# ECONOMIC IMPACTS OF THE INGHAM COUNTY LAND BANK (2006–2012)

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INGHAM COUNTY LANDBANK

MICHIGAN STATE UNIVERSITY | Land Policy Institute

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# Executive Summary

DURING THE LATTER HALF OF 2012, THE INGHAM COUNTY LAND BANK CONTRACTED THE MICHIGAN STATE UNIVERSITY LAND POLICY INSTITUTE TO INVESTIGATE THE ECONOMIC IMPACTS OF LAND BANK ACTIVITY IN LANSING, MI. SEVERAL STUDIES HAVE EXAMINED THE NEGATIVE CONSEQUENCES OF FORECLOSURE, ABANDONMENT, VACANCY AND BLIGHT. YET, TO OUR KNOWLEDGE, FEW STUDIES HAVE EMPIRICALLY ESTIMATED THE ECONOMIC IMPACTS OR PROPERTY VALUE EFFECTS OF DIRECT LAND BANK ACTIVITY, PARTICULARLY REHABILITATION AND RESALE. THIS STUDY UTILIZES MANY OF THE QUANTITATIVE METHODS AND TECHNIQUES USED IN PREVIOUS ECONOMIC IMPACT STUDIES WITH THE INTENT OF SHEDDING LIGHT ON THE BENEFITS OF LAND BANKING, RATHER THAN THE COSTS OF FORECLOSURE AND ABANDONMENT. THE PRIMARY OBJECTIVE OF THIS RESEARCH IS TO DETERMINE WHAT, IF ANY, POSITIVE EFFECT LAND BANK ACTIVITIES HAVE ON NEARBY PROPERTY VALUES AND THE REGIONAL ECONOMY AS A WHOLE.

During the latter half of 2012, the Ingham County Land Bank contracted the Michigan State University Land Policy Institute to investigate the economic impacts of Land Bank activity in Lansing, MI. Several studies have examined the negative consequences of foreclosure, abandonment, vacancy and blight. Yet, to our knowledge, few studies have empirically estimated the economic impacts or property value effects of direct Land Bank activity, particularly rehabilitation and resale. This study utilizes many of the quantitative methods and techniques used in previous economic impact studies with the intent of shedding light on the benefits of land banking, rather than the costs of foreclosure and abandonment. The primary objective of this research is to determine what, if any, positive effect Land Bank activities have on nearby property values and the regional economy as a whole.

Overall, the study attempts to answer the following questions:

- What is the effect of Land Bank activities on nearby sale prices?
- At what distance does proximity to a Land Bank property have an effect?
- Do Land Bank activities result in higher assessed values for nearby properties?
- What are the total economic impacts of Land Bank construction, renovation, and maintenance activities on the regional economy?

Previous research on places with weak housing markets, such as the City of Lansing has experienced in the last four to five years, indicates that finding a positive effect—or benefit—of Land Bank activities may be challenging. In response to this challenge, the Land Policy Institute utilized a mixed-methods approach to estimate the Land Bank's potential range of impacts. They include:

1. Hedonic Property Price Analysis.
2. Property Value Comparison.
3. Economic Impact Analysis of Regional Economy.

The hedonic pricing method breaks down the sale price of specific properties in Lansing by the features of the home, property and surrounding attributes. The outcome allows us to isolate and assess the effect of a nearby Land Bank property (within 1,000 feet) on sale prices. The City of Lansing's Assessor's office and Ingham County Equalization office provided property information for parcels within the City from 2002–2012 for this analysis. These records include information on sale price, sale year, assessed value for tax purposes, number of bathrooms, square feet and so on. Data for the number of bedrooms, a typical hedonic variable, was not available from the Assessor's office for the majority of the properties in Lansing; therefore, this variable was not included in the analysis. The MSU Land Policy Institute utilized spatial data on these parcels and the location of Land Bank properties to determine the proximity of demolished, rehabilitated and newly built Land Bank homes to sold homes.

Despite the declining housing market in the Lansing area, there appears to be a mitigating effect of the presence of Land Bank properties in neighborhoods that have experienced high rates of foreclosure. The hedonic analysis implies that although property values within 1,000 feet of a Land Bank home decreased by 9.5%, properties within 500 feet of a renovated or new home experienced a net increase of 5.2%. There is a 14.7% cost difference between prices of homes sold after a renovation took place within 500 feet and those sold after a renovation between 500 and 1,000 feet. This is consistent with other study findings, which show homes within 500 feet are affected most by foreclosures.

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The second method, a property value comparison, examines before-and-after changes in neighborhood average assessed values associated with a Land Bank acquisition, rehabilitation or sale of a property. Due to a weak housing market in Lansing, lower sales volume in the distressed neighborhoods where the Land Bank tends to focus its efforts, or a combination of both, sale prices can be problematic when attempting to measure property value impacts. Therefore, a comparison test was identified to examine whether nearby properties experience an increase in their assessed value after a Land Bank intervenes on a nearby property. To test these effects, the average property assessment value is aggregated at pre-determined distances from a Land Bank property for numerous years. The Land Policy Institute hypothesized that this comparison could show whether or not a Land Bank positively contributed to nearby property assessed values.

The test on the assessed values of properties near Land Bank activities produced inconclusive results for two likely reasons. First, there could be a time component that is not captured in the analysis. That is, assessed values of nearby properties may still reflect the presence of a foreclosure or abandoned property—not one that was rehabilitated or demolished. Second, assessed values in the City of Lansing have been on a downward trend. Even while controlling for this trend, it was not possible to isolate changes in assessed values based on Land Bank activity rather than market forces. Despite these inconclusive results, the hedonic property price method described above provided useful evidence of the positive relationship between proximity to Land Bank renovations and new homes and surrounding home prices.

Finally, to identify the estimated economic impacts of Land Bank activities, such as snow removal, yard maintenance, renovation, construction and demolition, spending data are analyzed using an economic impact modeling tool (IMPLAN). The economic impact analysis estimates the number of jobs and economic output associated with an increased investment in different spending categories over time. The total estimated economic impacts of $56,239,355 and 426 jobs suggest a significant impact beyond localized neighborhood effects. Based on a total investment of $31,051,692 from 2006 to 2012, this impact represents a 1.8:1 return on investment for Ingham County Land Bank activities.

The results from the hedonic property price analysis and the regional economic impact assessment suggest that there is a positive, measurable impact of Ingham County Land Bank properties within Lansing neighborhoods and the broader region. It should be noted that these quantitative effects are in addition to other qualitative effects that have been witnessed in improved neighborhood aesthetics, home ownership for low-income families, and more stable property tax revenues for the City of Lansing.

These results show that the return on investment made by the Ingham County Land Bank in the Lansing community has been positive, even in a down economy and a declining housing market. It should also be noted that there is often a delay in the realization of economic impacts, particularly property price increases, associated with these types of investments. The Ingham Land Bank has only been in operation for seven years, and it will be important to continue to monitor economic impacts in the future.

Finally, the provision of Neighborhood Stabilization Program funds, provided by the U.S. Department of Housing and Urban Development, through the Michigan State Housing Development Authority, augmented the Land Bank's investments over the past four years. These federal funds have helped to build capacity within the Land Bank, as well as its ability to leverage future funds for neighborhood revitalization efforts.

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# Introduction

SINCE 2006, THE INGHAM COUNTY LAND BANK HAS SERVED AS A "STRATEGIC ECONOMIC TOOL THAT SUPPORTS GROWTH AND INVESTMENT WITHIN THE COMMUNITY. DEDICATED TO IMPROVING THE QUALITY OF OUR NEIGHBORHOODS AND STRENGTHENING OUR COMMUNITIES, THE INGHAM COUNTY LAND BANK WAS CREATED TO RETURN TAX REVERTED, PURCHASED, DONATED AND UNCLAIMED LAND TO PRODUCTIVE USE MORE RAPIDLY THAN MAY HAVE BEEN POSSIBLE OTHERWISE."

Since 2006, the Ingham County Land Bank has served as a "strategic economic tool that supports growth and investment within the community. Dedicated to improving the quality of our neighborhoods and strengthening our communities, the Ingham County Land Bank was created to return tax reverted, purchased, donated and unclaimed land to productive use more rapidly than may have been possible otherwise." The Land Bank prevents neighborhoods from falling into further decline by buying, renovating and reselling properties in a given area. The overall aim is to make properties attractive housing options for individuals and families interested in buying a home, which in turn attracts good neighbors, protects property values and improves neighborhoods (Ingham County Land Bank, 2012).

The activities of the Ingham County Land Bank have been supported by funding from Citizens Bank, Capital National Bank, PNC Bank, the HUD Neighborhood Stabilization Program (phases 1, 2 and 3) and the City of Lansing HOME funds. The Land Bank receives property acquisition rights from the County.

Once the Land Bank obtains ownership of a property, it has several options. When a house is badly deteriorated, demolition is an option that is often used. In many cases though, the Land Bank invests time, labor and construction materials in an effort to build or improve a house, which can then be purchased by an individual or family who has the intent of residing there. The Land Bank sells properties with an ownership covenant, meaning that the buyer must agree to own the property and not convert it to a rental. This ensures that

properties, and in many cases, neighborhoods, have a chance to become more stable through ownership, as opposed to facing the instability associated with a high concentration of speculators and/or rental properties.

Between 2006 and now, the Land Bank has acquired 919 properties; demolished 142 properties; renovated or re-built 132 properties; and has resold 116 properties (as of September 2012), with revenues totaling approximately $10 million, which are reinvested in Land Bank activities (Ingham County Land Bank, 2012). While the Land Bank directly witnesses the positive impacts it has on neighborhoods, communities and the City, there has not been an effort to systematically estimate its overall economic impact.

# Background

LAND BANKING HAS BEEN IN PRACTICE SINCE THE 1960'S, WHEN CITIES ACROSS THE U.S. BEGAN TO EXPERIENCE HEAVY POPULATION SHIFTS FROM CITIES TO SUBURBS. THE RESULT WAS NOT ONLY FEWER PEOPLE IN CORE CITIES, BUT ALSO A SELF-PERPETUATING CYCLE OF ELEVATED VACANCY RATES, HIGHER CRIME, MORE BLIGHT AND A DECLINING TAX BASE. LAND BANKS WERE DEVISED TO COMBAT THE GROWING NUMBER OF ABANDONED AND TAX DELINQUENT PROPERTIES IN INNER CITIES. BY ACQUIRING AND RESERVING LAND, PUBLIC ENTITIES WERE ABLE TO "BANK" THESE LANDS FOR FUTURE USE.

Land banking has been in practice since the 1960's, when cities across the U.S. began to experience heavy population shifts from cities to suburbs. The result was not only fewer people in core cities, but also a self-perpetuating cycle of elevated vacancy rates, higher crime, more blight and a declining tax base. Land banks were devised to combat the growing number of abandoned and tax delinquent properties in inner cities. By acquiring and reserving land, public entities were able to "bank" these lands for future use. Over the years, Land Bank activities have primarily focused on acquiring tax delinquent properties. Legal processes and streamlined regulation have enabled Land Banks to more effectively acquire, manage and dispose of property (Alexander, 2011).[1]

Due to the mortgage crisis of the mid-to-late 2000's, rates of abandonment, bank and tax foreclosures rapidly increased across the country. Communities already facing higher than average abandonment—particularly those in the Midwest and some parts of the Northeast—were especially harmed by the crisis. By 2008, the foreclosure rate had doubled and 600,000 vacant, for-sale homes were added to already weak real estate markets (Alexander 2008).

1 For a thorough and detailed history of land banking, see Alexander (2011).

Unusually high rates of abandonment and vacancy had, and continue to have, negative effects on surrounding properties and the community at large. Vacant and abandoned properties are neighborhood liabilities. They decrease property values of surrounding properties, do not produce property tax revenue for local governments, increase the costs of police and fire protection, and lead to arson and crime (Alexander, 2008). The consequences of these risks spill over into nearby houses by decreasing their value, thereby further decreasing property tax revenues from occupied homes. Moreover, entire communities often fall into despair. Community cohesion dissipates, trust declines and people that once felt safe or happy in their neighborhood leave; therefore, perpetuating the cycle of decline and disinvestment.

> Vacant and abandoned properties are neighborhood liabilities. They decrease property values of surrounding properties, do not produce property tax revenue for local governments, increase the costs of police and fire protection , and lead to arson and crime.

The economic impacts of foreclosure and disinvestment have been examined extensively. Previous studies have shown that a house slipping into foreclosure or abandonment can depress surrounding property values by approximately $1,666 for properties within 250 feet (Leonard and Murdoch, 2009) in and around Dallas County, TX, and 2.3% for properties within 500 feet in Genesee County, MI (Griswold and Norris, 2007). In Philadelphia, the impacts were even more exaggerated. Abandoned property within 150 feet depressed values by $7,627; $6,819 at 300 feet; and $3,542 at 450 feet (Temple University Center for Public Policy and Eastern Pennsylvania Organizing Project, 2001). The same researchers found that houses on blocks with abandonment sold for $6,715 less than houses on blocks with no abandonment (Ibid) (Vacant Properties: The True Cost to Communities).

In Chicago, from 1997 to 1998, 3,750 foreclosures were estimated to have depressed nearby property values by $598 million citywide (Immergluck and Smith, 2006). In New York City, NY, Schuetz et al (2008) found a less straightforward relationship between foreclosure starts and home prices. In strong neighborhoods, being nearby to less than three foreclosures did not negatively affect property values, whereas being nearby more than three of them depressed values. However, in weaker neighborhoods, property values were lower where foreclosures were expected to occur. Whitaker and Fitzpatrick (2012) posited that measuring the negative effects of foreclosure alone obscures the fact that foreclosures are often driven by other factors, such as tax delinquency and high rates of poverty and vacancy. Additionally, not controlling for these factors and studying foreclosure effects in robust markets may produce biased estimates of foreclosure impacts on nearby properties. In the Cleveland (OH) housing market—which is weaker than Chicago (IL) and New York— controlling for submarkets, the authors found that foreclosures and/or tax delinquent properties depressed nearby sale prices by 2.7% to 7.6%.

In short, studies abound on the negative externalities created by vacant and abandoned property. However, much less research effort has been directed at estimating what, if any, positive impacts mitigating such problems has had on neighborhoods.

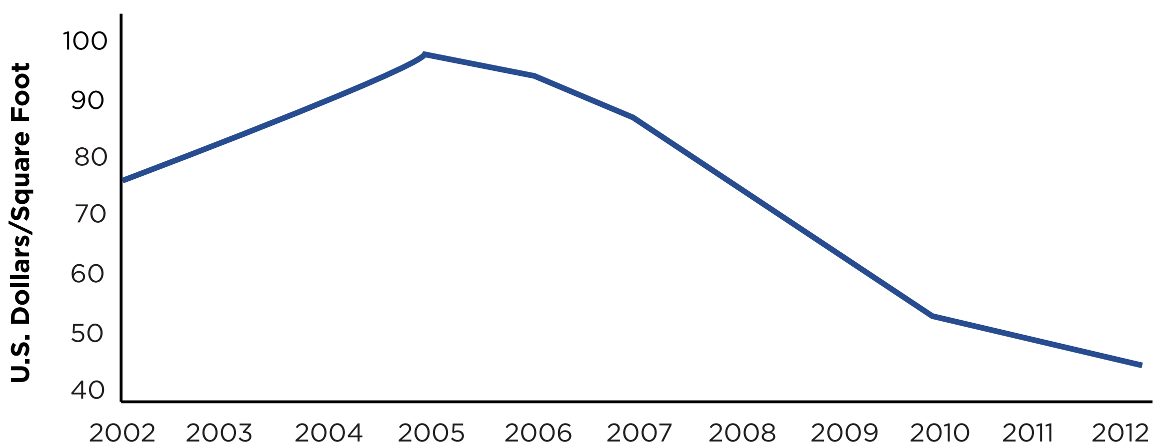
# Land Bank Activity in Ingham County

THE RATIONALE FOR HAVING A LAND BANK IN INGHAM COUNTY IS EVIDENT AFTER A BRIEF ANALYSIS OF THE MARKET. . . IN THE GENERAL PUBLIC, CONFIDENCE IN THE HOUSING MARKET HAS ALSO DWINDLED. LANSING WAS RANKED AMONG THE MARKETS WITH THE SLOWEST POTENTIAL RECOVERY FROM THE RECENT REAL-ESTATE CRISIS, WHICH FURTHER JUSTIFIES THE NEED FOR MARKET INTERVENTION.

The rationale for having a Land Bank in Ingham County is evident after a brief analysis of the market. Figure 1 gives some general insight to Lansing real estate trends by illustrating the average selling price of a two-bedroom home from 2000 to 2010. The upward spike from 2000 to 2005 and decline between 2006 to 2010 supports the notion that the Lansing real estate market was a victim of the national housing crisis. Vacancies in Lansing also increased by 56.57% between 2000 to 2010 (Michigan Foreclosure Task Force, 2012). In the general public, confidence in the housing market has also dwindled. Lansing was ranked among the markets with the slowest potential recovery from the recent real-estate crisis (Business Insider, 2010), which further justifies the need for market intervention.

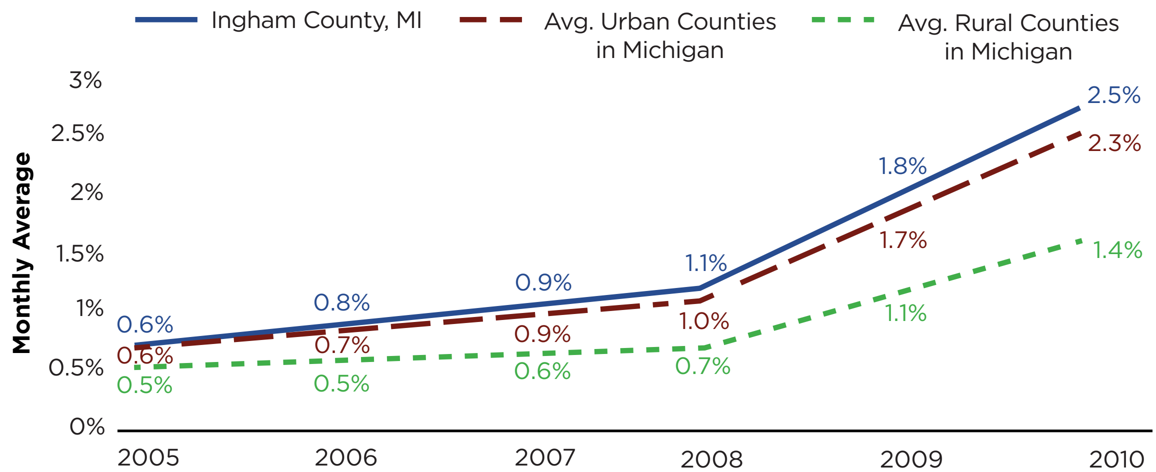
Much of this distress is attributed to the increasing foreclosure rate in Ingham County. Like in many other communities across the country, foreclosure rates have increased after 2005 (Figure 2). Also important is the increase in monthly average percentage of mortgages paid more than 90 days late per year. This number is often used to predict the future foreclosure rates. Ingham County experienced an increase of late payments from 2.4% in 2005 to 7.2% in 2010 (Figure 3), implying foreclosure rates continuing into the future. For all of the above reasons, it is not surprising that Land Bank activities in Ingham County have increased, particularly over the past two years.

## Figure 1: Average Price/Square Foot of Single Family Homes in Lansing



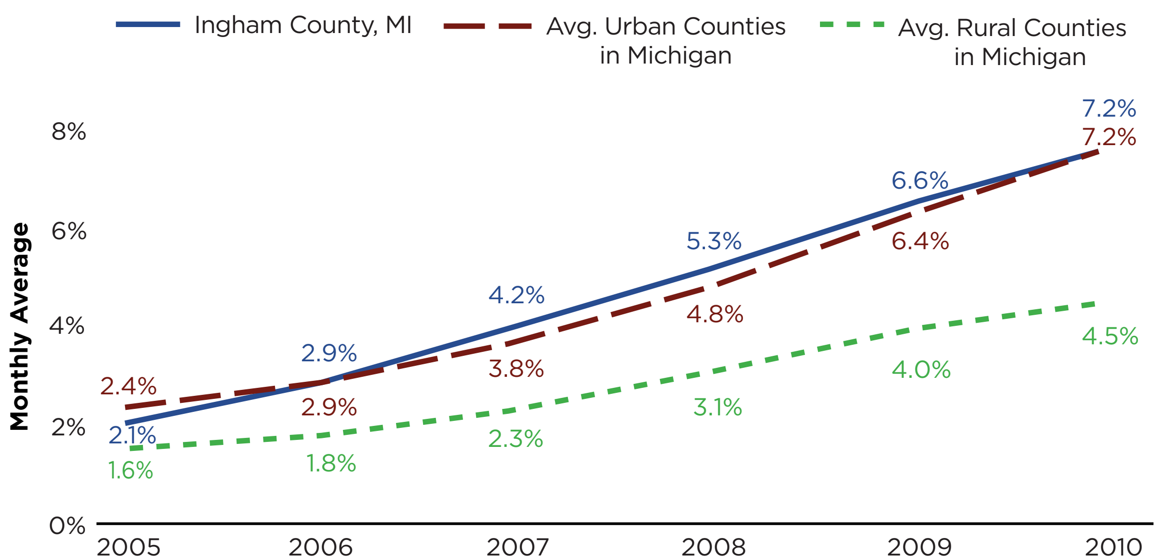

**Note:** Sales data was only available through 04/04/2012; the average price/square foot for 2012 has been calculated based on this information.
**Source:** Ingham County Equalization Office. Figure created by the Land Policy Institute, Michigan State University, 2013.

## Figure 2: Ingham County, MI – Monthly Average Percentage of Mortgages Foreclosed by Year – 2005–2010




**Source:** Michigan Foreclosure Task Force, Cridata.org. Figure created by the Land Policy Institute, Michigan State University, 2013.

## Figure 3: Ingham County, MI – Monthly Average Percentage of Mortgages 90+ Days Late per Year – 2005–2010




**Source:** Michigan Foreclosure Task Force, Cridata.org. Figure created by the Land Policy Institute, Michigan State University, 2013.

# Study Methods and Objectives

Due to the lack of previous research assessing the economic impacts of Land Bank investments, and the general concern about discovering positive impacts in a down economy and declining housing market, this study uses multiple methods and an assortment of data sources to examine the extent of economic impacts at the neighborhood and community or regional level. The three analyses that were conducted include:

1. Hedonic Property Price Analysis.
2. Property Value Comparison.
3. Economic Impact Analysis of Regional Economy.

The following sections describe the methods, data and results for each separate analysis.

Overall, the study attempts to answer the following questions:

- What is the effect of Land Bank activities on nearby sale prices?
- At what distance does proximity to a Land Bank property have an effect?
- Do Land Bank activities result in higher assessed values for nearby properties?
- What are the total economic impacts of Land Bank construction, renovation, and maintenance activities on the regional economy?

# Hedonic Property Price Analysis

MOST EMPIRICAL RESEARCH ON THE EFFECTS OF FORECLOSURE, ABANDONMENT AND VACANCY USED A HEDONIC REGRESSION MODEL, CONSISTING OF STRUCTURAL, DEMOGRAPHIC AND CENSUS DATA, COMBINED WITH FORECLOSURE, VACANCY STATUS AND TAX DELINQUENCY INFORMATION. . . THIS STUDY FOLLOWS IN THE FOOTSTEPS OF FORECLOSURE RESEARCH WITH ONE MAJOR EXCEPTION. INSTEAD OF MEASURING THE SHOCK THAT FORECLOSURES HAVE HAD ON NEARBY PROPERTIES, THIS STUDY AIMS TO ESTIMATE THE EFFECT OF LAND BANK ACTIVITIES ON NEARBY PROPERTIES OVER TIME.

Most empirical research on the effects of foreclosure, abandonment and vacancy used a hedonic regression model, consisting of structural, demographic and census data, combined with foreclosure, vacancy status and tax delinquency information (Schuetz et al., 2008). The estimates produced using these models answered the question: Controlling for numerous factors, how much of an impact do foreclosures have on nearby property values? Models typically utilized a time or distance function—or both—to improve their models and examine the effects of both recent and/or nearby foreclosures.

This study follows in the footsteps of foreclosure research with one major exception. Instead of measuring the shock that foreclosures have had on nearby properties, this study aims to estimate the effect of Land Bank activities on nearby properties over time. Instead of assuming a negative impact associated with foreclosure, this study hypothesizes a positive impact resulting from Land Bank intervention. Since the Land Bank focuses its efforts in neighborhoods with weaker housing markets and where foreclosure, delinquency and vacancy are more likely to occur, not only is the full range of negative impacts partially avoided by Land Bank intervention, but the neighborhood may

also expect to make strides toward recovery sooner than had the Land Bank not intervened.

This analysis follows previous empirical research by using the hedonic pricing method to estimate the effects of Land Bank activities by regressing structural attributes (square feet, number of bedrooms and bathrooms, presence of garage, etc.), demographic and socio-economic conditions at the census tract or block level (vacancy, household income, education), nearby Land Bank properties, time (before and after interventions took place) and distance classifications, and several other control factors, on price. The resulting coefficients on the Land Bank variable(s) illustrate the marginal effect (measured in dollars), all else being equal, that Land Banks have had on sale prices in the neighborhood.

Since foreclosures and Land Bank activities are concentrated in weaker housing market neighborhoods, a dearth of housing sales, or weak sales values, could produce estimation bias in the model.

## DATA

First, a list of all Land Bank properties was obtained from the Ingham County Land Bank. This included property address, acquisition date and date the property was sold. Properties for this study were selected based on the following criteria:

1. The property was within the City of Lansing;
2. The property was a single family home; and
3. The property was sold to an individual(s).

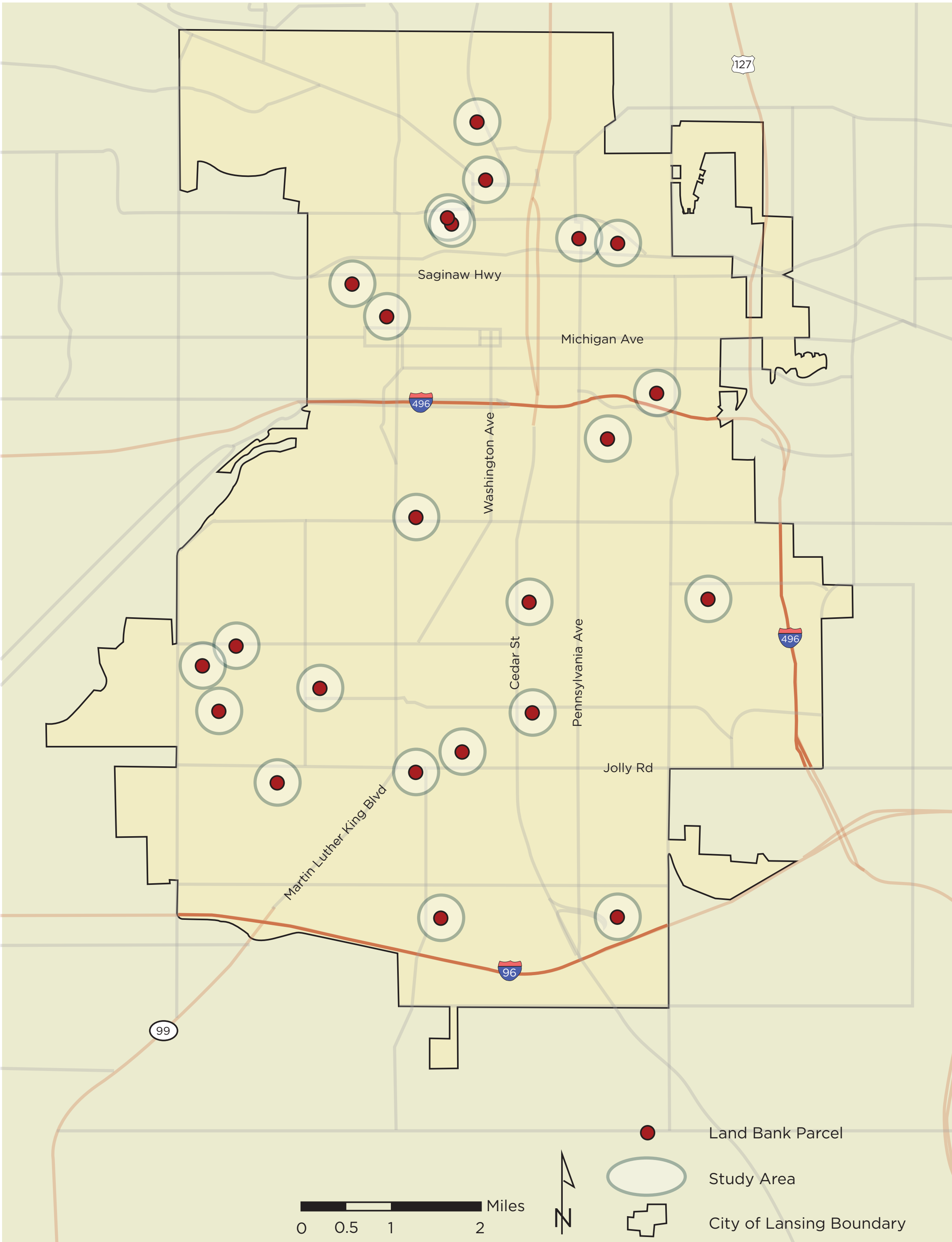
Panel data acquired from the City of Lansing's Office of the City Assessor was also used in this study. This dataset included all property sales from 2002–2012. Observations used for further analysis included the following information:

1. Date of sale;
2. Sale price of home;
3. Number of bathrooms;
4. Number of square feet;
5. Property parcel ID # and address; and
6. Type of sale.

All sales besides those of single family homes were then excluded. The Land Bank properties were then mapped. A radius of 1,000 feet was drawn around each property, using GIS software, and all sale records within this radius, between January 1, 2002, to April 4, 2012, were collected. The exact distance between the center of each sale property and the Land Bank property was then measured. If there were not at least 30 observations of sales over these 10 years within 1,000 feet, the Land Bank property was excluded from this study, for statistical reasons. Sales under $10,000 were also excluded to eliminate potential sales of land without an accompanying structure. Figure 4 illustrates the location of the 23 Land Bank properties selected for further analysis.

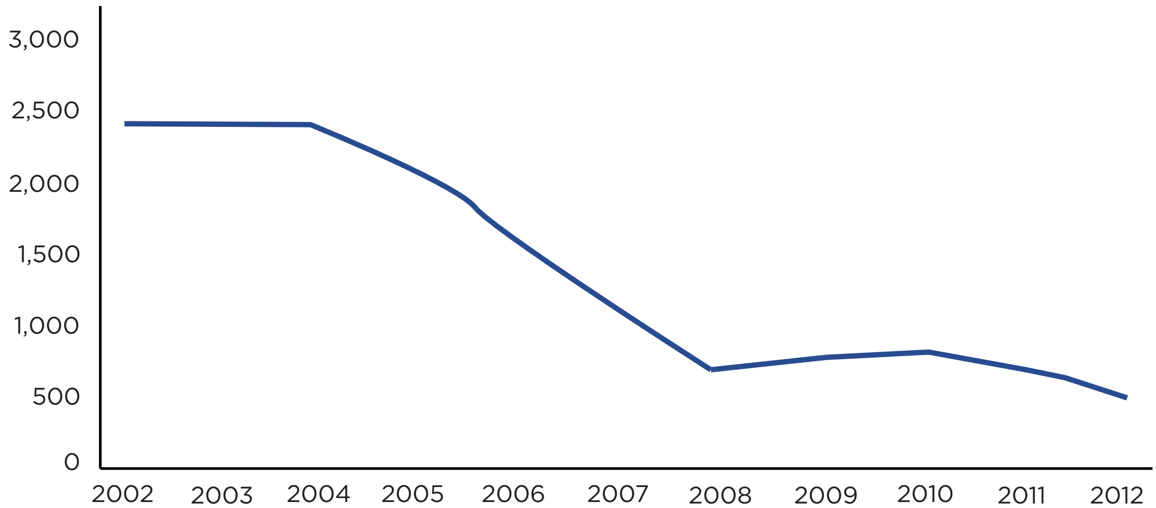
In total, there were 2,350 sales records within a 1,000-foot radius of these properties. This small number is due, in part, to declines in number of home sales in recent years relative to sales in the early 2000s (Figure 5).

# Figure 4: Map of the 23 Land Bank Properties Used in the Study




**Source:** Ingham County Land Bank. Map created by the Land Policy Institute, Michigan State University, 2013.

## Figure 5: Number of All Single Family Home Sales by Year in Lansing – 2002–2012




**Note:** Sales data was only available through 04/04/2012; the number of sales for 2012 has been projected out through the full calendar year based on this information.
**Source:** Ingham County Equalization Office. Figure created by the Land Policy Institute, Michigan State University, 2013.

### METHODOLOGY

The creation of a hedonic model was necessary to determine the true impact of the Land Bank activities on neighborhood home prices. A variation of the standard hedonic housing price model was used (Ottensmann et al., 2008):

$$Y = \beta_0 0 + \beta_1 Dis_1 + \beta_2 Year + \beta_3 SQ + \beta_4 Bath + \beta_5 Neigh + \beta_6 After + \beta_7 AfterDist;$$

where ***Y*** is the natural log of a house price, ***Dis*** is the distance in feet from the sale to the Land Bank home, ***Year*** is the year dummy variables for 2000–2012, ***SQ*** is the square footage of the home, ***Bath*** is the number of bathrooms, ***Neigh*** is the neighborhood dummy variables created for each of the 23 Land Bank locations, ***After*** is the time frame at which the home was sold, where it equals "1" if the sale was after the Land Bank occupancy or "0" if it was before, and ***AfterDist*** which equals the product of the variables ***After*** and ***Dist***. ***ß0*** is the constant term vector.

The natural log of price was used as the output variable to eliminate heteroskedasticity often found in highly skewed sales price variables (Ottensmann et al., 2008). Dummy variables were created for each of the individual Land Bank neighborhoods to control for different neighborhood characteristics such as racial composition and median income. This assumes that neighborhood demographics have remained unchanged over the last few years, which may not necessarily be accurate. Year dummy variables were used to control for time trends.

### RESULTS

The regression results can be seen in Table 1 in the Appendix. The results with respect to variables that are common to hedonic pricing models are consistent with prior analyses. For instance, the regression shows a positive and significant relationship between the sale price and both square footage of the house and number of bathrooms. Other results are also intuitive, such as the increase in sale prices of homes from 2001 to 2005, and a decline in sale prices from 2008 to 2012. Continued negative coefficients on the variables for 2010, 2011 and 2012 indicate that the Lansing housing market is not yet in recovery. Finally, the analysis shows a negative relationship between the sale price of a home and the presence of properties slated for demolition within 1,000 feet. If the home sale occurred before the demolition, the sale price was 11.5% lower, all else remaining equal. This finding means that the presence of blighted properties negatively affects home prices in the neighborhood (which is consistent with prior study findings).

. . . The analysis shows a negative relationship between the sale price of a home and the presence of properties slated for demolition within 1,000 feet. If the home sale occurred before the demolition, the sale price was 11.5% lower, all else remaining equal.

The hedonic analysis returned a significant, negative coefficient associated with a home being a rental property. In other words, being a rental property decreases the value of a home by 10%. This finding validates the Land Bank's policy to support home ownership in the properties that it renovates and sells.

The regression equation reported a significant negative coefficient on the variable ***After*** (at the 90% confidence interval). The interaction variable, demonstrating the effect of a home's distance from a Land Bank after the Land Bank property sold came up both positive and significant at the 95% confidence level.

At first glance, the significant negative coefficient on the variable ***After*** may lead some to believe that occupancy of the renovated or new Land Bank home actually decreased the value of other homes in the neighborhood; however, this is not the case. The relationship becomes clearer when taking the derivatives with respect to ***Distance*** and ***After*** so as to isolate the before/after impact of the Land Bank project. The regression offers more insight into the effect of Land Bank homes on neighborhood housing prices because of the statistical significance found in the variable ***AfterDist***, which equals "1" if a home is within 500 feet and sold after a Land Bank revitalization, or "0" otherwise.

First, the effect of the Land Bank with respect to distance will be analyzed. The effect of the Land Bank project on homes within 500 feet is as follows:

$dY/d\,Dist = \beta_1 + \beta_7 After$.

Using the beta coefficients found in the regression model, this equation becomes:

Homes Sold before Land Bank Sale: $dY/d\,Dist = -0.030 + 0.147(0) = -0.030$.

Homes Sold after Land Bank Sale: $dY/d\,Dist = -0.030 + 0.147(1) = 0.117$.

Even if the $\beta_1$ is ignored, due to its statistical insignificance, the large statistically significant coefficient on $\beta_7$ implies an increase in the value of houses within 500 feet of the Land Bank after the sale of the Land Bank home.

Next, it is important to look at derivative of the regression with respect to ***After***. This shows the impact of the Land Bank project on homes within 500 feet (1) and between 501 feet to 1,000 feet (0). The derivative with respect to ***After*** is: $dY/dAfter = \beta_6 + \beta_7 Dist$.

Using the coefficients found in Table 1, the regression equation becomes:

Within 500 Feet: $dY/dAfter = -0.095 + 0.147(1) = 0.052$.

Outside of 500 Feet: $dY/dAfter = -0.095 + 0.147(0) = -0.095$.

The positive, significant coefficient $\beta_7$ implies that homes within 500 feet of the Land Bank benefited more from the Land Bank occupancy than those outside of the 500-foot radius. This is consistent with findings discussed in the literature review, which show homes within 500 feet are most affected by foreclosures.

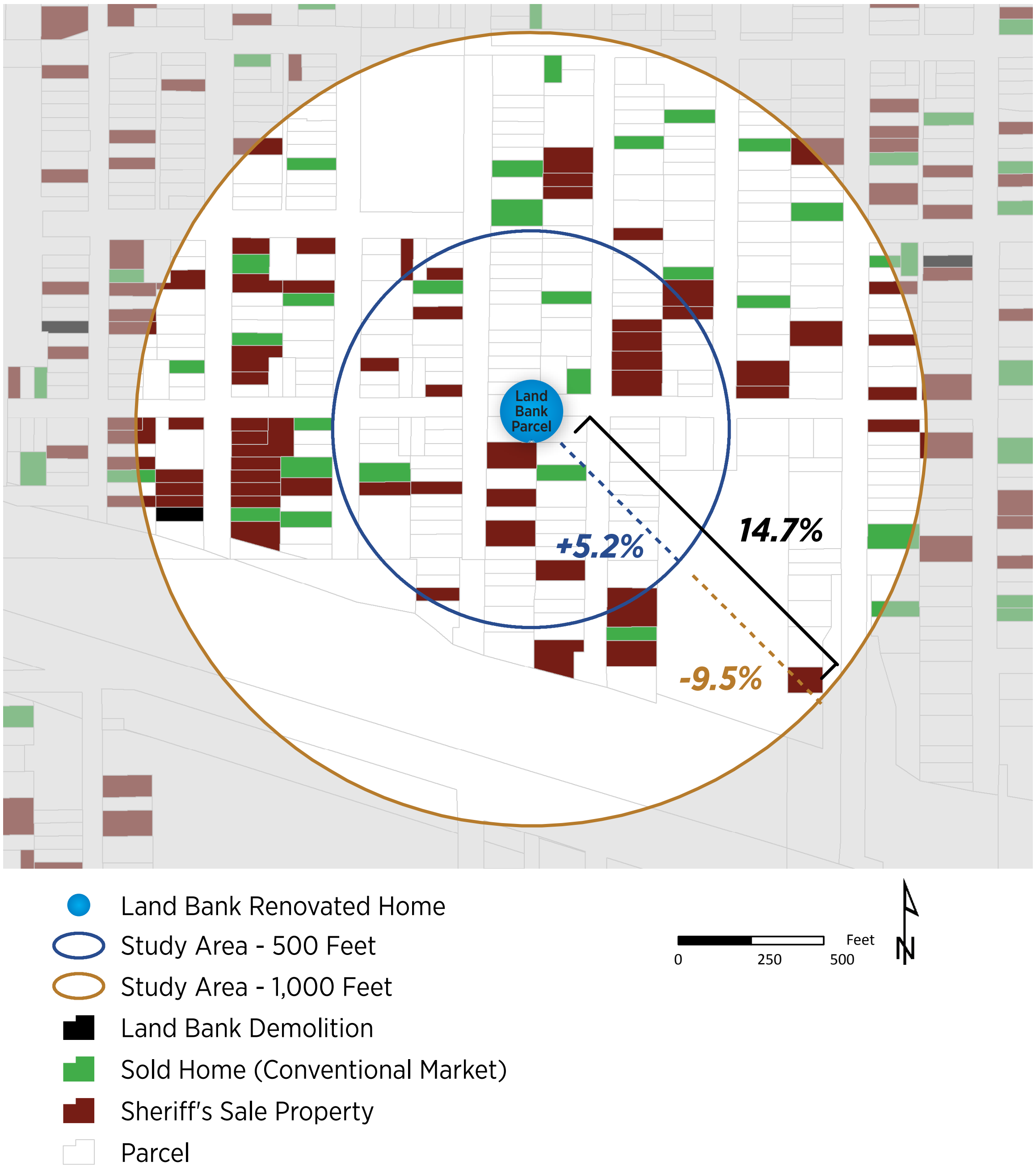
Since both of these coefficients were found to be statistically significant, it could be said that without the Land Bank revitalization, the negative effects of the declining housing market in these neighborhoods would have been greater. Homes within 500 feet of the property are associated with 5.2% <u>higher</u> property prices, while those outside of 500 feet are associated with 9.5% <u>lower</u> property prices. This supports the idea that revitalization of foreclosures through Land Bank activities prevents neighborhood home prices from declining at a more precipitous rate (see Figure 6).

## PROPERTY VALUE COMPARISON

The second method used a difference in means test to determine if property value assessments were positively impacted by Land Bank interventions in the study area(s). To test these effects, the average property assessment value was aggregated at pre-determined distances from a Land Bank property for numerous years. The Land Policy Institute hypothesized that this comparison could show whether or not a Land Bank positively contributed to nearby property values.

The difference in means test on the assessed values of properties near Land Bank activities produced inconclusive results for two likely reasons. First, there could be a time component that is not captured in the analysis. That is, assessed values of nearby properties may still reflect the presence of a foreclosure or abandoned property—not one that was rehabilitated or demolished. Second, assessed values in the City of Lansing have been on a downward trend. Even while controlling for this trend, it was not possible to isolate changes in assessed values based on Land Bank activity rather than market forces. The challenges associated with utilizing assessed values are mitigated by the significant findings in hedonic property price method.

## Figure 6: Property Price Assessment – Ingham County Land Bank Renovated Property




**Note:** Homes sold after the renovation of an Ingham County Land Bank renovated property within 500 feet have 5.2% higher property prices, while homes sold after the renovation of an Ingham County Land Bank property within 500 to 1,000 feet have 9.5% lower property prices, all else equal. There is a 14.7% marginal price difference between sold homes within 500 feet and those between 500 and 1,000 feet.
**Source:** Figure created by the Land Policy Institute, Michigan State University, 2013.

# Regional Economic Impact Analysis

IN ADDITION TO THE EMPIRICAL RESEARCH UNDERTAKEN, THIS STUDY ALSO USES IMPLAN TO PRODUCE AN ECONOMIC IMPACT ASSESSMENT OF ALL LAND BANK ACTIVITIES, WHICH INCLUDE CONSTRUCTION, REHABILITATION AND DEMOLITION, AS WELL AS SNOW REMOVAL AND LAWN CARE AT ALL OF THE PROPERTIES IT OWNS. THE RESULTS OF THESE ANALYSES PRODUCE ESTIMATES FOR THE NUMBER OF JOBS CREATED, ECONOMIC OUTPUT AND PROPERTY INCOME EFFECTS THAT THE LAND BANK PRODUCES THROUGH ITS ANNUAL ACTIVITIES.

In addition to the empirical research undertaken, this study also uses IMPLAN to produce an economic impact assessment of all Land Bank activities, which include construction, rehabilitation and demolition, as well as snow removal and lawn care at all of the properties it owns. The results of these analyses produce estimates for the number of jobs created, economic output and property income effects that the Land Bank produces through its annual activities.

## METHODOLOGY

The regional economic impact assessment was conducted using IMPLAN® (IMpact analysis for PLANning), which is a complete economic assessment package including data and software, devised and provided by MIG, Inc. (formerly Minnesota IMPLAN Group, Inc.). The IMPLAN system provides data with economic resolution from the national level down to the zip code level and is used by many government agencies, colleges and universities, nonprofit organizations, corporations, and business development and community planning organizations to help quickly and efficiently model economic impacts. The IMPLAN creates data files representing the specified local economy, ideal for examining impacts of targeted investments in the local community, county or state.

Using multipliers provided by IMPLAN for the Lansing region, as well as the spending data provided by the Ingham County Land Bank, the input data was plugged into the model, which produced the economic output estimates for these activities.

The IMPLAN creates data files representing the specified local economy, ideal for examining impacts of targeted investments in the local community, county or state.

The estimated economic impacts are reported at three levels: 1) Direct economic impacts (the total economic activity effect of the Land Bank's spending in industries directly related to their activities, such as house construction and renovation, utilities, property and building maintenance, and closing costs, etc.) and indirect economic impacts (the secondary impacts in "backward" and "forward" linked industries as a result of Land Bank spending in primary sectors); 2) Total (direct and indirect) job creation impacts; and 3) total value-added impacts (value in goods and services added across industries as a result of spending by the Land Bank after accounting for costs).

## DATA

The Ingham County Land Bank provided spending data for their activities since 2006. These spending categories were matched to industries available for modeling within the

IMPLAN framework. The IMPLAN industries used were:

- Maintenance and repair construction of residential structures.
- Services to building and dwellings.
- Electric power generation, transmission and distribution.
- Natural gas distribution.
- Water, sewage and other treatment delivery systems.
- Other state and local government enterprises.
- Monetary authorities and depository credit intermediation activities.

Table 2 in the Appendix provides a match of Land Bank spending categories to available IMPLAN industries. Table 3, also in the Appendix, shows the total spending of the Land Bank by category for each year from 2006–2012.

It is important to note that some assumptions were made about this data that may affect the outcomes. For instance, there is a question as to whether the property acquisition costs should all be modeled as new spending, as there is at least some likelihood someone else would have paid to purchase the property (though the price and time frame of purchase cannot be known). Given the uncertainties associated with alternative purchases, all property acquisition costs are included in the model. Future research could examine the difference in estimated economic impact associated with Land Bank acquisitions versus, for instance, property sales at auctions (where properties tend to stay longer on the market and sell for less). Finally, utility expenditures were lumped together in the dataset; without a clear idea of how much was spent on each utility group, expenditures were split evenly between electric, heat and water. This is such a small amount of spending that moving money from one utility company type to the next will have little to no effect.

## RESULTS

Results suggest a significant economic impact of the Land Bank activities on the regional economy. The total estimated direct and indirect economic impacts of Land Bank spending over the time period from 2006 to 2012 is $56,239,355. Total spending during this period equals $31,051,692. This estimated impact suggests a 1.8:1 return on investment, meaning that for each $1 spent, $1.80 was added to the regional economy. Land Bank spending is also estimated to result in a total of 232 jobs in direct job creation and 194 jobs in induced (indirect) job creation. The total job impact of Land Bank spending is estimated at 426 jobs (see Figure 7). The total labor income of these investments is, therefore, estimated at $29,296,282. The total estimated value added impact in the Lansing area is $21,183,923. Total state and local tax impacts are estimated at $1,257,428, while total federal tax impacts are estimated at $3,657,811.

The total estimated direct and indirect economic impacts of Land Bank spending over the time period from 2006 to 2012 is $56,239,355. Total spending during this period equals $31,051,692. This estimated impact suggests a 1.8:1 return on investment, meaning that for each $1 spent, $1.80 was added to the regional economy.

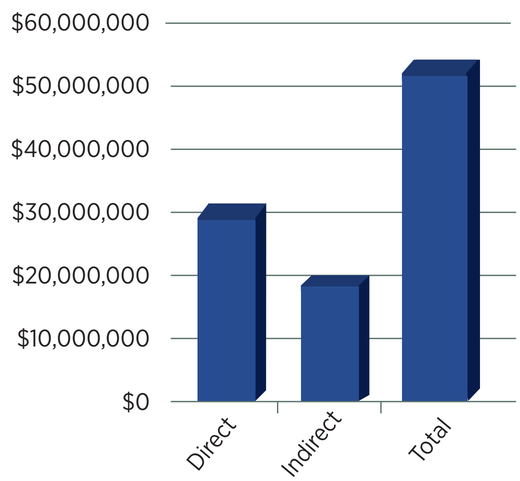
The aggregate impact for the period of 2006 to 2012 is shown in Table 4 in the Appendix.

# Figure 7: Regional Economic Impacts of the Ingham County Land Bank (2006–2012)

426 Jobs

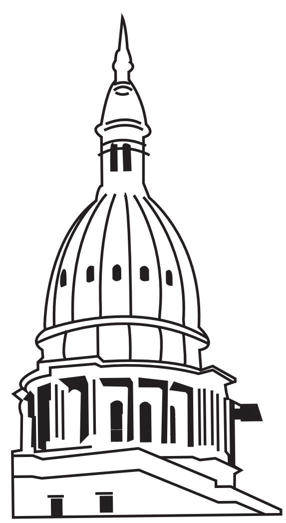
Total Investment
$31,051,692

Direct & Indirect
Economic Impact
$56,239,355




1.8 to 1
Return on
Investment

Tax Revenue
$4,915,239



**Source:** Figure created by the Land Policy Institute, Michigan State University, 2013.

# Conclusion

THE RESULTS FROM BOTH THE PROPERTY PRICE ANALYSIS AND THE REGIONAL ECONOMIC IMPACT ASSESSMENT SUGGEST THAT THERE IS A POSITIVE, MEASURABLE IMPACT OF INGHAM COUNTY LAND BANK PROPERTIES WITHIN LANSING NEIGHBORHOODS AND THE BROADER REGION. DESPITE THE DECLINING HOUSING MARKET IN THE LANSING AREA, THERE APPEARS TO BE A MITIGATING EFFECT OF THE PRESENCE OF LAND BANK PROPERTIES IN NEIGHBORHOODS THAT HAVE EXPERIENCED HIGH RATES OF FORECLOSURE.

The results from both the property price analysis and the regional economic impact assessment suggest that there is a positive, measurable impact of Ingham County Land Bank properties within Lansing neighborhoods and the broader region. Despite the declining housing market in the Lansing area, there appears to be a mitigating effect of the presence of Land Bank properties in neighborhoods that have experienced high rates of foreclosure. While the hedonic analysis shows a decrease in value of 9.5% for property values within 1,000 feet of renovated and sold Land Bank properties, comparable houses that were within 500 feet appeared to have experienced a net increase of 5.2%, all else equal. The total estimated economic impacts from 2006 to 2012 of $56,239,355 and 426 jobs suggest a significant impact beyond localized neighborhood effects. It should be noted that these quantitative effects are in addition to other qualitative effects that have been witnessed in improved neighborhood aesthetics, home ownership for low-income families, and more stable property tax revenues for the City of Lansing.

These results show that the return on investment made by the Ingham County Land Bank in the Lansing community has been positive (1.8:1), even in a down economy and

a declining housing market. It should also be noted that there is often a delay in the realization of economic impacts, particularly property price increases, associated with these types of investments. The Ingham Land Bank has only been in operation for six years, and it will be important to continue to monitor economic impacts in the future.

Finally, the provision of Neighborhood Stabilization Program funds, provided by the U.S. Department of Housing and Urban Development, through the Michigan State Housing Development Authority, augmented the Land Bank's investments over the past three years. These federal funds have helped to build capacity within the Land Bank, as well as its ability to leverage future funds for neighborhood revitalization efforts.

# Appendix

## Table 1: Regression Results*

| Model | R | R-Square | Adjusted R-Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.66 | 0.43 | 0.42 | 0.40 |

| Model | Unstandardized Coefficients | | Standard Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 10.86 | 0.05 | – | 221.83 | 0 |
| Floor Square Footage | 0.06 | 0 | 0.40 | 20.03 | 0 |
| Sale Year 2002 | -0.19 | 0.03 | -0.07 | -6.46 | 0 |
| Sale Year 2003 | -0.10 | 0.03 | -0.13 | -3.24 | 0 |
| Sale Year 2004 | – | – | – | – | – |
| Sale Year 2005 | 0.07 | 0.03 | 0.04 | 2.18 | 0.03 |
| Sale Year 2006 | 0 | 0.03 | 0 | -0.02 | 0.99 |
| Sale Year 2007 | -0.04 | 0.04 | -0.02 | -1.17 | 0.24 |
| Sale Year 2008 | -0.26 | 0.04 | -0.11 | -6.08 | 0 |
| Sale Year 2009 | -0.41 | 0.05 | -0.16 | -8.89 | 0 |
| Sale Year 2010 | -0.63 | 0.05 | -0.27 | -13.82 | 0 |
| Sale Year 2011 | -0.66 | 0.06 | -0.23 | -11.31 | 0 |
| Sale Year 2012 | -0.70 | 0.10 | -0.13 | -6.99 | 0 |
| Rental | -0.11 | 0.02 | -0.10 | -5.98 | 0 |
| Bathrooms | -0.05 | 0.03 | -0.04 | -1.93 | 0.05 |
| Sheriff Sales within 500 Feet | 0 | 0 | 0 | 0.25 | 0.80 |
| Neighborhood 1 | -0.05 | 0.06 | -0.02 | -0.85 | 0.40 |
| Neighborhood 2 | 0.03 | 0.06 | 0.01 | 0.49 | 0.63 |
| Neighborhood 3 | 0.01 | 0.05 | 0.01 | 0.27 | 0.79 |
| Neighborhood 4 | -0.09 | 0.05 | -0.04 | -1.98 | 0.05 |
| Neighborhood 5 | 0.05 | 0.04 | 0.02 | 1.12 | 0.26 |
| Neighborhood 6 | -0.08 | 0.06 | -0.02 | -1.28 | 0.20 |
| Neighborhood 7 | 0.13 | 0.05 | 0.05 | 2.59 | 0.01 |
| Neighborhood 8 | 0.03 | 0.05 | 0.01 | 0.63 | 0.53 |
| Neighborhood 9 | 0.13 | 0.05 | 0.05 | 2.82 | 0.01 |
| Neighborhood 10 | 0.19 | 0.05 | 0.07 | 3.57 | 0 |
| Neighborhood 11 | 0.29 | 0.07 | 0.08 | 4.45 | 0 |
| Neighborhood 12 | -0.13 | 0.06 | -0.06 | -2.19 | 0.03 |
| Neighborhood 13 | -0.09 | 0.05 | -0.04 | -1.86 | 0.06 |
| Neighborhood 14 | 0.08 | 0.04 | 0.04 | 1.89 | 0.06 |
| Neighborhood 15 | -0.20 | 0.06 | -0.09 | -3.43 | 0 |

***Note:** The variable for Sales Year 2004 and Neighborhood 16 were dropped from the regression analysis. All other coefficients for Sales Year and Neighborhood are all relative to Sales Year 2004 and Neighborhood 16.
**Source:** Land Policy Institute, Michigan State University, 2013.

## Table 1: Regression Results* (cont.)

| Model | Unstandardized Coefficients | | Standard Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| Neighborhood 16 | – | – | – | – | – |
| Neighborhood 17 | -0.16 | 0.05 | -0.08 | -3.46 | 0 |
| Neighborhood 18 | -0.29 | 0.06 | -0.12 | -4.77 | 0 |
| Neighborhood 19 | -0.10 | 0.08 | -0.03 | -1.32 | 0.19 |
| Neighborhood 20 | -0.11 | 0.06 | -0.05 | -1.82 | 0.07 |
| Neighborhood 21 | -0.24 | -0.08 | -0.06 | -3.18 | 0 |
| Neighborhood 22 | -0.32 | 0.06 | -0.10 | -5.16 | 0 |
| Neighborhood 23 | -0.13 | 0.06 | -0.04 | -2.35 | 0.02 |
| Sale after Demolition within 1,000 Feet | -0.06 | 0.08 | -0.01 | -0.68 | 0.50 |
| Sale before Demolition within 1,000 Feet | -0.12 | 0.04 | -0.10 | -2.95 | 0 |
| Sale within 500 Feet of a Land Bank Renovation or New Home | -0.03 | 0.02 | -0.03 | -1.63 | 0.10 |
| Sale within 500 Feet of a Land Bank Renovation or New Home after Land Bank Activity | 0.15 | 0.07 | 0.04 | 2.01 | 0.05 |
| Sale after Land Bank Renovation or New Home Built (within 1,000 Feet) | -0.10 | 0.06 | -0.04 | -1.72 | 0.09 |

***Note:** The variable for Sales Year 2004 and Neighborhood 16 were dropped from the regression analysis. All other coefficients for Sales Year and Neighborhood are all relative to Sales Year 2004 and Neighborhood 16.
**Source:** Land Policy Institute, Michigan State University, 2013.

## Table 2: Land Bank Spending Categories Matched to IMPLAN Industries

| Land Bank Expense Category | IMPLAN Industry |
|---|---|
| Property Acquisition | Other State and local government enterprises |
| Property Taxes | Other State and local government enterprises |
| Renovation (includes New Construction/Demolition) | Maintenance and repair construction of residential structures |
| Utilities | Electric power generation, transmission and distribution; natural gas distribution; and water, sewage and other treatment delivery systems |
| Building/Property Maintenance | Other State and local government enterprises |
| Lawn Mowing/Snow Removal | Services to buildings and dwellings |
| Closing Costs (Property Sale Expenses) | Monetary authorities and depository credit intermediation activities |

**Source:** Land Policy Institute, Michigan State University, 2013.

## Table 3: Land Bank Spending – 2006–2012

| Land Bank Expense Category | Expense Year | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Property Acquisition | 14,042 | 413,253 | 530,176 | 1,283,405 | 1,407,446 | 2,411,385 | 220,247 |
| Property Taxes | 78,542 | 46,414 | 96,063 | 218,640 | 240,778 | 263,737 | 77,360 |
| Renovation (includes New Construction/Demolition) | 313,608 | 658,902 | 1,208,786 | 1,613,186 | 3,760,248 | 7,965,088 | 5,470,278 |
| Utilities | 2,393 | 16,563 | 18,486 | 28,331 | 64,216 | 94,898 | 133,485 |
| Building/ Property Maintenance | 8,356 | 4,607 | 7,735 | 47,194 | 68,242 | 110,078 | 171,550 |
| Lawn Mowing/ Snow Removal | 10,460 | 36,387 | 144,615 | 131,142 | 160,886 | 184,446 | 267,026 |
| Closing Costs (Property Sale Expenses) | 30,000 | 76,636 | 145,058 | 156,636 | 217,627 | 223,770 | 199,287 |
| Total | 457,400 | 1,252,763 | 2,150,919 | 3,478,534 | 5,919,442 | 11,253,401 | 6,539,233 |

**Source:** Ingham County Land Bank.

## Table 4: Regional Economic Impacts of Land Bank Spending – 2006–2012

| Impact Type | Employment | Labor Income | Value Added | Output |
|---|---|---|---|---|
| Direct Effect | 232.3 | $13,151,489 | $15,613,648 | $34,106,493 |
| Indirect Effect | 86.2 | $3,784,760 | $5,953,811 | $10,113,904 |
| Induced Effect | 107.9 | $4,170,934 | $7,728,823 | $12,018,958 |
| Total Effect | 426.4 | $21,107,183 | $29,296,282 | $56,239,355 |

| | |
|---|---|
| Total State and Local Tax | $1,257,428 |
| Total Federal Tax | $3,657,811 |

**Source:** Land Policy Institute, Michigan State University, 2013.

# References


Alexander, F. 2008. *Land Banking as Metropolitan Policy*. Blueprint for American Prosperity: Unleashing the Potential of a Metropolitan Nation. Metropolitan Policy Program, The Brookings Institution, Washington, DC. Available at: http://www.brookings.edu/~/media/research/files/papers/2008/10/28%20mortgage%20crisis%20alexander/1028_mortgage_crisis_alexander.

Alexander, F. 2011. *Land Banks and Land Banking*. Written for the Center for Community Progress, Flint, MI. Available at: http://www.communityprogress.net/filebin/pdf/new_resrcs/LB_Book_2011_F.pdf.

*Business Insider*. (2010, May 10). "The 13 Housing Markets that Will Never Recover." Available at: http://www.businessinsider.com/thirteen-housing-markets-that-will-never-recover-2010-5?op=1.

Immergluck, D., and G. Smith. 2006. "The External Costs of Foreclosure: The Impact of Single-Family Mortgage Foreclosures on Property Values." *Housing Policy Debate* 17(1):57–79. Fannie Mae Foundation, Washington, DC. Available at: http://findaforeclosurecounselor.net/network/neighborworksProgs/foreclosuresolutions/pdf_docs/hpd_4closehsgprice.pdf.

Ingham County Land Bank. 2012. Presentation Master. Available at: http://www.inghamlandbank.org/.

Leonard, T., and J.C. Murdoch. 2009. *The Neighborhood Effects of Foreclosure*. Economics Program, University of Texas at Dallas: Richardson, TX. Available at: http://www.utdallas.edu/~murdoch/NeighborhoodChange/Foreclosures/LM.pdf.

Michigan Foreclosure Task Force. 2012. *Michigan Historical Residential Foreclosure Data: Ingham County, MI*. Community Research Institute, Johnson Center, Grand Valley State University, Grand Rapids, MI Available at: http://cridata.org/michiganforeclosuretaskforce/report.aspx?GEOID=26065.

Griswold, N., and P. Norris. 2007. *Economic Impacts of Residential Property Abandonment and the Genesee County Land Bank in Flint, Michigan*. Land Policy Institute Report Series #2007–05. Land Policy Institute, Michigan State University, East Lansing, MI. Available at: http://www.landpolicy.msu.edu/modules.php?name=Documents&op=viewlive&sp_id=357.

Ottensmann, J.R., S. Payton, and J. Man. 2008. "Urban Location and Housing Prices within a Hedonic Model." *Journal of Regional Analysis & Policy* 38(1):19–35. Available at: http://www.jrap-journal.org/pastvolumes/2000/v38/F 38 1 2.pdf.

Schuetz, J., V. Been, and I. Gould Ellen. 2008. "Neighborhood Effects of Concentrated Mortgage Foreclosures." New York University School of Law and Economics Working Papers, NELLCO Legal Scholarship Repository. Available at: http://lsr.nellco.org/nyu_lewp/151/.

Temple University Center for Public Policy and Eastern Pennsylvania Organizing Project. 2001. *Blight Free Philadelphia: A Public-Private Strategy to Create and Enhance Neighborhood Value*. Philadelphia, PA. Accessed at: http://astro.temple.edu/~ashlay/blight.pdf.

Whitaker, S., and T.J. Fitzpatrick. 2011. "The Impact of Vacant, Tax-Delinquent, and Foreclosed Property on Sales Prices of Neighboring Homes." Federal Reserve Bank of Cleveland Working Paper No. 1123R. Federal Reserve Bank of Cleveland, Cleveland, OH. Available at: http://www.clevelandfed.org/research/workpaper/2011/wp1123r.pdf.


*Photos courtesy of the Ingham County Land Bank.*

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This full report is available for download online at
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