to a 2007-style unexpected drop in housing prices of 30%. The study calibrated the cost of modification after the financial crisis to match the Home Affordable Modification Program (HAMP) modification rate of 0.68, showing that current government efforts to promote mortgage modifications reduced the mortgage default rate by 0.63 percentage points.
J. Collins and Carly Urban, "The Effects of a Foreclosure Moratorium on Loan Repayment Behaviors", Regional Science and Urban Economics Volume 68 (2017): 73-83.	Using data from a New Jersey court-ordered stay on foreclosure-related filings that applied to six high-profile lenders, this paper finds that loans impacted by the moratorium are no more likely to be in default than comparable loans not subject to the court order.
J. Collins and Carly Urban, "Mandatory Mediation and the Renegotiation of Mortgage Contracts," The Economic Journal, 125 (2015): 1734-1763.	Based on an analysis of loans in four metropolitan statistical areas (MSA) before and after at least one sub-jurisdiction imposed mandatory mediation and one did not, mediation policies appeared to increase the rate of mortgage loan modifications. This paper exploited a natural experiment where judicial courts administering foreclosures implemented mandatory mediation legislation while other courts in the same MSA did not. Three courts in Florida and one in Pennsylvania implemented a mandatory mediation policy where mediation sessions were automatically scheduled with the initial mailing of the foreclosure decision. In Florida, borrowers received up to three out-of-court mediation sessions. In Philadelphia, pro-bono lawyers served as mediators to discuss options with the lender and borrower outside of the courts. It found that mandatory mediation increased the probability of lenders modifying mortgages in areas of Florida and Pennsylvania. These results are robust to various tests including removing all loans affected by federal mortgage modification policies.

Stephanie Moulton, J. Collins, Cäzilia Loibl, and Anya Samek, "Effects of Monitoring on Mortgage Delinquency: Evidence From a Randomized Field Study," Journal of Policy Analysis and Management Volume 34, Issue 1 (2015): 184-207.	The study tested the impact of goal setting and external monitoring on mortgage delinquency after the Great Recession. First-time homebuyers who completed a financial planning module and received quarterly contact from a financial coach were less likely to become delinquent or default on their mortgages.
Kristopher Gerardi, Lauren Lambie-Hanson and Paul S. Willen, "Do borrower rights improve borrower outcomes? Evidence from the foreclosure process," Journal of Urban Economics (2013): 1-17.	The paper evaluated the effects of laws designed to protect borrowers from foreclosure. The authors first compared states that require lenders to seek judicial permission to foreclose with states that do not. Borrowers in judicial states were no more likely to cure and no more likely to renegotiate their loans. However, the delays led to a build-up in these states of persistently delinquent borrowers, the vast majority of whom eventually lose their homes. The paper also found the “right-to-cure” law instituted in Massachusetts on May 1, 2008 lengthened the foreclosure timeline, but it did not lead to better outcomes for borrowers.
Daniel Hammel and Sujata Shetty, “Complexity and Change in the Foreclosure Process in Toledo, Ohio,” Housing Policy Debate 23, no. 1 (2013): 35–58.	The study analyzed trends in foreclosure cases in Lucas County, Ohio, from 2004-08. The authors found that almost 40% of foreclosure filings were dismissed, which indirectly pointed to the possible effectiveness of foreclosure interventions. Interestingly, they also found that income differences matter little to case outcomes once the foreclosure is filed.
Ira Goldstein, Colin Weidig, and Charles Boateng, “The City of Philadelphia’s Residential Mortgage Foreclosure Diversion Program: Addressing the Rising Tide of Foreclosure,” Housing Policy Debate. 23, no. 1 (2013): 233–258.	Analysis of 28,000 court orders on 16,000 foreclosure cases in the City of Philadelphia between 2005-2009 showed that (a) the program annually addressed more than 60% of Philadelphia's foreclosure case filings (b) approximately 70% of eligible homeowners participated (c) 35% of those who participated reached an agreement with their lender/servicer, and (d) of the first year's agreements, 85% of homeowners remained in their homes 20+ months post-agreement. All of this was accomplished without significant delay in case processing time or expenditure of court resources.

"What if Pennsylvania Had Not Had HEMAP?," The Reinvestment Fund (2012). https://www.reinvestment.com/wp-content/uploads/2012/02/HEMAP-Brief_2012.pdf accessed on April 28, 2021.	The study looked at the activities of the Pennsylvania's Homeowners' Emergency Mortgage Assistance Program (HEMAP). The program provides loans to homeowners unable to make their mortgage payments and in danger of foreclosure. In 2008, it reduced Pennsylvania's foreclosure rate from what would have been 2.28% absent the HEMAP program to 2.17%. Two years later, the rate decreased from 3.39% to 3.24%. The estimated financial impact of foreclosures prevented by HEMAP from 2008 to 2010 was $480 million, which was a six-fold return on the cost of the program. Importantly, mortgage lenders received a significant portion of the program's financial benefit. They saved an estimated $308.1 million in costs between 2008 and 2010 because of HEMAP. As of 2011, more than 47,000 homeowners received assistance from HEMAP. At that time, 85% of the HEMAP loan recipients repaid their loans as agreed.
Robert Clifford, "State Foreclosure Prevention Efforts in New England: Mediation and Assistance," New England Public Policy Center Research Reports 11-3 (2011). https://www.bostonfed.org/publications/new-england-public-policy-center-research-report/2011/state-foreclosure-prevention-efforts-mediation-and-financial-assistance.aspx accessed on April 28, 2021.	This report reviewed two foreclosure prevention programs in the New England region between 2005-2010. It explores how they were funded, weighs their benefits and challenges, and discusses their effectiveness at preventing foreclosures. The report concludes with policy recommendations for current and future foreclosure prevention programs.
"Philadelphia Residential Mortgage Foreclosure Diversion Program - Initial Report Of Findings", Reinvestment Fund (2011). https://www.reinvestment.com/wp-content/uploads/2015/12/Foreclosure_Diversion_Initial_Report-Report_2011.pdf accessed April 28, 2021.	The study assessed the outcomes and impacts of the Philadelphia Residential Mortgage Foreclosure Diversion Program. It reviewed court orders on nearly 16,000 cases handled by the Diversion Program from inception through March of 2011. Foreclosure mediation cut that rate at which homes went to sale in half, and 80% of homeowners with mediated agreements were still in their homes almost two years later.

Kristopher Gerardi and Wenli Li, "Mortgage Foreclosure Prevention Efforts," Economic Review 95 (2010).	This article begins with an overview of the different loss mitigation tools that mortgage lenders and policymakers have used in the past to combat foreclosure and then briefly summarizes the main U.S. programs of the past few years. By most analyses, the authors note, these recent programs have had poor results in terms of significantly reducing foreclosures, and borrowers who have received modifications are redefaulting at extremely high rates. The study found that the process of renegotiating and modifying large numbers of mortgages is likely characterized by severe asymmetric information issues, which, when properly accounted for, dramatically increase the costs of modifications to levels that approach and may even surpass the cost of foreclosures.

Greening Vacant Lots

Studies find that greening a vacant lot may raise surrounding property values, lower crime, and reduce the negative health impacts of blight on neighboring residents in lower-income neighborhoods. Further studies show that creating a community garden on the lot provides additional positive impacts on surrounding property values and neighborhood stabilization.

Charles C. Branas, Eugenia South, Michelle C. Kondo, et al., "Citywide cluster randomized trial to restore blighted vacant land and its effects on violence, crime, and fear," Proceedings of the National Academy of Sciences U.S.A 115 (12) (2018):2946-2951.	Blighted and vacant urban land affects people's perceptions of safety and their actual physical safety. A total of 541 randomly sampled vacant lots in Philadelphia received random assignments in treatment and control study arms. An analysis of the lots took place over a 38-month study period. Participants living near treated vacant lots reported significantly reduced perceptions of crime, vandalism, and safety concerns when going outside their homes, as well as a significant increased use of outside spaces for relaxing and socializing. The study found significant reductions in crime overall and gun violence in neighborhoods below the poverty line.
Michelle Kondo, Bernadette Hohl, SeungHoon Han and Charles Branas, "Effects of greening and community reuse of vacant lots on crime, Urban Studies (2015).	Youngstown Neighborhood Development Corporation's greening vacant lots program was found to lower crime. Tests to look at the effects of two types of vacant lot treatments on crime occurred: a cleaning and greening 'stabilization' treatment and a 'community reuse' treatment mostly involving community gardens. The study found statistically significant reductions in all crime classes for at least one lot treatment type. It also found the most consistent significant reductions in burglaries around stabilization lots, as well as in assaults around community reuse lots.
M Heckert and J Mennis, "The Economic Impact of Greening Urban Vacant Land: A Spatial Difference-In-Differences Analysis," Environment and Planning A: Economy and Space 44, no. 12 (2012): 3010–3027.	Analysis observed differences in surrounding property values for vacant lots cleaned and greened between 1999 and 2006 and a control sample that was not in Philadelphia. The effect differed depending upon neighborhood type. In moderately distressed regions of the city, the greening program had a positive impact on nearby property values. It did not have a positive impact in non-distressed or severely distressed regions of the city.
Ioan Voicu and Vicki Been, "The Effect of Community Gardens on Neighboring Property Values," Real Estate Economics 36, no. 2 (2008).	The study found New York Community gardens established between 1977 and 2000 led to greater increases in property values than in

	control areas, and increases were sustained over time. The effect was significant in lower-income and not in higher-income areas.

Land Banks and Alternatives to Tax Sale Auctions

Studies find that auctions of tax-foreclosed properties to the highest bidder often result in the property remaining vacant, unmaintained, and tax delinquent. A core power of many land banks is to obtain tax foreclosed properties outside of the tax auction process in order to transfer the property to responsible buyers. Studies find that proactive disposition of vacant and abandoned properties to buyers with the interest and capacity to reactivate them resulted in the property's reuse, increased property value and fewer ownership changes after sale compared to tax lien sales. Just the transfer of a property to a land bank may better preserve the value of nearby homes, but it does not result in increased property value unless the property is well-maintained or renovated. Land banks also provide a host of other functions discussed elsewhere in this literature review, including demolition and rehabilitation, that may stabilize neighborhoods.

Studies & Publications	**Summary**
Yakuyuki Fujii,"Tax deed sales and land banking to reuse vacant and abandoned properties," International Journal of Housing Markets and Analysis (September 2020).	This paper analyzed the consequences of tax lien sales and land banking in Indianapolis, Indiana. It found that land banking, when compared to tax lien sales, results in less tax delinquency, vacancy and abandonment. Land banking also results in an increase in assessed value, and fewer ownership changes after sales. Also, this paper discusses the contributions of non-profit and for-profit developers as business partners to land banks.
"Cuyahoga Land Bank: 10-Year Economic Impact Analysis," Dynamo Metrics (June 2019). https://static1.squarespace.com/static/5650fa1de4b02fdfadb21b3e/t/5d1386c2cf9b290001031ccb/1561560788176/CuyahogoImpactReport.pdf accessed on April 28, 2021.	The study measured the economic impact of Ohio's Cuyahoga Land Bank from 2009 to 2019. It found that the land bank caused about $415 million in increased home value from demolitions and $320 million from rehabilitations within the time period. The land bank also produced $362 million in local economic activity and jobs.
Gregory Niemesh, L. Allison Jones-Farmer, Joseph M Hart, William Holmes and Nathan Soundappan, "The Impact of Land Bank Demolitions on Property Values," Economics Bulletin 40 (2019): 217-233.	The study estimates the impact of land bank demolitions on surrounding property values for medium-sized municipalities in Butler County, Ohio, covering the period 2012–2017. The report finds modest increases in sales prices associated with land bank activity in a neighborhood. In general, the impact estimates are smaller than those found in the literature for a much larger metropolitan area. Even when using the most optimistic forecast, it would take the county 39 years to

	recover its costs through increases in future tax collections. The evidence suggests that the scale of purchases and demolitions of abandoned houses by the Butler County Land Bank was not a cost-effective policy to reverse neighborhood decline.
"Quantitative and Qualitative Impact Assessment of Land Bank Activity in Michigan," Dynamo Metrics and Public Sector Consultants (2018). https://milandbank.org/wp-content/uploads/2018/10/Final_Reduced-Size.pdf accessed April 28, 2021.	The study examined the economic and social impacts of the Kalamazoo (2009-2018), Calhoun (2011-2018), and Benzie County (2012-2018) land banks in Michigan and found the land bank activity during the timeframes increased home values and reduced mortgage foreclosure and crime rates. The impact of distressed property interventions varied based on neighborhood type.
Stephen Whitaker and Thomas J. Fitzpatrick, "LAND BANK 2.0: AN EMPIRICAL EVALUATION," Journal of Regional Science 56, no. 1 (August 25, 2015): 156–75.	In this evaluation of the Cuyahoga County Land Bank in Ohio, the authors looked at its impact on home sale prices near homes owned by the land bank from 2009 to October 2013. Using data on properties from the land bank and county data on sales prices, the results showed that land banks reduce negative externalities of distressed properties and are important in value preservation for nearby homes which are not transacting.
Yasuyuki Fujii, "Spotlight on the Main Actors: How Land Banks and Community Development Corporations Stabilize and Revitalize Cleveland Neighborhoods in the Aftermath of the Foreclosure Crisis," Housing Policy Debate 26, no. 2 (2015): 296–315.	The study focuses on Cleveland, Ohio property transfers between 2002-2005, 2006-2009, and 2010-2013. A case study of the South Broadway neighborhood found irresponsible property transfer practices by financial institutions and speculative investors more often caused frequent property turnover and tax delinquency. Land banks, partnered with community development corporations (CDCs), minimized transfers to irresponsible, tax-delinquent owners.
Margaret Dewar, "Reuse of Abandoned Property in Detroit and Flint: Impacts of Different Types of Sales," Journal of Planning Education and Research 35, no. 3 (2015): 347–68.	The paper compared tax-foreclosed property outcomes in Detroit and Flint, Michigan, after either being auctioned off by the government or having a managed sale from the Detroit Department of Planning and Development (2002–2003) or Genesee County Land Bank (Flint 2002–2004). The results showed that the managed sales led to more properties moving into 'productive use' associated with better property conditions and lower foreclosure rates than auctioned properties. This shift may result from managed sale administrators who can better

	screen purchasers. Still, the study mentioned that many factors possibly influenced these results, including preexisting property conditions.
Frank Ford et al., "The Role of Investors in the One-to-Three-Family REO Market: The Case of Cleveland," Joint Center for Housing Studies at Harvard University (2013).	The study analyzed data from 72,954 post-foreclosure transactions on 38,931 properties in Cuyahoga County between 2000 and March 2013. It found that in Cuyahoga County, real estate owned (REO) properties acquired by a public or mission-driven entity—including the Cuyahoga Land Bank, a community development corporation, or nonprofit—were three times more likely to have a positive outcome (i.e., to be sold, rehabbed, or maintained) than a property acquired by an investor. Real estate owned (REO) properties with a negative outcome had a disproportionately negative impact on Black neighborhoods.
Tyler Borowy, Mary Beth Graebert, Benjamin Calnin, and Brianna Acker, "Economic Impacts of the Ingham County Land Bank (2006-2012)," The Land Policy Institute at Michigan State University (2013). https://www.canr.msu.edu/landpolicy/uploads/files/Resources/Publications__Presentations/Reports/LPI/2013EconImpactsICLBReport_ICLBLPI_Final_082213.pdf accessed on April 28, 2021.	The analysis examined the impact of Ingham County Land Bank (home of Lansing, Michigan) on nearby homes' sales prices. The study found that from 2006 to 2012, sold homes located between 500 and 1,000 feet of a land Bank unremediated property decreased in value by 9.5%. Sold homes located within 500 feet of a renovated or new land bank home, however, experienced a property value increase of 5.2%. Study authors also pointed to the positive impact of the maintenance of these Land Bank properties (such as lawn mowing and snow removal, and the demolition of blighted homes) on neighborhood revitalization.

Multipronged Investments

Studies of multipronged investment strategies that provide a connected web of place- and people-based programs within a relatively small geography have the power to stabilize or improve neighborhoods. An oft studied example is the Neighborhood Stabilization Program, a multipronged federally funded effort to combat the foreclosure crisis post-2008 with a primary focus on rehabilitating foreclosed single-family properties. Various studies offer conflicting findings as to whether the low intensity of the NSP investment was sufficient to stabilize neighborhoods with weak housing markets.

Studies & Publications	Summary
"Affordable Housing In Pittsburgh: A Collaborative Approach to Neighborhood Development in Southwest Atlanta," The Annie E. Casey Foundation (2020). https://www.aecf.org/resources/affordable-housing-in-pittsburgh/ accessed on April 28, 2021.	The Casey Foundation and its partners invested more than $8.1 million into Atlanta's Pittsburgh neighborhood between 2009 and May 2020. They renovated 43 homes and prepared ten others for redevelopment, while creating a neighborhood master plan and increasing neighborhood leadership capacity. The report does not provide a quantitative analysis of impact, but it shares some lessons learned to help stabilize neighborhoods as they grapple with the economic fallout of the coronavirus pandemic. Lessons learned include the need for a multipronged approach that includes community cleanups, home repair programs, and code enforcement; the fact that neighborhood change requires a long-time commitment; and redevelopment activities must be clustered on one street or a few blocks.
"Dekalb County Neighborhood Stabilization Program - Impact On Families and Communities," Atlanta Neighborhood Development Partnership (2017). https://www.dekalbcountyga.gov/sites/default/files/user2778/DeKalbNSPImpactFINAL-MedRes%20%281%29.pdf accessed on April 28, 2021.	The report analyzed data from the DeKalb County Georgia Tax Assessor's Office to measure the impact of home rehabilitation investments funded under the Neighborhood Stabilization Program (NSP) on overall neighborhood values in foreclosure-impacted communities between 2010–2016. The analysis found that an investment of $8.9 million in home rehabiliation improvements lifted the value of surrounding homes and resulted in a $141 million increase in values for surrounding properties. Sales values for rehabilitated properties funded under NSP remained above those for non-NSP sales, with an average differential of $22,268.

Peter Rosenblatt and Stefanie DeLuca, "What Happened in Sandtown-Winchester? Understanding the Impacts of a Comprehensive Community Initiative," Urban Affairs Review 53, no. 3 (2017): 463-494.	The study examined the Neighborhood Transformation Initiative (NTI) in the Sandtown-Winchester community of Baltimore from its start in 1990 until 2009. This comprehensive community initiative invested $100 million and adopted a comprehensive approach to neighborhood redevelopment. NTI included housing construction, education reform, and employment services. The study found significant increases in homeownership and reductions in unemployment in Sandtown. However, limited gains emerged in other areas as poverty remained high and local schools did not show sustained improvement.
Xian F Bak and Geoffrey J.D. Hewings, "Measuring Foreclosure Impact Mitigation: Evidence from the Neighborhood Stabilization Program in Chicago," Regional Science and Urban Economics 63 (2017): 38–56.	Using housing sales data from 2008–2014 in Chicago, Illinois, this study measured the effects of the Neighborhood Stabilization Program (NSP) funded acquisition and rehabilitation of foreclosed and abandoned properties on nearby property values. The research demonstrated that every NSP rehabilitation project brought a 14.3% increase in housing sale prices within 0.1 miles.
MM Ehlenz, "Gown, Town, and Neighborhood Change: An Examination of Urban Neighborhoods with University Revitalization Efforts," Journal of Planning Education and Research 39, no. 3 (2017): 285-299.	This study drew from a survey of twenty-two universities with neighborhood revitalization strategies to build an understanding of how university revitalization areas changed in both time (1990–2010) and space. Findings show that the university case tracts saw positive shifts in their housing markets—particularly for median home values—that are significantly different than their regions. Yet, even as the market value improved, the socioeconomic indicators did not change in significant ways. This inactivity suggested a bifurcation in the populations who live in the target neighborhoods, including higher-income homeowners and lower-income student renters.
Richard Holzer, "Evaluating the Minneapolis Neighborhood Revitalization Program's Effect on Neighborhoods," Dissertation University of Southern California (2017). https://spatial.usc.edu/wp-content/uploads/formidable/12/Richard-Holzer.pdf accessed April 28, 2021.	The study examined the impact of the Minneapolis Neighborhood Revitalization Program between 1990–2014 on neighborhood income, rent, vacancies, and home value. The results showed that neighborhoods in Minneapolis, Minnesota significantly improved because of the NRP, especially in home value and rent. Meanwhile, the regression analysis did not provide conclusive evidence on individual variables relevant to neighborhood success (possibly due to unique neighborhood circumstances regarding NRP participation).

"Evaluation of the Baltimore City Vacants to Values Program: Quantitative Analysis," Baltimore Neighborhood Indicators Alliance – Jacob France Institute (December 2016). https://bniajfi.org/wp-content/uploads/2017/03/V2V_complete.compressed.pdf accessed April 28, 2021.	In 2015, the City of Baltimore commissioned an evaluation of the City's Vacants to Value (V2V) program, which deploys code enforcement and multipronged tools to facilitate investment and homeownership while reducing the number of vacant properties. The V2V approach does appear to have changed market dynamics with respect to vacant house notices, median sales prices, and rehabilitation rates for the treatment areas across two time periods (2005–2009 and 2010–2014) compared with citywide averages. In treatment areas with preconditions of high development activity, the V2V approach aligns and supports the reduction of vacancy and increases sales prices because it can leverage private resources. Conversely, in areas with preconditions of less development activity and less density where the housing market has collapsed, the level of V2V activity may not be enough of a market signal to affect change; vacant house notices have increased in these kinds of treatment areas over time.
Jonathan Spader et. al., "The Evaluation of the Neighborhood Stabilization Program", U.S. Department of Housing and Urban Development (March 2015). https://www.huduser.gov/portal/publications/affhsg/eval_neighborhood.html accessed April 28, 2021.	The report extensively analyzed the impact of the national Neighborhood Stabilization Program (NSP) on communities in Chicago over 2008-2014. Researchers selected data on 19 representative sample NSP2 counties. The time frames varied depending on the type of data collected. The findings showed that increased foreclosures cause increased blight and that the typical low intensity of NSP2 investment per tract resulted in only a middling impact of NSP2 on the housing market. The report drew many conclusions on the management of NSP2 and the impact of the program on crime, home values, and more.
"Impact of Rehab Investments on Neighborhood Home Values in Douglas County, GA," Atlanta Neighborhood Development Partnership (2015). https://e96d8fd0-8057-4990-8ee2-f9ddd1d0c1da.filesusr.com/ugd/9bcf20_a01ba95f86b14bb0bb2334d33966cc1a.pdf accessed April 28, 2021.	This analysis measured the impact of home rehabiliation investments made by Atlanta Neighborhood Development Partnership (ANDP) on overall neighborhood values in 30 foreclosure-impacted neighborhoods in suburban Douglas County, Georgia. The investments were funded with Neighborhood Stabilization Program (NSP) funds. The analysis showed that $2.3 million in NSP rehabiliation investment in 53 scattered-site single family homes from 2010-2013 lifted values by $14.6 million in the 30 neighborhoods.

"Evaluation Neighborhood Stabilization Program 2 ("NSP 2") for the City Of Camden Redevelopment Agency and Housing Authority Of The City Of Camden," Reinvestment Fund (2015). https://www.reinvestment.com/wp-content/uploads/2015/12/Camden_NSP2_Evaluation-Report_2015.pdf accessed April 28, 2021.	The Camden NSP2 program sought to stabilize markets and arrest further deterioration of market conditions between 2008–2010. As a whole, the Camden NSP2 investments were generally successful in moving the target markets relative to the areas that did not receive NSP2 investments. As a group, the sales prices declined minimally (-1.4%) in the NSP Investment Clusters. Meanwhile, they declined significantly in the comparable areas (-64.5%). Furthermore, the Cooper Plaza NIC actually saw price appreciation with a median sales price change of 69.1% during the same time.
David Greenberg, Sonya Williams, Mikael Karlström, Victoria Quiroz-Becerra, and Marcia Festen, "The Promise of Comprehensive Community Development Ten Years Of Chicago's New Communities Program," (August 2014). https://www.mdrc.org/sites/default/files/New%20Communities%202014%20ExecSum%20for%20web.pdf accessed April 28, 2021.	This study analyzed Chicago's New Communities Project drawn from nearly 400 interviews and observations to develop case comparisons among neighborhoods and the formal analysis of themes related to practitioner strategies, local context, and implementation outcomes. The evaluation showed that nearly 850 varied improvement projects and over $900 million in total funding were reported among the 14 neighborhood areas over 10 years. The program succeeded in connecting many groups to citywide and national funders, and resulted in partnerships across neighborhoods. Neighborhoods with multi-issue, high-capacity lead agencies and strong local partners tended to leverage the most additional funds.
Erin Graves and Elizabeth Shuey, "The Social Impact of Home Rehabilitation in Low-Income Neighborhoods," Federal Reserve Bank of Boston (2013).	The study of NSP investments in Boston found that rehabilitation investments had a negative effect on social conditions and no impact on physical conditions in the immediate area. In weak markets, where crime and social cohesion were low, scattered rehabilitation activity contributed to a decline in physical conditions and social cohesion. A combination of interviews and regression analyses compared changes in physical and social conditions on blocks where rehabilitation activity occurred and similar blocks where rehabilitation did not occur.

Scattered Site Single-Family Housing Rehabilitation

Rehabilitation of vacant properties positively impacts surrounding property values in every neighborhood market studied. One study found scattered-site rehabilitation had a greater positive impact on property values compared to multiunit new construction on a single-site. Studies provide mixed assessments as to whether home improvements are contagious and lead to greater investments in surrounding homes.

Bev Wilson and Shakil Bin Kashem, "Spatially Concentrated Renovation Activity and Housing Appreciation in the City of Milwaukee, Wisconsin," Journal of Urban Affairs 39, no. 8, (2017): 1085-1102.	This study examined the relationship between renovation activity and housing prices in Milwaukee, Wisconsin, between 2002–2012. It found that proximity to renovated properties increased sale prices, even after accounting for neighborhood characteristics.
Haoying Wang, "A Simulation Model of Home Improvement with Neighborhood Spillover." *Computers,* Environment and Urban Systems 57 (2016): 36-47.	The author developed a simulation model of the impact of nearby home improvement on household decisions to renovate or move. It found home improvements significantly increased the average household duration of residence and the amount of home improvement investment in nearby homes. Neighborhood spillover effects are shown to be a form of social capital that connects homeownership and neighborhood quality.
"Decision Support for Property Intervention: Rehab Impacts in Greater Cleveland 2009-2015," Dynamo Metrics (2016). https://static1.squarespace.com/static/5650fa1de4b02fdfadb21b3e/t/5e3b03d21708cc3728054689/1580925952161/rehab-impacts-cleveland_dynamo-metrics.pdf accessed on April 28, 2021.	The findings of this study estimated that 1,081 rehabilitations of homes completed between 2009 and 2015 in Cuyahoga County preserved or increased just over half a billion dollars in the aggregate value of surrounding homes. This averaged out to $498,907 of property value impact per home rehabilitated. Impacts varied by submarket, with weaker submarkets realizing less impact per rehabilitation and stronger submarkets more. The rehabilitations nevertheless showed positive impacts in every submarket studied and were strongly associated with faster declines in mortgage foreclosure rates over time.
"West Philadelphia Scattered Site Model: An Affordable Housing Impact Study," May 8 Consulting and Reinvestment Fund, (September 2016). https://www.may8consulting.com/west-philadelphia-scattered-site-model-an-affordable-	The study explored how the rehabilitation of 1,100 affordable housing units in 760 single-family houses or duplexes from 1989 to 2013 changed West Philadelphia neighborhoods where they resided. It compared the scattered site approach to developments that produced a similar number of affordable units on single sites. Analysis found that home sales prices for houses within a mile and a half of West Philadelphia scattered site

housing-impact-study/ accessed April 28, 2021.	properties rose by 50% while single site new construction increased sales prices by only 25%.
Erin Graves, “Is Home Maintenance Contagious? Evidence from Boston,” Federal Reserve Bank of Boston (December 2013).	The paper examined whether a ‘contagion effect’ exists where maintenance of a home by one resident encourages neighbors to do the same in Dorchester, Boston, and Roxbury, Boston. The author picked 16 vacant foreclosed houses scheduled for renovation. They assessed the condition of all housing on their streets in 2011 (before the renovation) and 2012 (after the renovation). The author did not find any significant improvements to nearby properties associated with the renovation of the target property. In short, they didn’t observe a contagion effect. Instead, homeownership itself was significantly associated with better housing conditions.
Kelly D. Edmiston, “Nonprofit Housing Investment and Local Area Home Values,” Federal Reserve Bank of Kansas City Economic Review (2012).	Community Development Corporation (CDC) housing investments in Kansas City low- and moderate-income neighborhoods — mostly rehabilitation but some new construction — had a significant positive effect on neighborhood property values. Using data on homes that sold more than once between 2004 and 2011 in Jackson County, Missouri, the findings showed that housing investments by CDC substantially increased the appreciation of nearby homes. On average, homes within 500 feet of the development projects appreciated at an 11.8% greater rate than homes further away from the projects between the first and second sales of the homes. The effects dissipate beyond 500 feet.
Marvin Smith and Christy Chung Hevener, "The Impact of Housing Rehabilitation on Local Neighborhoods: The Case of Small Community Development Organizations," American Journal of Economics and Sociology 70, no. 1 (2011): 50-85. http://www.jstor.org/stable/27916918.	The study focused on the quantitative impact St. Joseph's Carpenter Society (SJCS) in Camden, New Jersey had on its target neighborhoods before (1990) and after (2000). SJCS had a program where it rehabilitated vacant and deteriorated homes to sell them for affordable homeownership at a loss. The analysis suggested that SJCS's rehabilitation and homeownership education activities appear to have had a positive influence on the neighborhoods in its target area as they raised median sales prices. These neighborhoods declined at a slower rate than comparison block groups based on vacancy, median income, and poverty. The authors made clear that the small scale and lack of data make it difficult to establish causality.
Kevin Park, “Good Home Improvers make Good Neighbors,” Joint Center for Housing Studies of Harvard University. April 2008.	Using the Metropolitan Surveys of the American Housing Survey from 1995 to 2004, this paper analyzed the differences in real appreciation rates between neighborhoods with different levels of median home improvement spending. It even looked at households with comparable

http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/w08-2_park.pdf accessed on April 28, 2021.	levels of individual expenditures. The paper found a modest but statistically significant neighborhood effect, which was strongest among those households that spent the least individually. For a given level of individual home improvement spending, the inflation-adjusted annual house price appreciation rate was 15% higher in high-spending neighborhoods compared to low-spending ones.

Significant Targeted Neighborhood Investment

Studies found that significant targeted investment into a low-income or moderate-income neighborhood may cause increases in property values, better standards of home maintenance, increased sales to homeowners, and reductions in poverty.

Brett Theodos, Eric Hangen, Brady Meixell and Lionel Foster, "Neighborhood Investment Flows in Baltimore With a Case Study on the East Baltimore Development Initiative," Urban Institute (September 2020). https://www.urban.org/research/publication/neighborhood-investment-flows-baltimore-case-study-east-baltimore-development-initiative accessed on April 28, 2021.	The study measured neighborhood disparities in private, public, and mission capital flows in Baltimore between 2004–2016. These capital flows include financing home mortgages, small-business loans, and commercial real estate and investment from state and federal dollars and local programs. The study found that investment in Baltimore is highly concentrated in ways that reflect patterns of racial and economic inequality. White neighborhoods received more than three times the investments that majority-Black neighborhoods received during the 13-year period. Investment from all sources in neighborhoods where less than 50% of residents were Black was $26,533 per household per year. In comparison, investment in neighborhoods where more than 85% of residents are Black was $8,160 per household per year.
Matthew Baird, Heather Schwartz et. al., “Does Large-Scale Neighborhood Reinvestment Work? Effects of Public–Private Real Estate Investment on Local Sales Prices, Rental Prices, and Crime Rates,” Housing Policy Debate 30, no. 2 (2019): 164–90.	The study focused on a number of large public-private investments in the Pittsburgh Hill District between 1990 and 2015. Homewood, Pittsburgh was the comparison neighborhood. The findings showed a 0.95%, 2.7%, and 0.55% increase in residential, commercial, and rental prices for every $10 million in investment, but It didn’t show a significant effect on crime.
Suzanne Lanyi Charles, “The Financialization of Single-Family Rental Housing: An Examination of Real Estate Investment Trusts’ Ownership of Single-Family Houses in the Atlanta Metropolitan Area,” Journal of Urban Affairs (2019).	The paper examined investments in single-family houses made by the four largest publicly traded Real Estate Investment Trusts (REITs) in the Atlanta metro area. The study found REIT ownership resulted in increased rents, depressed housing prices, deferred maintenance, and increased evictions.
Isabelle Nilsson and Elizabeth C. Delmelle, “Transit investments and neighborhood change: On the likelihood of change,” *Journal of Transport Geography* 66 (2018): 167-179.	Utilizing data from 9 metropolitan areas that invested in light rail between 1980 and 2010, this paper focused on the identification of and dynamics associated with neighborhoods that are more prone to experience socioeconomic and demographic changes following rail transit investment. The study’s findings suggested a significant

	difference in transit and non-transit neighborhood transitions. While neighborhoods are largely stable over time, impoverished neighborhoods are more likely to experience changes (such as gentrification) following the opening of a transit station. A minimal amount of evidence suggests that the socioeconomic ascent following station openings aligns with significant changes in racial composition.
Tammy Leonard, "Housing Upkeep and Public Good Provision in Residential Neighborhoods," Housing Policy Debate 26, no. 6 (May 20, 2016): 888–908.	The study examined whether residential property upkeep changes as a result of transformations in the overall neighborhood condition. It focused on the low-income Fair Park neighborhood in Dallas, Texas which includes three train stations. It recorded parcel-by-parcel neighborhood condition data in 2009, 2010, and 2012. The author found that a positive substitution effect exists – an improved neighborhood corresponded to improved home upkeep.
Karen Beck Pooley, "Using Community Development Block Grant Dollars to Revitalize Neighborhoods: The Impact of Program Spending in Philadelphia," *Housing Policy Debate* 24, no. 1 (2014): 172-191.	This study tested estimates of threshold spending amounts from 1990–2009. It used data on investments funded by Philadelphia's Community Development Block Grants (CDBG) and Section 108 loans and house value trends at the census-tract level. According to this analysis, Philadelphia census tracts receiving above-sample-median amounts of CDBG and/or Section 108 loan funds saw property values increase far more than those tracts receiving less subsidy or control group tracts receiving no subsidy at all. It concludes that targeting CDBG dollars can maximize neighborhood-wide effects.
Christina Cudney and Lavea Brachman, "Achieving Healthy Neighborhoods: Evaluating the Impact of Housing Investments in Weinland Park," Greater Ohio Policy Center (2014). https://www.greaterohio.org/blog/2965 accessed on April 28, 2021.	This report examined the impact of $80 million in housing and infrastructure investments provided to the Weinland Park neighborhood in Columbus Ohio from 2000-2010. It compared the neighborhood to peer neighborhoods using assessed values, as opposed to sale prices, to estimate home value distributions because many comparable sales were auctions of distressed properties, which may not accurately reflect market values. It found that the neighborhood was increasingly stable, with vacancy decreasing and housing values well-distributed, as well as a lack of gentrification. Still, the neighborhood remained low-income and had a low homeownership rate.

Access to Mortgage Credit

While historic disinvestment is responsible for many neighborhood weak market conditions that create vulnerabilities during a stress event, few studies explore whether improved access to credit can stabilize a neighborhood.

Studies & Publications	Summary
Hyojung Lee and Raphael W. Bostic, "Bank Adaptation to Neighborhood Change: Mortgage lending and the Community Reinvestment Act," Journal of Urban Economics 116 (2019).	Using 2004–2011 Home Mortgage Disclosure Act (HMDA) data, the study found that banks approve loans more frequently for neighborhoods that are rapidly improving. This effect is stronger if the neighborhoods are Community Reinvestment Act (CRA)-eligible, low- and moderate-income (LMI) tracts.
Dan Immergluck, Stephanie Earl and Allison Powell, "Black Homebuying after the Crisis: Appreciation and Segregation Patterns in Fifteen Large Metropolitan Areas," City and Community (2018).	The authors estimated the 2012–2017 appreciation rates of homes 2012 buyers purchased using mortgages in 15 large metropolitan areas. The study found that the median 5-year estimated appreciation for Blacks buying homes in 2012 was 38.2%, substantially higher than the 29.9% median for white buyers. Latino homebuyers saw particularly strong appreciation (63.7% median) because they were disproportionately located in high-appreciation metros, such as Los Angeles and Riverside. A very small portion of 2012 buyers of any ethnoracial group saw property values increase less than 5% or decline over the 5-year period. The study found that the strength of the metropolitan housing market is an extremely important driver of appreciation across all ethnoracial groups.
Jacob William Faber, "Segregation and the Geography of Creditworthiness: Racial Inequality in a Recovered Mortgage Market," Housing Policy Debate 28, no. 2 (2017): 215–47.	The study examined inequality in mortgage application outcomes in 2014 in metropolitan areas with at least 5,000 Black and 5,000 Latino residents. It found that white applicants were more likely to get approved, followed by Asians, Latinos, and Black applicants. In fact, the poorest white applicants were more likely to receive approval than the most affluent Black applicants. Black and Latino applicants were also more likely to receive high-cost loans.
Lei Ding, "Information Externalities and Residential Mortgage Lending in the Hardest Hit Housing Market: The Case of Detroit," Cityscape: A	The study examined the flow of credit to the residential sector in Detroit, Michigan across 2010–2011. It analyzed whether prior lending occurrences and foreclosures could affect lenders' decisions – either approving or denying a mortgage application. Results supported the existence of information externalities revealing that if five or fewer

Journal of Policy Development and Research 16, no. 1 (2014): 233–52.	mortgage purchases in a tract occurred the previous year, the chances of mortgage denial increased by 32%.
Di Wenhua, Jielai Ma and James C. Murdoch, "An Analysis of the Neighborhood Impacts of a Mortgage Assistance Program: A Spatial Hedonic Model," Journal of Policy Analysis and Management 29, no 4 (2010): 682-697.	The paper examined the effects of the Dallas Mortgage Assistance Program (MAP), which assists with down payments or closing costs, on nearby home values from 1990 to 2006. Research found that a moderate amount of MAP properties do not negatively affect nearby home values and a small number of MAP properties may cause positive spillover effects for the neighborhood.

Community Land Trusts (CLT)

Community Land Trusts are typically local nonprofit organizations that retain ownership of land and sell or rent the housing on that land to maintain long-term affordability of residential properties. While neighborhood stabilization is not the primary goal of most CLTs, studies found that CLTs may lower foreclosure rates and stem the decline of surrounding sales prices. One study found that CLTs may increase the proportion of homeownership while depressing rental prices in surrounding areas. Another study asserts that CLTs create more racial diversity within the neighborhood and decrease the odds of the surrounding area gentrifying.

Studies & Publications	Summary
Katharine Nelson, James DeFilippis, Richard Kruger, Olivia Williams, Joseph Pierce, Deborah Martin and Azadeh Hadizadeh Esfahani, "The Commodity Effects of Decommodification: Community Land Trusts and Neighborhood Property Values," Housing Policy Debate (2020).	This case study of a relatively large CLT in Minneapolis, Minnesota, from 2006 to 2020 explored the impacts of CLT properties on the real estate prices of nearby homes. The study found that clustering CLT homes stemmed the decline in sales prices during the foreclosure crisis. The introduction of the first nearby CLT property had no measurable price impact, but each additional CLT property aligned with a 5% higher sales price in North Minneapolis and a 3% higher sales price in Central Minneapolis. In the post-recession period, the authors estimate that the introduction of CLT properties in North Minneapolis was linked to a 10.9% increase in nearby sales prices.
Brett Theodos, Christina Plerhoples Stacy, Breno Braga and Rebecca Daniels, "Affordable Homeownership: An Evaluation of the Near-Term Effects of Shared Equity Programs," Housing Policy Debate (2019): 865-879.	The study estimated the effect of nine shared equity programs on the short-term financial health and loan performance outcomes of participating households. It compared the outcomes of shared equity home purchasers with the outcomes of other similar first-time home buyers in their metropolitan regions. The study found that shared equity purchasers have, on average, significantly less mortgage debt. They also pay less on their credit accounts each month than other similar purchasers, are appreciably less likely to have a home equity line of credit, and perform just as well on their mortgages.

Myungshik Choi, Shannon Van Zandt and David Matarrita-Cascante,"Can community land trusts slow gentrification?" Journal of Urban Affairs 40, no. 3 (2018): 394-411.	The study sought to define whether and how CLTs influenced gentrification from 2000 to 2010. The study found that the presence of CLTs decreased the odds of gentrification by 70%. In addition, the findings show the results of comparisons between neighborhoods with and without CLTs, regardless of gentrification. Three comparisons (racial composition, affordability, and income level) showed statistically significant differences. The proportion of the white population decreased in neighborhoods with CLTs and increased in those without a CLT, meaning that racial diversity increased in neighborhoods with a CLT. The affordability index and income level significantly decreased in neighborhoods without a CLT, whereas no such change was evident in neighborhoods with CLTs.
Kenneth Temkin, Brett Theodos and David Price,"Sharing Equity with Future Generations: An Evaluation of Long-Term Affordable Homeownership Programs in the USA," Housing Studies 28, no. 4 (2013).	The article analyzed seven shared equity programs and found that homebuyers earned returns that were competitive with alternative investments; homes remained affordable to lower-income buyers over time; delinquency and foreclosure rates were very low; families who sold their homes could use the proceeds to purchase market-rate homes; and owners showed little evidence of being locked in place.
Karen Gray and Julie Miller-Cribbs, "The Durham Community Land Trustees," Journal of Community Practice 20 (2012): 402-413.	This study examined the possible impact of the Durham Community Land Trustees (DCLT) on owner-occupied rates, vacancy, and median rent in Durham since 1990. The proportion of owner-occupied housing increased in the DCLT census tract and decreased in comparison tracts, with significantly higher rates of Black and Hispanic homeownership. Rental prices in the DCLT tract were significantly lower and authors assert that DCLT may have helped to keep rental prices affordable.
Emily Thaden, “Stable Home Ownership in a Turbulent Economy: Delinquencies and Foreclosures Remain Low in Community Land Trusts,” Lincoln Institute of Land Policy (2011).	The study examined mortgage delinquency and foreclosure rates among the owner-occupants of resale-restricted houses and condominiums in community land trusts (CLTs) in 2011. It found that 1.30% of the mortgage loans held by CLT homeowners were seriously delinquent (defined as loans at least 90 days delinquent or in foreclosure proceedings) at the end of 2010 compared to a delinquency rate of 8.57% of mortgage loans in the conventional market.

Sideyard Purchase Programs

Selling vacant “undevelopable” lots to adjacent or nearby owners for below-market prices may reduce crime and build wealth for residents. Other studies probe who the buyers of sideyard properties are and its impact on the future condition of the properties. The majority of studies of sideyard programs evaluate the Chicago Large Lots Program.

Studies & Publications	Summary
Matthew Stern and T. William Lester, "Does Local Ownership of Vacant Land Reduce Crime? An Assessment of Chicago’s Large Lots Program," Journal of the American Planning Association (2020).	The study examined the Chicago Large Lots Program since 2014. Program buyers must be same-block landowners, although they are not required to live nearby. The study estimated the distance between buyers and their parcels and performed a block-level difference-in-differences analysis to explore whether the program reduced crime. The study found that same-neighborhood buyers have purchased 69% of parcels. Overall, sales reduced block-level crime rates by 3.5%, but sales to neighborhood residents decreased crime rates by 6.8%.
Paul H. Gobster, Alessandro Rigolon, Sara Hadavi and William P. Stewart, "Beyond Proximity: Extending the “Greening Hypothesis” in the Context of Vacant Lot Stewardship," Landscape and Urban Planning Volume 197 (2020).	The study looked at improvements made in the condition and care of large lots purchased through the Chicago Large Lots Program. Authors found that the improvements made in the condition and care of large lots in the year after purchase were positively related to the proximity, condition and care of the individual’s previously owned property, and signs of use and care of the lot before purchase (blotting). The study does not find an association with block-level indicators of care and disorder and improvements made to lots purchased on the block. However, it did find that the same block-level indicators of care and disorder more strongly predicted the percent of large lots sold on that block.
Paul Gobster, Sara Hadavi, Allesandro Rigolon, and William Stewart, “Measuring Landscape Change, Lot by Lot: Greening Activity in Response to a Vacant Land Reuse Program,” Landscape and Urban Planning 196 (2020).	The study examined the Chicago Large Lots Program across 2014–2016. It performed a landscape change analysis based on a visual assessment of aerial and street-level imagery on 424 lots purchased in two areas of the city one year before and after purchase. The study found an 8% increase of lots with gardens, and while there was a 16% reduction of lots with mature trees, it was accompanied by a similar increase in the proportion of mature trees in "good condition." Also, nearly a third of the lots showed signs of appropriation for use and/or stewardship prior to purchase, a process known as "blotting" but the non-blotted lots had bigger improvements in condition and care after purchase than the blotted lots.

Matthew Stern, "Five years in: Assessing the impacts of Chicago's Large Lots Program Measuring the Effectiveness of Chicago's $1 Residential Lot Sale Program on Crime And Wealth-Building," Masters Thesis University of North Carolina (2019). https://cdr.lib.unc.edu/concern/masters_papers/1c18dm77d accessed on April 28, 2021.	The study evaluated the impact of Chicago's Large Lots program in three economically distressed neighborhoods to determine who is buying the lots, how many parcels they are buying, and how far they live from the parcels they are purchasing. The study found that the wealth generation impacts of the Large Lots program have been substantial and that most program participants have been local individuals. Findings drew a direct causal link between the program and reductions in crime and found that the highest crime reduction was measured when property transfers were limited to less-distant owners.
Joanna P. Ganning and J. Rosie Tighe, "Assessing the Feasibility of Side Yard Programs as a Solution to Land Vacancy in U.S. Shrinking Cities," Urban Affairs Review 51, no. 5 (2015):708-725.	This study of the city of St. Louis, Missouri side yard program evaluated the potential for reducing residential land vacancy. The analysis revealed that while demand-side issues (i.e., affordability) existed, the supply-side barriers (i.e., restrictive guidelines and inequitable or illogical pricing structures) were the larger constraints for the program's success. In St. Louis, the program as currently structured could find buyers for approximately 10.8% of vacant residential parcels if all eligible buyers were interested. The study concluded that program policy significantly influenced a program's potential success through a range of mechanisms, including restrictions regarding buyers' owner-occupancy status, side yard lot width maximums, and pricing structure. State legislation regarding tax foreclosure auctions and elements of urban design also influenced the program's effectiveness.

Tax Policies

Studies are unclear as to whether tax policies, including tax abatements and tax increment financing districts (TIF), stabilize and improve neighborhoods. Several studies found minor or no effects on neighborhood markets. Other studies found tax policies impacted property appreciation.

Studies & Publications	Summary
Michael Hicks, Dagney Faulk, and Srikant Devaraj, "Tax Increment Financing: Capturing Or Creating Growth?" Growth and Change 50, no. 2 (2019): 672-688.	This research examined tax increment financing (TIF) to determine whether TIFs capture economic activity that would have occurred anyway. Using 2003–2012 data from Indiana counties, results showed that TIF adoption is positively related to TIF use in surrounding counties, median household income and employment growth, which suggests that TIF is used to capture existing growth. The results of the impact model showed that as the share of county assessed value in TIF increases, assessed value in non-TIF areas decreases and assessed value within TIF districts does not increase.
Burdette Edward Fullerton, "The Effects of Tax Increment Financing on Assessed Land Values," Dissertation The University of Southern Mississippi (2017). https://aquila.usm.edu/dissertations/1423/ accessed on April 28, 2021.	The study compared the growth in assessed market value of land parcels in tax increment financing districts (TIF) in Jackson County, Missouri, over a period of ten years to the value growth of the remainder of the county. Researchers used assessment data for the period from 2000 to 2015. The findings indicate that a TIF does have a stimulating and significant effect on land value growth in Jackson County. Land parcels and buildings increased in value faster inside versus outside of TIF districts.
Paul F. Byrne, "Determinants of Property Value Growth for Tax Increment Financing Districts," Economic Development Quarterly 20, no. 4 (2006): 317-329.	The study of the use of tax increment financing districts in Chicago, Illinois found that successful TIFs were more likely in economically disadvantaged areas. The TIFs had positive impacts on property value growth within the district, particularly those near downtown Chicago. This result may stem from the fact that they are in areas that naturally experience high growth.

In Kwon Park and Burkhard von Rabenau, “Tax Delinquency and Abandonment: An Expanded Model with Application to Industrial and Commercial Properties,” Urban Studies 52, no. 5 (April 2015): 857–75.	Using data from Cleveland, Ohio in 2008, the study found that tax policies have a limited impact on abandonment. Instead, two categories of variables not previously modelled are significant and policy relevant. First, the more specialized a property and the greater the cost of conversion to alternative uses, the greater the likelihood of tax delinquency and abandonment, suggesting policies to ease transition to new uses. Second, abandonment spillovers are highly significant even after accounting for neighborhood common factors. This suggests that spatial solutions, such as land use planning, may be more effective than tax abatement policies in dealing with abandonment, and approaches to abandonment must be differentiated by type of property.
Richard Funderburg, "Regional Employment and Housing Impacts of Tax Increment Financing Districts," Regional Studies 53, no. 6 (2017): 874-886.	This paper estimated the impacts of tax increment financing (TIF) districts on employment and residential development in Polk County, Iowa between 2001–2011. Some evidence shows that TIF districts contributed positively to residential development, although the increase in housing near the districts was not considered statistically significant.
William T. Lester, "Does Chicago’s Tax Increment Financing (TIF) Programme Pass the ‘But-for’ Test? Job Creation and Economic Development Impacts using Time-Series Data," Urban Studies (Edinburgh, Scotland) 51, no. 4 (2013): 655-674.	This paper conducted a comprehensive assessment of the effectiveness of Chicago's TIF program between 1990–2008 in creating economic opportunities and catalyzing real estate investments at the neighborhood scale. The findings showed that TIF ultimately failed the 'but-for' test, and showed no evidence of increasing tangible economic development benefits for local residents.
Mark S. Rosentraub, Brian Mikelbank and Charlie Post, "Residential Property Tax Abatements and Rebuilding in Cleveland, Ohio," State and Local Government Review 42, no. 2 (2010): 104-17.	An analysis of residential property tax abatement policy in Cleveland, Ohio from 1987–2005 found that assessed homes located near tax-abated properties appreciated at a faster rate than other similar homes. It also found 60% of residents who purchased a tax abated home claimed that lower property taxes significantly factored into their decision to buy.

Understanding the Threat Macroeconomic Shocks Pose

There is significant literature exploring neighborhood change. This section provides a brief summary of post-2008 studies that attempt to define the level of threat a major economic disruption poses to different types of neighborhoods. This section explores studies that analyze how natural disasters and recessions, including the Great Recession, affected neighborhoods.

Great Recession or Natural Disaster

Studies on neighborhood stability after the 2008 Great Recession show:

- Higher-income and economically diverse neighborhoods are more resilient.
- High residential foreclosure rates are strong predictors of neighborhood distress and instability, including reduced property values and increased vacancy rates. Factors that affect foreclosure rates include the race of the residents.
- Homeowner neighborhoods may offer more stability than majority rental neighborhoods.
- A municipality's financial condition and ability to maintain and improve core infrastructure can also influence the neighborhood housing market's resilience.

Studies & Publications	Summary
Dalbyul Lee, "The Impact of Natural Disasters on Neighborhood Poverty Rate: A Neighborhood Change Perspective," Journal of Planning Education and Research 40, no. 4 (2020).	This study found that the physical damage inflicted by natural disasters has a significant effect on the trend of neighborhood change. Home values and racial diversity of neighborhoods are likely to immediately decrease after natural disasters; however, they don't shift the subsequent rate of change. Meanwhile, poverty rates likely increase in the aftermath of the disasters and annually decline over time. Natural disasters may have more adverse impacts on low- and high-income neighborhoods than moderate-income neighborhoods. The effects on low-income communities are most severe and long-lasting. Suburban neighborhoods are likely to see a decrease in their home values and increase in poverty after natural disasters.
Thom Malone and Christian L. Redfearn, "Shocks and Ossification: The Durable Hierarchy of Neighborhoods in U.S. Metropolitan Areas from 1970 to 2010," Regional Science and Urban Economics 69 (2018): 94-121.	The study found that despite the substantial changes within metropolitan America between 1970 and 2010, there is remarkable persistence in the rank of census tracts by population density, income, education, and house prices. Racial and ethnic variables appear to be less persistent, but all variables exhibit a significant trend toward more stability over time. Even in the presence of large shocks to the metropolitan economy, a majority of Metropolitan Statistical Areas (MSAs) retain the same basic spatial hierarchy they had decades ago.

Kyungsoon Wang, “Neighborhood Housing Resilience: Examining Changes in Foreclosed Homes During the U.S. Housing Recovery,” Housing Policy Debate 29, no. 2 (2018): 296–318.	Using mortgage data from LPS Applied Analytics and data on neighborhoods from the 2009–2013 American Community Survey (ACS), the author analyzed 368 metropolitan areas. The study found that initially stable neighborhoods had quicker recoveries while lower-income neighborhoods were less resilient—although their resilience improved when surrounded by suburban, affluent neighborhoods.
Kyle Fee, “Neighborhood Change in the Fourth Federal Reserve District: A Multivariate Approach,” Federal Reserve Bank of Cleveland Special Report (2017).	The report described neighborhood change in the Ohio cities of Cincinnati, Cleveland, and Columbus, and Pittsburgh, Pennsylvania from 1970 to 2010. The report found that most neighborhoods did not change in terms of demographics and income and home values over the 40 years. However, neighborhood change rates increased during the 2000s, especially in Cincinnati and Pittsburgh.
RJ Sampson, Jared N. Schachner and R. Mare, “Urban Income Inequality and the Great Recession in Sunbelt Form: Disentangling Individual and Neighborhood-Level Change in Los Angeles,” The Russell Sage Foundation Journal of the Social Sciences 3, no. 2, (2017): 102 - 128.	This study found an overwhelming 97% of Los Angeles low-income neighborhoods in 1990 remained low-income ten years later while 87% of the highest income neighborhoods in 2000 retained their status ten years later (2008–2012). Downward neighborhood mobility from the top was thus quite rare, as well as neighborhood upgrading. The tendency was for low-income neighborhoods to remain “stuck in place.” Where change does occur is in the middle of the distribution. Mixed middle- income neighborhoods were both less prevalent and more unstable.
Elora Raymond, Kyungsoon Wang and Dan Immergluck, “Race and Uneven Recovery: Neighborhood Home Value Trajectories in Atlanta Before and After the Housing Crisis." Housing Studies 31 (3) (2016): 324-339.	Examining housing markets in the Atlanta region before, during, and after the housing crisis, the authors found that many Black neighborhoods exhibited steep price declines with only slight recovery following the crisis. Meanwhile, many predominantly white middle- and upper-income neighborhoods generally recovered from any housing price declines.
J. Landis, “Tracking and Explaining Neighborhood Socioeconomic Change in U.S. Metropolitan Areas Between 1990 and 2010,” Housing Policy Debate 26 (2016): 2-52.	The study sought to categorize all urban and suburban census tracts in the 70 largest U.S. metropolitan areas according to whether they experienced substantial socioeconomic change between 1990 and 2010. Metropolitan-scale factors and neighborhood-scale factors did a better job of explaining neighborhood decline than neighborhood upgrading. Among core areas, the principal local factors associated with whether a neighborhood experienced substantial socioeconomic upgrading were low initial incomes, high initial rents, and higher proportions of white and college-educated residents. The presence and availability of an older housing stock also contributed to the likelihood

	of neighborhood upgrading. Core areas were more likely to drop, but less so if their location was near their central business districts. The suburban tracts most likely to decline were those within initially tracts with higher incomes and rents and lower home values. Suburban tracts with lower initial proportions of whites and higher proportions of Blacks and Hispanics were only slightly more likely to decline.
Kyungsoon Wang, "The Characteristics of Resilient Neighborhood Housing Markets During and After the Housing Crisis." Dissertation Georgia Institute of Technology (2016). https://smartech.gatech.edu/handle/1853/59156?show=full accessed on April 28, 2021.	This dissertation studied neighborhood resilience from 2000-2014 and found that after the Great Recession, neighborhoods with low-income families had more difficulty recovering to their former housing status while those with high-income families were resilient to the economic recession. Low-income neighborhoods across the nation suffered 5% lower home appreciation rates and 7% higher foreclosure rates. Homeowners in low-income neighborhoods also obtained 5% fewer low-cost home purchase loans than middle-income neighborhoods during the housing market recovery period from 2011 to 2014. Conversely, higher-income neighborhoods enjoyed 2.5% more low-cost home purchase loans than middle-income neighborhoods. Nieghborhoods with lower-income residents who acquired home purchase loans in 2011 were more likely to experience rapid growth in home appreciation rates. Loan originations for low-income neighborhoods were associated with an approximately 20% increase in home values. Racial diversity and high education and income, in general, contributed to neighborhood resilience by decreasing the number of foreclosures and increasing the number of low-cost home purchase loans. However, economic shocks affected neighborhoods with higher shares of auto-dependency, minorities, the elderly, young workers, and middle education attainment.
Elizabeth C. Delmelle and Jean-Claude Thill, "Neighborhood Quality-of-Life Dynamics and the Great Recession: The Case of Charlotte, North Carolina," Environment and Planning A: Economy and Place *Vol* 46(4) (2014): 867-884.	This paper examined neighborhood responses to the business cycle for the decade 1999 –2009 in Charlotte, North Carolina. The results indicated that neighborhoods falling within the lowest quality of life category exhibited the greatest boost in relative upward mobility in the boom leading up to the recession. Many of these same neighborhoods reverted back to their previous conditions once the recession hit. Overall, neighborhood resilience is context-dependent, and so is neighborhood response to exogenous shocks.

Elizabeth C. Delmelle and Jean-Claude Thill, “Mutual relationships in neighborhood socioeconomic change,” Urban Geography 35 (2014): 1215 - 1237.	The study explored whether crime, youth, social distress, homeownership, and economic conditions led to changes in communities in Charlotte, North Carolina, throughout the 2000-2010 decade. The findings indicated that homeownership does not influence decline. Homeownership may decrease when a neighborhood is in decline or when a community is attracting residents of a higher socioeconomic status. The study did not find evidence that higher transit, retail, or employment accessibility would lead to changes in a neighborhood’s socioeconomic profile.
Sonya Williams, George Galster and Nandita Verma, "The Disparate Neighborhood Impacts of the Great Recession: Evidence from Chicago," Urban Geography 34, no. 6 (2013): 737-763.	This analysis of neighborhood trajectories and the rate of change in Chicago from 2000-2009 found that the Great Recession (2006-09) had disparate impacts based upon neighborhood type. The authors defined five neighborhood types distinguished by their economic and racial composition. The analysis found that the recession had greater negative impacts on lower-income and neighborhoods of color that included loss of local job opportunities, home price values, and a rise in foreclosures. Moderate income neighborhoods experienced lesser declines in mortgage lending than high- or low-income neighborhoods.
Claudia Solari, “Affluent Neighborhood Persistence and Change in U.S. Cities,” City and Community 11(4) (2012): 370-388.	Using US census data from 1970 to 2010, the study found increasing rates of stability in the affluence and poverty of neighborhoods through 2000 with declines during the last decade. Overall, the analysis shows that neighborhoods within cities are characterized more by persistently affluent and poor neighborhoods in the 2000s than in the 1970s and over one-third of neighborhoods that were poor in 1970 were also poor in 1980, 1990, 2000, and 2010. Most neighborhood change occurs between adjacent income categories (e.g., poor-to-middle-income or affluent-to-middle-income). The drop in income among poor neighborhoods comes in combination with lower rates of stability.
Yang Zhang and Walter Gillis Peacock, "Planning for Housing Recovery? Lessons Learned From Hurricane Andrew," *Journal of the American Planning Association* 76(1) (2009): 5-24.	Following Hurricane Andrew in South Miami-Dade County, Florida, housing recovery trajectories depended on neighborhood demographic, socioeconomic, and housing characteristics. The study findst that rental units and homes in low-income and minority neighborhoods recovered more slowly. Home sales increased significantly, with some properties selling multiple times within a short period, especially in heavily damaged nonminority neighborhoods. Property abandonments increased dramatically, potentially creating cascading negative effects in affected communities.

Recessions Generally

Initial socio-economic conditions in a neighborhood significantly impact post-recession recovery. Economic diversity, homeownership rates, and the local government's financial capacity may also be critical resilience factors.

Richard Adkisson, Lawrence D. Laplue, and Christopher J. Sroka, " The Role of Initial Conditions in Post-Great Recession Recovery and Development: Single-County MSAs, " Economic Development Quarterly 34, no. 1 (2019): 64–77.	The study analyzed the link between initial socioeconomic conditions in 2009 in single-county metropolitan areas and post-recession economic recovery from 2009 to 2016. The authors found that initial socioeconomic conditions could explain at least two-thirds of post-recession recovery variables.
Sisi Zhang, and Robert I. Lerman, "Does Homeownership Protect Individuals From Economic Hardship During Housing Busts?" Housing Policy Debate 29, no. 4 (2018): 522–41.	Using data from the national 2008 Survey of Income and Program Participation, this study found that homeowners were 25% less likely to experience material hardship than unsubsidized renters, and that these benefits hold for both households of color and non-Hispanic whites.
Anne Anders and Richard Gearhart, "The Financial State of Municipalities and the Effect on Housing Values," Journal of Housing Research, 27, no. 1 (2018): 17-44.	This study found that a municipality's financial condition impacts housing values within that municipality. The empirical results provide evidence that the financial state of a municipality affects local housing values. In particular, engaging in long-term capital projects leads to higher housing values.
Steven Deller and Philip Watson, " Did Regional Economic Diversity Influence The Effects Of The Great Recession?" Economic Inquiry 54, no. 4 (2016): 1824–38.	The study examined whether higher levels of pre-recession economic diversity in 2005 assisted communities during and after the recession from 2012-2015. Results showed that economic diversity was consistently associated with more stability in the unemployment rate, population-employment ratio, and concentration of establishments, but it was not related to average weekly wages.

Derek Hyra and Jacob S. Rugh, "The US Great Recession: Exploring Its Association with Black Neighborhood Rise, Decline and Recovery," Urban Geography 37, no. 5 (2016): 700–726.	This article explored the connection between lending and property value patterns before (2000-2006), during (2007-2009), and after (2010-2012) in three gentrifying Black neighborhoods – Bronzeville in Chicago, Harlem in NYC, and Shaw/U Street in Washington, DC. The analysis found that different communities experienced different trajectories after the recession, likely due to individual characteristics. Increasingly middle-class Bronzeville saw property decline. In contrast, the wealthier Harlem and Shaw/U Street neighborhoods remained more stable. The study also found that subprime lending pre-recession might have temporarily stabilized Black neighborhoods, and certain types of gentrification possibly protected communities from negative impacts of the recession.

Mortgage and Tax Foreclosures

Mortgage and tax foreclosures have a negative impact on urban and suburban neighborhoods with substantial "spillover" effects, including increasing crime and homelessness while reducing property values and homeownership rates.

Studies & Publications	Summary
Kyungsoon Wang and Dan Immergluck, "Neighborhood Affordability and Housing Market Resilience," Journal of the American Planning Association 85 (2019): 544 - 563.	The study examined the effects of location affordability (housing and transportation affordability combined) on resilience to foreclosure in more than 300 U.S. metropolitan areas between 2011-2014. In the national analysis, where location affordability was high, home foreclosure rates dropped substantially in central/high-density areas, but not in low-density suburban areas. Location affordability contributed to recovery in central cities in strong and weak metros and the suburbs of boom–bust metros.
Jacob William Faber, "On the Street During the Great Recession: Exploring the Relationship Between Foreclosures and Homeless-ness," Housing Policy Debate 29, no. 4 (2019): 588–606.	Using U.S. Department of Housing and Urban Development (HUD) homelessness data from 2008-2012, as well as RealtyTrac foreclosure data from 2007-2011, the author found a strong correlation between foreclosures and homelessness, especially in single homeless individuals.
Eric Seymour and Joshua Akers, "Building the Eviction Economy: Speculation, Precarity, and Eviction in Detroit," Urban Affairs Review, (June 2019).	Leveraging data from Detroit tax foreclosure auctions and eviction filings in single-family neighborhoods from 2005 to 2017, the study linked foreclosure sales to subsequent eviction cases and estimated the neighborhood-level impact of prior-year tax sales on current year evictions. It found that at least 23% of tax foreclosure sales between 2005 and 2015 were linked to one or more subsequent eviction filings with many of the largest foreclosure buyers associated with large numbers of filings involving hundreds of properties. Furthermore, many investor-owned properties were linked to repeat evictions on individual properties.
Emily Molina, "Foreclosures, Investors, and Uneven Development during the Great Recession in the Los Angeles Metropolitan Area," Journal of Urban Affairs 38, no. 4 (2016): 564–80.	The paper examined investment patterns in investor purchases of foreclosures in the L.A. and Inland Empire region in 2008 and 2009. It found that investors were more likely engaged in harmful flipping in urban, poorer neighborhoods with lower foreclosure rates and larger nonwhite populations. Corporate investors were more likely to invest in neighborhoods with lower foreclosure rates and more white residents.

	Other findings similarly showcased different patterns of investment in the urban and inner-ring sections of the region compared to the exurbs, as well as significant correlations between patterns of investment and neighborhood racial demographics.
Jackelyn Hwang, “Racialized Recovery: Post-Foreclosure Pathways in Distressed Neighborhoods in Boston,” Joint Center for Housing Studies Harvard University (2015).	Between 2006–2011 in Boston, Massachusetts, this study found that foreclosures purchased by individual investors, corporations, and trusts saw higher rates of housing maintenance inspection violations than owner-occupied foreclosures.
Katrin B. Anacker, "Analyzing Census tract foreclosure risk rates in mature and developing suburbs in the United States, Urban Geography 36, no.8 (2015) : 1221-1240.	This study analyzed foreclosure risk rates in central cities, mature suburbs, and developing suburbs in the 100 largest metropolitan statistical areas using data from the 2010 Neighborhood Stabilization Program (NSP3). It found that mature suburbs have foreclosure rates similar to central cities and that similar factors determine neighborhood foreclosure risk rates.
Lauren Lambie-Hanson, “When Does Delinquency Result in Neglect? Mortgage Distress And Property Maintenance,” Journal of Urban Economics, Vol 90 (2015): 1-16.	Using data on constituent complaints and requests for public services made to the City of Boston, the author examines whether foreclosures push down prices of nearby properties due to poorer maintenance. Based upon an examination of the incidence and timing of complaints of maintenance issues at foreclosed properties, borrowers begin neglecting maintenance when they are 90 days or more delinquent, and property distress becomes more common once the owner has been in foreclosure for over a year. Bank owned properties are most likely to be the subject of constituent complaints.
Matthew Hall, Kyle Crowder and Amy Spring, "Neighborhood Foreclosures, Racial/Ethnic Transitions, and Residential Segregation," American Sociological Review 80, no. 3, 2015, 526-549.	The authors examined foreclosure events between 2005 and 2009 to calculate neighborhood foreclosure rates for nearly all block groups in the United States. They found that the foreclosure crisis patterned strongly along racial lines: Black, Latino, and racially integrated neighborhoods had exceptionally high foreclosure rates. Foreclosure concentrations accompanied declining shares of whites and expanding shares of Black and Latino residents. Results further suggested that both white population loss and growth of Black and Latino households drove these compositional shifts, particularly from racially mixed settings with high foreclosure rates.

Jason Houle, Michael Collins, and Max Schmeiser, "Flu and Finances: Influenza Outbreaks and Loan Defaults in U.S. Cities, 2004-2012," American Journal of Public Health 105 (2015): 75-85.	The study examined the association between influenza outbreaks and credit card and mortgage defaults in 83 metropolitan areas from 2004 to 2012. These results suggest that influenza outbreaks have a disproportionate impact on vulnerable borrowers already behind on their payments. Overall, it appears a relationship exists between exogenous health shocks (such as influenza) and credit default.
Keith Ihlanfeldt and Tom Mayock, "The Variance in Foreclosure Spillovers across Neighborhood Types," Public Finance Review 44, no. 1 (2014): 80–108.	The study looked at Florida single family home sales in Broward, Miami-Dade, and Palm Beach Florida counties from 1999 to 2011. It explored how a 'distressed' property would impact the transaction of another property finding greater negative spillover effects in high-income neighborhoods, whereas spillover effects were not observed in low-income, minority neighborhoods.
Ingrid Gould Ellen, Josiah Madar and Mary Weselcouch, "The Foreclosure Crisis and Community Development: Exploring REO Dynamics in Hard-Hit Neighborhoods," Housing Studies 30, no. 4 (2014): 535–59.	The study examined real estate owned (REO) properties in Fulton County, Georgia, Miami-Dade County, Florida, and New York City between 2002 and 2012, or 2002 and 2011 (Miami-Dade), and found a wide variation in REO concentration rates. Authors noted that while REOs were not concentrated in the poorest neighborhoods, their concentration was overwhelming in areas with Black residents. Still, in all cities, REO numbers began declining in the hardest-hit neighborhoods (those with higher numbers of REOs) by the end of 2011.
Deidre Pfeiffer, Danielle Wallace, and Alyssa Chamberlain, "Is Investor Purchasing of Foreclosures Related to Neighborhood Crime? Evidence From a Phoenix Suburb," Housing Policy Debate 25, no. 1 (2014): 67–90.	The study investigated investor purchases of foreclosed properties and associations with violent and property crime reports in Chandler, Arizona between 2007 and 2010. The results showed that neighborhoods with more investor-purchased properties had higher rates of violent crime the following year.
Laura Choi, "Housing Market Recovery in the 12th District: Implications for Low- and Moderate-Income Communities," Federal Reserve Bank of San Francisco (2013).	The report examined the reality of the housing market recovery and investor activity in low- and moderate-income communities in the Federal Reserve Bank's 12th District (approximately all states west of the Rockies, including noncontiguous states and territories) from 2010 to 2013. One main finding was that low- and moderate-income communities experienced especially high investor purchase activity rates that resulted in higher rents and lower homeownership.
Chris Schildt, Naomi Cytron, Elizabeth Kneebone and Carolina	The paper explored subprime lending and foreclosure trends in suburban areas compared to inner cities. It measured the relationship

Reid, "The Subprime Crisis in Suburbia: Exploring the Links Between Foreclosures and Suburban Poverty," Federal Reserve Bank of San Francisco (2013).	between suburban foreclosures and suburban poverty in the 100 largest metropolitan areas from 2004 to 2008. The findings showed that while subprime lending happened along similar patterns in urban and suburban areas, foreclosures were much more prevalent in the suburbs, a phenomenon that was strongly linked to increases in poverty since 2007.
Sonya Williams, George Galster, and Nandita Verma,"Home Foreclosures as Early Warning Indicator of Neighborhood Decline," Journal of the American Planning Association 79(3) (2013): 201–21.	The study used time-series data on residential and neighborhood characteristics in Chicago to determine causal predictors of neighborhood disinvestment. Of the characteristics the authors analyzed, only residential foreclosures were significant, unidirectional predictors of future neighborhood distress. The study also found a link between foreclosure and decline. It found that "the completed foreclosure indicator was strongly predictive of three other indicators: property crimes, total home purchase loan amounts, and mean home purchase loan amounts." The authors characterize foreclosures as an "early warning indicator" of neighborhood change.
Roderick W. Jones and William Alex Pridemore, "The Foreclosure Crisis and Crime: Is Housing-Mortgage Stress Associated with Violent and Property Crime in U.S. Metropolitan Areas?" Social Science Quarterly 93(3) (2012): 671-691.	The study examined a sample of 142 metropolitan statistical areas between 2005-2011 to determine if the housing-mortgage stress caused by the foreclosure crisis is associated with violent and property crime in the U.S. The study found no evidence that foreclosures caused crime or that metropolitan areas with higher levels of housing-mortgage stress had higher rates of violent crime.
Stephan Whitaker and Thomas J. Fitzpatrick, "Deconstructing Distressed-Property Spillovers: The Effects of Vacant, Tax-Delinquent, and Foreclosed Properties in Housing Submarkets," Federal Reserve Bank of Cleveland (2012).	The study focused on Cuyahoga County, the home of Cleveland, between 2005 and 2009. The authors found that a vacant and/or delinquent property within 500 feet reduces a home's selling price by 1% to 2.7%. In low-poverty areas, tax-current foreclosed homes have large negative impacts of 4.6%. In high-poverty areas, the authors observe positive correlations of sale prices with tax-current foreclosures and negative correlations with tax-delinquent foreclosures.
John Campbell, Stefano Giglio and Parag Pathak,"Forced Sales and House Prices," American Economic Review 101, no. 5 (2011): 2108-31.	This paper analyzed data on all house transactions in Massachusetts in the 20 years from 1990–2010 and found that houses sold after foreclosure sold at lower prices than other houses. Foreclosure discounts were on average at 27% of the value of a house. Moreover, foreclosures that took place within proximity of a house lowered the price at which it was sold. The study estimated that a foreclosure at a distance of 0.05 miles lowered a house's price by about 1%.

Timothy Kobie and Sugie Lee, "The Spatial-Temporal Impact of Residential Foreclosures on Single-Family Residential Property Values," Urban Affairs Review 47 (2011): 3-30.	Using data from 2006–2007 in Cuyahoga County, the study found that nearby foreclosures imposed less of an impact on non-distressed sales in the city of Cleveland than in the city's suburbs. Given the predominance of FHA-insured properties and HUD-owned homes in Cleveland, however, the marginal effect of these properties added up to a massive depreciation of home values. The study findings also showed a higher negative impact on neighboring property values one year after a property has been foreclosed upon.
Ingrid Gould Ellen, Johanna Lacoe and Claudia Ayanna Sharygi, "Do foreclosures cause crime?" Journal of Urban Economics 74(C) (2011): 59-70.	This policy brief looked at the relationship between foreclosure and crime increases in New York City from 2003–2010 The study found that concentrated foreclosure activity led to increases in violent and public order crime in the surrounding blocks. The crime increase began even before auctioning the house - emphasizing the need to expedite foreclosures.
Yanmei Li and Hazel Morrow-Jones, "The Impact of Residential Mortgage Foreclosure on Neighborhood Change and Succession," Journal of Planning Education and Research 30(1) (2010): 22-39.	The study used sheriff's foreclosure sales data in Cuyahoga County between 1983 and 1989 to examine how residential mortgage foreclosures contribute to neighborhood change and succession. The results suggest that higher foreclosure rates are positively related to changes in percentage Black population, female headship rate, median household income, and unemployment rate. The authors concluded that foreclosures sped up the housing filtering process, and the racial and economic turnover of residents.
Jenny Schuetz, Vicki Been, and Ingrid Gould Ellen, "Neighborhood Effects of Concentrated Mortgage Foreclosures," NYU Law and Economics Research Paper No. 08-41 (2008).	Authors examine the effect of foreclosure starts on housing prices in the surrounding neighborhood using a unique dataset on property sales and foreclosure filings in New York City from 2000 to 2005. Analysis found that proximity to foreclosure is associated with lower sales prices and the magnitude of the price discount increases with the number of properties in foreclosure.
Brian A. Mikelbank,"Spatial Analysis of the Impact of Vacant, Abandoned and Foreclosed Properties," Federal Reserve Bank of Cleveland (2008).	This study of Columbus, Ohio described the impact of vacant, foreclosed, and tax-delinquent properties on house prices. It found that a vacant property had a more severe impact on a nearby house sale within 500 feet. The effect of foreclosures, by contrast, was more moderate but had a farther reach with a significant impact out to 1,000 feet. Additionally, since the distribution of foreclosures was more widespread throughout the study area, their estimated aggregate impact (for 2006) of more than $97.5 million far outpaced the $16.9

	million impact of vacant or abandoned properties, which were clustered in the city core.

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