Indiana's Housing Market in 2014:
Moving toward Stability

Prepared for
Indiana Association of REALTORS®

KELLEY SCHOOL OF BUSINESS
INDIANA UNIVERSITY
Indiana Business Research Center

December 2014

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Executive Summary

Indiana has seen dramatic improvement in many key housing market indicators over the last couple of years. Existing home sales improved by 31 percent between 2011 and 2013 and the state's foreclosure rate has dropped to its lowest level since early 2001. Indiana house prices have regained nearly all the ground lost during the slump, and even residential construction—although still well below historic norms—has shown signs of life.

So far in 2014, however, price gains and construction activity have moderated some, and existing home sales have taken a step back. Odd as it may sound though, these developments could also be seen as positive signs since they likely signal a move toward normalcy in housing. That is, for at least a decade, Indiana's housing markets have been overly influenced by a series of national-level forces. Factors like easy lending practices, the Great Recession, federal homebuyer tax credits, historically low mortgage rates and bulk home purchases by investors have fueled booms and busts in local markets.

In 2014, these influences are either long gone or at least fading, which has helped to dampen some housing-related activity lately. Moving forward, the ups and downs in housing indicators are likely to be less dramatic as local markets increasingly sink or swim on the strength of their own economic and demographic fundamentals.

Table 1: Indiana Housing Market by the Numbers

	U.S.	Indiana
Existing Home Sales, July 2013 to June 2014, Year-over-Year Change	1.4%	2.0%
House Price Appreciation, 2013:2 to 2014:2	6.2%	3.7%
Residential Building Permits, July 2013 to June 2014, Year-over-Year Change	8.1%	16.6%
Share of Mortgages That Are Seriously Delinquent, 2014:2	4.8%	5.2%
Share of Mortgages with Negative Equity, 2014:2	10.7%	5.1%
Household Formation Rate, 2013	0.3%	0.7%

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

Fortunately, Indiana's fundamentals appear to be improving. As of August 2014, the state has added more than 58,000 jobs in the last year, and its unemployment rate has dropped 1.7 percentage points. Indiana had the nation's sixth-best improvement in median household income in 2013 according to the Current Population Survey, and its per capita income growth has outpaced the U.S. average over the last few years. After an extended period of sluggish population growth, the state had a relatively strong net in-migration of residents in 2013, and its household formation rate last year was on par with pre-recession levels. Finally, mortgage rates did spike in 2013 but they remain very low, and research by the Federal Reserve indicates that lending standards for prime loans may be loosening a bit.

The Indiana housing market has made great strides in recent years, but these gains were more about playing catch-up and were often ahead of market fundamentals. Now that the drivers of housing demand are improving, the state may be poised for a period of steady but sustainable housing market growth.

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 and mortgage refinancing trends.

Key Findings

- Existing home sales in Indiana increased by 14 percent in 2013, the state's second consecutive year of double-digit increases. The number of sales declined so far this year, however. Through the first half of 2014, existing home sales are down 6 percent compared to the same period a year ago.
- Indiana's median price for existing home sales rose to $122,000 in 2013—a 3 percent increase over the previous year and 11 percent above 2009. The Federal Housing Finance Agency's House Price Index shows that Indiana had the 29th-fastest rate of price appreciation among states in the last year.
- Indiana's foreclosure rate has declined dramatically of late, dropping to its lowest level in 13 years. The state's foreclosure rate has dropped by nearly 2.4 percentage points between the end of 2011 and mid-2014 to 2.5 percent. Over this period, Indiana has gone from the nation's ninth-highest foreclosure rate to 18th-highest.
- According to the most recent census data, Indiana's homeownership rate declined from 71.4 percent in 2000 to 68.5 percent in 2013. Despite this drop, Indiana had the 13th-highest homeownership rate in the country and was well above the U.S. mark of 63.5 percent.
- The aging of the baby boomers into the prime age group for homeownership helps to mask what is an even more dramatic drop in homeownership. In 2013, the homeownership rates for each 10-year age group between the ages of 25 and 64 were down by between 5 and 8 percentage points compared to Census 2000. Under normal conditions, Indiana's homeownership rate would have risen over this period simply because the state is growing older and homeownership increases with age.
- Housing affordability conditions have declined some as house prices and mortgage rates climb, but housing in Indiana remains very affordable by any objective standard. According to Moody's Economy.com, Indiana enjoyed the nation's third-best housing affordability conditions in 2013.
- After five years of very sluggish growth between 2006 and 2011, Indiana's household formation rate has been rising the last two years. The state's formation rate hit 0.7 percent in 2013, which was more than two-times greater than the U.S. mark—and equal to Indiana's average annual rate prior to the housing slump. A relatively strong net in-migration of residents to the state in 2013 helped to boost household formation last year.
- For the fourth consecutive year, the value of Indiana's building permits increased in 2013. This is good news, yet construction has fallen to such an extent that the value of permits in 2013—even when measured in nominal terms (i.e., not adjusted for inflation)—was a shade below the level seen in 1994.
- The number of new housing units permitted for construction in 2013 climbed 30 percent over the previous year. Apartment developments accounted for roughly 30 percent of these new units—the highest multi-family share since 1986. Despite this strong increase, 2013 marks Indiana's 11th-lowest annual number of permitted units since 1960. Growth in permits has slowed to 6 percent year-over-year through July 2014.

Market Conditions

Pace of Home Sales Cools in 2014

Indiana had its second consecutive year of strong gains in existing home sales home in 2013. The state's sales tally last year was up 14 percent over the 2012 mark and was its strongest annual figure since 2007 (see **Table 2**). Furthermore, Indiana had roughly 18,000 more existing home sales in 2013 than it did during its post-recession low in 2010.

Table 2: Indiana Existing Home Sales, 2006 to 2013

	2006	2007	2008	2009	2010	2011	2012	2013
Existing Home Sales	86,142	79,545	66,505	61,826	57,765	57,985	66,516	75,849
Annual Percent Change	n/a	-7.7%	-16.4%	-7.0%	-6.6%	0.4%	14.7%	14.0%

Source: Indiana Association of Realtors

As **Figure 1** shows, however, the rebound in existing home sales slowed significantly in late 2013 and has reversed some during the first half of this year. Existing home sales in Indiana during the first quarter of 2014 were nearly 11 percent lower than during the same period a year ago. Meanwhile, sales in the second quarter were down three percent year-over-year.

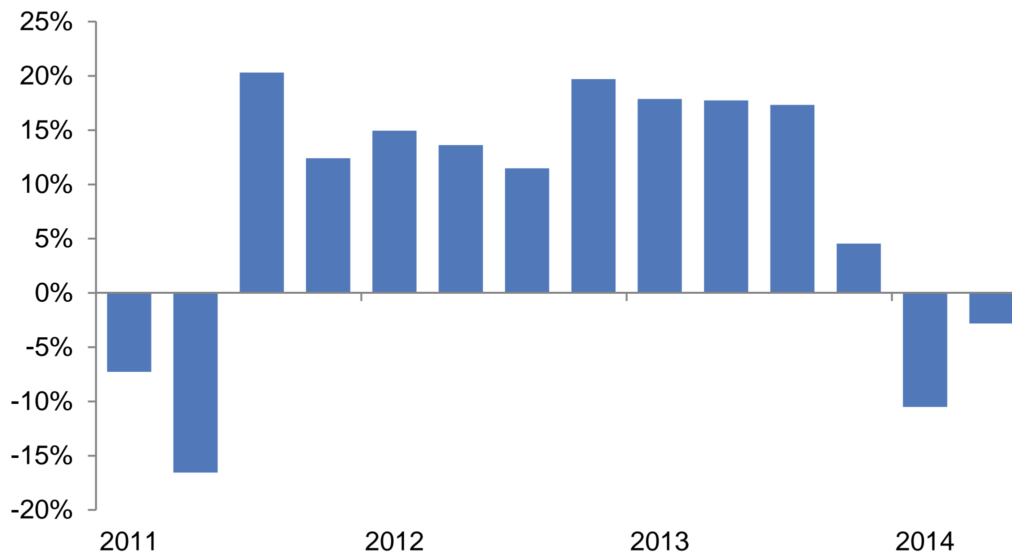
There are several factors that contribute to this recent decline in home sales. The two largest are likely a rise in mortgage interest rates and a decline in home purchases by investor groups.[1] The 30-year conventional mortgage rate jumped a full percentage point between May and December of last year and, while it has declined some this year, it remains quite a bit higher than it was in 2012 and the first half of 2013. As for investors, several media reports in 2013 showed that they played a role in the home sales rebound in some Indiana markets by buying a large number of single family homes and converting them into rental properties.[2] But as prices climb and the stock of foreclosed homes declines rapidly, investor purchases have likely been on the wane in Indiana this year, as they have been around the country.[3]

[1] John Krainer, "The Slowdown in Existing Home Sales," Federal Reserve Bank of San Francisco, May 2014, http://www.frbsf.org/economic-research/publications/economic-letter/2014/may/existing-home-sales-slowdown/

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

[3] "Q2 2014 U.S. Institutional Investor and Cash Sales Report," RealtyTrac, August 2014, www.realtytrac.com/content/foreclosure-market-report/q2-2014-us-institutional-investor-and-cash-sales-report-8126

Figure 1: Indiana Home Sales, Year-over-Year Change, 2011:1 to 2014:2

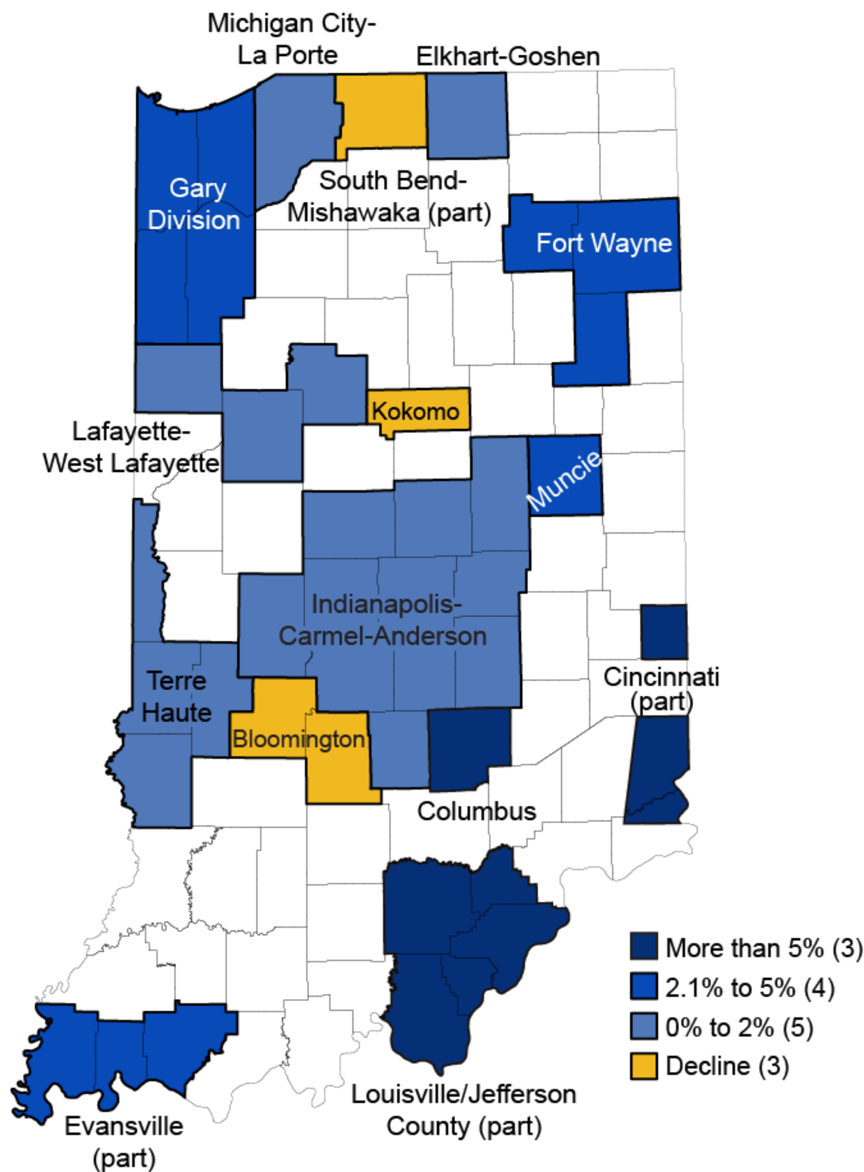


Source: Indiana Association of Realtors

Considering these factors then, the recent dip in home sales is not necessarily a sign of a weakening market, but more likely signals a stabilizing one. The nearly 34,700 home sales through the first half of 2014 are still the state's second-highest total for this period since 2007. The number of sales remains well below levels seen last decade before the crash but, of course, that was a period of easy financing and an abnormally high homeownership rate in Indiana (along with a comparatively high foreclosure rate). It doesn't seem likely—or even desirable—that Indiana will see sales totals that high anytime soon. Instead, the state's sales totals will be more closely tied to economic and demographic fundamentals as the influence of factors like low interest rates and investor buying diminishes.

Looking at local markets for a 12-month period ending in June 2014, the Indiana portions of the Louisville and Cincinnati metro areas had the state's greatest increases in existing home sales with gains of 10 percent and 9 percent, respectively (see **Figure 2**). The Columbus area also posted a strong jump in sales with a 7 percent improvement year-over-year. The 11-county Indianapolis-Carmel-Anderson metro, which accounts for 30 percent of the state's total population, claimed 38 percent of Indiana's home sales over this period.

Figure 2: Total Home Sales by Metro Area, Year-over-Year Change, July 2013 to June 2014



Source: Indiana Association of Realtors

The 48 counties that are outside of metro areas combined to post a 1 percent increase in sales. Among counties with at least 100 sales, Jay County had the largest increase at 40 percent followed by Perry (26 percent), Jennings (23 percent) and Wabash (21 percent) counties.[4] Statewide, sales are up roughly 2 percent over this period.

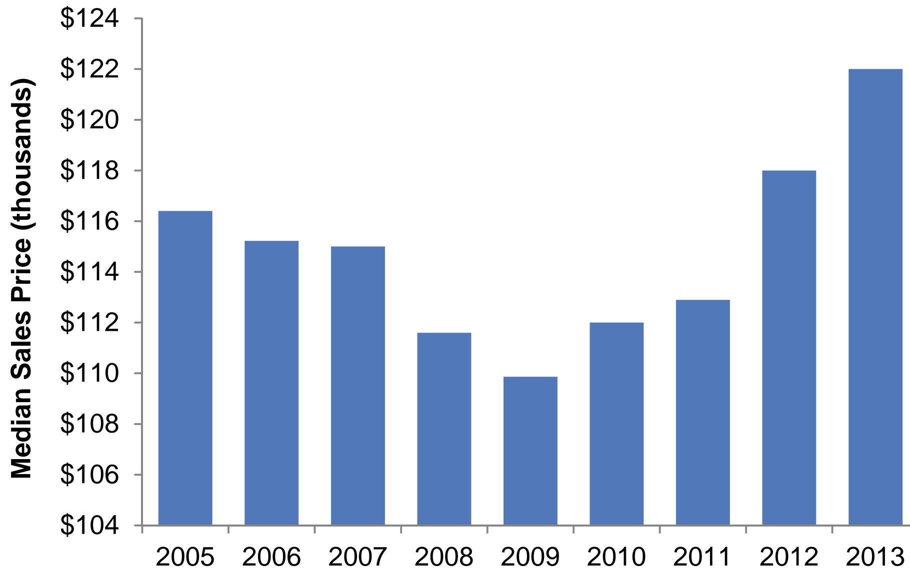
Indiana's Median Sales Price Makes a Large Leap in 2013

As the market for existing homes in Indiana stabilizes, house prices are on the climb. At $122,000 last year, the state's median sales price for existing homes increased by more than 3 percent over the 2012

[4] See the appendix for home sales and median sales price data for all Indiana counties.

mark and was 11 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 2013 is the state's highest annual mark on record.

Figure 3: Indiana Median Sales Price, 2005 to 2013

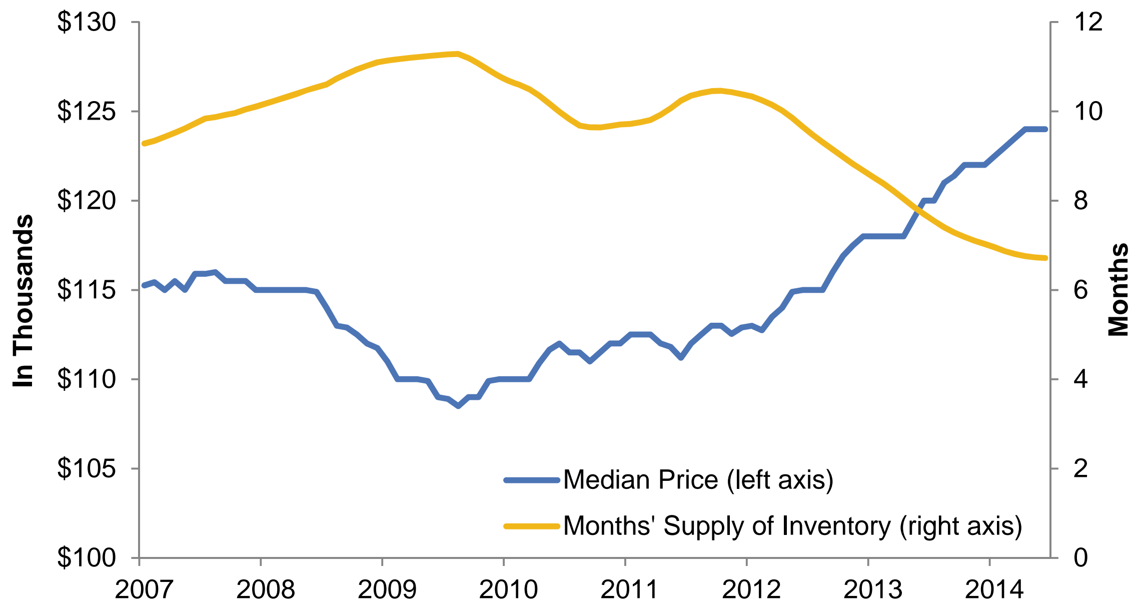


Source: Indiana Association of Realtors

The sharp increase in prices over the last two years has been driven in large part by a shrinking inventory of homes for sale. As of June 2014, the inventory of homes for sale in Indiana was slightly greater than 44,100. This is 16 percent lower than for the same month in 2012 and 42 percent lower than the inventory in June 2007.

The decline in inventory coupled with an uptick in demand has led to a seven-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 = -0.93), 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 June 2014



Source: Indiana Association of Realtors

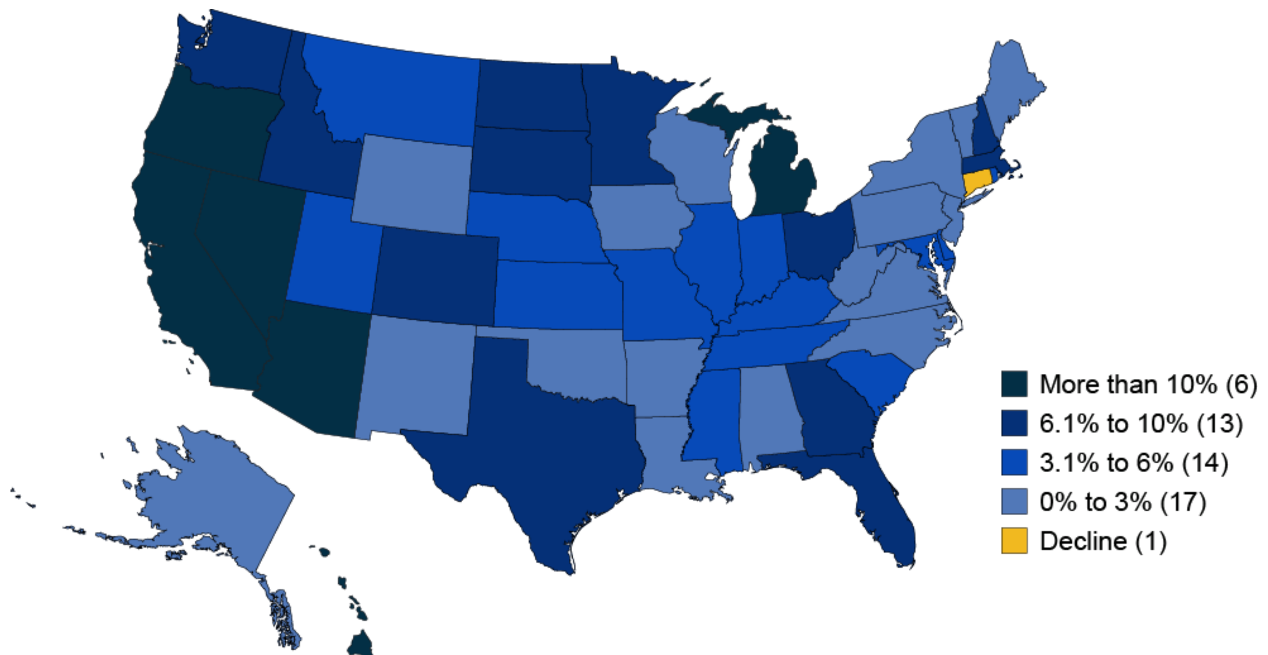
Indiana's median sales price has climbed to $124,000 over the 12-month period ending in June 2014—a 3.3 percent increase year-over-year. Looking around the state over the same period, the median sales price held steady or increased in 63 of Indiana's 92 counties. Among the state's larger markets, Hamilton (8 percent increase), Hendricks (7.8 percent), Grant (7.7 percent), St. Joseph (7.3 percent) and Bartholomew (7 percent) counties posted the largest increases over this 12-month period. Madison (-5.3 percent), Floyd (-4.1 percent), and Vigo (-3.9 percent) counties had the largest price declines among communities with at least 500 existing home sales.

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 House Price Index (HPI), Indiana has seen price appreciation for ten consecutive quarters dating back to early 2012 and the state's home prices in the second quarter of 2014 are up 3.7 percent year-over-year.[5] This rate of appreciation ranked 29th-fastest among states but was outpaced by neighboring Michigan (10.3 percent), Ohio (7.8 percent) and Illinois (4.2 percent). Indiana did edge out Kentucky, which had an HPI increase of 3.6 percent over this period. As **Figure 5** illustrates, several of the hardest-hit states during the crash posted the greatest gains led by Nevada (15.8 percent) and California (15.3 percent).

[5] An HPI like this one from FHFA is conceptually different from the median sales price indicator discussed earlier. Comparing the median sales price from one period to another can be misleading since the median price is influenced by the mix of homes sold in each period. 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.

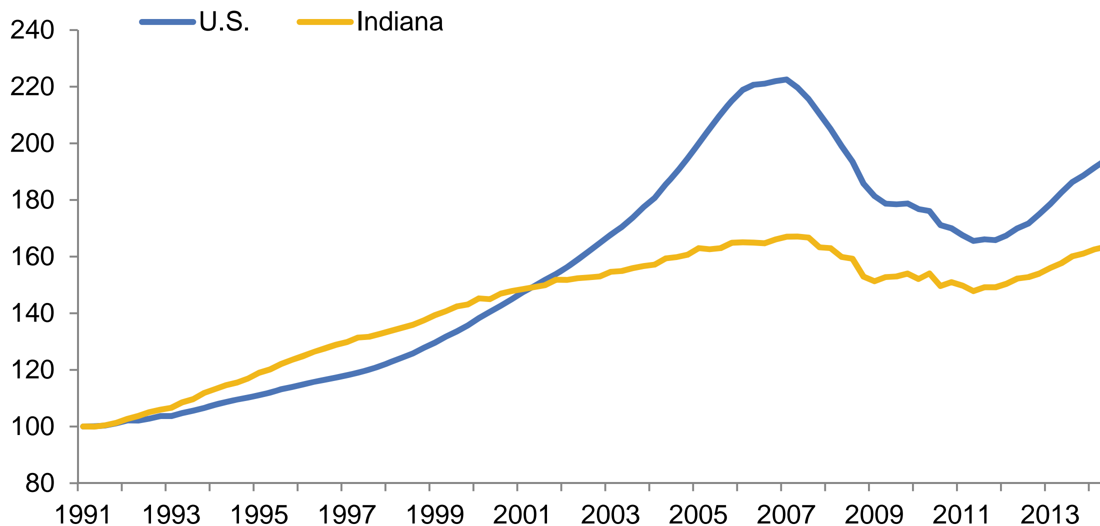
Figure 5: Change in House Price Index by State, 2013:2 to 2014:2



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

It is important to note that comparing states based on one-year growth rates can be a little misleading. States like Michigan, Ohio and Illinois are outpacing Indiana now because they are rebounding from far more severe price declines through the housing bust. House prices in Michigan declined by 45 percent after the crash. Ohio and Illinois saw drops of 25 percent and 32 percent, respectively. Indiana had a comparatively mild 12 percent slide in prices between 2007 and 2011. Since that time, the state has recovered nearly all the ground it lost (see **Figure 6**). As of mid-2014, the HPI for Indiana was only 2 percent lower than its pre-recession peak. House prices in Michigan and Illinois, by contrast, are both still more than 25 percent below their respective peaks, and Ohio is 14 percent off its previous high.

Figure 6: House Price Index, 1991:1 to 2014:2

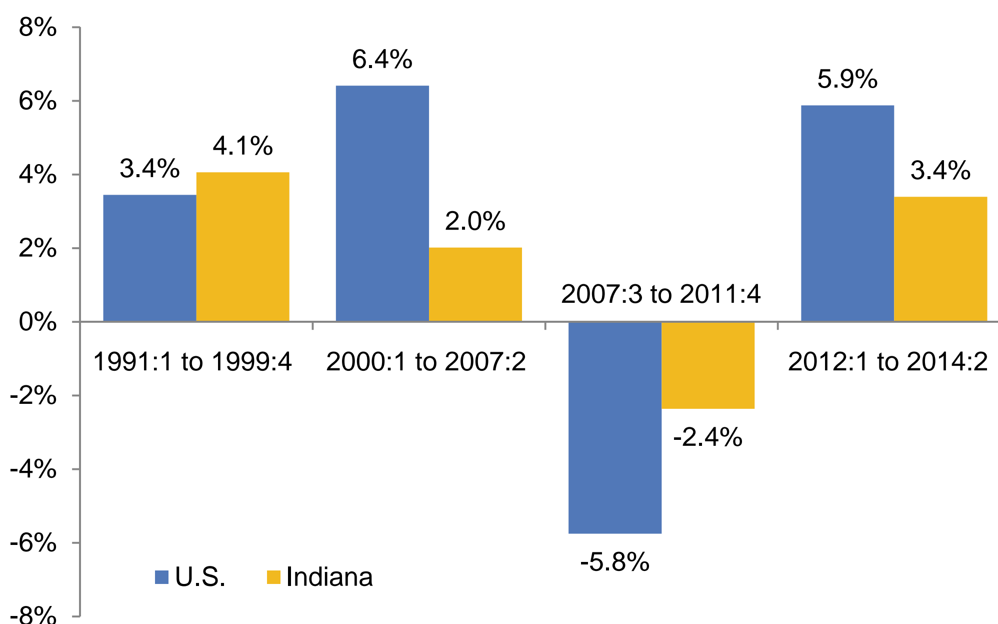


Source: Federal Housing Finance Agency, House Price Index (expanded data series, seasonally adjusted)

Looking at the previous graphic, it's easy to see that both Indiana and the U.S. have undergone four distinct periods of house price appreciation trends over the past 25 years. The Hoosier state saw comparatively strong gains during much of the 1990s, but its pace of growth began to slow just as the price bubble era started to emerge elsewhere. Prices began to decline in Indiana and the U.S. in 2007, but both have had a sustained rebound in effect since early 2012.

During this rebound period, prices in Indiana have been growing at an average annualized rate of 3.4 percent—which is much stronger than the pace the state set between 2000 and 2007 and not far off the trend of the 1990s (see **Figure 7**). Nationally, the HPI growth rate during the recent rebound is near the unsustainable pace set before the crash—which has raised some concerns that the U.S. could be headed for another bubble. This concern appears overblown, however—at least for the time being. A recent analysis by the real estate website Trulia estimates that prices in the U.S. on average are still slightly undervalued.[6] Furthermore, the pace of HPI growth has been slower so far in 2014 than it was the year before, and it should continue to moderate as inventory expands.

Figure 7: Average Annualized Growth in HPI over Select Periods, 1991:1 to 2014:2

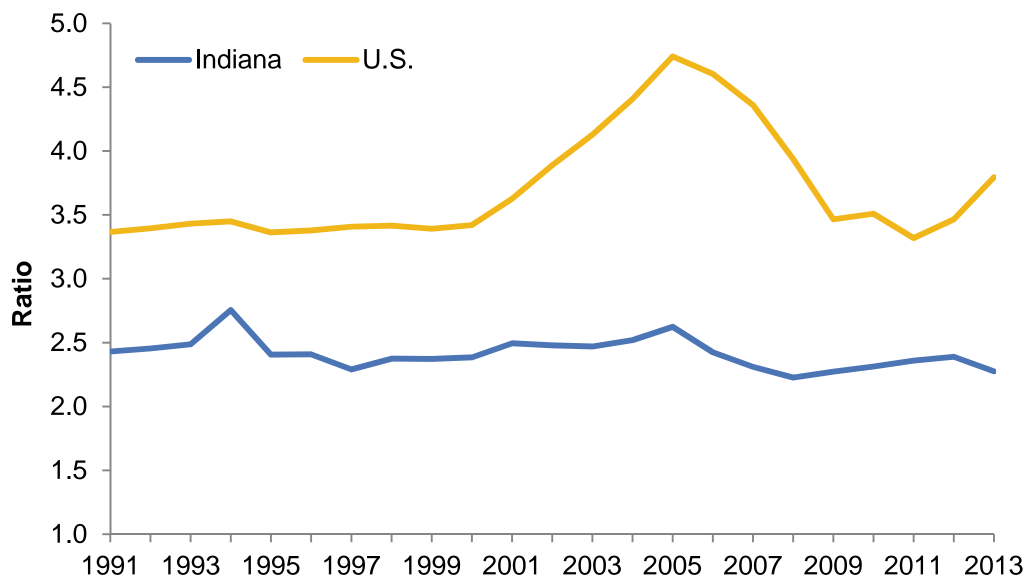


Here in Indiana, there is no concern over a price bubble. One enduring characteristic of Indiana housing is that the movement of most key market indicators are closely tied to the state's economic performance. The ratio of the state's median sales price to median household income may be the best illustration of this point. The U.S. had a consistent ratio of house prices to income through the 1990s, but this measure increased sharply between 2000 and 2005 (see **Figure 8**). Since the onset of the housing slump, however, the U.S. price-to-income ratio tumbled back to the more sustainable level seen during the 1990s—although, as discussed earlier, the spike in 2013 does merit some concern.

[6] Jed Kolko, "Bubble Watch: Home Prices Still Undervalued, But Not For Much Longer," Trulia Trends, June 24, 2014, www.trulia.com/trends/2014/06/bubble-watch-q2-2014/.

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. Even with the strong jump in the state's median sales price in 2013, Indiana had an increase in median household income to match. According to the U.S. Census Bureau, Indiana's median income improved by nearly 10 percent in 2013 to $50,550—the sixth-best increase among states last year.

Figure 8: Ratio of Median Sales Price to Median Household Income, 1991 to 2013



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

Foreclosure Wave Begins to Recede

One of the primary ways that economic conditions have influenced home prices in recent years was 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, roughly 37 percent 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 by nearly three-quarters to 10.5 percent by July 2014.[7] Furthermore, FNC indicates that the foreclosure discount has fallen to 8 percent during the second quarter of 2013, which is a ten-year low in this measure.[8]

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 sharp drop in its foreclosure rate since the end of 2011. According to the Mortgage Bankers Association, the state's foreclosure rate has declined nearly two-and-a-half percentage points from 4.96 in the fourth quarter of 2011 to 2.54 in mid-

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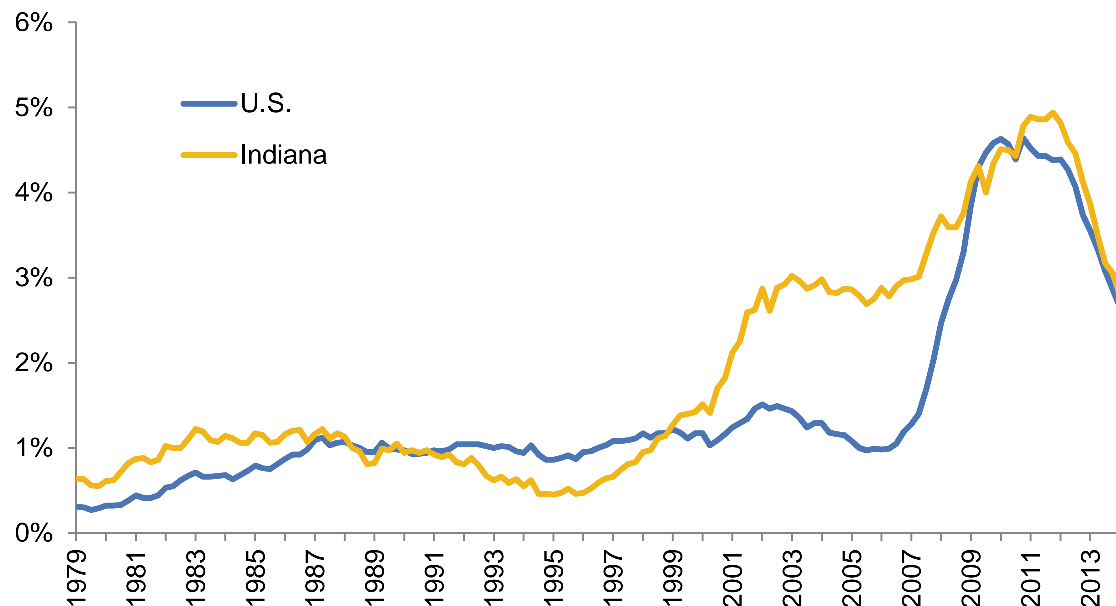
[7] "FNC Index: July Home Prices Up 0.6%," FNC Inc., September 16, 2014, http://fncrpi.com/press_releases.aspx?pr=84.

[8] "Amid Rapid Declines of Foreclosure Rates and Rising Prices, Prospective Trade-Up Buyers Are Returning to the Market," FNC Inc., September 12, 2013, http://fncrpi.com/press_releases.aspx?pr=69.

2014. This is Indiana's lowest quarterly foreclosure rate since early 2001. Even with this dramatic decline, Indiana's foreclosure rate remains slightly above the U.S. average and ranks 18th-highest among states.

Figure 9: Share of Mortgages in Foreclosure, 1979:1 to 2014:2



Source: National Delinquency Survey, Mortgage Bankers Association

One reason that Indiana has struggled with a high foreclosure rate for the last 13 years is that Hoosiers are more reliant on high-risk mortgages. In the second quarter of 2014, 27 percent of Indiana's outstanding mortgages were so-called FHA loans.[9] An additional 9 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 36 percent of all mortgages. By contrast, FHA loans (17 percent) and subprime loans (9 percent) combine to account for 26 percent of all U.S. mortgages, according to the Mortgage Bankers Association.

In Indiana, 3.2 percent of FHA loans were in foreclosure in mid-2014 compared to 1.5 percent of the state's prime mortgages. The state's foreclosure rate for subprime loans stands at 7.7 percent, which is lower than the U.S. mark of 9.7 percent. So while these types of loans account for a little more than one-third of Indiana's home loans, they represent 61 percent of Indiana's foreclosure inventory due to their comparatively high default rates (see **Figure 10**). These higher-risk loans account for 53 percent of the foreclosure inventory nationwide.

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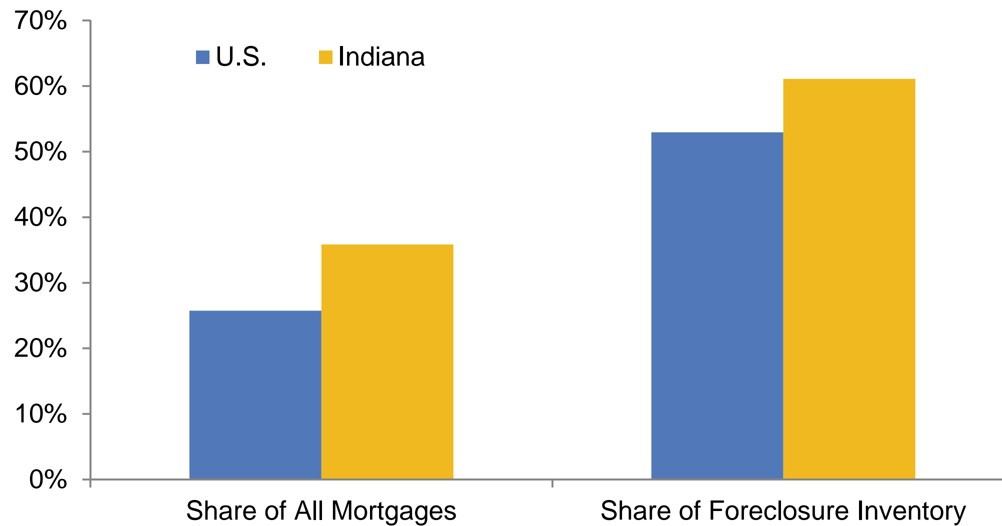
[9] FHA loans are loans from private lenders that are insured by the Federal Housing Administration. These loans typically feature low down-payment requirements and are intended for borrowers who would likely not qualify for a mortgage without the insurance.

Figure 10: FHA and Subprime Loans as a Share of All Mortgages and Foreclosure Inventory, 2014:2



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 continue to 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.[10]

Figure 11 highlights this relationship between foreclosure and house price changes. These two measures have a strong negative correlation (-0.73), suggesting that changes in one will influence the other—although the causal relationship is not a one-way street.[11] Foreclosures affect prices for the reasons listed above, but rising prices can also reduce the pool of homeowners at risk of foreclosure by allowing homeowners to build equity more quickly.

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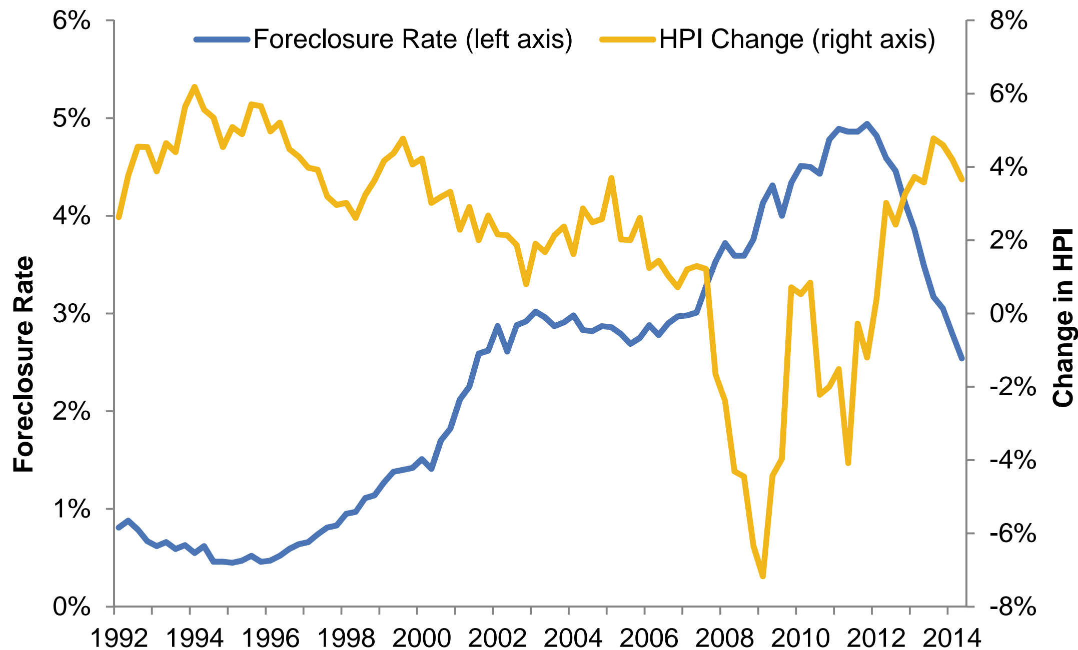
[10] Stephan Whitaker, "Foreclosure-Related Vacancy Rates," Federal Reserve Bank of Cleveland, July 26, 2011, www.clevelandfed.org/research/commentary/2011/2011-12.cfm.

[11] The one time that the relationship between foreclosures and price changes did not hold was in late 2009 and early 2010 when the federal government's homebuyer tax credit programs temporarily boosted house prices.

Figure 11: Indiana Foreclosure Rate and Year-over-Year Change in House Price Index, 1992:1 to 2014:2



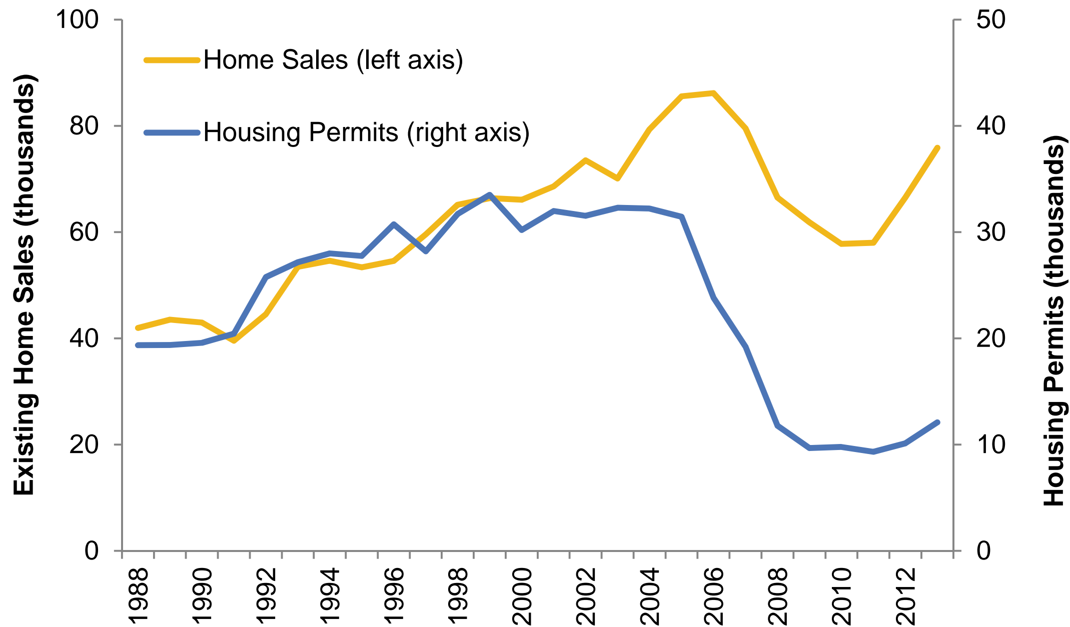
Source: Mortgage Bankers Association, Federal Housing Finance Agency

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 13-to-1 by mid-2014. The price discount on existing homes brought on by foreclosures and other distressed properties at least partially explains this widening gap.[12] This is a trend that the economics blog *Calculated Risk* has termed the "distressing gap," referring to the large number of distressed home sales since the start of the housing bust.

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 12**). From 1988 to 2005, there were approximately two existing home sales for each single-family housing permit in Indiana, but in 2013 the ratio was roughly six-to-one. As the market continues to stabilize, this gap will have to begin closing over the next few years.

[12] Bill McBride, "Comments on New Home Sales," Calculated Risk (blog), August 25, 2014, www.calculatedriskblog.com/2014/08/comments-on-new-home-sales.html.

Figure 12: Indiana Existing Home Sales and Single-Family Housing Permits, 1988 to 2013



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

Looking Ahead

The Indiana housing market has made great strides in the last two-and-a-half years, and it should continue to improve through 2015. Among the bright spots is the decline in Indiana's foreclosure rate to its lowest level since early 2001. Over the next year or two, look for the state's foreclosure rate to continue dropping before settling at a level well below that seen between 2002 and 2006—a period before the Great Recession when Indiana had one of the highest foreclosure rates in the nation.

The primary reason for optimism is simply the length of time elapsed between now and the days of easy lending. That is, with respect to the risky mortgages issued before the crash, many of those that were destined to default have likely done so by now. Meanwhile, at the national level at least, mortgages originated after 2008 have proven far less likely to slip into delinquency.[13] Thanks to stricter lending standards, the flow of mortgages into foreclosure in Indiana has been declining since 2010, and should continue to fall.

The state's rising house prices will also continue to help solve the foreclosure problem. According to CoreLogic, roughly 5 percent of Indiana homeowners with a mortgage had negative equity as of the second quarter of 2014.[14] This mark is down sharply from nearly 12 percent of Hoosier homeowners with negative equity at the beginning of 2013. Even more encouraging, one-quarter of these homeowners with negative equity were close to getting back 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

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[13] "Black Knight Mortgage Monitor," Black Knight Financial Services, July 2014, www.bkfs.com/CorporateInformation/NewsRoom/MortgageMonitor/201407/MortgageMonitorJuly2014.pdf.

[14] "CoreLogic Equity Report," CoreLogic, Second Quarter 2014, www.corelogic.com/research/negative-equity/corelogic-q2-2014-equity-report.pdf .

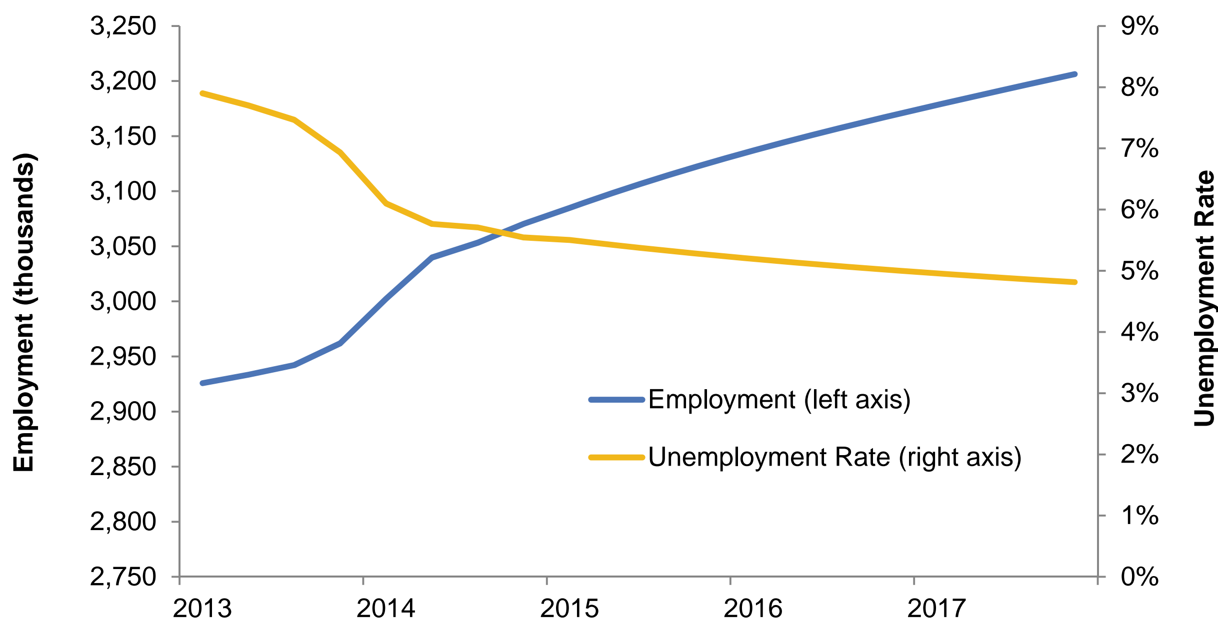
avoid foreclosure in the event that they fall behind on their payments. As a point of comparison, 12.7 percent of all U.S. mortgages have negative equity.

One of the major question marks facing the market looking into 2015 revolves around the direction of existing home sales. As discussed earlier, a combination of factors that include higher mortgage rates, a decline in investor purchases and a harsh winter have led to year-over-year declines in existing home sales so far this year. Although the severity of these declines has diminished in the summer months to the point where the combined closed sales in June and July of this year are down just 0.2 percent compared to the same months in 2012. Looking at the same periods, pending existing home sales are up 5.5 percent, however, which suggests that Indiana will see a return to year-over-year sales gains this fall.

Of course, the future path of home sales will depend on the strength of the economy and housing affordability. The prospects for Indiana's economy look solid. As of August 2014, Indiana has added more than 58,000 jobs over the past 12 months. According to the latest forecast from the IBRC and the Center for Econometric Model Research (CEMR) at Indiana University, employment growth should continue at a pace of roughly 45,000 new jobs per year between 2015 and 2017 (see **Figure 13**). The state's unemployment rate is expected to dip below 5 percent by the end of that period, as well.

Perhaps the best economic news for Indiana is that the state is seeing relatively strong personal income growth. The state's per capita personal income had been losing ground to the U.S. mark in a big way between the mid-1990s and the late 2000s, but Indiana has started to chip away at that gap over the last six years. The latest CEMR forecast indicates that Indiana incomes will continue to gain ground on the nation over the next three years as well.

Figure 13: Indiana Employment and Unemployment Rate Forecast, 2013:1 to 2017:4

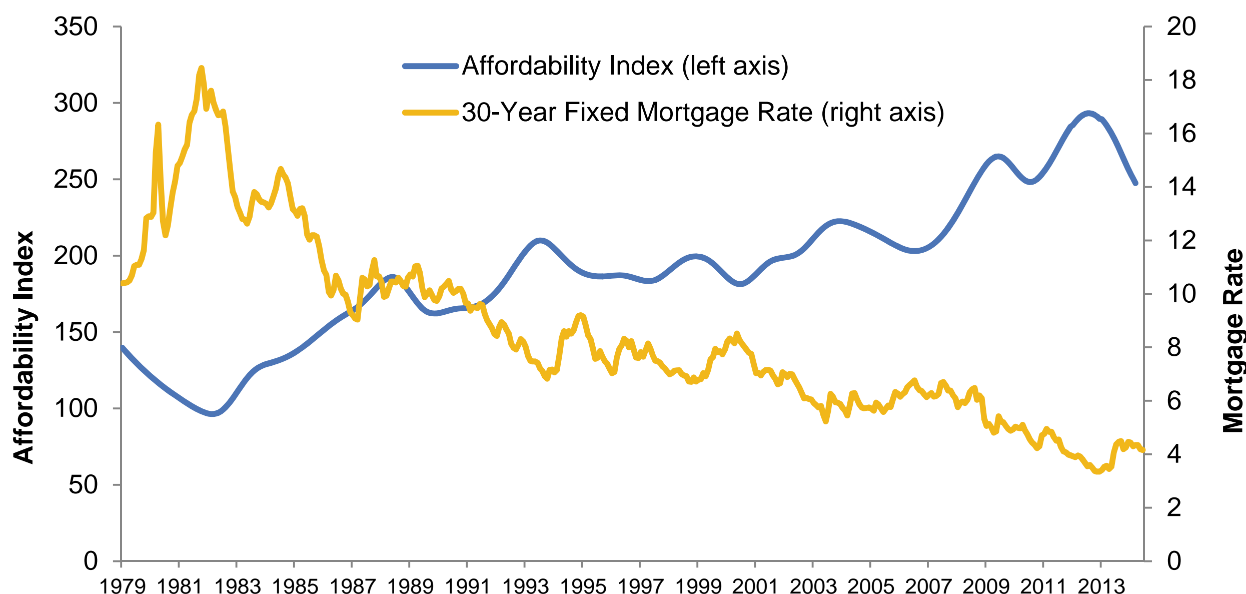


Source: Center for Economic Model Research and Indiana Business Research Center, Indiana University (released in August 2014)

As for affordability, Indiana remains one of the most buyer-friendly markets in the country. According to Moody's Economy.com, Indiana enjoyed the third-best housing affordability conditions among states in 2013, ranking behind only Michigan and Ohio. As the housing market stabilizes, however, affordability is

bound to come back to earth a bit. Not only are house prices on the rise, but mortgage rates are up too (see **Figure 14**). After peaking at 4.5 percent in December 2013, rates have declined slightly so far this year, but many market-watchers expect them to start climbing again soon. In their September forecasts, both the Mortgage Bankers Association and Freddie Mac predict the rate will hit at least the 5 percent mark in 2015.

Figure 14: Mortgage Interest Rates and Indiana Housing Affordability Index, January 1979 to June 2014



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 248 in June 2014, meaning that the state's median household income was 248 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 2014 index values are a forecast.
Source: Freddie Mac and Moody's Economy.com

Rising rates will certainly have a negative impact on some potential buyers, but housing in Indiana will remain affordable by any objective standard for some time. An analysis last year by Freddie Mac indicates that housing would remain affordable in metro areas throughout the Midwest with mortgage rates as high as 8 percent, and they could probably go even higher before housing is considered unaffordable (8 percent is the highest level in their analysis).[15]

Another positive sign for home sales is that there are finally indications that mortgage lending standards may start to loosen a bit. While it was certainly appropriate that lenders tightened standards after the housing bust, there have been concerns that standards are too conservative and an impediment to a full economic recovery.[16] According to the Federal Reserve's latest quarterly survey of senior loan officers, however, roughly one-quarter of respondents stated that their institutions had eased standards for prime

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[15] "What Happens When Interest Rates Rise?," *U.S. Economic & Housing Market Outlook*, Freddie Mac, June 2013, http://www.freddiemac.com/finance/pdf/Jun_2013_public_outlook.pdf .

[16] Ben S. Bernanke, "Challenges in Housing and Mortgage Markets" (speech given at the Operation HOPE Global Financial Dignity Summit, Atlanta, Georgia, November 15, 2012), www.federalreserve.gov/newsevents/speech/bernanke20121115a.htm.

mortgages in the second quarter of 2014—by far the strongest positive shift in this indicator since the crash.[17] An improving economy will be the key driver in housing demand moving forward, but once more potential buyers have the confidence and means to purchase a home, the availability of affordable financing will be important to the health of the market.

[17] Nick Timiraos, “Fed Survey: Mortgage Standards Ease for First Time Since Housing Bust,” *Wall Street Journal*, August 4, 2014.

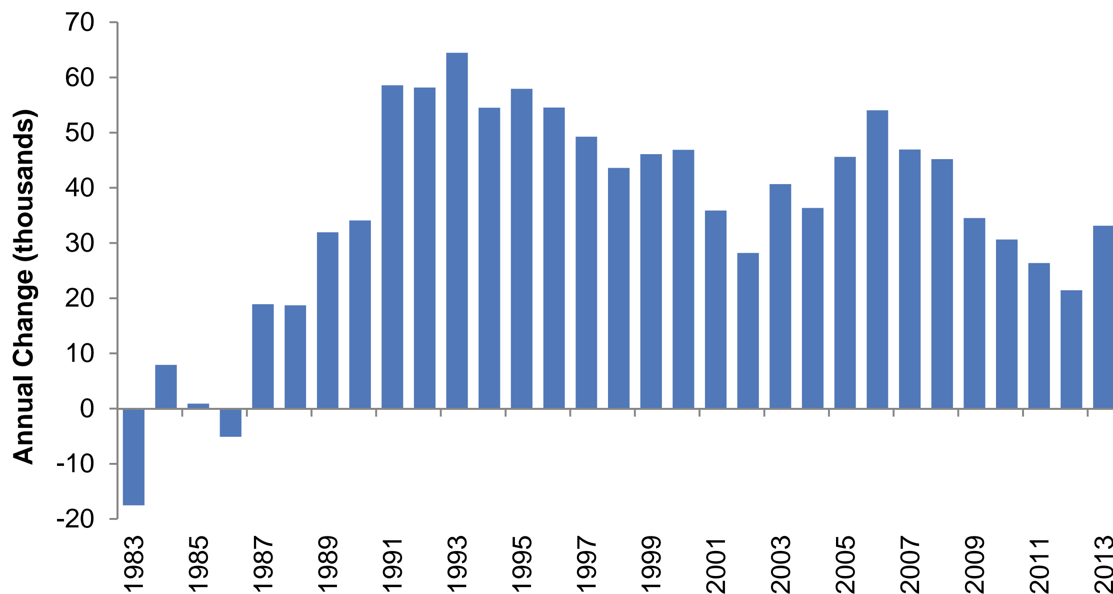
Demographic Fundamentals

Population Growth and Household Formation on the Upswing

Another positive sign for the Indiana real estate market is that the demographic drivers of housing demand are on the rise again. Indiana added an estimated 33,100 residents between mid-2012 and mid-2013, up from an increase of 21,400 the year before. This level of change is still lower than the state should expect, but it stops a slide of six consecutive years of decline in Indiana's population growth rate (see **Figure 15**).

What's more encouraging for Indiana's housing market, and the state in general, is that growth occurred in all adult age groups. The young adult group (ages 25 to 44) added an estimated 6,300 residents in 2013, which is the first time in at least 13 years that this group grew in Indiana. The state's population between the ages of 45 and 64 grew by a modest 200 residents in 2013 after declining 4,500 the year before. Growth in these age groups is important because they typically drive net gains in household formation and home purchases.

Figure 15: Indiana Annual Population Change, 1983 to 2013



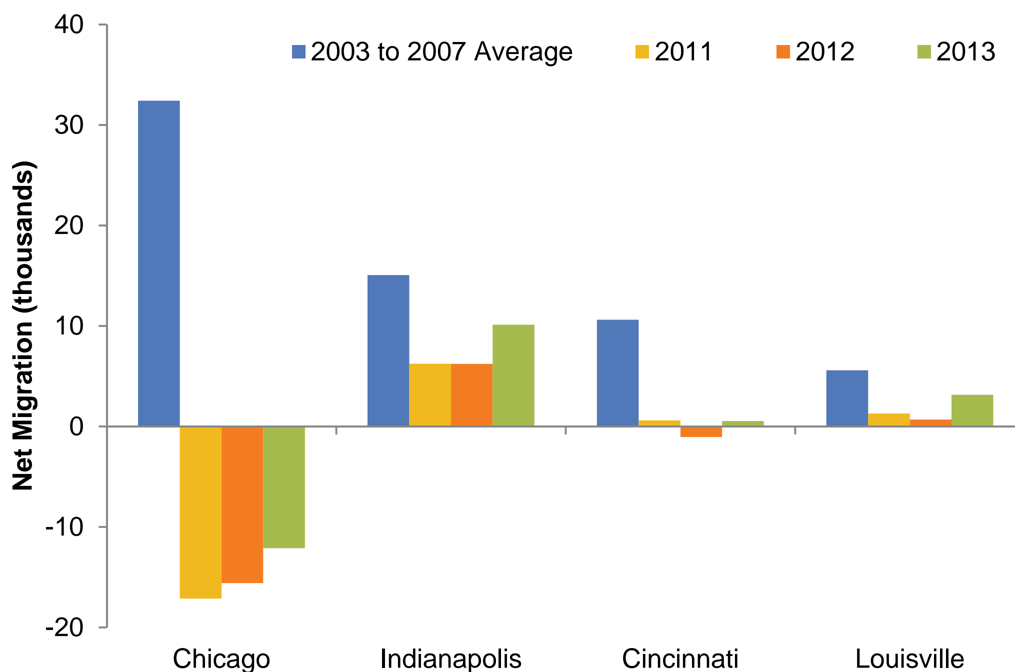
Source: U.S. Census Bureau population estimates

The primary cause of Indiana's improved population growth was a rebound in migration last year. According to Census Bureau estimates, after three years in which the state had an average annual net out-migration of roughly 2,000 residents, the state posted a net inflow of 8,200 residents in 2013. Movement within the state is also up, 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 increased from 5.3 percent in 2012 to 6.1 percent in 2013. This was Indiana's highest rate of homeowner movement within the state since 2008.

In the wake of the Great Recession, the slowdown in migration hit many different types of communities, including traditionally fast-growing suburban areas. However, the in-migration to some of these suburban areas—particularly in the Indianapolis metro—is beginning to pick up again.

Figure 16 compares the annual net migration estimates over the last three years 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 metro averaged a net in-migration of nearly 15,100 residents a year between 2003 and 2007, but this influx slowed to 6,200 by 2012—a 60 percent decrease.[18] The net inflow to these same counties jumped to 10,100 last year. Interestingly, the improvement in these counties did not come at the expense of Marion County, which had a net influx of nearly 2,900 residents in 2013—its best mark in more than two decades. In all, 62 of Indiana's 92 counties saw its net migration estimate for 2013 improve over the previous year.

Figure 16: Comparison of Net Migration Estimates for Suburban Counties of Select Metro Areas

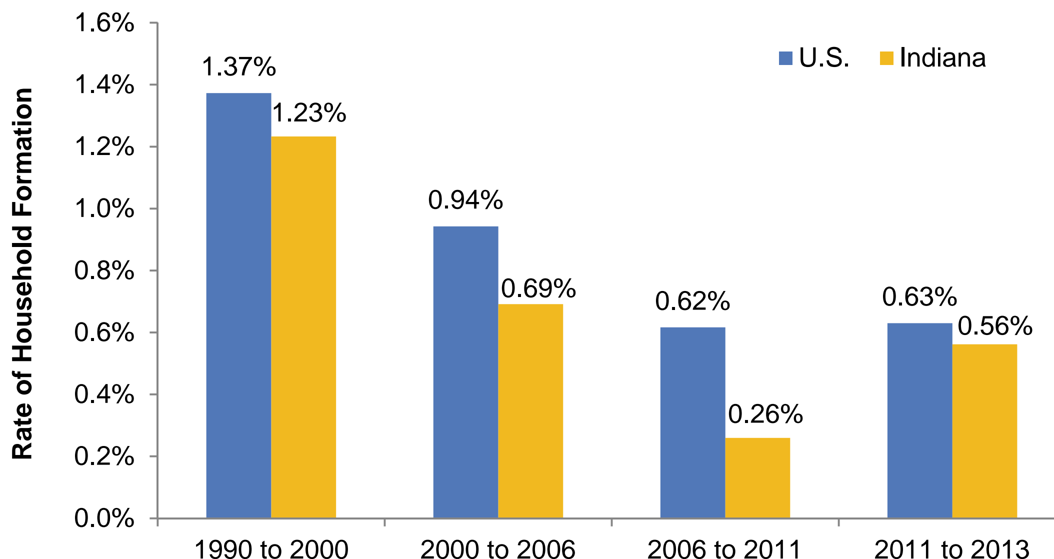


Source: U.S. Census Bureau population estimates

[18] 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.

As one might expect, improved migration to the state is helping to boost Indiana's household formation rate. As **Figure 17** shows, after a period of very anemic household growth between 2006 and 2011, the state's average household formation rate for the last two years is nearly back to the pre-recession level seen in the early and mid-2000s. Stated in raw numbers: Indiana added roughly the same number of households in the last two years (31,300) as it did over the five years between 2006 and 2011 (31,800).

Figure 17: Average Annual Household Formation Rates, 1990 to 2013



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

Indiana's household formation rates could improve even more once the number of households "doubling up" begins to subside. That is, due to the variety of negative effects associated with the housing crash and Great Recession, many adults were forced to reside with family or friends. As a result, Indiana's headship rate (i.e., the number of households divided by the population age 15 or older), has been on the decline, particularly among young adults. In 2007, for instance, approximately 50 percent of Hoosiers between the age of 25 and 34 were the head of their own household, but the headship rate for that same age group has dropped to 46 percent in 2013. Comparing those same years, age-specific headship rates are down for each age group with the exception of residents age 65 or older. Therefore, there is a sizable pool of potentially untapped housing demand in the state that could enter the market as the economy improves.

Table 3 provides estimates of the shortfall in the number of households in Indiana by age group. The shortfalls were calculated by looking at the differences in the actual number of households in 2013 compared to the number of households we would expect in 2013 if age-specific headship rates were still at the levels seen in 2007. The decline in the headship rate for the 25 to 34 age group referenced earlier translates to more than 31,000 fewer households in the state within this group alone. This number accounts for 41 percent of the state's total estimated shortfall. All told, Indiana would have had roughly 77,000 more households in 2013 if headship rates were still at 2007 levels.

Table 3: Estimated Shortfall in Number of Indiana Households in 2013

Age Group	Actual Number of Households (thousands)	Number at 2007 Headship Rates (thousands)	Difference (thousands)
15 to 24	119.5	136.6	-17.0
25 to 34	386.7	418.2	-31.5
35 to 44	431.2	450.4	-19.2
45 to 54	504.1	518.1	-14.0
55 to 64	480.4	482.9	-2.5
65+	576.5	568.9	7.6
Total	**2,498.4**	**2,575.0**	**-76.6**

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

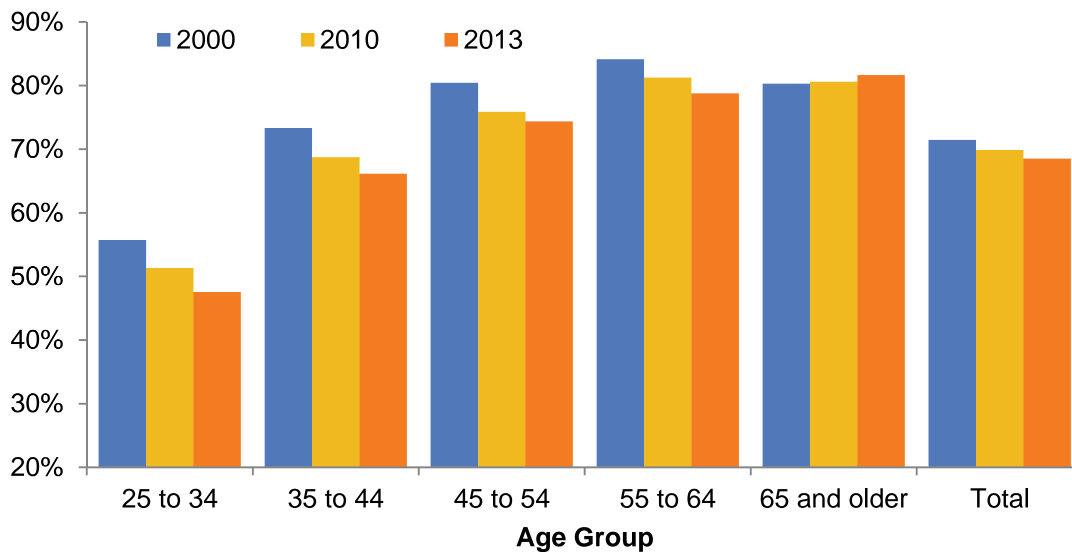
Indiana's Homeownership Rate Continues to Slide

As new households form in Indiana, will they be looking to buy or rent? If the trend over the past six years holds, more will be looking to the rental market than was the case before 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). According to the Census Bureau's American Community Survey (ACS), the state's homeownership rate has continued to slip since 2010, dropping to 68.5 percent in 2013. Indiana ranked 13th among states in homeownership rate last year.

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 2013 ACS, for instance, and Indiana's total homeownership rate was down 2.9 percentage points. The homeownership rate for Indiana's 25-to-34 age group, however, is down by 8.2 percentage points over the same period (see **Figure 18**). At the same time, the state's 35-to-44 and 45-to-54 groups are down 7.1 percentage points and 6.1 percentage points, respectively. Only Indiana's senior age group has seen its homeownership rate on the rise.

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 50 and 68, this age group holds a larger share of the state's population than ever before. This is also the prime age group 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 18: Indiana Homeownership Rates by Age, 2000 to 2013



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

Looking Ahead

The key demographic drivers for Indiana's housing market in the next few years will be the direction that headship rates take and the level of migration to the state. With regard to headship rates, after declining through the worst of the recession, they have essentially held constant over the last three years in most age groups. So at worst, the state should not see any further erosion of this measure moving forward. If Indiana is anything like the nation, however, it should start to see a rebound in headship rates. 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.[19] This increase reflects both the effect of an aging population and more young adults starting households as the labor market improves.

As for migration, Indiana posted a strong net inflow of residents in 2013 after enduring three years with an average annual net out-migration. As the economy improves, the state should continue to attract new residents. The IBRC's population projections conducted in 2012 indicate that Indiana should expect an average annual net in-migration of 6,000 residents per year between 2015 and 2020. If Indiana does continue to see positive net migration and a rebound in headship rates, then household formation should remain relatively strong, and possibly pick up steam, through the rest of this decade.

As household formation picks up, will age-specific homeownership rates begin to rebound too? Research indicates that the housing crash has done little to dampen the desire for homeownership among most Americans, even young adults. According to a Fannie Mae survey conducted in late 2013, 76 percent of current renters between the ages of 18 and 39 feel that owning a home makes more financial sense than renting does.[20] Furthermore, analysis of National Housing Survey data by Harvard researchers shows

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

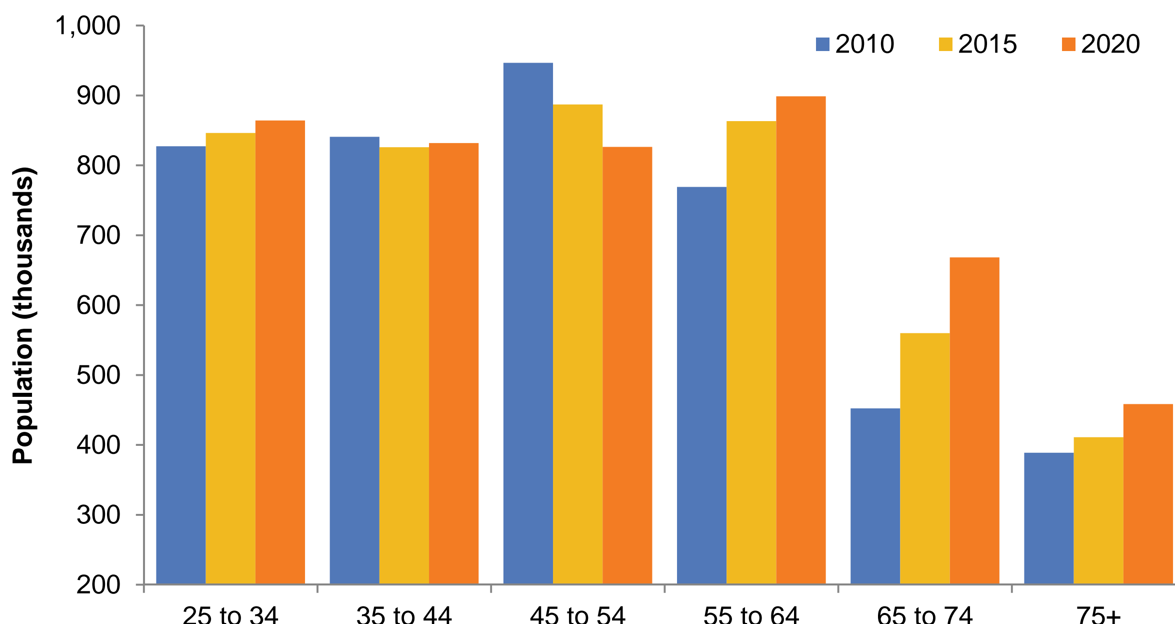
[20] "What Younger Renters Want and the Financial Constraints They See," Fannie Mae National Housing Survey, May 2014, www.fanniemae.com/resources/file/research/housingsurvey/pdf/nhsmay2014presentation.pdf.

that approximately 95 percent of respondents between the ages of 25 and 44 expect to buy a home sometime in the future.[21]

While the desire to buy a home may be there, the means may not. Seventy-three percent of the younger renters questioned in the Fannie Mae survey referenced above indicated they believe it would be difficult for them to get a mortgage, with insufficient credit scores and difficulty saving for a down payment listed as the top reasons why. Hopefully more and more young adults in this position will be able to access loans as the labor market improves.

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 19**). 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 19: 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

[21] 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.

sellers 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.[22] 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.

[22] 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.[23] One reason that RFI is widely followed is that it tends to be a leading indicator of economic activity since 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.[24] However, given housing's central role in this most recent economic downturn, RFI is only now beginning to provide much of a boost to the recovery.

While residential investment is beginning to show signs of life, it 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 3.1 percent in 2013—the fifth-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 2014, RFI has improved for 14 of the past 15 quarters, although it has plateaued at roughly 3.2 percent of GDP over the last four quarters.

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 20** 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 more impressive gains the last couple of years. The value of Indiana's permits increased by nearly 31 percent in 2013. Even with this improvement, the value of construction has fallen to an extent that the dollar total for permits in 2013, even when measured in nominal terms (i.e., not adjusted for inflation), was a shade below the level seen in 1994.

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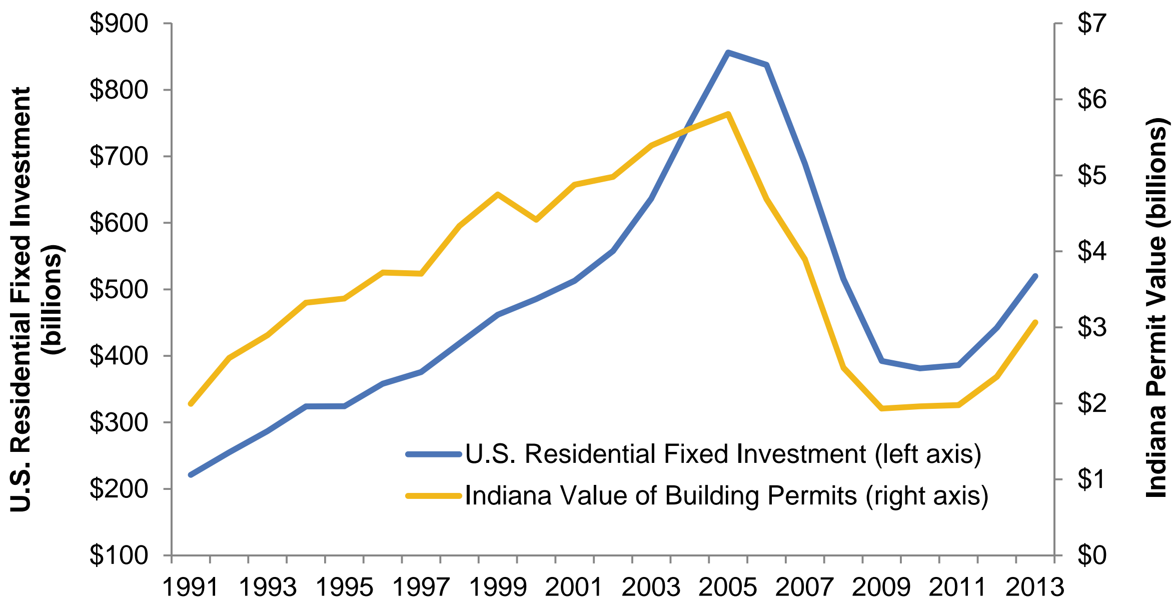
[23] According to the U.S. Bureau of Economic Analysis, RFI consists of the purchase of residential structures and the residential equipment that is owned by landlords and rented to tenants. Investment in residential structures includes the new construction of housing units, improvements to existing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

[24] Kathryn Byun, "The U.S. Housing Bubble and Bust: Impacts on Employment," *Monthly Labor Review*, December 2010.

Figure 20: U.S. Residential Fixed Investment and Indiana Value of Building Permits, 1991 to 2013



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

The value of housing permits in Indiana continues to rise so far this year, although not at the rate seen over the last two years. Through July 2014, the total value of permits issued in the state is up 5.6 percent over the same period in 2013. The harsh weather this past winter and higher mortgage rates may be two contributing factors to this slowdown.

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 2013 was only 43 percent of the peak level seen in 1999 and was the 11th-lowest mark since 1960. However, the number of units last year was up 30 percent over 2012. One reason for this large increase in residential construction in 2013 was a spike in multi-family developments. Apartment construction accounted for roughly 30 percent of the new units permitted in Indiana in 2013—the highest multi-family share since 1986. Nearly 30 percent of the state's multi-family units permitted in 2013 were in Hamilton County. Marion and Tippecanoe counties each accounted for an additional 12 percent of the total.

As with the value of permits, however, the number of new units is growing more slowly this year. Through July 2014, the number of units is up 6.4 percent over the same period in 2013. Multi-family construction continues to play a large roll, accounting for 28 percent new units so far this year.

Of course, this lower level of residential construction has triggered a serious decline in employment in this industry. Compared to 2005, Indiana had nearly 7,600 fewer residential construction jobs in 2013—a 40 percent decline. By comparison, the state's total employment was off by 1 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,

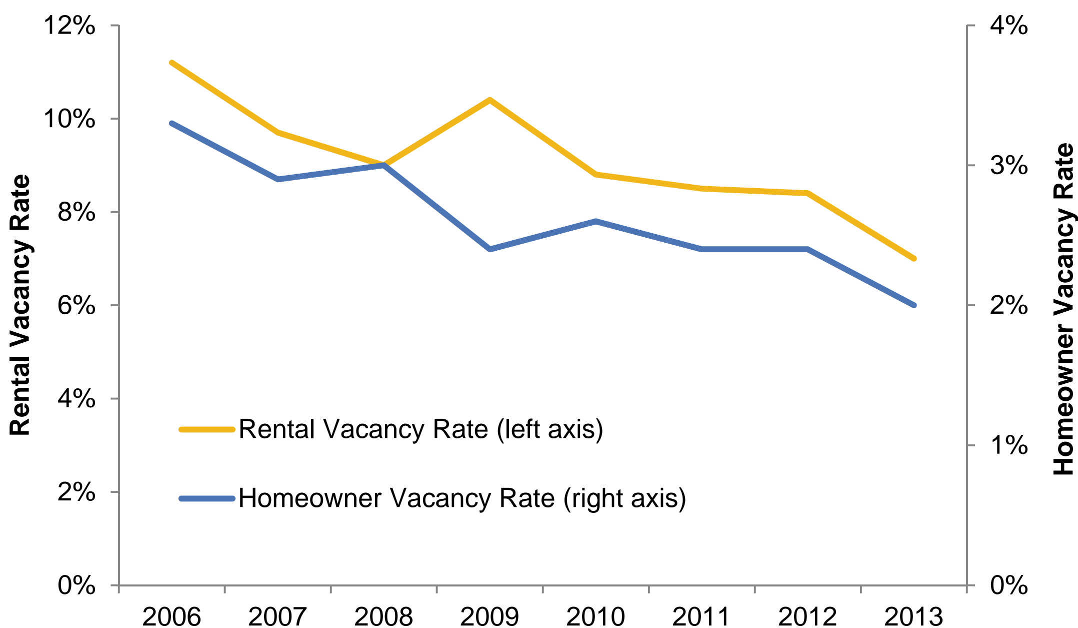
residential construction has an employment multiplier of 2.1 in Indiana, meaning that each job in this industry supports an additional 1.1 jobs in other industries throughout the state. If this multiplier holds, the decline of 7,600 construction jobs between 2005 and 2013 translates to a loss of an estimated 8,360 jobs in other industries in the state.

Looking Ahead

Clearly, continued improvements in residential construction would be a shot in the arm for the Indiana economy. Fortunately, several industry forecasts predict that construction activity will remain strong for the remainder of 2014 and really pick up steam next year. Freddie Mac's recent forecast, for instance, predicts that total housing starts in 2014 at the national level will be 10 percent higher than the year before, and starts in 2015 will be up 28 percent year-over-year. If these forecasts prove to be in the ballpark, then housing will start to play a larger role in the economic recovery.

Another indication that residential construction may continue to rebound in the next few years is that vacancy rates continue to decline in Indiana, indicating a tightening housing market. Both the rental vacancy rate (7 percent) and the homeowner vacancy rate (2 percent) in Indiana have declined to their lowest levels since at least 2006 (see **Figure 21**).

Figure 21: Indiana Homeowner and Rental Vacancy Rates, 2006 to 2013



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

The housing market's influence on the economy extends beyond construction, 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 ever-growing gains in the value of their homes.[25] Indeed, during the housing bubble, the nation's personal

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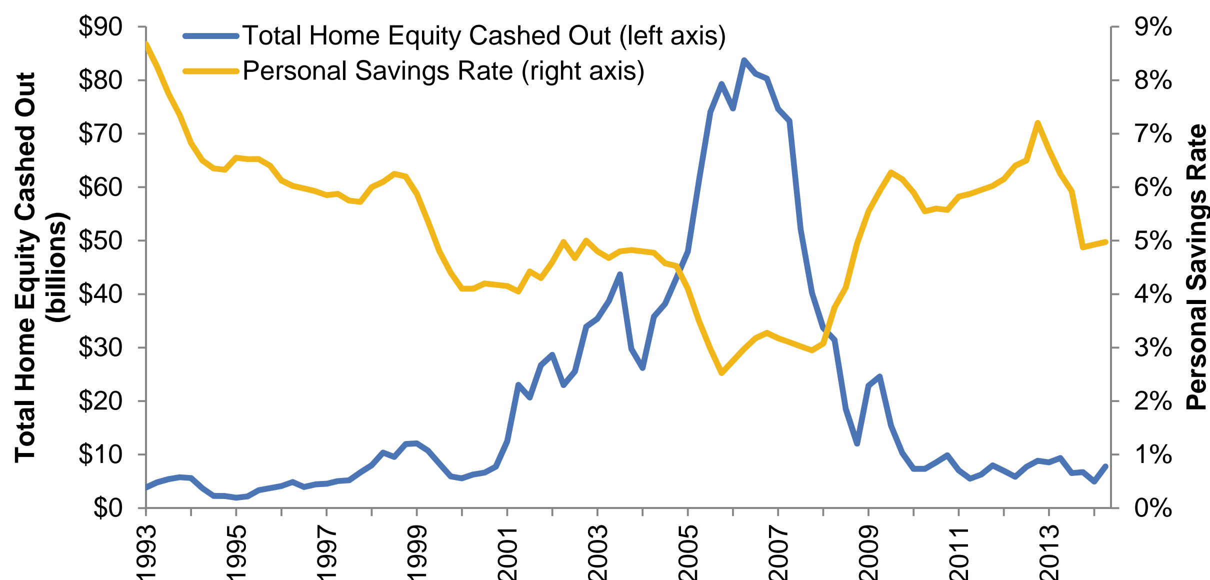
[25] "Housing Wealth and Consumer Spending," Congressional Budget Office, January 2007.

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 historical standards (the savings rate averaged 10 percent between 1950 and 1998 and has declined sharply of late to a mark of 5.3 percent in the second quarter of 2014).

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 22** 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 22: U.S. Total Home Equity Cashed Out and Personal Savings Rate, 1993:1 to 2014:2



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.[26] Also like the reduced savings rate, this trend proved short-lived. Even as historically low interest rates spurred a surge in refinancing in 2012 and 2013, cash-out volume as a share of all refinancing over these two years was at a 20-year low.

[26] 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

Last year at this time, this report noted that while many phases of the Indiana housing market were seeing strong improvements, the drivers of housing demand—a strong labor market, migration and favorable lending conditions—were not yet to a point where they could support sustained growth. It appears the opposite is the case so far this year, which isn't such a bad thing. Gains in residential construction and house prices have moderated so far in 2014 and existing home sales have declined a bit. Meanwhile, measures of employment growth, unemployment, net migration and household formation have all moved firmly in the right direction in Indiana, and there are indications that access to mortgage credit is improving nationally. These developments put Indiana's housing markets on more solid footing.

While we would have all liked to see double-digit increases in the rate of home sales and construction continue for a while longer, that level of growth can't be sustained for long. What the state needs most is to shore up the economic and demographic foundations of a strong housing market to allow for steady growth. In the last 12 to 18 months, Indiana has come a couple of steps closer to reaching that goal.

Appendix

Home Sales and Median Sales Price by County, Year-over-Year Change, July 2013 to June 2014

County	Sales, July 2012 to June 2013	Sales, July 2013 to June 2014	Percent Change	Median Price, July 2012 to June 2013	Median Price, July 2013 to June 2014	Percent Change
Indiana Total	72,458	73,894	2.0%	$120,000	$124,000	3.3%
Adams	241	264	9.5%	$83,000	$83,250	0.3%
Allen	4,672	4,862	4.1%	$112,000	$112,000	0.0%
Bartholomew	977	1,049	7.4%	$142,000	$152,000	7.0%
Benton	67	90	34.3%	$55,000	$61,000	10.9%
Blackford	93	83	-10.8%	$53,500	$54,000	0.9%
Boone	1,040	1,069	2.8%	$193,950	$205,000	5.7%
Brown	162	173	6.8%	$144,900	$140,000	-3.4%
Carroll	161	162	0.6%	$98,450	$88,650	-10.0%
Cass	353	318	-9.9%	$63,000	$62,000	-1.6%
Clark	1,450	1,612	11.2%	$121,000	$127,000	5.0%
Clay	206	213	3.4%	$76,000	$80,000	5.3%
Clinton	205	213	3.9%	$80,000	$76,000	-5.0%
Crawford	56	71	26.8%	$65,000	$84,000	29.2%
Daviess	201	190	-5.5%	$95,000	$81,450	-14.3%
Dearborn	446	490	9.9%	$133,940	$140,000	4.5%
Decatur	216	255	18.1%	$107,000	$114,500	7.0%
DeKalb	455	450	-1.1%	$95,000	$95,000	0.0%
Delaware	987	1,022	3.5%	$81,750	$82,500	0.9%
Dubois	404	331	-18.1%	$124,800	$124,000	-0.6%
Elkhart	1,744	1,752	0.5%	$107,900	$112,000	3.8%
Fayette	148	141	-4.7%	$60,000	$61,272	2.1%
Floyd	1,016	1,064	4.7%	$135,500	$130,000	-4.1%
Fountain	50	41	-18.0%	$86,000	$66,500	-22.7%
Franklin	121	121	0.0%	$129,500	$140,000	8.1%
Fulton	164	173	5.5%	$72,500	$80,500	11.0%
Gibson	300	306	2.0%	$94,900	$99,900	5.3%
Grant	579	564	-2.6%	$65,000	$70,000	7.7%
Greene	131	149	13.7%	$76,500	$75,900	-0.8%
Hamilton	6,017	6,171	2.6%	$197,000	$212,825	8.0%
Hancock	1,056	1,132	7.2%	$137,000	$139,350	1.7%
Harrison	342	418	22.2%	$127,300	$120,000	-5.7%
Hendricks	2,542	2,621	3.1%	$141,000	$152,000	7.8%
Henry	350	331	-5.4%	$61,000	$63,000	3.3%

County	Sales, July 2012 to June 2013	Sales, July 2013 to June 2014	Percent Change	Median Price, July 2012 to June 2013	Median Price, July 2013 to June 2014	Percent Change
Howard	1,074	1,029	-4.2%	$77,000	$81,000	5.2%
Huntington	416	403	-3.1%	$82,950	$81,500	-1.7%
Jackson	421	383	-9.0%	$97,305	$99,500	2.3%
Jasper	287	297	3.5%	$133,750	$136,250	1.9%
Jay	75	105	40.0%	$55,000	$55,500	0.9%
Jefferson	281	286	1.8%	$100,500	$114,400	13.8%
Jennings	120	148	23.3%	$87,000	$83,500	-4.0%
Johnson	2,318	2,404	3.7%	$127,000	$132,000	3.9%
Knox	244	282	15.6%	$79,900	$85,250	6.7%
Kosciusko	889	980	10.2%	$128,700	$126,500	-1.7%
Lagrange	278	244	-12.2%	$105,000	$114,950	9.5%
Lake	5,026	5,258	4.6%	$125,000	$129,900	3.9%
LaPorte	1,072	1,087	1.4%	$111,270	$114,000	2.5%
Lawrence	375	407	8.5%	$80,000	$85,000	6.3%
Madison	1,441	1,394	-3.3%	$81,300	$77,000	-5.3%
Marion	11,481	11,660	1.6%	$108,000	$115,000	6.5%
Marshall	366	366	0.0%	$112,900	$118,750	5.2%
Martin	30	45	50.0%	$92,000	$64,750	-29.6%
Miami	283	276	-2.5%	$43,250	$55,000	27.2%
Monroe	1,509	1,473	-2.4%	$153,500	$154,500	0.7%
Montgomery	412	455	10.4%	$92,000	$97,500	6.0%
Morgan	878	920	4.8%	$130,500	$127,000	-2.7%
Newton	124	130	4.8%	$97,900	$84,600	-13.6%
Noble	486	438	-9.9%	$88,950	$90,000	1.2%
Ohio	39	33	-15.4%	$132,500	$100,000	-24.5%
Orange	37	48	29.7%	$64,500	$65,000	0.8%
Owen	131	127	-3.1%	$79,950	$85,100	6.4%
Parke	51	50	-2.0%	$71,450	$70,750	-1.0%
Perry	87	110	26.4%	$70,000	$85,000	21.4%
Pike	76	94	23.7%	$74,900	$80,000	6.8%
Porter	1,985	2,053	3.4%	$166,900	$165,000	-1.1%
Posey	169	193	14.2%	$104,950	$102,500	-2.3%
Pulaski	46	52	13.0%	$64,010	$84,250	31.6%
Putnam	430	398	-7.4%	$109,000	$112,000	2.8%
Randolph	126	152	20.6%	$60,000	$54,824	-8.6%
Ripley	221	200	-9.5%	$104,900	$115,000	9.6%
Rush	10	10	0.0%	$38,500	$15,500	-59.7%
Scott	166	182	9.6%	$65,000	$81,200	24.9%
Shelby	524	441	-15.8%	$99,900	$111,250	11.4%
Spencer	164	152	-7.3%	$116,200	$117,950	1.5%
St. Joseph	2,815	2,638	-6.3%	$106,000	$113,725	7.3%
Starke	190	166	-12.6%	$76,250	$79,900	4.8%

County	Sales, July 2012 to June 2013	Sales, July 2013 to June 2014	Percent Change	Median Price, July 2012 to June 2013	Median Price, July 2013 to June 2014	Percent Change
Steuben	488	446	-8.6%	$118,000	$127,250	7.8%
Sullivan	105	91	-13.3%	$64,000	$78,950	23.4%
Switzerland	49	46	-6.1%	$80,000	$98,750	23.4%
Tippecanoe	2,046	2,023	-1.1%	$129,000	$133,000	3.1%
Tipton	137	127	-7.3%	$79,250	$85,000	7.3%
Union	12	17	41.7%	$52,500	$63,000	20.0%
Vanderburgh	2,181	2,264	3.8%	$113,500	$112,000	-1.3%
Vermillion	88	118	34.1%	$59,950	$52,000	-13.3%
Vigo	996	992	-0.4%	$87,400	$84,000	-3.9%
Wabash	262	317	21.0%	$65,000	$76,000	16.9%
Warren	43	38	-11.6%	$89,500	$73,000	-18.4%
Warrick	849	818	-3.7%	$150,000	$156,000	4.0%
Washington	179	205	14.5%	$75,000	$76,750	2.3%
Wells	266	284	6.8%	$94,000	$97,500	3.7%
White	228	251	10.1%	$115,000	$91,400	-20.5%
Whitley	424	387	-8.7%	$107,000	$113,000	5.6%

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, 2012 to 2013

County	Number of Units, 2012	Number of Units, 2013	Percent Change	Value of Permits (in thousands), 2012	Value of Permits (in thousands), 2013	Percent Change
Indiana Total	13,781	17,950	30.3%	$2,349,906	$3,065,787	30.5%
Adams	66	56	-15.2%	$10,798	$9,226	-14.6%
Allen	1,152	893	-22.5%	$168,216	$179,991	7.0%
Bartholomew	200	241	20.5%	$45,969	$59,560	29.6%
Benton	1	5	400.0%	$592	$2,033	243.4%
Blackford	4	2	-50.0%	$363	$592	63.1%
Boone	498	840	68.7%	$91,801	$142,972	55.7%
Brown	36	48	33.3%	$7,394	$9,288	25.6%
Carroll	0	0	n/a	$0	$0	n/a
Cass	9	12	33.3%	$1,505	$2,060	36.9%
Clark	499	533	6.8%	$67,709	$74,541	10.1%
Clay	15	18	20.0%	$1,733	$2,105	21.5%
Clinton	0	28	n/a	$0	$5,037	n/a
Crawford	0	0	n/a	$0	$0	n/a
Daviess	15	23	53.3%	$1,794	$3,055	70.3%
Dearborn	44	68	54.5%	$10,057	$14,548	44.7%
Decatur	29	36	24.1%	$5,219	$8,719	67.1%
DeKalb	64	79	23.4%	$12,023	$14,954	24.4%
Delaware	260	284	9.2%	$17,915	$29,030	62.0%

County	Number of Units, 2012	Number of Units, 2013	Percent Change	Value of Permits (in thousands), 2012	Value of Permits (in thousands), 2013	Percent Change
Dubois	84	107	27.4%	$10,218	$22,024	115.5%
Elkhart	221	303	37.1%	$39,308	$60,976	55.1%
Fayette	4	11	175.0%	$725	$1,431	97.4%
Floyd	140	153	9.3%	$32,534	$40,055	23.1%
Fountain	6	4	-33.3%	$412	$929	125.5%
Franklin	23	35	52.2%	$5,082	$6,840	34.6%
Fulton	13	14	7.7%	$2,763	$3,135	13.5%
Gibson	56	101	80.4%	$9,052	$17,456	92.8%
Grant	36	48	33.3%	$5,065	$8,190	61.7%
Hamilton	2,137	3,635	70.1%	$479,074	$656,739	37.1%
Hancock	209	327	56.5%	$44,018	$50,918	15.7%
Harrison	83	92	10.8%	$15,301	$35,807	134.0%
Hendricks	646	1,039	60.8%	$117,959	$168,124	42.5%
Henry	16	13	-18.8%	$2,535	$2,297	-9.4%
Howard	162	151	-6.8%	$18,145	$17,304	-4.6%
Huntington	85	50	-41.2%	$9,581	$10,100	5.4%
Jackson	120	170	41.7%	$13,638	$20,366	49.3%
Jasper	74	58	-21.6%	$13,593	$12,134	-10.7%
Jay	17	22	29.4%	$2,646	$2,960	11.9%
Jefferson	46	31	-32.6%	$6,290	$3,730	-40.7%
Jennings	37	46	24.3%	$3,983	$4,632	16.3%
Johnson	594	698	17.5%	$100,879	$135,284	34.1%
Knox	33	48	45.5%	$5,104	$7,297	43.0%
Kosciusko	225	262	16.4%	$29,239	$35,721	22.2%
LaGrange	122	129	5.7%	$14,556	$20,168	38.6%
Lake	819	985	20.3%	$164,104	$213,174	29.9%
LaPorte	306	113	-63.1%	$34,604	$21,378	-38.2%
Lawrence	11	27	145.5%	$1,733	$4,565	163.4%
Madison	68	93	36.8%	$14,665	$21,286	45.1%
Marion	604	1,309	116.7%	$111,730	$185,524	66.0%
Marshall	50	98	96.0%	$11,800	$14,788	25.3%
Martin	2	3	50.0%	$110	$297	170.0%
Miami	13	12	-7.7%	$2,262	$2,056	-9.1%
Monroe	421	516	22.6%	$51,156	$59,208	15.7%
Montgomery	40	47	17.5%	$6,489	$8,278	27.6%
Morgan	120	106	-11.7%	$18,714	$17,990	-3.9%
Newton	13	21	61.5%	$2,357	$4,519	91.7%
Noble	67	82	22.4%	$11,127	$13,361	20.1%
Ohio	11	4	-63.6%	$1,470	$598	-59.3%
Orange	4	4	0.0%	$596	$791	32.7%
Owen	0	0	n/a	$0	$0	n/a
Parke	2	25	1,150.0%	$261	$3,587	1,274.3%

County	Number of Units, 2012	Number of Units, 2013	Percent Change	Value of Permits (in thousands), 2012	Value of Permits (in thousands), 2013	Percent Change
Perry	23	52	126.1%	$2,988	$5,322	78.1%
Pike	19	20	5.3%	$3,432	$2,701	-21.3%
Porter	398	469	17.8%	$83,628	$121,185	44.9%
Posey	98	45	-54.1%	$12,389	$8,152	-34.2%
Pulaski	18	13	-27.8%	$3,507	$1,907	-45.6%
Putnam	100	83	-17.0%	$12,538	$11,858	-5.4%
Randolph	15	15	0.0%	$2,458	$2,458	0.0%
Ripley	79	81	2.5%	$11,535	$11,715	1.6%
Rush	11	10	-9.1%	$1,858	$1,390	-25.2%
Scott	28	30	7.1%	$4,356	$3,919	-10.0%
Shelby	50	66	32.0%	$5,999	$8,437	40.6%
Spencer	42	34	-19.0%	$8,001	$5,941	-25.7%
St. Joseph	582	422	-27.5%	$71,941	$64,678	-10.1%
Starke	45	37	-17.8%	$7,502	$6,559	-12.6%
Steuben	107	113	5.6%	$23,983	$27,089	13.0%
Sullivan	1	2	100.0%	$95	$190	100.0%
Switzerland	49	47	-4.1%	$2,855	$2,739	-4.1%
Tippecanoe	542	1,080	99.3%	$100,979	$129,670	28.4%
Tipton	15	15	0.0%	$2,932	$3,127	6.7%
Union	7	6	-14.3%	$670	$1,075	60.4%
Vanderburgh	303	302	-0.3%	$32,538	$41,988	29.0%
Vermillion	1	65	6,400.0%	$70	$8,770	12,428.6%
Vigo	223	184	-17.5%	$25,222	$22,595	-10.4%
Wabash	20	24	20.0%	$3,557	$4,240	19.2%
Warren	0	16	n/a	$0	$1,768	n/a
Warrick	201	322	60.2%	$32,885	$46,837	42.4%
Washington	46	45	-2.2%	$7,710	$7,189	-6.8%
Wayne	24	26	8.3%	$4,470	$4,961	11.0%
Wells	25	49	96.0%	$5,293	$9,495	79.4%
White	24	26	8.3%	$5,276	$5,026	-4.7%

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