

Indiana's Housing Market 2013: On the Rise

A Report for the Indiana Association of REALTORS®



KELLEY SCHOOL OF BUSINESS

INDIANA UNIVERSITY
Indiana Business Research Center



Indiana's Housing Market 2013: On the Rise

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Executive Summary

It took a long while, but Indiana's housing market now appears to be squarely on the road to recovery. Over a 12-month period ending in June 2013, for instance, the number of houses sold in Indiana increased by nearly 17 percent over the previous year and the median price of existing home sales climbed more than 4 percent. With building permits up roughly 12 percent over the same period, this boost in demand is beginning to spill over to the new construction market too. The state's foreclosure rate is still too high, but it has fallen precipitously since the end of 2011.

Of course, given the depth of the housing slump, there are still a few more miles left on the road to a healthy market. Existing home sales in Indiana are still more than 10 percent off the 2007 mark, and the share of mortgages that are seriously delinquent is only about two-thirds of the way back to the state's pre-crash level. Meanwhile, despite the recent uptick, residential construction activity in the first half of 2013 is still at low levels last seen in the early 1980s.

TABLE 1: INDIANA HOUSING MARKET BY THE NUMBERS

	U.S.	Indiana
Existing Home Sales between July 2012 and June 2013, Year-over-Year Change	10.4%	16.5%
House Price Appreciation, 2012:1 to 2013:1	6.4%	3.1%
Residential Building Permits between July 2012 and June 2013, Year-over-Year Change	28.6%	11.6%
Share of Mortgages That Are Seriously Delinquent, 2013:2	5.9%	6.2%
Share of Mortgages with Negative Equity, 2013:1	19.8%	11.6%

Sources: Indiana Association of Realtors, National Association of Realtors, Federal Housing Finance Agency, U.S. Census Bureau, Mortgage Bankers Association, CoreLogic

This resurgence in the housing market has occurred even though the drivers of housing demand—a strong labor market, migration and favorable lending conditions—are still not firing on all cylinders. Indiana did add nearly 55,000 jobs between July 2012 and July 2013, but the state's unemployment rate remained stuck at 8.4 percent over that period. Data on migration trends are not as current, but Indiana had a net outflow of residents each year between 2010 and 2012. Meanwhile, historically low mortgage interest rates have been a boon to the market, but tighter lending standards may have kept some creditworthy borrowers from accessing them.

So while there is plenty of cause for optimism, the state's housing market won't truly return to form until Indiana's labor market improves and the state begins to attract new residents again. This will bolster demand and begin to revive still-lagging residential construction. Once the foundation of the housing market is shored-up, we'll know that this recovery is built to last.

This report examines some of the latest data in order to gauge the state of Indiana's housing market. The first section presents a detailed overview of market conditions with a focus on home sales and prices, mortgage delinquency and foreclosure, and affordability. The next section examines the demographic drivers of the housing market, including household formation rates, migration and the aging population.

Finally, we consider the role of housing in Indiana's economy with a look at construction activity, the impact of home sales and mortgage refinancing trends.

Key Findings

- Existing home sales in Indiana increased by 15 percent in 2012, ending a five-year stretch of declining or flat sales. The state's housing market is off to an even stronger start this year. Through the first half of 2013, existing home sales are up 18 percent over the same period a year ago.
- The state's median price for existing home sales rose to \$118,000 in 2012—a 4 percent increase over the previous year and 7 percent above 2009. The Federal Housing Finance Agency's House Price Index shows that Indiana had the 35th-fastest rate of price appreciation among states in the last year.
- Indiana's mortgage delinquency and foreclosure rates are still too high, but they have declined dramatically of late. The state's foreclosure rate has dropped by nearly 1.5 percentage points between the end of 2011 and mid-2013 to 3.5 percent. Over this period, Indiana has gone from the nation's ninth-highest foreclosure rate to 14th-highest.
- According to the most recent census data, Indiana's homeownership rate declined from 71.4 percent in 2000 to 69.7 percent in 2011. Despite this drop, Indiana had the 12th-highest homeownership rate in the country and was well above the U.S. mark of 64.6 percent.
- The aging of the large baby boom generation into the prime age group for homeownership helps to mask what is an even more dramatic drop in homeownership. In 2011, the homeownership rates for each 10-year age group between the ages of 25 and 54 were down more than 5 percentage points compared to the 2000 Census. The mark for the 55-to-64 age group was down 2.7 percentage points. Under normal conditions, Indiana's homeownership rate would have risen simply because the state is growing older and homeownership increases with age.
- At the end of 2012, housing affordability in Indiana was at a 30-year high, according to Moody's Economy.com. This measure has dipped slightly in 2013 as mortgage interest rates begin to climb from their extremely low levels. Even with higher rates, housing in Indiana remains very affordable. In fact, Indiana enjoyed the nation's fifth-best housing affordability conditions in 2012.
- Household formation remains sluggish in Indiana and around the country. Between 2006 and 2011, the number of new households in the state grew by an average annual rate of 0.3 percent per year compared to 0.7 percent annually during the earlier part of the decade. New Hoosier households formed at a 1.2 percent annual rate during the 1990s. Lower levels of migration contribute to this slower rate. Indiana had a net out-migration of residents each year between 2010 and 2012.
- For the third consecutive year, the value of Indiana's building permits increased in 2012. This is welcome news, yet construction has fallen to such an extent that the value of permits in 2012—even when measured in nominal terms (i.e., not adjusted for inflation)—was a shade below the level seen in 1992.
- After a slight annual decrease in 2011, the total number of units authorized by permits climbed 9 percent in 2012. Despite this relatively strong increase, 2012 marks Indiana's fifth-lowest annual number of permitted units since 1960. Permits are up 20 percent year-over-year through the first half of 2013.

Market Conditions

Home Sales Off to a Strong Start in 2013

After five years of flagging home sales numbers, Indiana finally had a breakout year in 2012. The state's sales tally in 2012 was up nearly 15 percent over the previous year and was its strongest annual figure since 2007 (see **Table 2**). Sales totals are still well below the peak years of the mid-2000s, but it seems unlikely (and undesirable) that Indiana will reach these heights again anytime soon. After all, it was the overheated housing market during this period that helped fuel the state's foreclosure crisis that began in 2006.

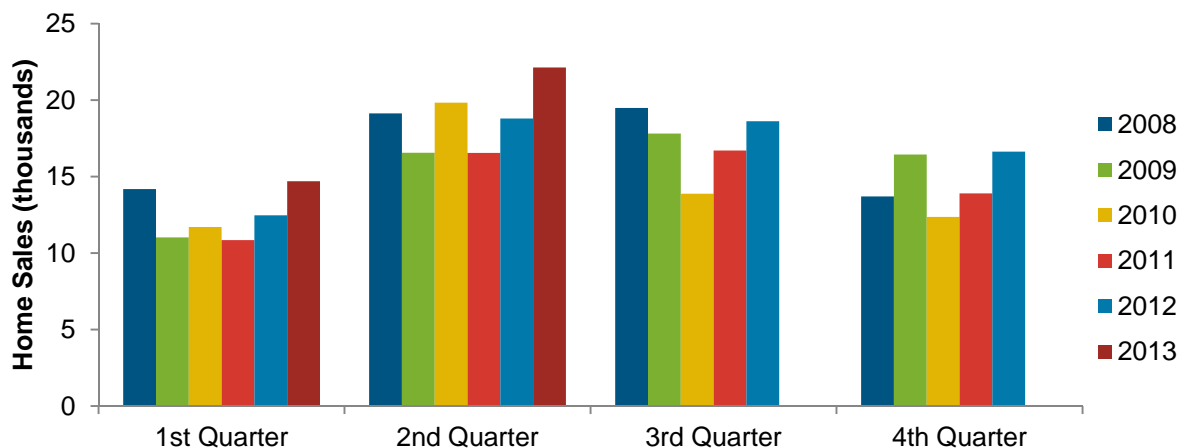
TABLE 2: INDIANA EXISTING HOME SALES, 2006 TO 2012

	2006	2007	2008	2009	2010	2011	2012
Existing Home Sales	86,142	79,545	66,505	61,826	57,765	57,985	66,516
Annual Percent Change	n/a	-7.7%	-16.4%	-7.0%	-6.6%	0.4%	14.7%

Source: Indiana Association of Realtors

As **Figure 1** shows, the rebound in existing home sales continued to improve early in 2013. The 14,700 existing home sales in Indiana during the first quarter of this year was an 18 percent improvement over the same period a year ago and was the state's highest first quarter mark in the last six years. Meanwhile, sales in the second quarter are also up 18 percent year-over-year and represent Indiana's best quarterly sales performance since mid-2007.

FIGURE 1: INDIANA HOME SALES BY QUARTER, 2008:1 TO 2013:2



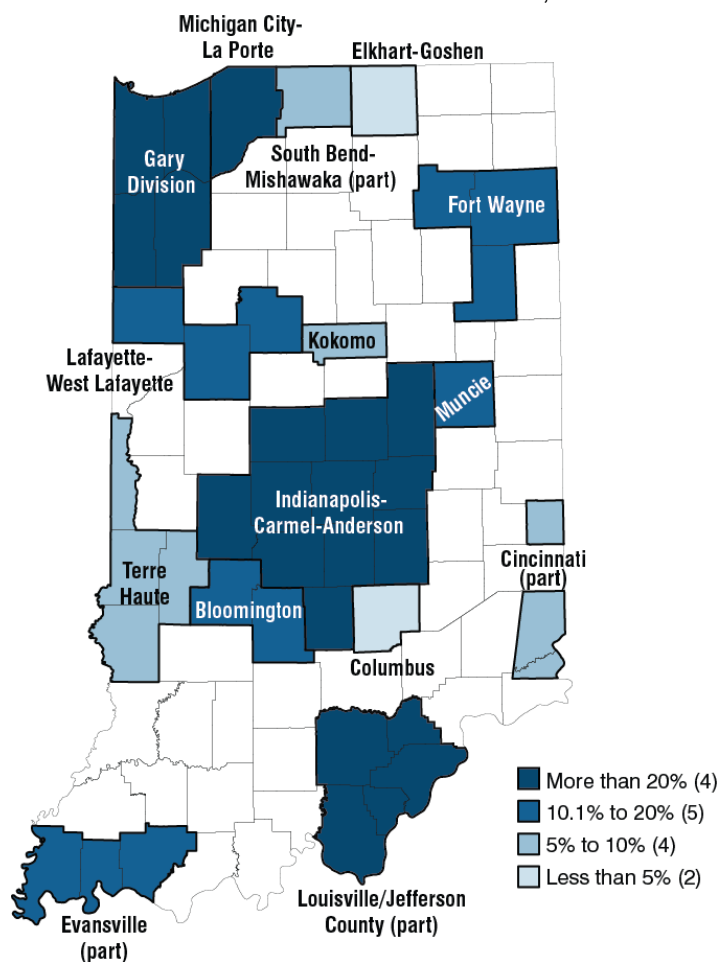
Source: Indiana Association of Realtors

As several recent media reports have highlighted, large investor groups are playing a role in the rebound in existing home sales and prices. As homeownership rates and house prices declined in recent years,

more and more real estate investment trusts (REIT) have been purchasing single-family homes and converting them into rental properties. This trend first emerged in some of the country's housing crash hot spots but now appears to be more widespread. As of July 2013, for instance, the REIT American Homes 4 Rent (AHR) reportedly holds a portfolio of more than 1,700 homes in the Indianapolis area—most of which were purchased in the last year.¹ A check of AHR's website shows that they also have properties in Bloomington, Columbus, Lafayette and Northwest Indiana.

While investor groups are helping to boost the numbers in some markets, **Figure 2** shows that the uptick in existing home sales is widespread around the state. Over the 12-month period ending in June 2013, each of Indiana's metro areas had an increase in home sales, led by the Indiana portion of the Louisville metro area with a 26 percent jump compared to the same period a year earlier. With a 23 percent increase, Gary had the second-largest increase in sales followed by the Indianapolis-Carmel-Anderson area (22 percent), Michigan City-LaPorte (20 percent) and Bloomington (16 percent).

FIGURE 2: TOTAL HOME SALES BY METRO AREA, YEAR-OVER-YEAR CHANGE, JULY 2012 TO JUNE 2013



Source: Indiana Association of Realtors

¹ Jeff Swiatek, "Indianapolis Official Wary of Investor Groups Snapping Up Homes," Indystar.com, September 4, 2013.

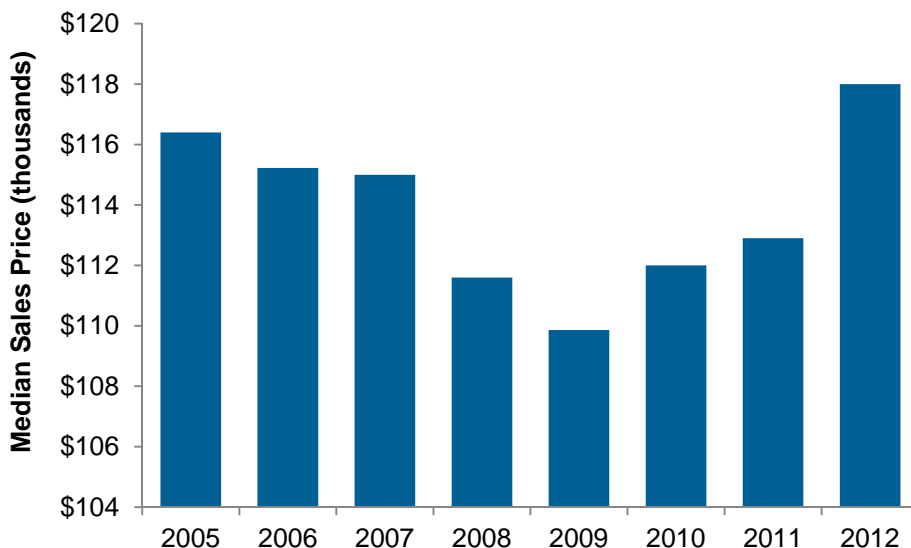
Columbus and Elkhart-Goshen registered the lowest growth rates over this period but that does not necessarily indicate that these markets are underperforming. In the case of Columbus, at least, its housing market was already relatively strong heading into this period so it didn't have much ground to make up.

The 48 counties that are outside of metro areas combined to post a 10 percent increase in sales. Among counties with at least 100 sales, Tipton County had the largest increase at 46 percent followed by Ripley (36 percent), Jackson (31 percent) and Dubois (27 percent) counties.² Statewide, sales are up roughly 17 percent over this period.

Indiana's Median Sales Price Makes a Large Leap in 2012

As demand for existing homes in Indiana has increased, so have prices. At \$118,000 last year, the state's median sales price for existing homes was 4 percent higher than in 2011 and better than 7 percent above the low point in 2009 (see **Figure 3**). Furthermore, according to data from the Indiana Association of Realtors that dates to 2004, the median sales price in 2012 is the state's highest annual mark on record.

FIGURE 3: INDIANA MEDIAN SALES PRICE, 2005 TO 2012



Source: Indiana Association of Realtors

A number of factors can help explain the relatively sharp increase in this measure. First, this measure simply indicates the median price of all homes sold in a given period and, therefore, is influenced by the mix of homes sold during that period. In 2012, for instance, homes with four or more bedrooms accounted for nearly 29 percent of all Indiana sales compared to an annual average of roughly 26 percent of homes between 2005 and 2010. From year to year, there could also be meaningful differences in the quality, location or foreclosure status of homes sold, although data on some of these characteristics aren't as readily available.

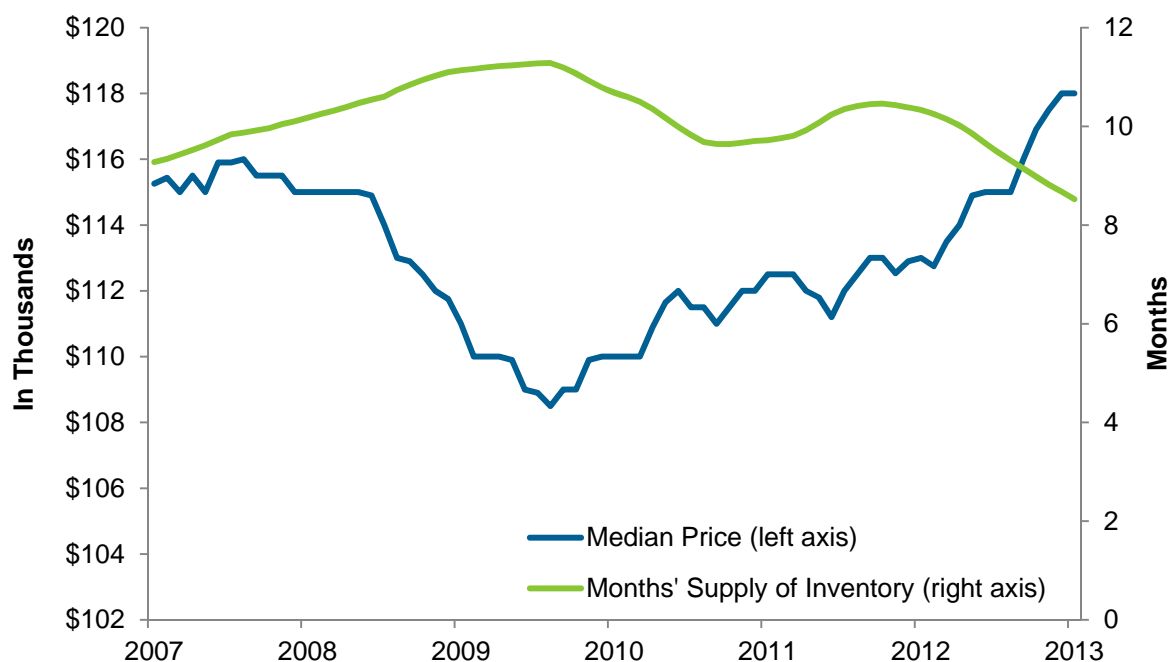
Differences in the mix of homes sold probably do not explain the entire increase in the 2012 median price, however. In fact, looking at the number of bedrooms only, the mix of homes sold in 2012 was nearly

² See the appendix for home sales and median sales price data for all Indiana counties.

identical to that in 2011, yet the median price in 2012 was 4 percent higher. Another key factor in the rise in prices is the shrinking inventory of homes for sale. As of March 2013, the inventory of homes for sale in Indiana was slightly greater than 40,000. This mark is 10 percent lower than for the same month in 2012 and is more than 40 percent lower than the inventory in March 2007.

The decline in inventory coupled with the uptick in demand has led to a six-year low in the estimated months' supply of existing homes for sale in Indiana. The months' supply measure is an estimate of how long it would take to work through the inventory of homes for sale in a given month at the average monthly sales rate over the previous year. As one would expect, there is a strong negative relationship between months' supply and prices (correlation = -0.76), with prices increasing as supply began to drop steadily in 2011 (see **Figure 4**).

FIGURE 4: MEDIAN SALES PRICE AND MONTHS' SUPPLY, 12-MONTH MOVING AVERAGE, JANUARY 2007 TO JANUARY 2013



Source: Indiana Association of Realtors

Indiana's median sales price climbed to \$120,000 over the 12-month period ending in June 2013—a 4.3 percent increase year-over-year. Looking around the state over the same period, the median sales price held steady or increased in 62 of Indiana's 92 counties. Among the state's larger markets, Shelby (13 percent increase), LaPorte (12 percent), Elkhart (12 percent), Hancock (9 percent) and Madison (8 percent) counties posted the largest increases over this 12-month period. Bartholomew (-3 percent), Grant (-2 percent), and Clark (-1 percent) counties were the only communities with at least 500 existing home sales to show a decline in median sales price.

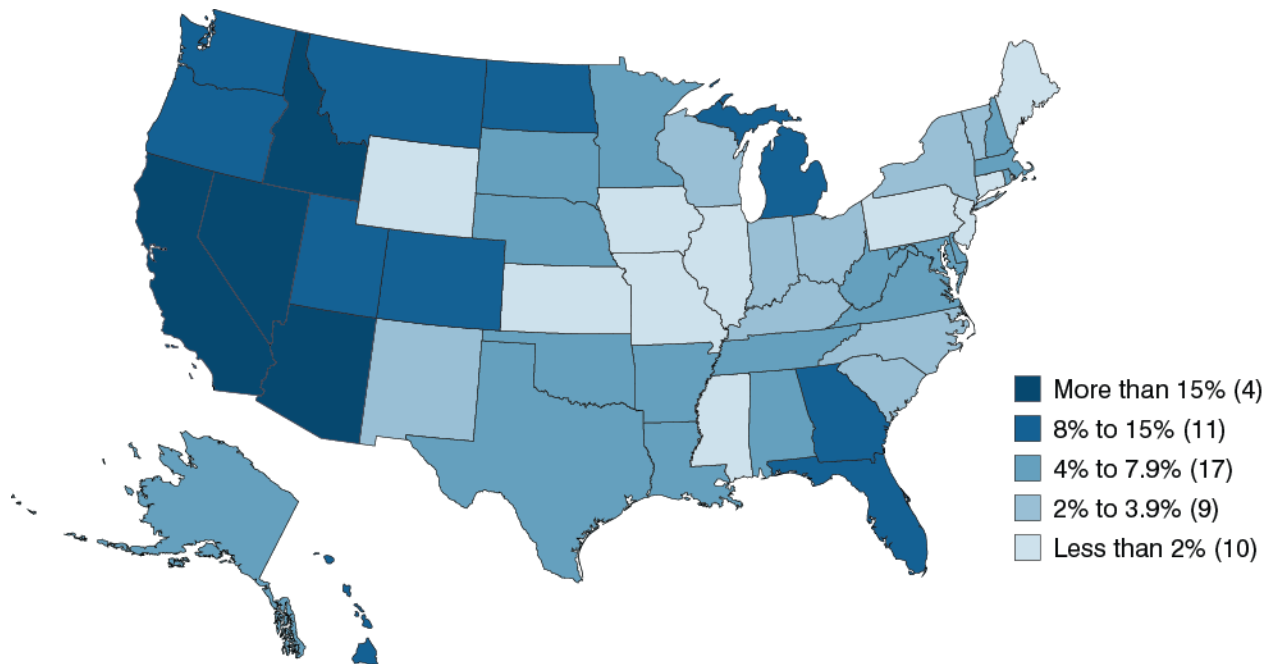
Indiana House Prices in Perspective

Other measures show that Indiana's house prices are improving as well. According to the Federal Housing Finance Agency's (FHFA) House Price Index (HPI), Indiana has seen price appreciation for seven consecutive quarters dating back to mid-2011 and the state's home prices in the first quarter of

2013 are up 3.1 percent year-over-year.³ This rate of appreciation ranked 35th-fastest among states and outpaced neighboring Kentucky (2.3 percent) and Illinois (0.5 percent). Ohio's growth rate matched that of Indiana, while prices in Michigan were up 9.4 percent.

Fortunately, price appreciation has been widespread around the country over the past year (see **Figure 5**). Several of the hardest-hit states during the crash posted the greatest gains led by Nevada (21.2 percent increase), Arizona (20.8 percent), Idaho (16.6 percent) and California (16.1 percent). Of course, the gains in Nevada, Arizona and California come on the heels of dramatic declines in recent years. With a 0.2 percent decline, only Mississippi saw house prices continue to slide in the last year.

FIGURE 5: CHANGE IN HOUSE PRICE INDEX BY STATE, 2012:1 TO 2013:1



Source: Federal Housing Finance Agency, House Price Index (expanded data series, seasonally adjusted)

With prices on the rebound in most areas of the country, this is a good time to look back and see how the pace of housing appreciation before the crash influenced the depth of price decline afterwards. **Figure 6** demonstrates a clear relationship between the degree of run-up in prices during the bubble era (x-axis) and the subsequent severity of depreciation after 2007 (y-axis). States like Arizona, California, Florida and Nevada had some of the largest price increases during the 2000s. In California, for instance, the increase in HPI between 1999 and 2007 peaked at 283, meaning that prices nearly tripled over that period (not adjusted for inflation). Due in large part to these extreme gains, each of these states had price declines in excess of 50 percent after the crash.

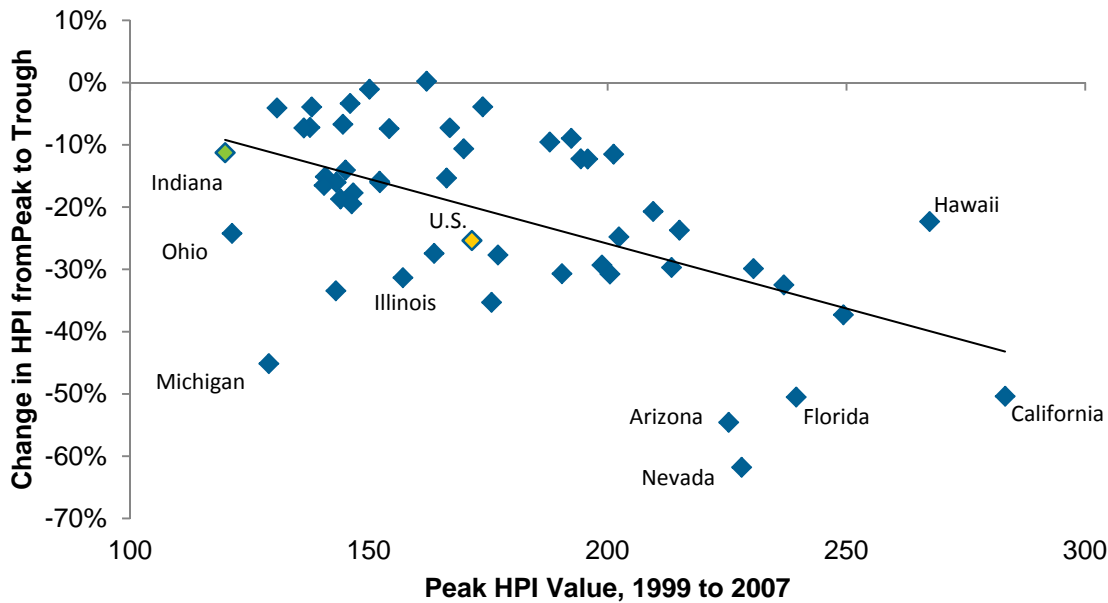
Indiana's experience rests at the opposite end of the spectrum. According to the FHFA, price appreciation in the state peaked at 20 percent between 1999 and 2007—the smallest gain among states. Since Indiana was not really part of the housing bubble, price declines after the crash were relatively mild. The

³ An HPI like this one from FHFA is conceptually different from the median sales price indicator discussed earlier. The HPI is a repeat-sales index, meaning that it measures the changes in sales price when a given property is sold multiple times. This approach removes a good deal of the comparability problems inherent in the median sales price.

state's HPI value declined 11 percent from its peak in mid-2007 to its trough in the second quarter of 2011. Only 14 other states—many of them in the Great Plains region—had smaller declines after the crash.

The fact that Indiana's decline was as large as it was likely reflects the economic difficulties in the larger industrial Midwest. Price gains in neighboring Ohio and Michigan were only slightly better than they were in Indiana, yet both experienced far more severe price declines after the bust. The situation in Michigan is so dire, in fact, that house prices in the first quarter of 2013 are 20 percent lower than they were at the beginning of 1999. With a 4 percent difference, Ohio is the only other state with an HPI value that is lower today than it was in 1999. Over the same period, house prices in Indiana are up nearly 12 percent.

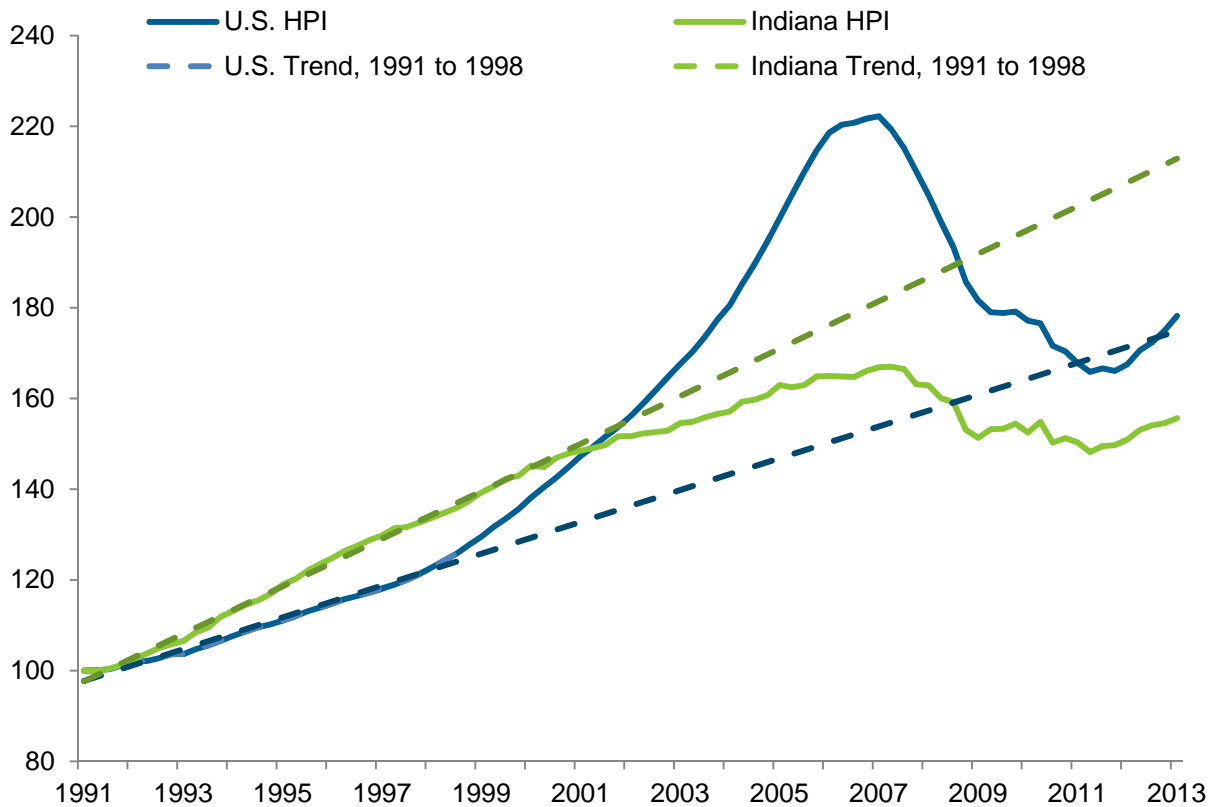
FIGURE 6: COMPARISON OF HOUSE PRICE CHANGES BEFORE AND AFTER THE HOUSING BUST, 1999 TO 2007



Source: Federal Housing Finance Agency

With all the talk of great booms and busts in house prices, it's helpful to step back to gain some historical perspective. As **Figure 7** illustrates, the five-year free fall in prices at the national level was really a reversion to the mean. That is, the national HPI value in the first quarter of 2013 was just about at its “pre-bubble” trend, meaning that house prices at the national level are about where one would expect had the run-up in prices never occurred. In this sense, the decline in prices—though painful for many homeowners and an economic drag for the nation—has been a necessary correction.

FIGURE 7: HOUSE PRICE INDEX COMPARED TO PRE-BUBBLE TREND, 1991 TO 2013



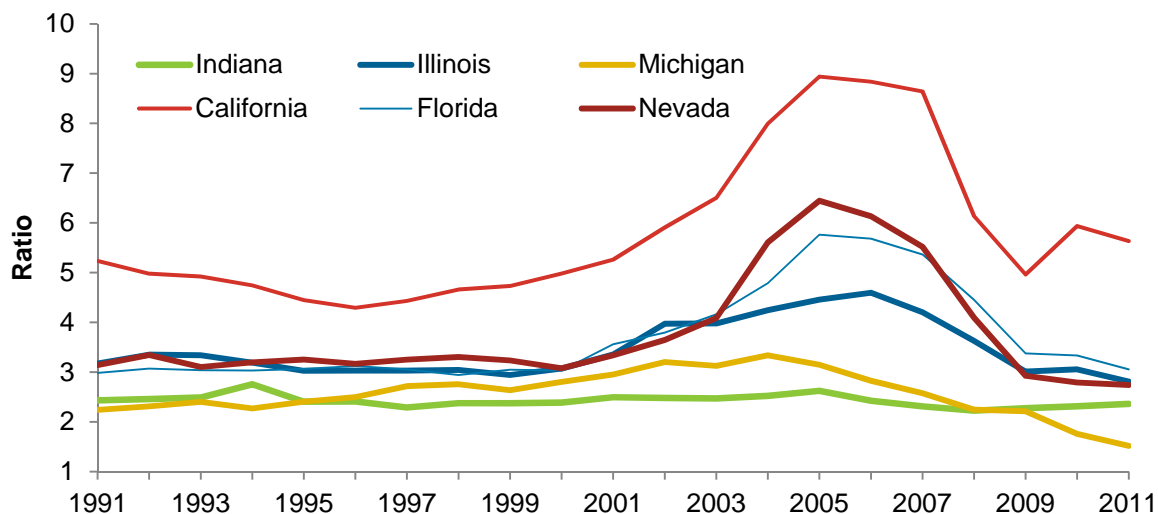
Source: Federal Housing Finance Agency, House Price Index (expanded data series, seasonally adjusted)

Obviously, the experience in Indiana has been far different. The Hoosier state saw relatively strong price gains during the 1990s but the pace of increase began to slow soon after values elsewhere started to take off. Indiana's home prices today sit well below the trend set during the 1990s. So while the HPI data for the U.S. clearly demonstrates the magnitude of the bubble, it also shows that Indiana had no price bubble at all. Instead, changes in Hoosier house prices have been glued to the state's economic performance.

A look at the ratio of median sales prices to median household income best illustrates this point. Among the states that headlined the housing bubble, the price-to-income ratios in Florida and Nevada more or less doubled between 2000 and 2005 while prices in California soared to nine times its median household income (see **Figure 8**). Looking at some of Indiana's neighbors, Illinois also saw a significant jump in this measure and even struggling Michigan's ratio climbed modestly.

Since the onset of the housing slump, however, the price-to-income ratio in each of these states tumbled back to the more sustainable levels seen during the 1990s. All the while, through a relative boom period in the 1990s and two recessions during the 2000s, Indiana's ratio has held remarkably steady over the last two decades.

FIGURE 8: RATIO OF MEDIAN SALES PRICE TO MEDIAN HOUSEHOLD INCOME, INDIANA AND SELECT STATES, 1991 TO 2013



Source: U.S. Census Bureau and Moody's Economy.com

With respect to the trend in Indiana house prices, one can view the glass as either half-full or half-empty. It is fortunate that prices in the state have remained tied to the economic fundamentals. If they had not, even more Hoosiers would have been hurt over the past five years by a larger decline in home values. However, looking at prices as an economic indicator, the HPI provides one more piece of evidence that the Indiana economy has not fared particularly well since the late 1990s, even during the period of economic growth between the last two recessions. Looking forward, at least, it's a safe bet that any gains the state can achieve in economic growth will translate into gains for Hoosier homeowners.

Foreclosure Wave Begins to Recede

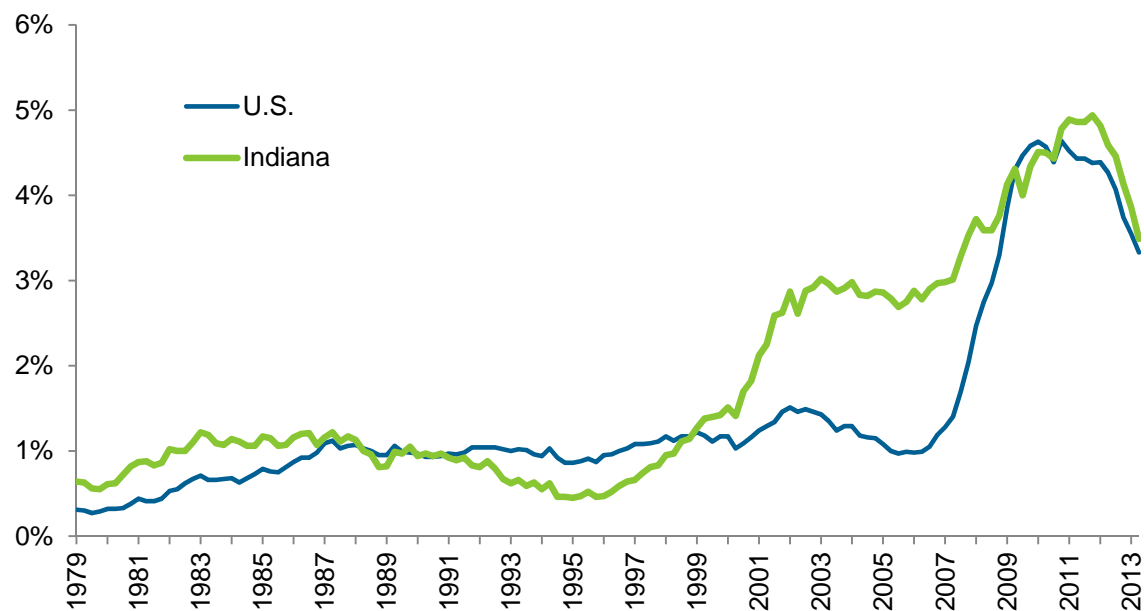
One of the primary ways that economic conditions have influenced home prices in recent years is through the dramatic rise in foreclosures. For instance, the mortgage technology firm FNC Inc. reports that, at the depth of the crisis in early 2009, a little more than one-third of all U.S. home sales were foreclosed properties. At the same time, these foreclosures were selling at 25 percent below market value.

As the foreclosure situation improved, its effect on prices has diminished. At the national level, foreclosures as a share of sales had been cut in half to 18 percent by the fourth quarter of 2012. FNC indicates that the foreclosure discount has fallen to 12 percent during the same period, which is comparable to foreclosure discount estimates before the housing bust.⁴

This situation should continue to improve as the volume of lender-owned properties decline in Indiana and around the country. **Figure 9** shows that the state has seen a precipitous decline in its foreclosure rate since the end of 2011. According to the Mortgage Bankers Association, the state's foreclosure rate has declined more than one percentage point from 4.96 in the fourth quarter of 2011 to 3.49 in mid-2013.

⁴ "Foreclosure Market Report," FNC Inc., February 2013, http://fncrpi.com/press_releases.aspx?pr=62.

FIGURE 9: SHARE OF MORTGAGES IN FORECLOSURE, 1979:1 TO 2013:2



Source: National Delinquency Survey, Mortgage Bankers Association

Even with this sharp decline, Indiana's foreclosure rate remains above the U.S. average and ranks 14th-highest among states. Several factors help explain Indiana's elevated rate. First, Indiana's sluggish economic performance—both before the recession and since—has contributed to a higher-than-average foreclosure rate for the better part of the last 13 years.⁵

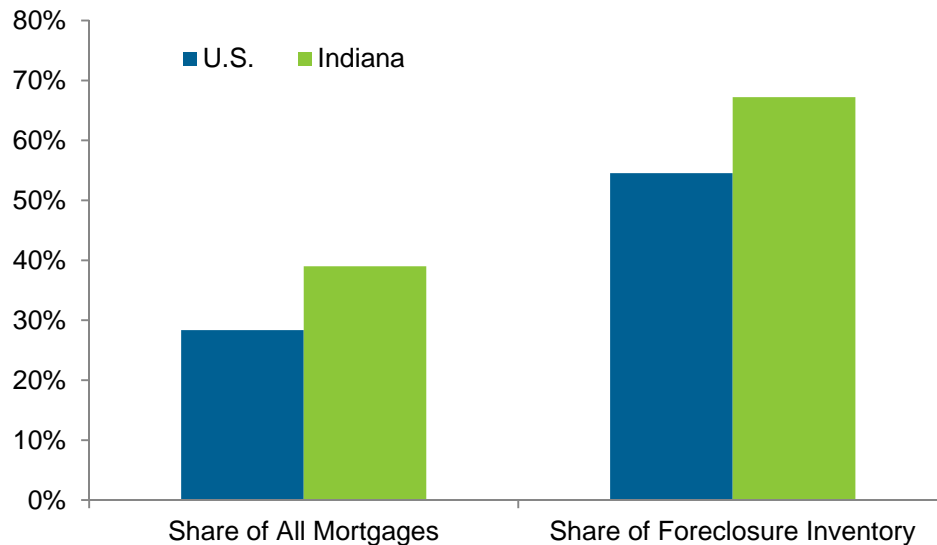
Another factor in Indiana's high foreclosure rate is that Hoosiers are more reliant on high-risk mortgages. In the second quarter of 2013, 27 percent of Indiana's outstanding mortgages were so-called FHA loans.⁶ An additional 12 percent of the state's mortgages were subprime. When combined together, Indiana had the nation's second-largest share (behind Oklahoma) of these types of loans at 39 percent of all mortgages. By contrast, FHA loans (18 percent) and subprime loans (10 percent) combine to account for 28 percent of all U.S. mortgages, according to the Mortgage Bankers Association.

In Indiana, 4.5 percent of FHA loans were in foreclosure in early 2013 compared to 1.8 percent of the state's prime mortgages. The state's foreclosure rate for subprime loans stands at 9.4 percent, which is lower than the U.S. mark of 11 percent. So while these types of loans account for a little more than one-third of Indiana's home loans, they represent approximately 67 percent of Indiana's foreclosure inventory due to their comparatively high default rates (see **Figure 10**). These higher-risk loans account for roughly 55 percent of the foreclosure inventory nationwide.

⁵ It's important to note that Indiana was not alone in its high foreclosure rate before the recession. Michigan, Ohio and Illinois joined Indiana to form a distinct block of high foreclosure states through much of the 2000s.

⁶ FHA loans are loans from private lenders that are insured by the Federal Housing Administration. These loans typically feature low down payment requirements and are intended for borrowers who would likely not qualify for a mortgage without the insurance.

FIGURE 10: FHA AND SUBPRIME LOANS AS A SHARE OF ALL MORTGAGES AND FORECLOSURE INVENTORY, 2013:2



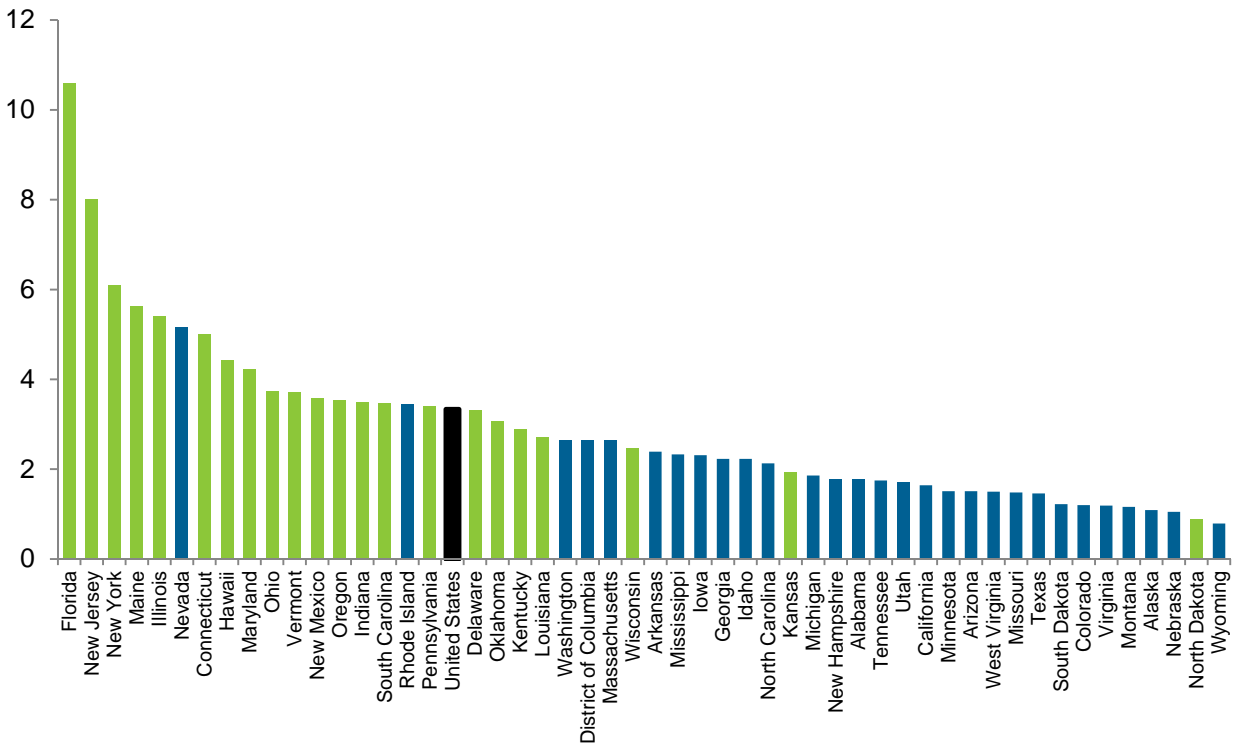
Source: National Delinquency Survey, Mortgage Bankers Association

Foreclosure laws also play a role in Indiana's comparatively high rate. According to the Mortgage Bankers Association, Indiana is one of 21 states that require a judicial review of all foreclosures. In all other states, lenders may proceed with a foreclosure without court oversight. While there are many reasons for these different approaches, one practical effect is that judicial review lengthens the time a given property spends in the foreclosure process, which can then inflate a state's foreclosure rate. As of April 2013, loans in foreclosure in judicial review states had been delinquent for an average of 31 months while the average length of delinquency in non-judicial states was 21 months—a 48 percent difference, according to Lender Processing Services (LPS).⁷

As a result, judicial review states have a greater backlog of foreclosures. Of the 21 states with the highest foreclosure rates in mid-2013, 19 were judicial review states (see **Figure 11**). Even some states that were at the epicenter of the housing bust like Arizona, California and Michigan now have comparatively low foreclosure rates due in part to their non-judicial review status. According to LPS, the combined foreclosure rate in judicial states as of April 2013 (5.3 percent) was more than three times greater than the rate in non-judicial states (1.6 percent).

⁷ "LPS Mortgage Monitor," Lender Processing Services, May 2012, www.lpsvcs.com/LPSCorporateInformation/CommunicationCenter/DataReports/Pages/Mortgage-Monitor.aspx.

FIGURE 11: SHARE OF MORTGAGES IN FORECLOSURE BY STATE, 2013:2

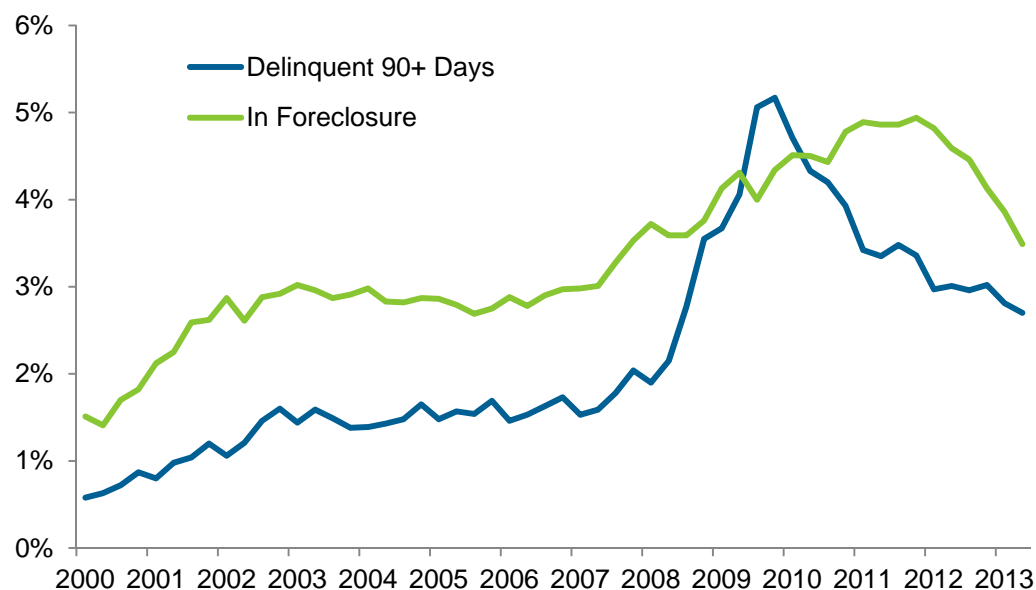


Note: Green bars indicate judicial review states.
 Source: National Delinquency Survey, Mortgage Bankers Association

Given the collateral effect of these laws on foreclosure inventory, the current situation in Indiana—while still a major problem—is somewhat better than the foreclosure rate suggests. While Indiana’s foreclosure rate has remained high, the flow of properties into foreclosure has declined sharply since peaking in late 2009 (see **Figure 12**).

In the second quarter of 2013, the share of the state’s mortgages that are at least three months past due was slightly more than two-thirds of the way back to its average rate between 2003 and 2007. The pace of decline has slowed since early 2011 but Indiana’s trend in this pre-foreclosure category has been nearly identical to the U.S. trend over the last three years.

FIGURE 12: SHARE OF INDIANA MORTGAGES THAT ARE 90+ DAYS PAST DUE OR IN FORECLOSURE, 2000 TO 2013



Source: National Delinquency Survey, Mortgage Bankers Association

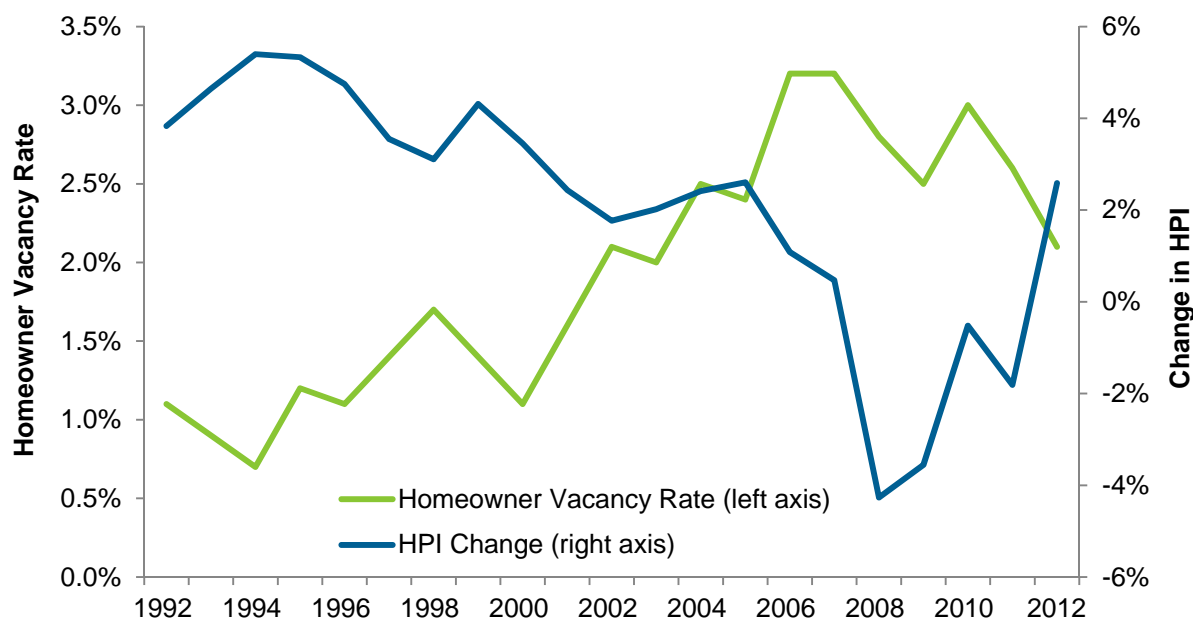
Implications of High Foreclosure Rates

Indiana's improving foreclosure rate will have several positive effects on the state's housing market. First, house prices will receive a boost from a shrinking foreclosure inventory. Not only do the foreclosed properties add to the total pool of homes for sale, but they also tend to sell at a discount and depress home values in their surrounding neighborhood.⁸

The rise in the inventory of vacant homes that are for sale (i.e., the homeowner vacancy rate) highlights this effect. During the 1990s, when foreclosure rates were low, Indiana's annual homeowner vacancy rate averaged 1.2 percent. Since 2002, when Indiana settled into its pattern of chronically high foreclosure rates, its vacancy rate has averaged 2.6 percent with a peak of 3.2 percent in 2006 and 2007. As **Figure 13** highlights, the rise in the homeowner vacancy rate has a strong negative correlation with the annual change in Indiana's house price index (-0.78), suggesting that the rise in vacancies and the weakening in Indiana's house price appreciation are related. With Indiana's comparatively strong home sales in 2012, however, the state's homeowner vacancy rate dropped to 2.1 percent—its lowest mark since 2003—and house prices showed strong gains in turn.

⁸ Stephan Whitaker, "Foreclosure-Related Vacancy Rates," Federal Reserve Bank of Cleveland, July 2011, www.clevelandfed.org/research/commentary/2011/2011-12.cfm.

FIGURE 13: INDIANA HOMEOWNER VACANCY RATE AND ANNUAL CHANGE IN HOUSE PRICE INDEX, 1992 TO 2012



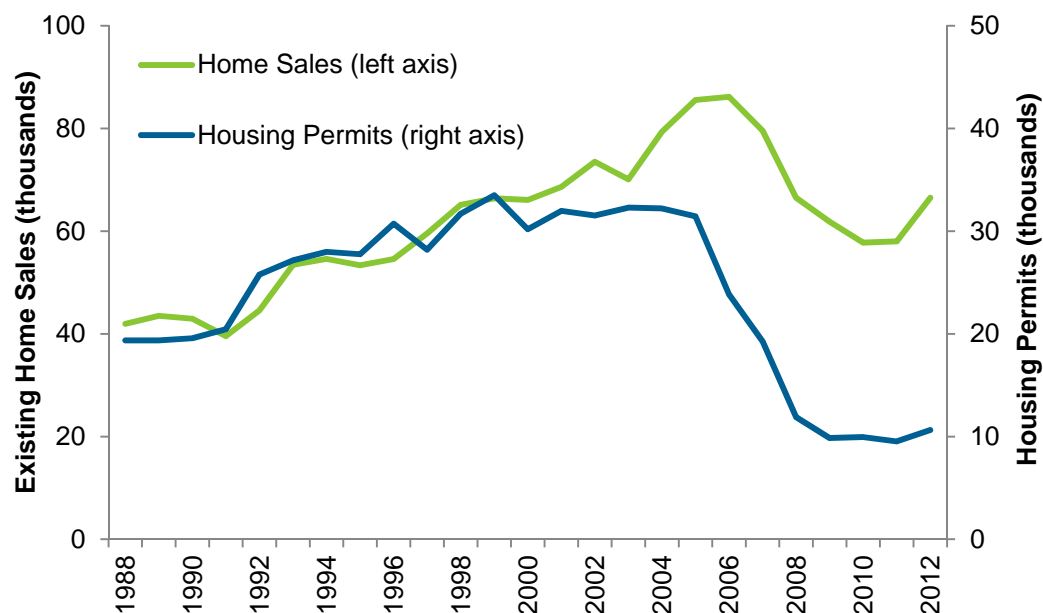
Source: U.S. Census Bureau, Federal Housing Finance Agency

Fewer foreclosures and rising house prices should also help spur demand for new home construction. Before the housing crash, there was a consistent ratio of five to six existing home sales for each new home sold at the national level. Since the beginning of 2007, however, housing demand has tilted even more heavily toward increasingly affordable existing homes. As a result, the ratio of existing home sales to new homes climbed to roughly 14-to-one by early 2012. The price discount on existing homes brought on by foreclosures and other distressed properties at least partially explains this widening gap.⁹ This is a trend that the economics blog *Calculated Risk* has termed the “distressing gap,” referring to the large number of distressed home sales in recent years.

New home sales data are not available for states, so we are unable to confirm if this relationship holds in Indiana. However, a comparison of existing home sales and annual housing construction permits suggests that the same dynamics are at play (see **Figure 14**). From 1988 to 2005, there were approximately two existing home sales for each single-family housing permit in Indiana, but in 2012 the ratio was greater than six-to-one. As the market continues to improve, this gap should begin to close over the next few years.

⁹ “New Home Sales and Distressing Gap,” *Calculated Risk* (blog), January 25, 2013, www.calculatedriskblog.com/2013/01/new-home-sales-and-distressing-gap.html

FIGURE 14: INDIANA EXISTING HOME SALES AND SINGLE-FAMILY HOUSING PERMITS, 1988 TO 2012



Source: U.S. Census Bureau, Moody's Economy.com

Looking Ahead

The Indiana housing market still has a long way to go, but it is clearly on the path to recovery. In terms of foreclosures, both time and tighter lending standards are helping to reduce the problem. That is, with respect to the risky mortgages issued before the crash, many of those that were destined to default have likely already done so. Meanwhile, at the national level at least, mortgages originated after 2008 have proven far less likely to fall into serious delinquency.¹⁰ So here in Indiana, the flow of mortgages into foreclosure, which has been on the decline since 2010, should continue to fall.

The trend toward rising house prices will also help alleviate the foreclosure problem. According to CoreLogic, nearly 12 percent of Indiana homeowners with a mortgage had negative equity as of the first quarter of 2013.¹¹ However, slightly more than one-quarter were close to getting into an equity position (i.e., within 5 percent of home value). So as prices rise, more and more of these (currently) underwater homeowners will be in a better position to avoid foreclosure in the event they fall behind on their payments. As a point of comparison, 19.8 percent of all U.S. mortgages have negative equity.

Newly expanded government programs at both the federal and the state levels will also help more homeowners escape foreclosure. At the national level, changes to the Home Affordable Refinance Program (HARP) in late 2011 triggered a dramatic increase in mortgage refinancing through this program. Here in Indiana, more than 15,000 homeowners refinanced through HARP over a 15-month period ending

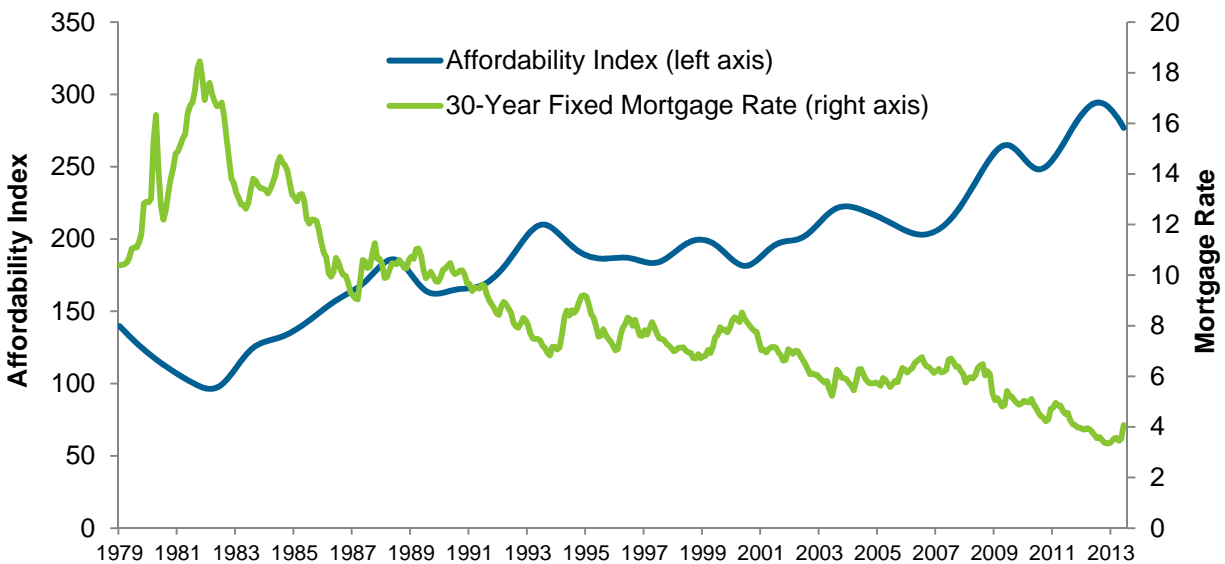
¹⁰ "LPS Mortgage Monitor," Lender Processing Services, March 2013, www.lpsvcs.com/LPSCorporateInformation/CommunicationCenter/DataReports/Pages/Mortgage-Monitor.aspx.

¹¹ "CoreLogic Equity Report," CoreLogic, First Quarter 2013, www.corelogic.com/about-us/researchtrends/asset_upload_file866_14435.pdf.

in March 2013.¹² Additionally, in April 2013, the State of Indiana announced a significant expansion of its Hardest Hit Fund program, which helps Hoosier facing economic hardship to remain in their home.¹³

Another positive sign for the market is a relatively strong rebound in housing demand. As discussed earlier, existing home sales in Indiana increased by 15 percent in 2012 and sales through the first half of 2013 are up 18 percent year-over-year. This development reflects both modest improvements in the economy and unprecedented housing affordability (see **Figure 15**). In fact, according to Moody's Economy.com, Indiana enjoyed the fifth-best housing affordability conditions among states in 2012.

FIGURE 15: MORTGAGE INTEREST RATES AND INDIANA HOUSING AFFORDABILITY INDEX, JANUARY 1979 TO JUNE 2013



Note: An index value of 100 means that a state's median household income is exactly enough to qualify for a mortgage on a median-priced home. Values above 100 indicate that the median income is more than enough to qualify. Indiana's index value was 281 in May 2013, meaning that the state's median household income was 281 percent of the income needed for a mortgage on the median-priced house. See the appendix for the index methodology. Monthly affordability values are interpolated from annual data. The 2013 index values are a forecast.
Source: Freddie Mac and Moody's Economy.com

Now that the housing market is beginning to stabilize, however, affordability is bound to come back to earth a bit. Not only are house prices on the rise again, but mortgage rates are climbing too. According to Freddie Mac, the 30-year fixed mortgage rate jumped from 3.35 percent in the first week of May to 4.39 percent at the beginning of August. In their July forecasts, both the Mortgage Bankers Association and Freddie Mac predict the rate will climb above the 5 percent mark in the second half of 2014.

It seems unlikely that a rise in rates will have too much of a negative impact on demand here in Indiana, at least not in the short run. In these current conditions, there is quite a bit of room to maneuver before affordability truly becomes a concern. A recent analysis by Freddie Mac indicates that housing would remain affordable in metro areas throughout the Midwest with mortgage rates as high as 8 percent, and

¹² "Refinance Report," Federal Housing Finance Authority, December 2012 and March 2013, www.fhfa.gov/Default.aspx?page=172.

¹³ "State Details Foreclosure Assistance Expansion," *Inside Indiana Business*, April 18, 2013.

they could probably go even higher before housing is considered unaffordable (8 percent is the highest level in their analysis).¹⁴

While housing will likely remain affordable for some time, there is an ongoing concern among some officials that many creditworthy households are being locked out of the market by tight lending standards. As Federal Reserve Chairman Bernanke indicated in a November 2012 speech, lenders appropriately tightened standards after the housing bust, but those standards may now be too conservative and an impediment to a full economic recovery.¹⁵ An improving economy will be the key driver in a housing rebound, but once more potential buyers have the confidence and means to purchase a home, the availability of affordable financing for creditworthy borrowers will be important to boosting the market.

¹⁴ “What Happens When Interest Rates Rise?,” *U.S. Economic & Housing Market Outlook*, Freddie Mac, June 2013, www.freddiemac.com/news/finance/docs/Jun_2013_public_outlook.pdf.

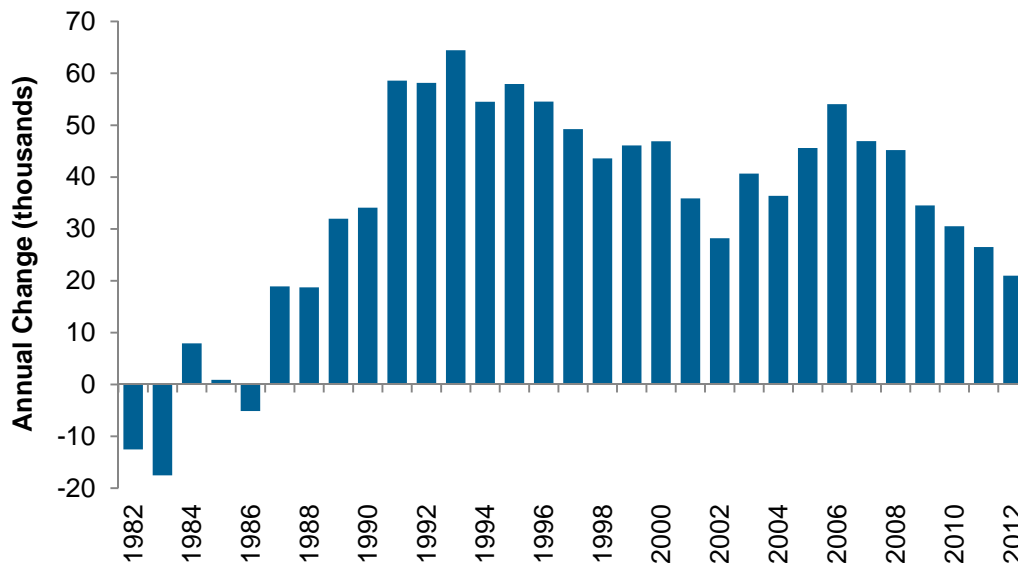
¹⁵ “Challenges in Housing and Mortgage Markets,” Federal Reserve Chairman Ben S. Bernanke, November 15, 2012, www.federalreserve.gov/newsevents/speech/bernanke20121115a.htm.

Demographic Fundamentals

Sluggish Population Growth in Indiana

Indiana's recent housing revival has occurred despite a continued slowdown in population growth. Indiana added an estimated 21,000 residents between mid-2011 and mid-2012, which marks the state's smallest annual increase since 1988 (see **Figure 16**). What's more, all of the state's population growth occurred in age groups not usually associated with a lot of net home purchases. Indiana's population age 65 or older and those age 18 to 24 both increased, but the 25-to-44 and 45-to-64 age groups declined by roughly 4,500 residents each.

FIGURE 16: INDIANA ANNUAL POPULATION CHANGE, 1982 TO 2012



Source: U.S. Census Bureau population estimates

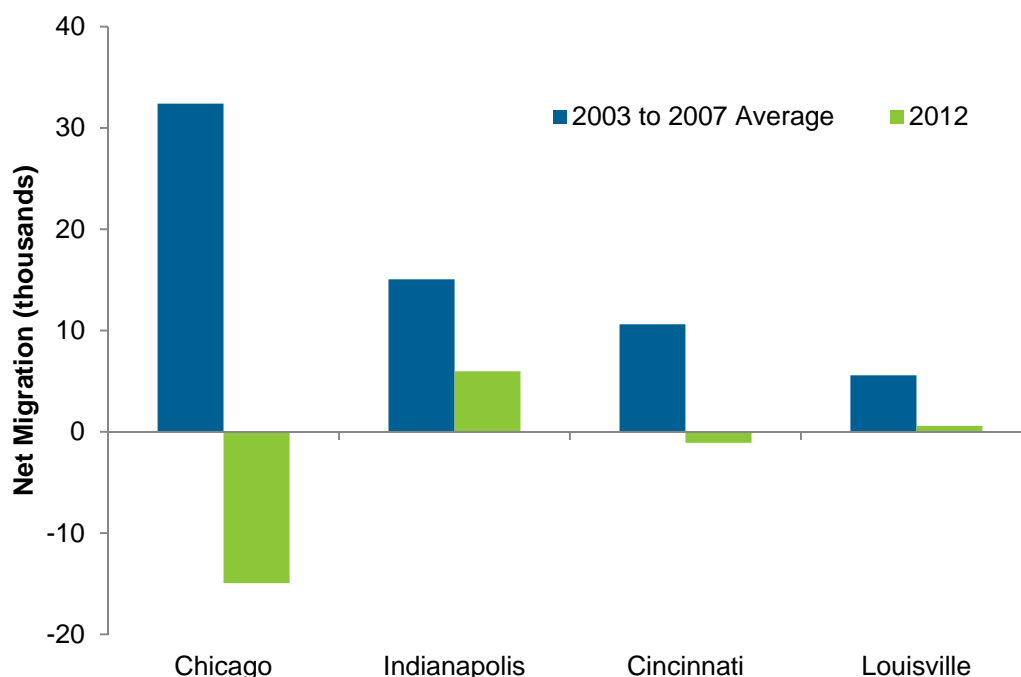
The primary cause of Indiana's sluggish population growth has been the dramatic decline in migration in the wake of the recession. According to Census Bureau estimates, Indiana had a net out-migration of nearly 4,600 residents between July 2011 and July 2012. This is the third consecutive year that Indiana had an estimated one-year net outflow of population, but only the fourth annual net-outmigration since 1990.

Movement within the state is also down, particularly among homeowners. Data from the American Community Survey (ACS) show that the share of Hoosier homeowners who reported moving within the state over the previous year declined from 7.4 percent in 2006 to 5.3 percent in 2011. This trend means

that many fast-growing communities have seen far fewer new residents in recent years, especially in the suburbs of large metro areas.

Figure 17 compares the 2012 net migration estimates for the suburban counties of the Indianapolis metro area along with the large metros that border the state against their average annual levels before the recession. The 10 suburban counties of the Indianapolis area averaged a net in-migration of nearly 15,100 residents a year between 2003 and 2007.¹⁶ However, the net influx dropped to 6,000 in 2012—a 60 percent decrease. Within the area, Hamilton County had the largest drop—going from an annual average of 7,600 net in-migrants between 2003 and 2007 to 3,800 in 2012.

FIGURE 17: COMPARISON OF NET MIGRATION ESTIMATES FOR SUBURBAN COUNTIES OF SELECT METRO AREAS



Source: U.S. Census Bureau population estimates

The 14 outlying counties of the Chicago metro area (which include Lake, Porter, Jasper and Newton counties in Indiana) have shown an even more dramatic fall in migration. Among Indiana counties in this metro, Lake County had the largest 2012 net out-migration at roughly 3,200 residents. In all, 67 of Indiana’s 92 counties had a net out-migration of residents in 2012.

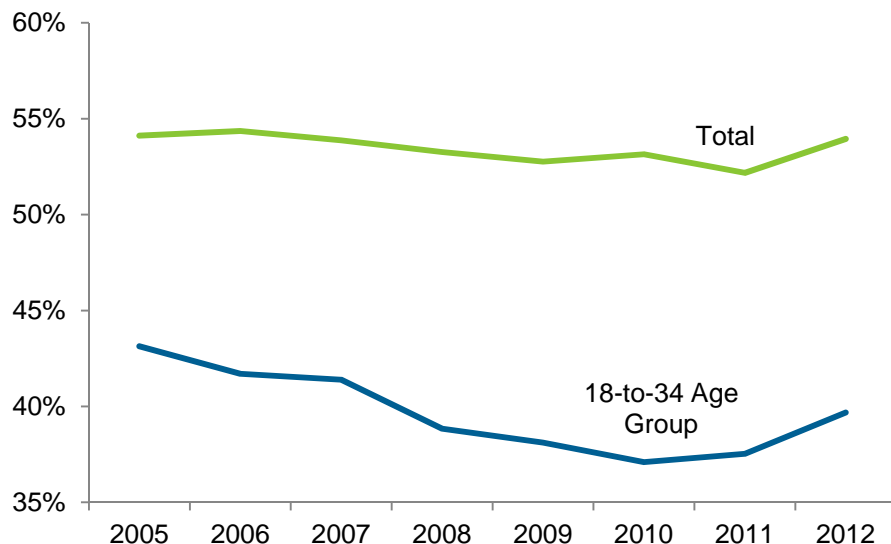
So how is it that Indiana’s housing market has begun to rebound if there is net out-migration and population decline in key age groups? One factor may be that the increasing number of households “doubling up” during the recession is beginning to subside. That is, with unemployment so high in recent years, many adults were forced to move in with family or friends. As a result, Indiana’s headship rate (the

¹⁶ In the case of the Indianapolis metro area, the suburban counties are Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Madison, Morgan, Putnam and Shelby. Marion County is the metro area’s core county and is excluded from these numbers. Many of the Midwest’s core metro counties—Marion County included—have seen marked improvements in their net migration figures through the downturn as the flow of residents to suburban areas or to other fast-growing regions of the country has slowed.

number of households divided by population age 18 or older), has been on the decline, particularly among young adults. That trend, however, appears to have reached a turning point in 2012.

Figure 18 illustrates that Indiana’s headship rate edged up in 2012 after falling in four of the past five years. This shift has been spurred in part by a strong rebound in household formation among the 18 to 34 age group. To help put this increased headship rate in context, Indiana would have had roughly 43,000 fewer households in 2012 had the state’s headship rate been at the average level of the previous five years.

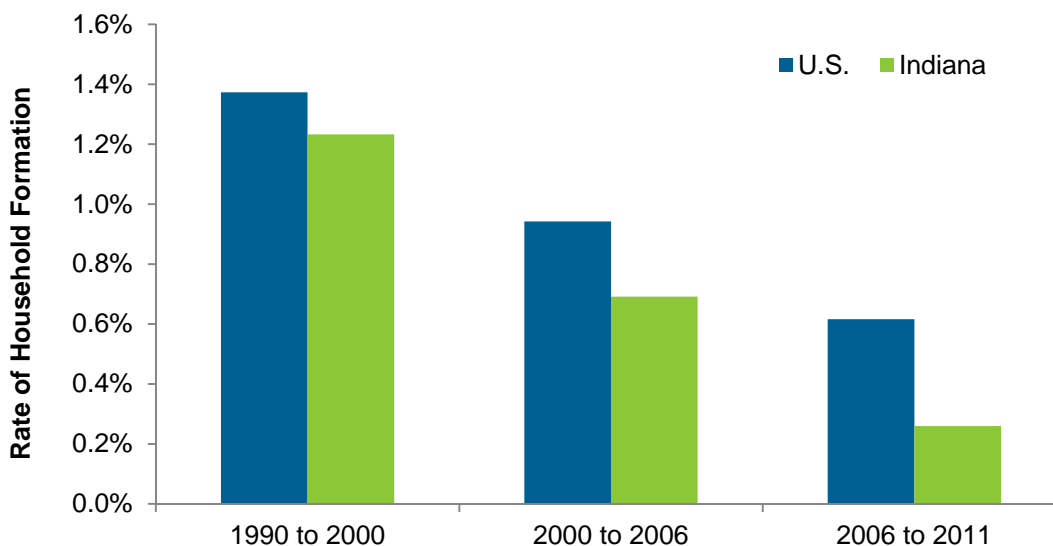
FIGURE 18: INDIANA HEADSHIP RATE, 2005 TO 2012



Source: IPUMS-CPS

Even with this uptick in headship rates, any gain in Indiana’s household formation rate last year is likely muted by the net out-migration of residents from the state. While data for 2012 are not available yet, Indiana’s household formation rate in recent years has been well below levels seen before the Great Recession. Between 2006 and 2011, the number of households in the state grew by an average rate of 0.3 percent per year—compared to 0.7 percent annually during the earlier part of the decade and 1.2 percent throughout the 1990s (see **Figure 19**). These rates translate to a decline from approximately 16,500 new households per year between 2000 and 2006 to 6,400 per year between 2006 and 2011. The nation as a whole has had higher rates of household formation but has still seen a similar decline in this measure.

FIGURE 19: AVERAGE ANNUAL HOUSEHOLD FORMATION RATES, 1990 TO 2011



Source: U.S. Census Bureau, Decennial Census and American Community Survey

Has the Homeownership Rate Stabilized?

Indiana's homeownership rate has also taken a tumble since the onset of the housing slump. Data from the Census Bureau's Housing Vacancy Survey indicate that, after a dramatic climb in homeownership between the mid-1990s and the mid-2000s, the state's homeownership rate plunged 3 percentage points between 2008 and 2010. According to the latest decennial census, the state's homeownership rate stood at 69.9 percent in 2010, which is below the mark measured in 1990 (70.2 percent) and 2000 (71.4 percent).

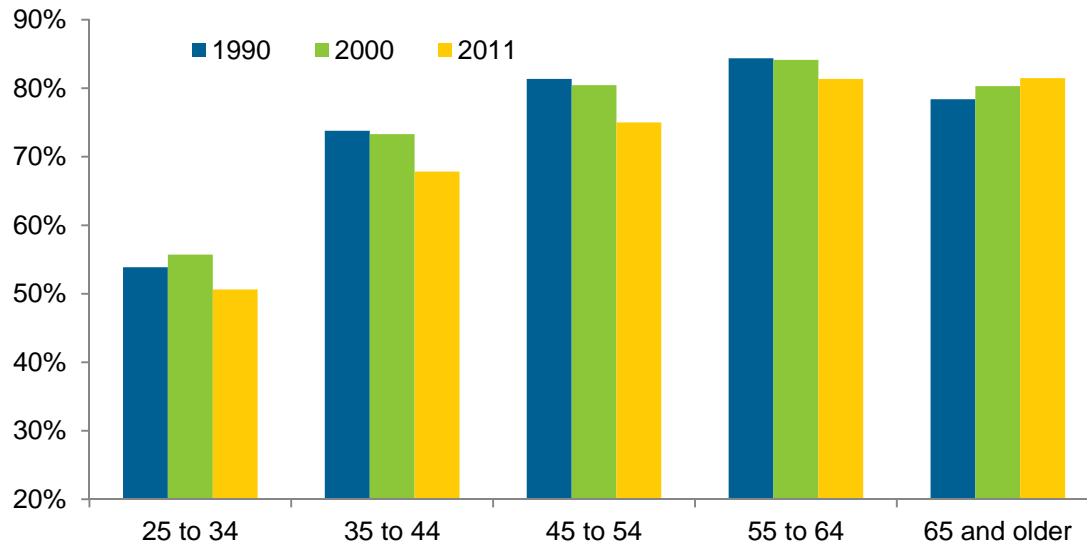
It's tough to get a good handle on the current state of homeownership in Indiana because different Census Bureau surveys paint slightly different pictures. The Housing Vacancy Survey, for instance, indicates that the state's homeownership rate increased slightly in 2011 and then held steady in 2012. The American Community Survey, on the other hand, shows a slight decline between 2010 and 2011, but the difference was not statistically significant. (The ACS is likely the more reliable survey.) So an optimistic interpretation of these data would be that even if the state's homeownership rate is not on the rise, the decline in this measure might have stopped.

The focus on the total homeownership rate, however, tends to distract attention from the even larger declines in most age-group-specific rates. Comparing results from the 2000 Census and the 2011 ACS, Indiana's total homeownership rate was down 1.7 percentage points. Meanwhile, the homeownership rates for each 10-year age group between the ages of 25 and 54 were down more than 5 percentage points over the same period (see **Figure 20**). The homeownership rate for the 55-to-64 age group was down 2.7 percentage points, while the share of Indiana seniors that owned their home increased slightly to 81.5 percent.

The comparatively small change in the total homeownership rate is simply a function of the fact that the Indiana population is growing older and the likelihood of being a homeowner increases with age. With the baby boom generation now between the ages of 49 and 67, this age group holds a larger share of the state's population than ever before. This is also the beginning of the prime age groups for

homeownership. So the continued aging of this outsized cohort will boost the state's total homeownership rate, even if age-specific rates only hold constant.

FIGURE 20: INDIANA HOMEOWNERSHIP RATES BY AGE, 1990 TO 2011



Source: U.S. Census Bureau, Decennial Census and American Community Survey

Looking Ahead

The pace of household formation in Indiana should begin to increase from the very low levels seen in recent years. The state's headship rate appears to have ticked up in 2012, and—if Indiana is like the nation as a whole—this measure should continue to climb over the next few years. Recent projections from analysts at the Federal Reserve indicate that the U.S. headship rate should improve by roughly 2 percentage points by the end of this decade.¹⁷ The increase reflects both the effect of an aging population and more young adults starting households as unemployment improves.

The other key driver of household formation is migration. Indiana is currently enduring an extended period of net out-migration, but this trend should improve along with the economy. The state has had periods of strong net in-migration following the previous two recessions and population projections from the IBRC and Moody's Economy.com both suggest that Indiana should start to attract more residents for the remainder of this decade. However, only time will tell whether migration to Indiana bounces back as it has in the past.

Once household formation does pick up, will age-specific homeownership rates begin to rebound too? Research indicates that the housing crash has done little to diminish the desire for homeownership among most Americans, even young adults. According to a recent Fannie Mae survey, 71 percent of current renters feel that owning a home makes more financial sense than renting does.¹⁸ Furthermore,

¹⁷ Andrew D. Paciorek, "The Long and the Short of Household Formation," Federal Reserve Board, April 2013, www.federalreserve.gov/pubs/feds/2013/201326/201326pap.pdf.

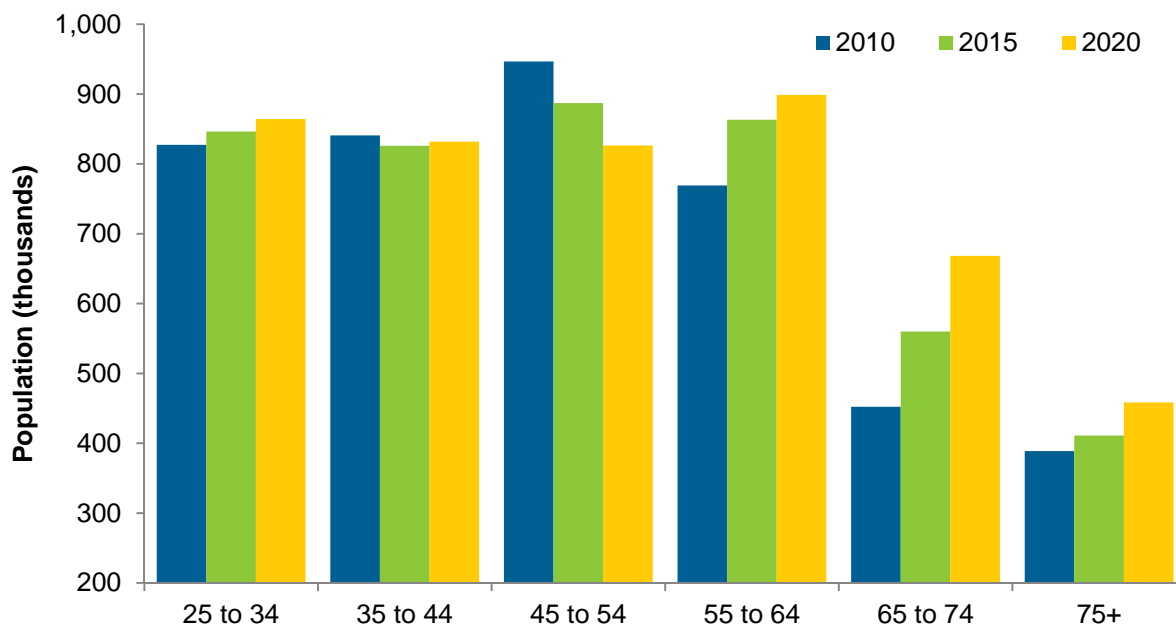
¹⁸ "Renters: Satisfied, but Reaching for Homeownership," Fannie Mae National Housing Survey, June 2013, www.fanniemae.com/resources/file/research/housingsurvey/pdf/nhsq32012presentation.pdf.

analysis of National Housing Survey data by Harvard researchers shows that approximately 95 percent of respondents between the ages of 25 and 44 expect to buy a home sometime in the future.¹⁹

While the desire to buy a home may be there, the means may not. As discussed earlier, the unemployment rate is still too high and lending standards remain tight. However, as the economy improves and house prices rise at sustainable rates, financing should be available to more and more prospective buyers.

The rate at which younger adults enter the market will be especially important over the next 15 years if large numbers of retiring baby boomers look to downsize from their current homes. The oldest members of the baby boom generation turned 65 in 2011 and the entire cohort will be of traditional retirement age by 2030. According to the IBRC’s population projections, Indiana can expect a slight increase in the state’s population age 25 to 44 by 2020 (see **Figure 21**). The 45-to-54 set will decline as the boomers start to age out of this group and the older brackets will begin their dramatic increase. When the dust settles in 2030, the share of Indiana’s population that is age 65 or older will increase to 20 percent from 13 percent in 2010.

FIGURE 21: INDIANA POPULATION PROJECTIONS BY AGE, 2010 TO 2020



Source: Census 2010 and Indiana Business Research Center population projections

This process will impact the housing market in a number of ways, such as increasing demand for senior-oriented housing. The aging of the baby boomers also has the potential to tilt the balance between homebuyers and sellers. That is, for the population under the age of 65, the number of homebuyers typically exceeds the number of sellers, which supports prices and spurs new construction. According to research from the University of Southern California (USC), this ratio flips around the age of 65 with sellers

¹⁹ Eric S. Belsky, “The Dream Lives On: The Future of Homeownership in America,” Joint Center for Housing Studies, Harvard University, January 2013, www.jchs.harvard.edu/research/publications/dream-lives-future-homeownership-america.

outnumbering buyers. The gap between the two begins to widen dramatically after the age of 70. In most states, this has been manageable because the senior population holds a small share of the total, but this will change. Over the next 10 years, Indiana's senior population will boom while the working age population (i.e., age 25 to 54) is projected to decline slightly.

Because of this dynamic, the USC researchers predict that there is a generational housing bubble on the horizon.²⁰ Their analysis indicates that only six other states (all in the Midwest or Northeast) have a higher ratio of sellers to buyers in the 65-to-69 age group than Indiana does. If this trend plays out as this study anticipates, Indiana's boomers would add more homes to the market without a corresponding increase in buyers to absorb them. The fact that homeownership rates among younger age groups have declined only exacerbates this situation. The most likely effect of this shift is that house prices will increase more slowly in some areas, or maybe even decline, in order to draw more young buyers to the market. This scenario could also hinder residential construction in some areas.

Some communities will feel the effects of this generational shift more than others will. Fast-growing suburban counties in the Indianapolis and Louisville metro areas will likely be able to absorb this supply of homes as younger families continue to move to these communities. Other areas of the state will age more rapidly, however, as young adults and families move elsewhere. Madison, LaPorte, Howard, Grant and Wayne counties are examples of larger Indiana communities that could feel the effects of a generational housing bubble.

²⁰ Dowell Myers and SungHo Ryu, "Aging Baby Boomers and the Generational Housing Bubble: Foresight and Mitigation of an Epic Transition," *Journal of the American Planning Association*, December 2007.

Housing and the Economy

Residential Construction Improving, but Still Weak

Residential Fixed Investment (RFI)—a component of GDP that includes investment in new construction and home improvements—is the most commonly watched indicator of housing’s contribution to the economy.²¹ One reason that RFI is widely followed is that it tends to be a leading indicator of economic activity.²² That is, RFI typically peaks before the start of a recession and it tends to rebound before a downturn ends, helping to pull the country out of its slump. However, given housing’s central role in this most recent economic downturn, RFI has yet to provide much of a boost to the recovery.

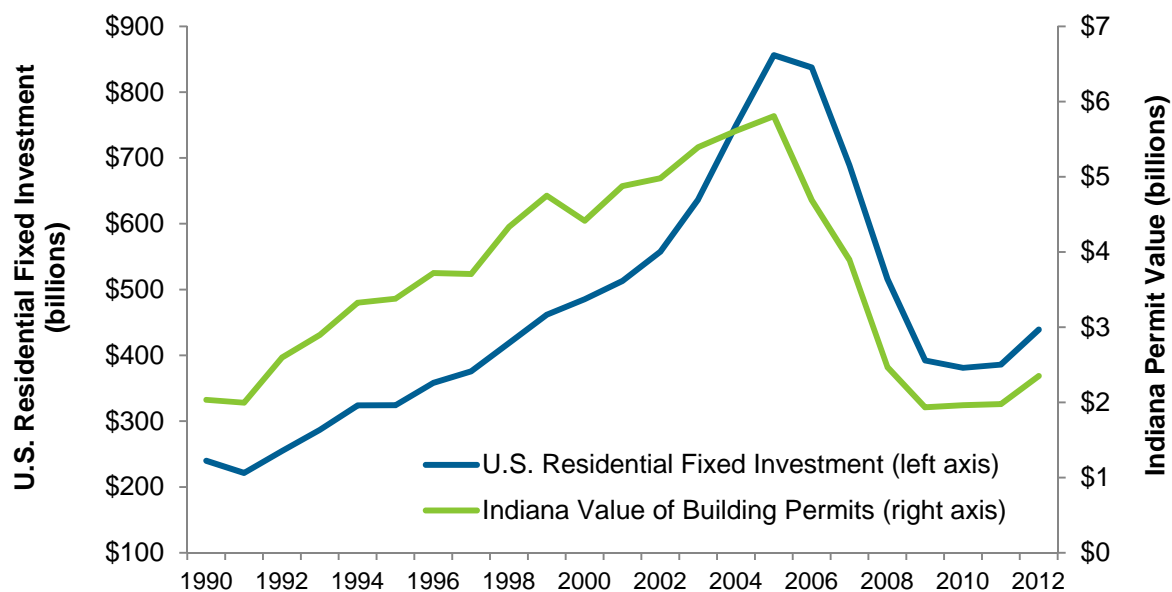
As with other areas of the housing market, residential investment is beginning to show signs of life but remains very low by historical standards. Between 1950 and 2007, RFI accounted for 4.9 percent of annual U.S. GDP on average. As the demand for new homes nosedived, however, RFI’s share of economic activity bottomed out at 2.5 percent in 2011 and stood at just 2.7 percent in 2012—the third-lowest annual mark since the end of World War II. That said, housing is beginning to make a sustained contribution to economic growth. As of the second quarter of 2013, RFI has improved for 11 consecutive quarters and now represents 3.1 percent of GDP.

There is no measure of RFI at the state level, but other indicators such as the value of annual building permits tend to follow the same path. **Figure 22** compares the change in national RFI to Indiana’s annual value of building permits. Both indicators peaked in 2005 and have fallen dramatically since. The total dollar value of Indiana’s housing permits hit bottom in 2009 and climbed slowly for the next two years before posting a more impressive 19 percent increase in 2012. Even with this improvement, the value of construction has fallen to an extent that the dollar total for permits in 2012, even when measured in nominal terms (i.e., not adjusted for inflation), was a shade below the level seen in 1992.

²¹ According to the U.S. Bureau of Economic Analysis, RFI consists of the purchase of residential structures and the residential equipment that is owned by landlords and rented to tenants. Investment in residential structures includes the new construction of housing units, improvements to existing housing units, the purchase of manufactured homes and brokers’ commissions on sales.

²² Kathryn Byun, “The U.S. Housing Bubble and Bust: Impacts on Employment,” *Monthly Labor Review*, December 2010.

FIGURE 22: U.S. RESIDENTIAL FIXED INVESTMENT AND INDIANA VALUE OF BUILDING PERMITS, 1990 TO 2012



Source: U.S. Bureau of Economic Analysis and U.S. Census Bureau

Indiana is off to a much stronger start in 2013 with respect to the value of housing permits. Through June 2013, the total value of permits issued in the state is up 31 percent over the same period in 2012. This increase is even more impressive considering that the winter weather in early 2012 was far milder than it was in the early part of this year.

Housing's Impact on Employment

The trend in the number of permitted units has been even more dramatic than the value of permits. The number of units permitted in Indiana in 2012 was less than one-third of the peak level seen in 1999 and was the fifth-lowest mark since 1960. However, the number of units last year was up 9 percent over 2011. The rebound has been even stronger so far this year, as the number of units through the first half of 2013 is 20 percent greater than for the same period in 2012.

Of course, this decline has had a serious effect on employment in residential construction. Compared to 2005, Indiana had 7,900 fewer residential construction jobs in 2012—a 41 percent decline. By comparison, the state's total employment was off by 2 percent over the same period.

The employment impacts don't end with the construction industry. With fewer houses built, there is a reduced demand for other goods and services related to the industry such as architecture and design, building materials, and home furnishings. According to the IMPLAN economic modeling software, residential construction has an employment multiplier of 2.1 in Indiana, meaning that each job in this industry supports an additional 1.1 jobs in other industries throughout the state. If this multiplier holds, the decline of 7,900 construction jobs between 2005 and 2012 translates to a loss of an estimated 8,690 jobs in other industries in the state.

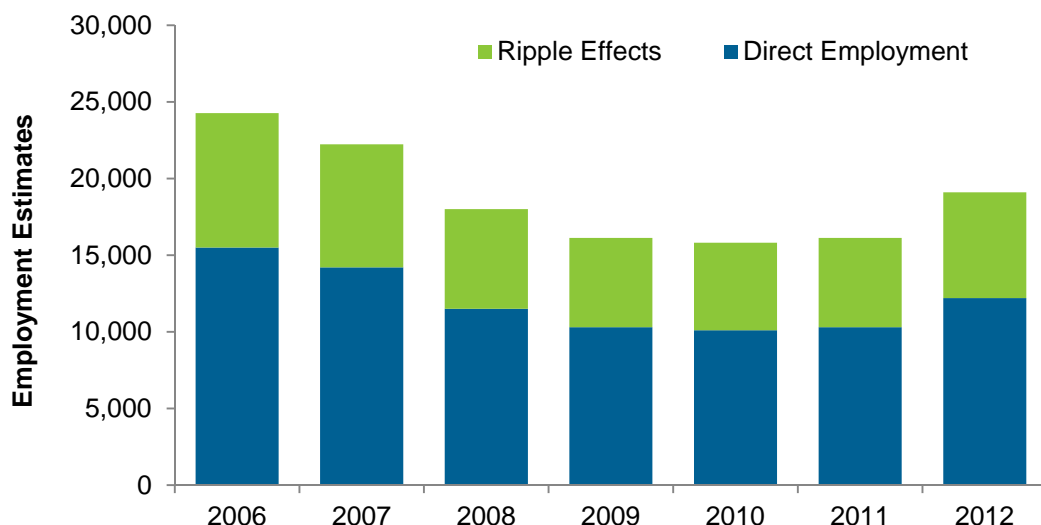
The Economic Impact of Home Sales

The sale of existing homes also has an impact on the state's economy. The National Association of Realtors estimates that each sale of an existing home generates a shot of direct economic activity that is

equal to 16 percent of the sale price. Borrowing this approach, a home selling at Indiana's 2012 median price of \$118,000 injects roughly \$18,900 into the state's economy through broker's commissions, mortgage fees, remodeling, furniture purchases and the like. According to the IMPLAN model, these combined transactions have an economic multiplier of 1.5 meaning that each dollar generated by an existing home sale spurs another \$0.50 in economic activity in the state. These ripple effects bring the total economic impact of a median-priced home sale to an estimated \$28,350.

In terms of employment, Indiana's total value of existing home sales in 2012 supported an estimated 12,200 jobs in industries directly related to these transactions. With a multiplier of 1.6, the total employment impact jumps to an estimated 19,100 jobs in the state. Of course, the dramatic decline in home sales since 2006 has had a negative impact on employment. **Figure 23** illustrates the estimated direct employment impact, along with the ripple effects, associated with the total value of existing home sales from 2006 to 2012. The decline in home sales over this period has cost the state an estimated 5,200 jobs.

FIGURE 23: ESTIMATES OF THE IMPACT OF EXISTING HOME SALES ON INDIANA EMPLOYMENT, 2006 TO 2012



Source: IBRC, using Indiana Association of Realtors data and the IMPLAN economic model

Looking Ahead

Clearly, continued improvements in residential construction and home sales would be a shot in the arm for the Indiana economy. Fortunately, several industry forecasts predict that housing activity will pick up some steam in 2013. Freddie Mac's recent forecast, for instance, predicts that housing starts at the national level will increase 28 percent in 2013 and home sales will be up 10 percent.²³ For 2014, they forecast annual gains in these same indicators at 20 percent and 7 percent, respectively. If these forecasts prove to be in the ballpark, then housing will start to play a larger role in the economic recovery.

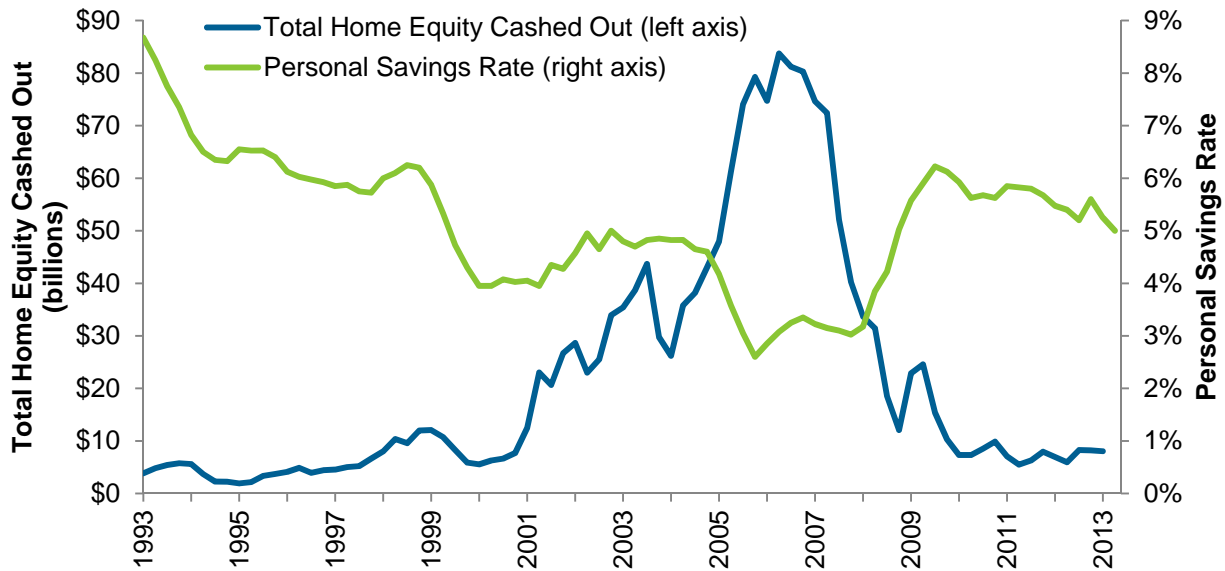
The housing market's influence on the economy extends beyond these core activities, however. Most notably, changes in home values can influence consumer spending. This was especially true during the bubble era when many homeowners reduced savings in response to what they viewed as permanent and

²³ "July 2013 Economic and Housing Market Outlook," Freddie Mac, July 2012, www.freddiemac.com/news/finance/.

ever-growing gains in the value of their homes.²⁴ Indeed, during the housing bubble, the nation's personal savings rate dropped to its lowest levels on record, according to the Bureau of Economic Analysis. This lower level of savings freed up more money for consumer spending throughout much of the last decade. The personal savings rate climbed swiftly after the housing bust, but it remains low by historic standards (the savings rate averaged 10 percent between 1950 and 1998) and has been slowly declining of late to a mark of 5 percent in the second quarter of 2013.

Additionally, during the bubble years, more and more homeowners took advantage of price gains to draw equity out of their homes through cash-out refinancing (i.e., borrowing more than is needed to pay off the original mortgage). To demonstrate this trend, data from Freddie Mac shows that homeowners with prime mortgages cashed out an average of \$23 billion in home equity per year between 1993 and 2000. As **Figure 24** shows, this number spiked between 2004 and 2007, averaging \$241 billion a year over that period. At the 2006 peak, cash-out transactions accounted for 87 percent of all refinancing originations.

FIGURE 24: U.S. TOTAL HOME EQUITY CASHED OUT AND PERSONAL SAVINGS RATE, 1993:1 TO 2013:1



Note: Freddie Mac defines cash-out refinance as a loan amount that is at least 5 percent greater than the unpaid principle balance of the original loan. The cash-out numbers refer to the refinancing of prime conventional mortgages only. The personal savings rate numbers are a four-quarter moving average.

Source: Freddie Mac and U.S. Bureau of Economic Analysis

Like the reduced savings rate, the cash-out refinancing boom likely helped to spur some additional consumer spending. A 2007 Federal Reserve study estimated that homeowners use more than half of their cashed-out equity on home improvements and other consumer spending.²⁵ Also like the reduced savings rate, this trend proved short-lived. Even as historically low interest rates have spurred a recent surge in refinancing, the cash-out option has fallen to a 25-year low of 14 percent of all refinancing transactions in 2012.

²⁴ "Housing Wealth and Consumer Spending," Congressional Budget Office, January 2007.

²⁵ Alan Greenspan and James Kennedy, "Sources and Uses of Equity Extracted from Homes," Federal Reserve Board, March 2007.

Both the decline in personal savings and the increase in cash-out refinancing amounted to more spending money on hand at a time when real household incomes were stagnant. Given Indiana's manufacturing focus—specializing in high-ticket goods like cars, RVs and home furnishings—the state was likely one of the larger beneficiaries of housing-induced spending. Starting in 2008, however, this spring began to run dry.

The role of housing wealth as a source of consumer spending will likely never return to bubble-era levels. For Indiana's economy to flourish in the next decade, improved income gains here at home and growth in exports abroad will have to offset this lost demand.

Conclusion

Indiana has seen dramatic improvement in some areas of its housing market. Most notably, between mid-2012 and mid-2013, existing homes sales increased roughly 17 percent and the median sales price was up 4 percent. The sharp decline in the state's foreclosure rate over the past year and a half is another important development. Among Indiana's key housing indicators, residential construction still has the most ground to recover, but sustained improvements in other areas of the market should help lift this industry.

In order to maintain this momentum, however, Indiana will need to see stronger progress in the broader economy. The state is adding jobs, but its unemployment rate in July 2013 is one percentage point higher than the national average and this measure has hardly improved since late 2011. A stronger labor market should help Indiana attract residents again after three consecutive years of net out-migration. Many of the other pieces needed for a strong housing market are already in place. For instance, even with somewhat higher mortgage rates, Indiana has some of the most affordable housing in the country. Once Indiana's economy is back on solid footing, its housing market should return to form too.

Appendix

Home Sales and Median Sales Price by County, Year-over-Year Change, July 2011 to June 2013

County	Sales, July 2011 to June 2012	Sales, July 2012 to June 2013	Percent Change	Median Price, July 2011 to June 2012	Median Price, July 2012 to June 2013	Percent Change
Indiana Total	61,860	72,080	16.5%	\$115,000	\$120,000	4.3%
Adams	230	241	4.8%	\$76,000	\$83,000	9.2%
Allen	4,167	4,672	12.1%	\$105,000	\$112,000	6.7%
Bartholomew	842	877	4.2%	\$147,925	\$143,500	-3.0%
Benton	53	67	26.4%	\$65,000	\$55,000	-15.4%
Blackford	73	93	27.4%	\$55,750	\$53,500	-4.0%
Boone	835	1,040	24.6%	\$185,000	\$193,950	4.8%
Brown	150	162	8.0%	\$144,500	\$144,900	0.3%
Carroll	150	161	7.3%	\$78,250	\$98,450	25.8%
Cass	281	353	25.6%	\$52,500	\$63,000	20.0%
Clark	1,133	1,450	28.0%	\$121,950	\$121,000	-0.8%
Clay	169	206	21.9%	\$80,950	\$76,000	-6.1%
Clinton	239	205	-14.2%	\$80,000	\$80,000	0.0%
Crawford	43	56	30.2%	\$75,000	\$65,000	-13.3%
Daviess	188	201	6.9%	\$81,750	\$95,000	16.2%
Dearborn	416	446	7.2%	\$130,000	\$133,940	3.0%
Decatur	212	216	1.9%	\$100,000	\$107,000	7.0%
DeKalb	323	317	-1.9%	\$85,500	\$90,057	5.3%
Delaware	882	987	11.9%	\$76,900	\$81,750	6.3%
Dubois	318	404	27.0%	\$125,111	\$124,800	-0.2%
Elkhart	1,711	1,744	1.9%	\$96,500	\$107,900	11.8%
Fayette	120	148	23.3%	\$67,900	\$60,000	-11.6%
Floyd	812	1,016	25.1%	\$130,991	\$135,500	3.4%
Fountain	40	50	25.0%	\$48,000	\$86,000	79.2%
Franklin	18	30	66.7%	\$90,000	\$85,000	-5.6%
Fulton	186	164	-11.8%	\$79,000	\$72,500	-8.2%
Gibson	251	300	19.5%	\$99,750	\$94,900	-4.9%
Grant	507	579	14.2%	\$66,250	\$65,000	-1.9%
Greene	114	82	-28.1%	\$75,000	\$71,500	-4.7%
Hamilton	4,634	6,017	29.8%	\$196,875	\$197,000	0.1%
Hancock	888	1,056	18.9%	\$126,000	\$137,000	8.7%
Harrison	261	342	31.0%	\$112,700	\$127,300	13.0%
Hendricks	2,062	2,542	23.3%	\$140,000	\$141,000	0.7%

County	Sales, July 2011 to June 2012	Sales, July 2012 to June 2013	Percent Change	Median Price, July 2011 to June 2012	Median Price, July 2012 to June 2013	Percent Change
Henry	276	350	26.8%	\$55,000	\$61,000	10.9%
Howard	986	1,074	8.9%	\$72,250	\$77,000	6.6%
Huntington	399	416	4.3%	\$70,000	\$82,950	18.5%
Jackson	322	421	30.7%	\$99,750	\$97,305	-2.5%
Jasper	234	287	22.6%	\$120,500	\$133,750	11.0%
Jay	88	75	-14.8%	\$46,000	\$55,000	19.6%
Jefferson	248	281	13.3%	\$106,000	\$100,500	-5.2%
Jennings	143	120	-16.1%	\$85,000	\$87,000	2.4%
Johnson	1,827	2,318	26.9%	\$125,000	\$127,000	1.6%
Knox	283	244	-13.8%	\$88,000	\$79,900	-9.2%
Kosciusko	807	889	10.2%	\$121,500	\$128,700	5.9%
LaGrange	241	278	15.4%	\$104,000	\$105,000	1.0%
Lake	4,032	5,026	24.7%	\$125,000	\$125,000	0.0%
LaPorte	892	1,072	20.2%	\$99,057	\$111,270	12.3%
Lawrence	343	375	9.3%	\$75,625	\$80,000	5.8%
Madison	1,146	1,441	25.7%	\$75,600	\$81,300	7.5%
Marion	9,926	11,481	15.7%	\$103,000	\$108,000	4.9%
Marshall	333	366	9.9%	\$100,000	\$112,900	12.9%
Martin	32	30	-6.3%	\$108,000	\$92,000	-14.8%
Miami	272	283	4.0%	\$43,488	\$43,250	-0.5%
Monroe	1,289	1,509	17.1%	\$150,000	\$153,500	2.3%
Montgomery	396	412	4.0%	\$90,500	\$92,000	1.7%
Morgan	707	878	24.2%	\$125,750	\$130,500	3.8%
Newton	108	124	14.8%	\$80,500	\$97,900	21.6%
Noble	509	486	-4.5%	\$88,000	\$88,950	1.1%
Ohio	32	39	21.9%	\$93,500	\$132,500	41.7%
Orange	31	37	19.4%	\$51,250	\$64,500	25.9%
Owen	126	131	4.0%	\$74,900	\$79,950	6.7%
Parke	37	51	37.8%	\$62,000	\$71,450	15.2%
Perry	67	87	29.9%	\$78,500	\$70,000	-10.8%
Pike	78	76	-2.6%	\$76,500	\$74,900	-2.1%
Porter	1,645	1,985	20.7%	\$157,000	\$166,900	6.3%
Posey	193	169	-12.4%	\$108,600	\$104,950	-3.4%
Pulaski	27	46	70.4%	\$69,950	\$64,010	-8.5%
Putnam	328	430	31.1%	\$97,000	\$109,000	12.4%
Randolph	105	126	20.0%	\$49,450	\$60,000	21.3%
Ripley	163	221	35.6%	\$123,500	\$104,900	-15.1%
Rush	7	10	42.9%	\$27,000	\$38,500	42.6%
Scott	138	166	20.3%	\$75,000	\$65,000	-13.3%
Shelby	442	524	18.6%	\$88,300	\$99,900	13.1%
Spencer	131	164	25.2%	\$94,000	\$116,200	23.6%

County	Sales, July 2011 to June 2012	Sales, July 2012 to June 2013	Percent Change	Median Price, July 2011 to June 2012	Median Price, July 2012 to June 2013	Percent Change
St. Joseph	2,635	2,815	6.8%	\$98,975	\$106,000	7.1%
Starke	174	190	9.2%	\$72,250	\$76,250	5.5%
Steuben	397	488	22.9%	\$110,000	\$118,000	7.3%
Sullivan	83	105	26.5%	\$62,500	\$64,000	2.4%
Switzerland	57	49	-14.0%	\$81,900	\$80,000	-2.3%
Tippecanoe	1,767	2,046	15.8%	\$125,000	\$129,000	3.2%
Tipton	94	137	45.7%	\$92,500	\$79,250	-14.3%
Union	9	12	33.3%	\$123,500	\$52,500	-57.5%
Vanderburgh	1,961	2,181	11.2%	\$109,950	\$113,500	3.2%
Vermillion	84	88	4.8%	\$47,500	\$59,950	26.2%
Vigo	966	996	3.1%	\$85,000	\$87,400	2.8%
Wabash	238	262	10.1%	\$67,250	\$65,000	-3.3%
Warren	44	43	-2.3%	\$84,500	\$89,500	5.9%
Warrick	693	849	22.5%	\$150,000	\$150,000	0.0%
Washington	155	179	15.5%	\$55,000	\$75,000	36.4%
Wells	260	266	2.3%	\$87,500	\$94,000	7.4%
White	235	228	-3.0%	\$85,000	\$115,000	35.3%
Whitley	311	424	36.3%	\$112,000	\$107,000	-4.5%

Note: Home sales data are not available for Wayne County.
Source: Indiana Association of Realtors

Number of Units and Value of Residential Building Permits by County, 2011 to 2012

	Number of Units, 2011	Number of Units, 2012	Percent Change, 2011 to 2012	Value of Permits (in thousands), 2011	Value of Permits (in thousands), 2012	Percent Change, 2011 to 2012
Indiana Total	12,618	13,781	9.2%	\$1,975,558	\$2,349,906	18.9%
Adams	38	66	73.7%	\$5,937	\$10,798	81.9%
Allen	657	1,152	75.3%	\$116,691	\$168,216	44.2%
Bartholomew	178	200	12.4%	\$36,630	\$45,969	25.5%
Benton	7	1	-85.7%	\$1,499	\$592	-60.5%
Blackford	5	4	-20.0%	\$600	\$363	-39.5%
Boone	530	498	-6.0%	\$71,194	\$91,801	28.9%
Brown	39	36	-7.7%	\$7,343	\$7,394	0.7%
Carroll	39	0	-100.0%	\$5,397	\$0	-100.0%
Cass	16	9	-43.8%	\$1,716	\$1,505	-12.3%
Clark	271	499	84.1%	\$40,339	\$67,709	67.8%
Clay	60	15	-75.0%	\$3,757	\$1,733	-53.9%
Clinton	33	0	-100.0%	\$4,955	\$0	-100.0%
Crawford	0	0	n/a	\$0	\$0	n/a
Daviess	41	15	-63.4%	\$4,151	\$1,794	-56.8%

	Number of Units, 2011	Number of Units, 2012	Percent Change, 2011 to 2012	Value of Permits (in thousands), 2011	Value of Permits (in thousands), 2012	Percent Change, 2011 to 2012
Dearborn	36	44	22.2%	\$7,528	\$10,057	33.6%
Decatur	26	29	11.5%	\$5,383	\$5,219	-3.0%
DeKalb	50	64	28.0%	\$9,166	\$12,023	31.2%
Delaware	82	260	217.1%	\$10,358	\$17,915	73.0%
Dubois	80	84	5.0%	\$14,905	\$10,218	-31.4%
Elkhart	146	221	51.4%	\$26,429	\$39,308	48.7%
Fayette	4	4	0.0%	\$283	\$725	156.2%
Floyd	101	140	38.6%	\$24,784	\$32,534	31.3%
Fountain	6	6	0.0%	\$749	\$412	-45.0%
Franklin	30	23	-23.3%	\$5,559	\$5,082	-8.6%
Fulton	19	13	-31.6%	\$2,561	\$2,763	7.9%
Gibson	48	56	16.7%	\$7,573	\$9,052	19.5%
Grant	33	36	9.1%	\$5,017	\$5,065	1.0%
Hamilton	1,891	2,137	13.0%	\$339,128	\$479,074	41.3%
Hancock	208	209	0.5%	\$32,400	\$44,018	35.9%
Harrison	48	83	72.9%	\$20,003	\$15,301	-23.5%
Hendricks	814	646	-20.6%	\$114,080	\$117,959	3.4%
Henry	23	16	-30.4%	\$4,299	\$2,535	-41.0%
Howard	22	162	636.4%	\$3,478	\$18,145	421.7%
Huntington	34	85	150.0%	\$6,522	\$9,581	46.9%
Jackson	114	120	5.3%	\$14,583	\$13,638	-6.5%
Jasper	72	74	2.8%	\$11,474	\$13,593	18.5%
Jay	13	17	30.8%	\$1,736	\$2,646	52.4%
Jefferson	44	46	4.5%	\$5,222	\$6,290	20.5%
Jennings	44	37	-15.9%	\$4,646	\$3,983	-14.3%
Johnson	414	594	43.5%	\$73,722	\$100,879	36.8%
Knox	29	33	13.8%	\$4,565	\$5,104	11.8%
Kosciusko	225	225	0.0%	\$26,690	\$29,239	9.6%
LaGrange	106	122	15.1%	\$13,733	\$14,556	6.0%
Lake	626	819	30.8%	\$116,514	\$164,104	40.8%
LaPorte	143	306	114.0%	\$23,132	\$34,604	49.6%
Lawrence	12	11	-8.3%	\$1,844	\$1,733	-6.0%
Madison	75	68	-9.3%	\$14,735	\$14,665	-0.5%
Marion	1,185	604	-49.0%	\$142,560	\$111,730	-21.6%
Marshall	76	50	-34.2%	\$15,903	\$11,800	-25.8%
Martin	3	2	-33.3%	\$350	\$110	-68.6%
Miami	10	13	30.0%	\$1,489	\$2,262	51.9%
Monroe	236	421	78.4%	\$33,049	\$51,156	54.8%
Montgomery	37	40	8.1%	\$5,362	\$6,489	21.0%
Morgan	96	120	25.0%	\$12,705	\$18,714	47.3%
Newton	4	13	225.0%	\$493	\$2,357	378.1%

	Number of Units, 2011	Number of Units, 2012	Percent Change, 2011 to 2012	Value of Permits (in thousands), 2011	Value of Permits (in thousands), 2012	Percent Change, 2011 to 2012
Noble	75	67	-10.7%	\$11,285	\$11,127	-1.4%
Ohio	11	11	0.0%	\$1,482	\$1,470	-0.8%
Orange	4	4	0.0%	\$604	\$596	-1.3%
Owen	0	0		\$0	\$0	
Parke	28	2	-92.9%	\$3,556	\$261	-92.7%
Perry	18	23	27.8%	\$2,819	\$2,988	6.0%
Pike	26	19	-26.9%	\$3,037	\$3,432	13.0%
Porter	237	398	67.9%	\$56,576	\$83,628	47.8%
Posey	36	98	172.2%	\$5,962	\$12,389	107.8%
Pulaski	15	18	20.0%	\$1,998	\$3,507	75.5%
Putnam	34	100	194.1%	\$5,598	\$12,538	124.0%
Randolph	7	15	114.3%	\$1,556	\$2,458	58.0%
Ripley	71	79	11.3%	\$10,505	\$11,535	9.8%
Rush	13	11	-15.4%	\$2,375	\$1,858	-21.8%
St. Joseph	392	582	48.5%	\$55,746	\$71,941	29.1%
Scott	27	28	3.7%	\$2,484	\$4,356	75.4%
Shelby	48	50	4.2%	\$5,646	\$5,999	6.3%
Spencer	36	42	16.7%	\$5,135	\$8,001	55.8%
Starke	33	45	36.4%	\$5,403	\$7,502	38.8%
Steuben	92	107	16.3%	\$22,917	\$23,983	4.7%
Sullivan	4	1	-75.0%	\$375	\$95	-74.7%
Switzerland	41	49	19.5%	\$2,389	\$2,855	19.5%
Tippecanoe	1,198	542	-54.8%	\$169,022	\$100,979	-40.3%
Tipton	17	15	-11.8%	\$2,144	\$2,932	36.8%
Union	9	7	-22.2%	\$895	\$670	-25.1%
Vanderburgh	226	303	34.1%	\$27,698	\$32,538	17.5%
Vermillion	10	1	-90.0%	\$1,782	\$70	-96.1%
Vigo	349	223	-36.1%	\$26,675	\$25,222	-5.4%
Wabash	23	20	-13.0%	\$3,369	\$3,557	5.6%
Warren	14	0	-100.0%	\$1,960	\$0	-100.0%
Warrick	183	201	9.8%	\$40,681	\$32,885	-19.2%
Washington	26	46	76.9%	\$3,583	\$7,710	115.2%
Wayne	33	24	-27.3%	\$5,061	\$4,470	-11.7%
Wells	29	25	-13.8%	\$5,828	\$5,293	-9.2%
White	17	24	41.2%	\$3,893	\$5,276	35.5%

Note: Residential permit data are not available for Greene County.
Source: U.S. Census Bureau

Housing Affordability Index Methodology

The housing affordability index is designed to measure the degree to which a “typical” middle income family can afford the mortgage payments on the typical home. To interpret the index, a value of 100 means that the typical family has just enough income to qualify for an 80 percent mortgage on a median-priced home. The higher the index, the more affordable the housing.

Calculation of affordability indices is dependent on several published data sources and assumptions. The primary building block is the median existing house sales price published by the National Association of Realtors (NAR). The NAR price estimates are available for the nation, Census regions and approximately 132 metropolitan areas. Economy.com estimates home prices for counties and states, in addition to the metropolitan areas not published by the NAR.

Published median family income data for the United States, regions, states, metropolitan and county areas are used to determine the income available for a home purchase. Since the Census Bureau publishes median family income for metropolitan and county areas on a decennial basis, Economy.com estimates the intercensal years.

The affordability indices use the state-level “effective” interest rates released on an annual basis by the Federal Housing Finance Board. Effective rates are higher than contract rates because they include fees and charges (points) amortized over the typical seven-year life of a mortgage.

A 20 percent down payment is assumed, being a standard of the housing industry. This implies a loan amount of 80 percent of the median sales price. Economy.com assumes a maturity of 30 years. Economy.com assumes a 25 percent coverage ratio, which is the proportion of minimum qualifying family income allocated to the monthly payment.

Source: Moody's Economy.com