2011 A Look at the Indiana Housing Market

A Report for the Indiana Association of REALTORS®

KELLEY SCHOOL OF BUSINESS
INDIANA UNIVERSITY
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REALTOR®

A Look at the Indiana Housing Market in 2011

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Executive Summary

Five years after the bottom fell out of the Indiana housing market, there are finally some signs that a recovery may be underway. In 2011, the number of houses sold in Indiana increased for the first time since 2006 and the median price of existing home sales climbed for the second consecutive year. The state's foreclosure rate is still far too high but the number of homes in the later stages of mortgage delinquency has declined of late.

Of course, a recovering patient is not necessarily a healthy one. The modest improvements in these indicators spring from very weak positions. Existing home sales in Indiana, for instance, are still more than 30 percent off the 2006 peak and the share of mortgages that are 90 or more days overdue is only about half-way back to the state's pre-crash level. Meanwhile, residential construction—another key facet of the housing market and the economy in general—has fallen to levels last seen in the early 1980s and seems stuck there.

TABLE 1: INDIANA HOUSING MARKET BY THE NUMBERS

	U.S.	Indiana
Number of Existing Home Sales, Percent Change 2010 to 2011	1.7%	0.4%
House Price Appreciation, 2010:4 to 2011:4	-2.9%	-0.9%
Residential Building Permits, Percent Change in Number of Units 2010 to 2011	3.2%	-3.6%
Share of Mortgages That Are Seriously Delinquent, 2011:4	7.7%	8.3%
Share of Mortgages with Negative Equity, 2011:4	22.8%	10.7%

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

Some of the key pieces needed for a housing recovery are in place. Mortgage interest rates are at historic lows and prices are down in many areas. Homes have rarely been more affordable. Additionally, Indiana's labor market is improving, albeit more slowly than anyone would like. As of July 2012, Indiana's employers have added 62,500 jobs over the past 12 months and the state's unemployment rate declined a full percentage point over the year. Despite steady job gains, however, the state is just a little more than halfway back to its pre-recession employment level.

This remaining slack in the economy is one important factor that continues to constrain housing demand. Others include still-lagging consumer confidence, tight lending standards and the large number of distressed properties that are on the market now or will be soon. Residential investment typically helps to pull the country out of economic downturns but housing has only recently begun to play a minor role in this recovery. It seems that only strong growth in the broader economy will trigger a true recovery in the housing market.

This report will examine 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 like household formation rates, migration, racial and ethnic diversity, 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 0.4 percent 2011, ending a four-year slide. Home sales are off to an even stronger start this year. Through the first half of 2012, the state's existing home sales are up 14 percent over the same period a year ago. Indiana's existing home sales in 2011 were still 33 percent below the peak set in 2006.

- The state's median price for existing home sales increased to $112,900 in 2011—a 0.8 percent increase over the previous year and 2.6 percent above 2009. The Federal Housing Finance Agency's House Price Index, which features a different conceptual measure of price changes, paints a slightly different picture, showing the state's home values down 0.9 percent over the year. Although a decline, Indiana had the 12th best performance among states on this measure.

- Mortgage delinquency and foreclosure continues to be a major drag on the Indiana housing market. As of the fourth quarter of 2011, Indiana had the ninth-highest foreclosure rate in the country at 4.94 percent. This is the state's highest mark on record. At 3.4 percent of all loans, Indiana's share of mortgages that are at least 90 days past due is still high but has declined steadily over the last two years. This surge in the shadow inventory of homes must subside further before the state sees a rebound in home prices and residential construction.

- According to the most recent census, Indiana's homeownership rate declined from 71.4 percent in 2000 to 69.9 percent in 2010. Despite this drop, Indiana had the 11th highest homeownership rate in the country and was well above the U.S. mark of 65.1 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. The homeownership rates for each 10-year age group between the ages of 25 and 54 are down roughly 4.5 percentage points compared to the 2000 Census and the mark for the

55 to 64 age group was down 2.9 percentage points. Under normal conditions, Indiana's homeownership rate would have risen simply because the state is growing older and homeownership increases with age.

- Housing affordability in Indiana is at a 30-year high, according to Moody's Economy.com. Affordability has boomed in recent years as prices have fallen and mortgage rates are at historic lows. Furthermore, Indiana had the nation's second-lowest ratio of median home sales price to median household income in 2010.
- The recent downturn has dampened household formation. Between 2005 and 2010, the number of new households in the state grew by an average annual rate of 0.2 percent per year compared to 0.9 percent annually during the first half 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 nearly 1,900 residents in 2011. This is only the third time since 1990 that Indiana had an annual net outflow of residents.
- For the second consecutive year, the value of Indiana's building permits increased in 2011. The value of permits had declined each year between 2005 and 2009. This is welcome news, yet construction has fallen to such an extent that the value of permits in 2011—even when measured in nominal terms (i.e., not adjusted for inflation)—was a shade below the level seen in 1990. After a slight annual increase in 2010, the total number of units authorized by permits declined in 2011. Since 1960, the only years with fewer housing units covered by permits were 1982 and 2009.

Market Conditions

Indiana Housing Market Begins the Long Road Back

After slipping for four straight years, Indiana finally saw an uptick in existing home sales in 2011. Spurred by historically low mortgage interest rates and modest job gains, sales in 2011 increased by 0.4 percent over the previous year. Existing home sales in the state had declined by an average rate of roughly 9.5 percent per year between 2006 and 2010 (see **Table 2**). The improved pace of sales is even more encouraging when one remembers that 2011 marked the first year since 2008 that the market stood on its own without government incentives designed to boost sales. The homebuyer tax credits of 2009 and 2010 almost certainly pulled forward some home sales that otherwise would have occurred in 2011.

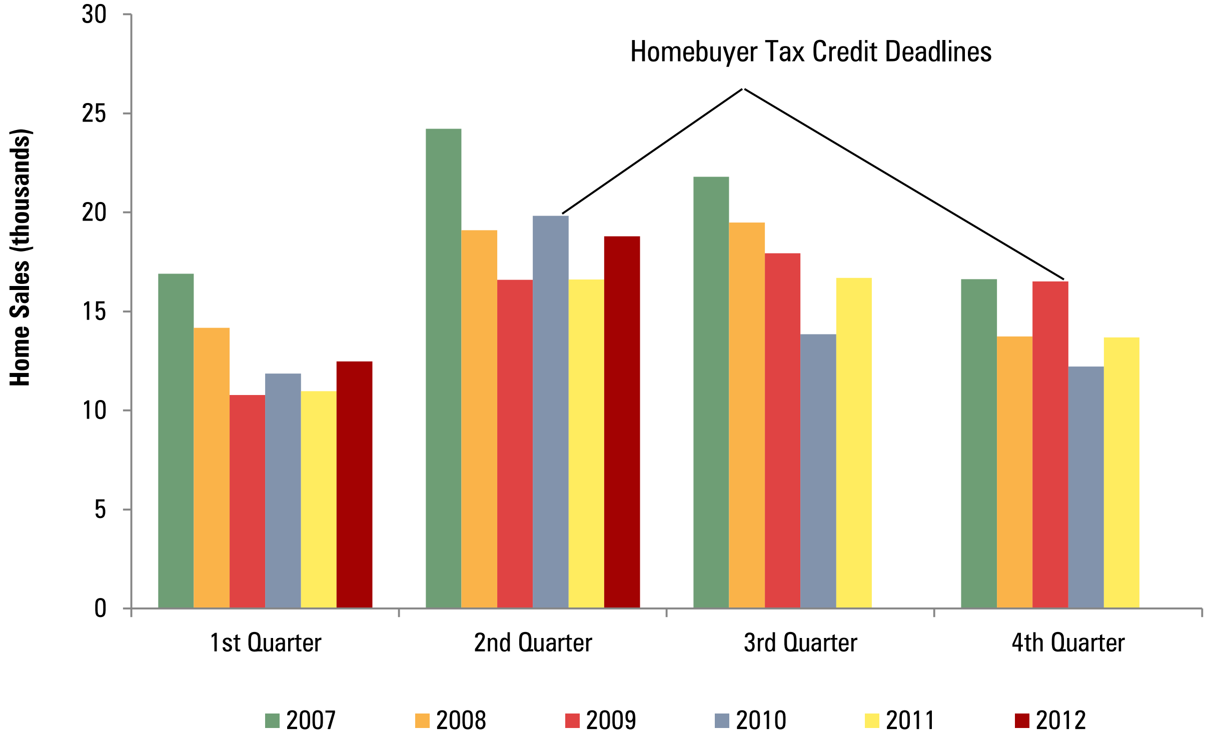
TABLE 2: INDIANA EXISTING HOME SALES, 2005 TO 2011

	2005	2006	2007	2008	2009	2010	2011
Existing Home Sales	85,540	86,142	79,545	66,505	61,826	57,765	57,985
Annual % Change	-	0.7%	-7.7%	-16.4%	-7.0%	-6.6%	0.4%

Source: Indiana Association of Realtors

As **Figure 1** illustrates, sales surged to beat the tax credit deadlines in the fourth quarter of 2009 and the second quarter of 2010 but then declined sharply afterward. Because of this distorted pattern, sales were down year-over-year in the first half 2011 but then increased in the second half of the year. The rebound appears to be picking up steam in early 2012. Data from the Indiana Association of Realtors shows that sales through the first half of 2012 are up 14 percent over the same period a year ago.

FIGURE 1: INDIANA HOME SALES BY QUARTER, 2007:1 TO 2012:1



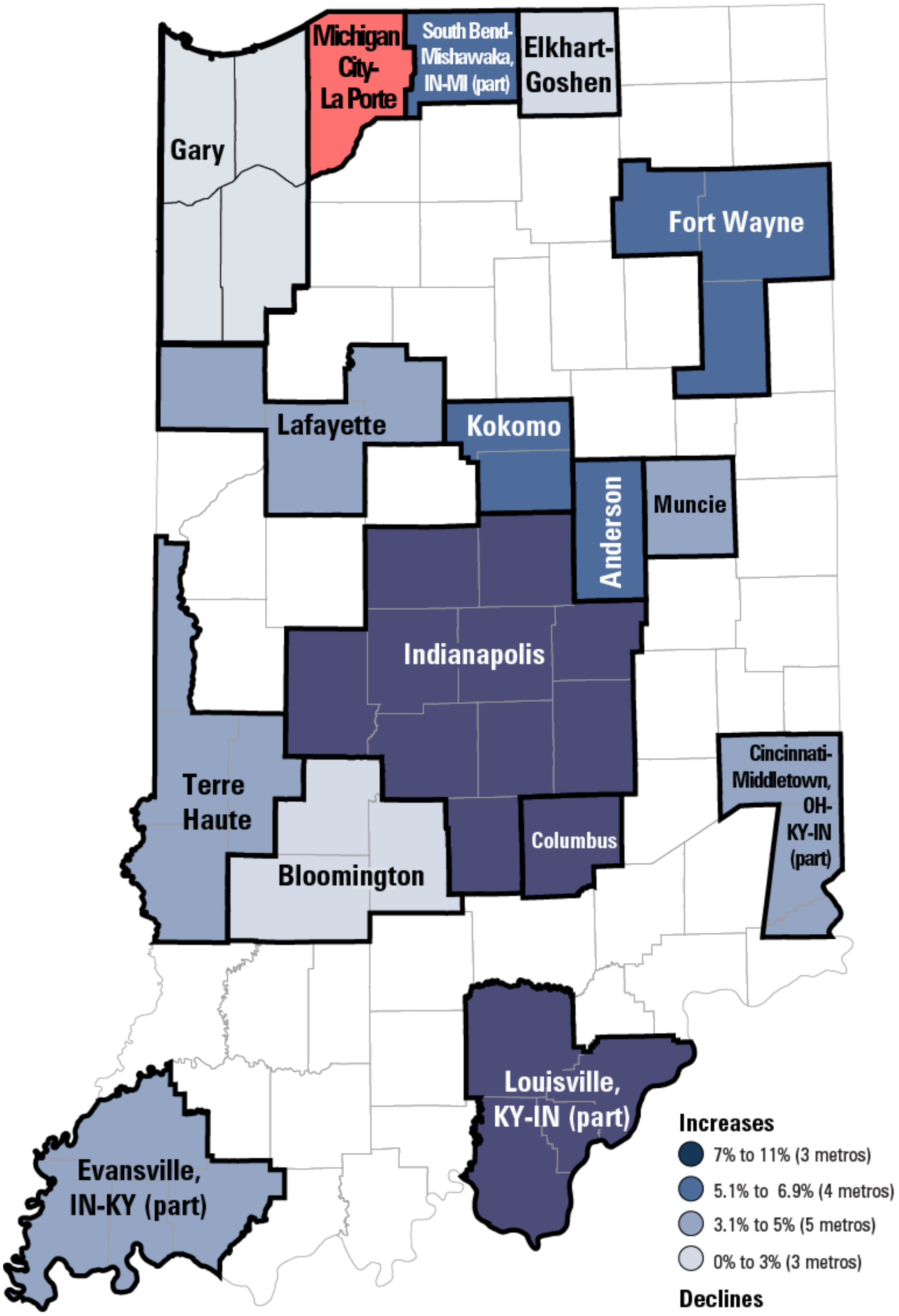
Source: Indiana Association of Realtors

As **Figure 2** indicates, with the exception of the Michigan City-La Porte area, each of Indiana's metro area's had an increase in home sales over the 12-month period ending in March 2012. The Columbus area led the way with an 11 percent increase in sales when compared to the same period a year earlier. With a 7.9 percent increase, the Indiana portion of the Louisville metro had the second-largest uptick in sales followed by the Indianapolis-Carmel area (7.3 percent), South Bend-Mishawaka (5.9 percent) and Fort Wayne (5.4 percent). The 10-county Indianapolis-Carmel metro, which accounts for 27 percent of the state's total population, claimed 35 percent of Indiana's home sales over this period.

The 45 Indiana counties that are outside of metro areas combined to post a 2.4 percent increase in sales. Among counties with at least 100 sales, Jennings County had the largest increase at 35 percent followed by Randolph (28.6 percent), Noble (24.3 percent) and Dubois (12.8 percent).[1] Statewide, sales are up 4.7 percent over this period.

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

Figure 2: Total Home Sales by Metro Area, April 2011 to March 2012, Year-over-Year Change

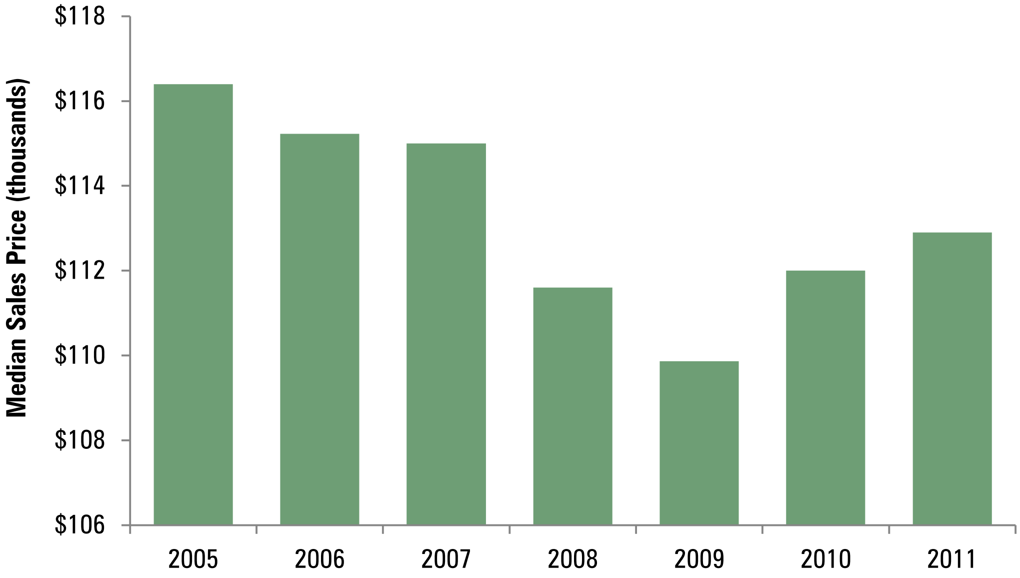

Michigan City-La Porte
South Bend-Mishawaka, IN-MI (part)
Elkhart-Goshen
Gary
Fort Wayne
Lafayette
Kokomo
Anderson
Muncie
Indianapolis
Terre Haute
Bloomington
Columbus
Cincinnati-Middletown, OH-KY-IN (part)
Louisville, KY-IN (part)
Evansville, IN-KY (part)
Increases
7% to 11% (3 metros)
5.1% to 6.9% (4 metros)
3.1% to 5% (5 metros)
0% to 3% (3 metros)
Declines
Less than 7% (1 metro)

Source: Indiana Association of Realtors

Indiana's Median Sales Price on the Rise

After declining each year between 2005 and 2009, the median sales price of homes sold in Indiana continues to rebound as demand begins to firm up. At $112,900, last year's median sales price was a 0.8 percent improvement over 2010 and 2.6 percent above 2009 (see **Figure 3**). As with housing demand, price gains continued into the early months of this year as the median price in the first quarter of 2012 improved 3 percent year-over-year.

FIGURE 3: INDIANA MEDIAN SALES PRICE, 2005 TO 2011



Source: Indiana Association of Realtors

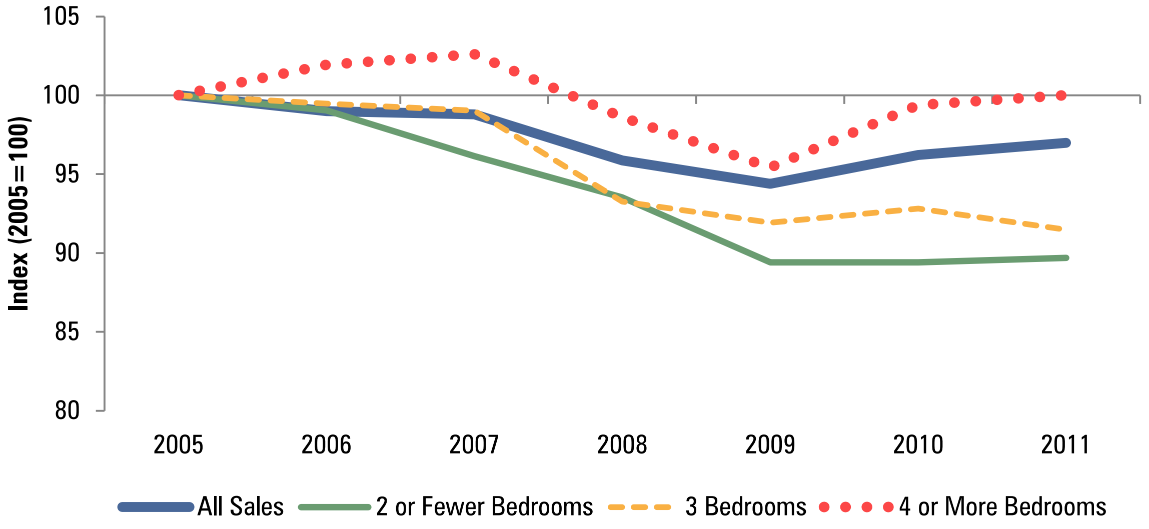
For the period covering April 2011 to March 2012, the median sales price increased in 51 of Indiana's 92 counties. Among the state's larger markets, Bartholomew (12.1 percent increase), Floyd (7.2 percent), Elkhart (6.7 percent), Marion (3.0 percent) and Madison (2.9 percent) counties posted the largest increases over this 12-month period compared to the same span a year earlier. Kosciusko (-6.0 percent), Delaware (-5.1 percent) Howard (-4.1 percent), Clark (-3.0 percent) and Hancock (-3.0 percent) counties showed the steepest declines among communities with at least 500 home sales in 2011.

Price Changes by the Number of Bedrooms

Some data collected through the housing bust indicate that price declines have been greatest at the lower end of the market. The Case-Shiller Tiered Home Price Index, for instance, shows that the bottom third of the market (based on sales price) has displayed the greatest price depreciation in each of the 17 metropolitan areas that it covers. Comparable data for Indiana are not available but the change in median sales price by the number of bedrooms suggests a similar trend is at play in the state.

As **Figure 4** shows, the median sales price for homes with two or fewer bedrooms in 2011 is roughly 10 percent lower than the median price in 2005. In contrast, Indiana homes with four or more bedrooms had a 2011 median price that was equal to the 2005 mark and roughly 2.5 percent off the 2007 peak. The median price for three-bedroom homes, which typically account for more than half of Indiana's home sales, increased slightly in 2010 but slipped again in 2011.

FIGURE 4: CHANGE IN MEDIAN SALES PRICE BY NUMBER OF BEDROOMS, 2005 TO 2011



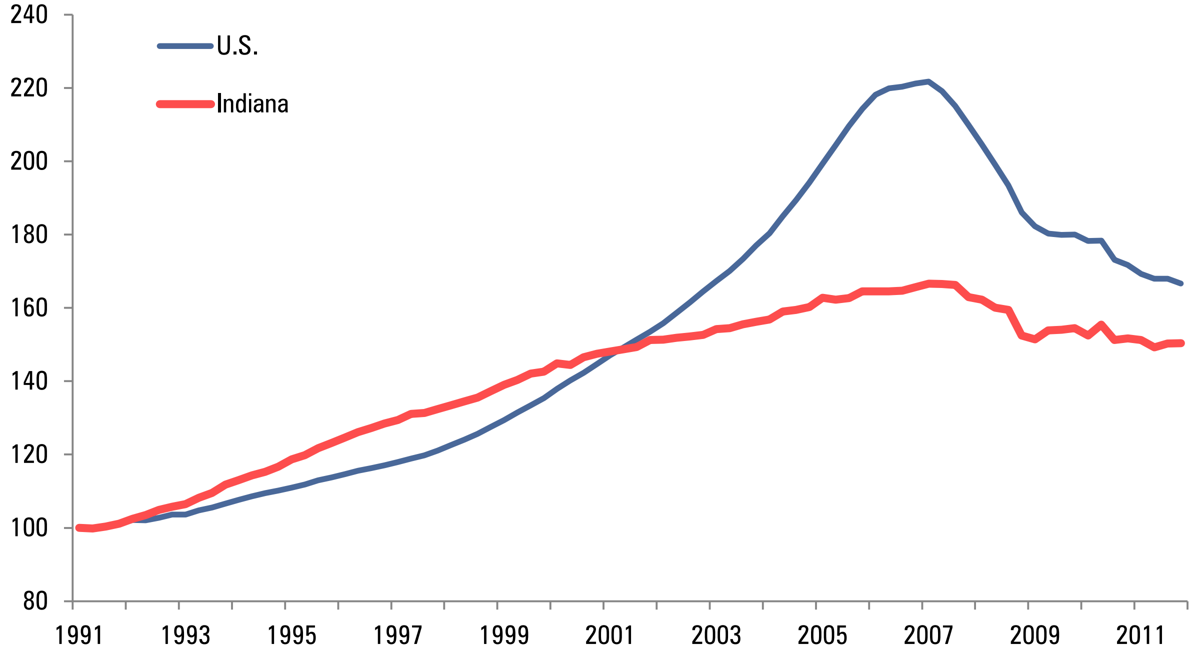
Source: Indiana Association of Realtors

Indiana House Prices in Perspective

Other measures show that Indiana's house prices are stabilizing too. According to the Federal Housing Finance Agency's House Price Index (HPI), the state's house prices have declined by 10 percent from their peak in early 2007 to the fourth quarter of 2011.[2] The U.S. index value is down 25 percent over this same period (see **Figure 5**). Most encouraging for Hoosier homeowners is that most of this decline occurred by early 2009. Since that point, Indiana's house prices have been in a holding pattern, showing no sustained movement up or down. In contrast, the U.S. HPI—though declining at a slower rate in recent years—continues to fall.

[2] 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 properties are sold multiple times. A median sales price simply indicates the median price of all homes sold in a given period and, thus, is influenced by the mix of homes sold in that period. In 2011, for instance, homes with four or more bedrooms accounted for 28.3 percent of Indiana's sales compared to 25.9 percent in 2009. The different mix of homes sold likely explains part of the increase in median sales price between these years.

Figure 5: House Price Index, Indiana and the United States, 1991:1 to 2010

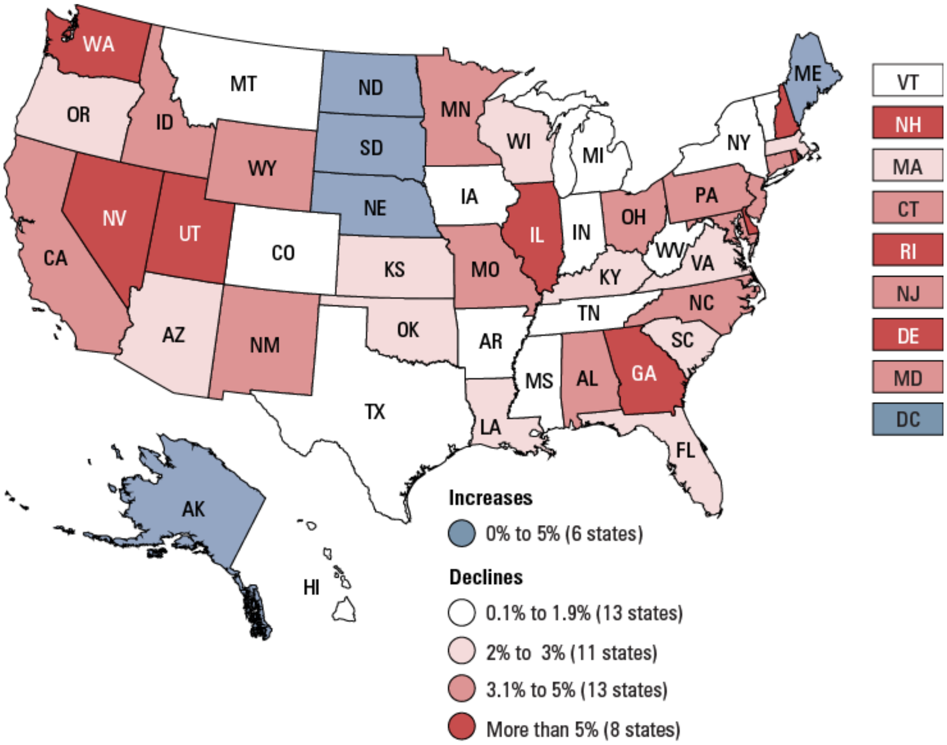


Source: Federal Housing Finance Agency, House Price Index (expanded data series, seasonally adjusted)

Although a decline, Indiana's 10 percent drop in house prices from 2007 to the fourth quarter of 2011 ranks as the 14th best peak-to-current price change performance among states. With a 62 percent decline in prices that began in early 2006, Nevada has the nation's largest peak-to-current loss followed by Arizona (-54 percent), California (-50 percent) and Florida (-49 percent). Among Indiana's neighbors, Michigan (-43 percent), Illinois (-30 percent) and Ohio (-25 percent) also had dramatic house price depreciation since their respective peaks but Kentucky's 6 percent decline has been comparatively mild. Only North Dakota and Alaska have posted new high-water marks for house prices by the end of 2011, according to the HPI data.

Looking over the past year, Indiana's HPI value increased in the last two quarters of the year but the mark for the fourth quarter of 2011 was 0.9 percent below the same period in 2010 (see **Figure 6**). Delaware had the largest house price decline over the year at 10.2 percent, followed by Nevada (-9.7 percent), Georgia (-8.1 percent) and the State of Washington (-7.6 percent). Only five states and the District of Columbia had an increase in house prices year-over-year in the fourth quarter of 2011.

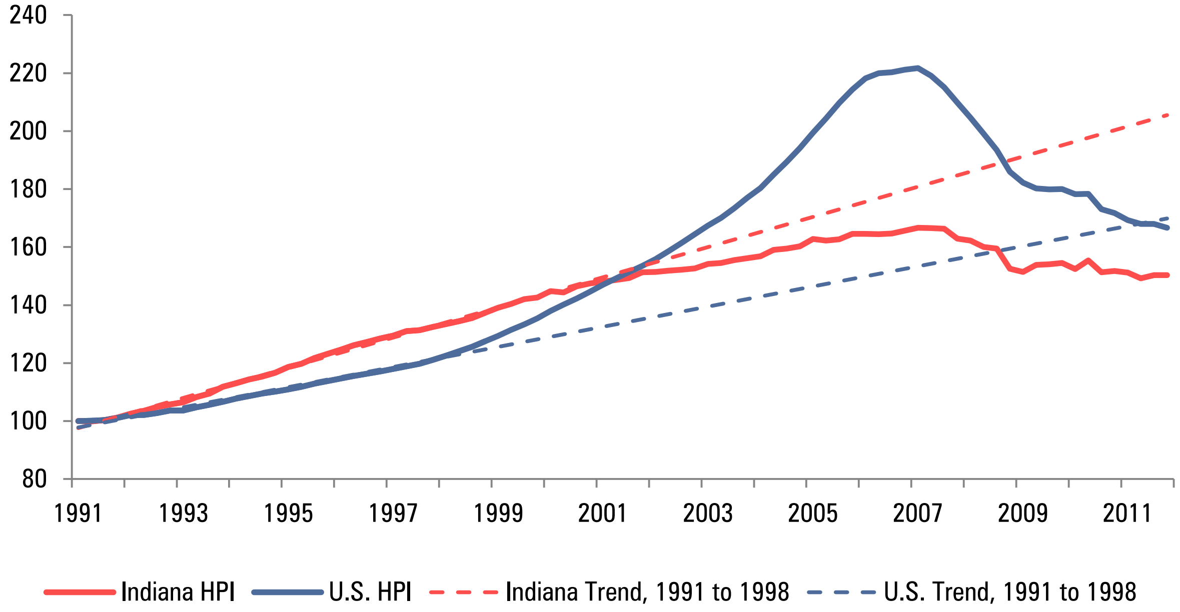
FIGURE 6: CHANGE IN HOUSE PRICE INDEX BY STATE, 2010:4 TO 2011:4


WA
OR
ID
MT
ND
SD
MN
WI
MI
NY
ME
WY
NE
IA
IL
IN
OH
PA
NV
UT
CO
KS
MO
KY
WV
VA
CA
AZ
NM
OK
AR
TN
NC
SC
MS
AL
GA
TX
LA
FL
AK
HI
VT
NH
MA
CT
RI
NJ
DE
MD
DC
Increases
0% to 5% (6 states)
Declines
0.1% to 1.9% (13 states)
2% to 3% (11 states)
3.1% to 5% (13 states)
More than 5% (8 states)

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

House prices around the country have fallen for five years simply because it has taken that long for the bubble to deflate fully (see **Figure 7**). That is, at the end of 2011, the national HPI had just reached the "pre-bubble" trend for price appreciation, 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



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

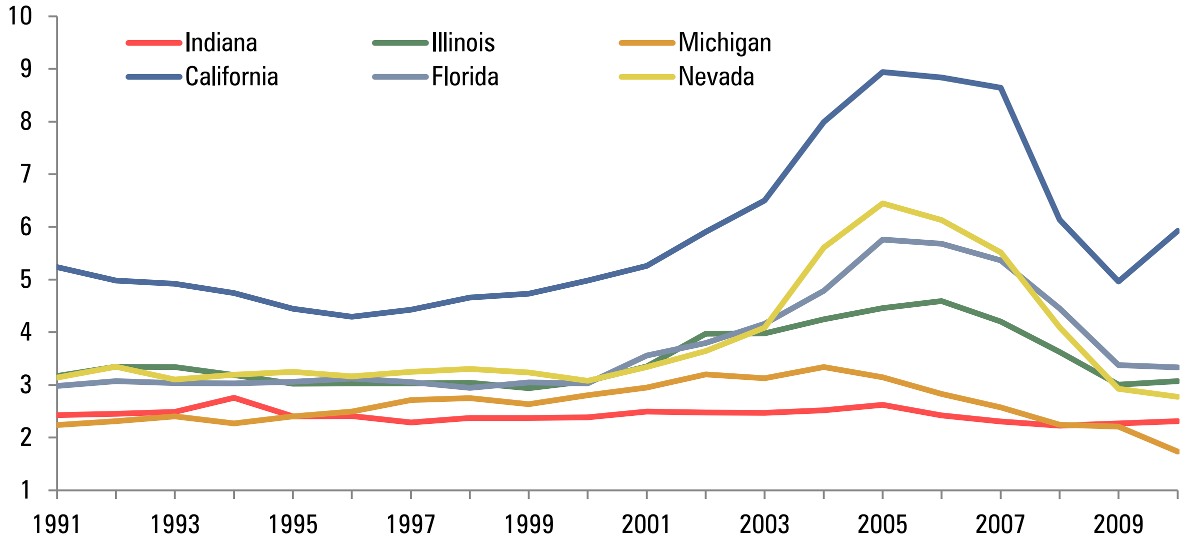
Indiana's experience has been far different. According to the FHFA, price appreciation in Indiana outpaced the national average through the 1990s but then began to slow while prices elsewhere were taking off. After falling since 2007, Indiana's home prices now sit well below the trend set during the 1990s. Unlike with the United States, though, comparing current prices to earlier trends isn't necessarily meaningful for Indiana, or at least not in the same way. Whereas the HPI data for the U.S. clearly illustrate the magnitude of the housing bubble, Indiana had no price bubble at all. Instead, changes in Hoosier house prices have gone hand-in-hand with the state's economic performance.

As a case in point, one important reason that Indiana's house price appreciation outpaced the U.S. during the 1990s was that household incomes in the state increased at a greater rate than for the nation as a whole. Between 1991 and 1998, Indiana's median household income grew at an average annual rate of 5.6 percent compared to 3.7 percent for the nation. During the housing bubble years of 1998 to 2006, Indiana's median household income growth slowed to an average rate of 1.7 percent per year and the state's pace of house price appreciation slowed in turn. By contrast, household income growth in the U.S. also slowed over this period (2.7 percent annually) but house prices increased by an average rate of 8 percent per year. Since 2006, the average annual rate of median household income growth for both Indiana and the U.S. has dropped to roughly 0.5 percent.

The ratio of incomes to house prices over time clearly illustrates how prices in many parts of the country became detached from economic fundamentals. 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, although the ratio did tick up in California and Illinois in 2010. All the while, Indiana's ratio held steady, rising just two-tenths of a percentage point between 2000 and 2005—a smaller increase than all but four states. Indiana and Michigan had the nation's lowest price-to-income ratios in 2010 while Ohio's was the fourth-lowest, suggesting that this region offers some of the most affordable housing in the country.

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



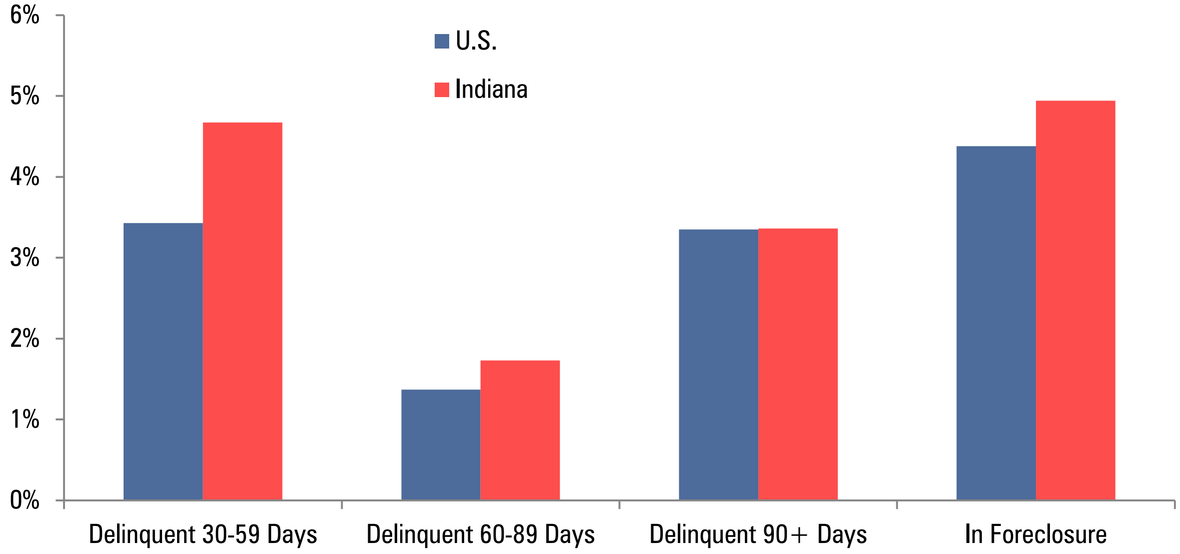
Source: U.S. Census Bureau and Moody's Economy.com

Foreclosures Remain High; Delinquencies Improving

The still-large numbers of mortgage defaults is one of the primary obstacles to a house price rebound in many areas. States like Florida, Nevada and Illinois—which have had some of the nation's steepest declines in house prices—also have some of the highest rates of mortgage delinquency and foreclosure. At the end of 2011, Florida led all states with more than 18 percent of its mortgages being seriously delinquent (e.g., 90 or more days overdue or in foreclosure), according to the Mortgage Bankers Association (MBA). Nevada, New Jersey and Illinois also had seriously delinquent rates above 10 percent. At the same time, Indiana's rate of 8.3 percent ranked ninth-highest among states and was above the U.S. mark of 7.7 percent.

As **Figure 9** shows, Indiana and the U.S. have a similar share of mortgages that are 90 or more days delinquent, but Indiana's foreclosure rate (4.9 percent) is higher than the U.S. mark (4.4 percent). The state's foreclosure rate at the end of 2011 was its highest on record. Indiana has a higher rate of loans in the early stages of delinquency too. As of the fourth quarter of 2011, 6.4 percent of all Indiana home loans were up to three months past due compared to 4.8 percent nationally. In all, 14.7 percent of Indiana mortgages were overdue or in foreclosure at last measure compared to 12.5 percent nationally.

FIGURE 9: PERCENT OF MORTGAGES IN VARIOUS STAGES OF DELINQUENCY, 2011:4



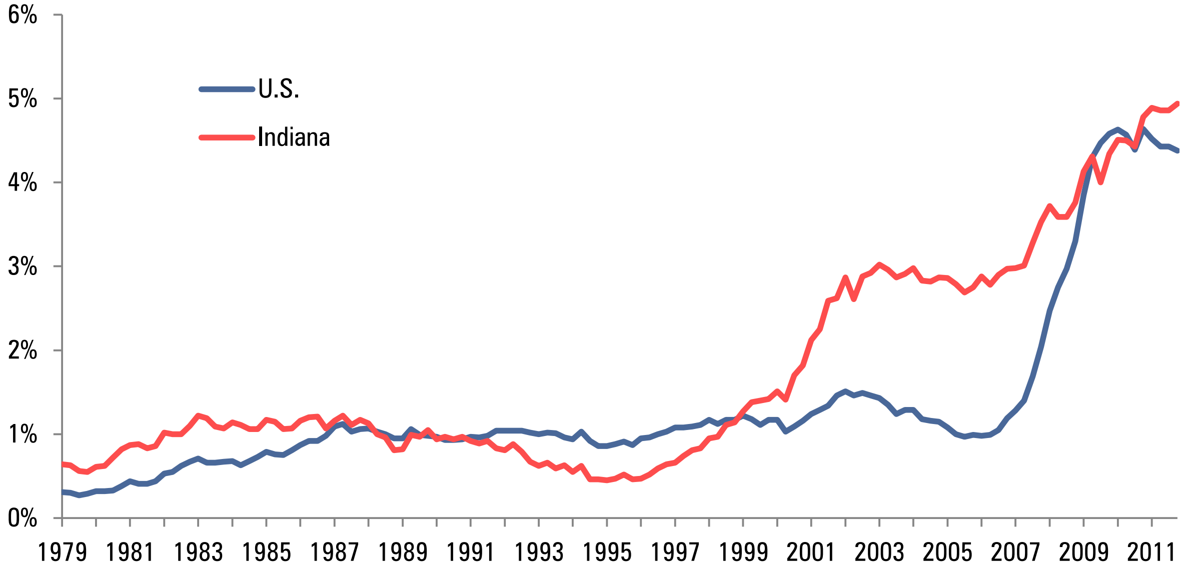
Source: National Delinquency Survey, Mortgage Bankers Association

Causes of Indiana's High Foreclosure Rate

For a variety of reasons, high foreclosure rates have been a persistent problem in Indiana for more than a decade. As **Figure 10** highlights, Indiana had little trouble with foreclosures through much of the 1990s but the state's foreclosure rate began to rise in 1996 and truly spiked around the 2001 recession and remained well above the U.S. average until the housing bust. It's important to note that Indiana was not alone in its high foreclosure rates before the bust. Neighboring Michigan, Ohio and Illinois joined Indiana to form a distinct block of high foreclosure states.[3]

[3] "Report to Congress on the Root Causes of the Foreclosure Crisis," U.S. Department of Housing and Urban Development, January 2010.

FIGURE 10: SHARE OF MORTGAGES IN FORECLOSURE, 1979:1 TO 2011:4



Source: National Delinquency Survey, Mortgage Bankers Association

Through the early and mid-2000s, a mix of factors that include weak economic conditions, a surge in high-risk mortgage lending, a rising homeownership rate and a slow pace of house price appreciation combined to give Indiana and its neighbors the highest foreclosure rates in the country. The rate of house price appreciation is important because homeowners in markets with rapid price gains could build equity in their homes quickly—even if they originally bought their home with little or no money down. In the event of economic or personal hardship, homeowners in these markets could often refinance into more favorable terms or sell their home at a price that allowed them to avoid foreclosure.[4] Because of Indiana's comparatively sluggish rate of appreciation, fewer Hoosiers with risky mortgages had this option.[5] Once prices declined in many markets, homeowners around the country faced the same set of circumstances that confronted Indiana homeowners for several years prior.

Another factor in Indiana's high foreclosure rate is the state's relative reliance on high-risk mortgages. At the end of 2011, nearly one-quarter of Indiana's outstanding mortgages were so-

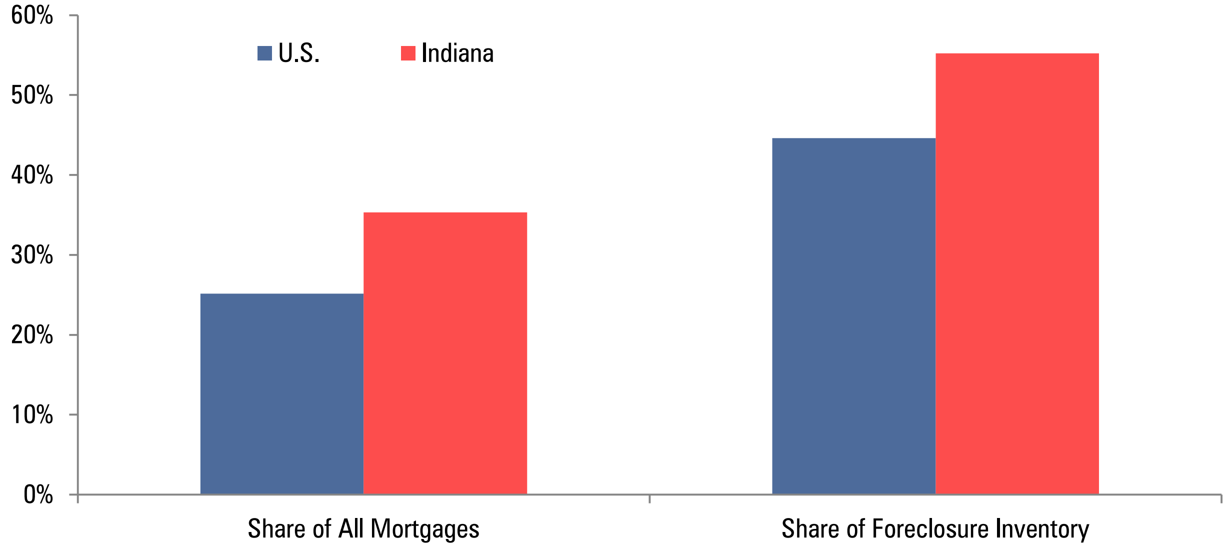
[4] Christopher Foote, Kristopher Gerardi, Lorenz Goette and Paul Willen, "Subprime Facts: What (We Think) We Know about the Subprime Crisis and What We Don't" Federal Reserve Bank of Boston, May 2008 http://www.bos.frb.org/economic/ppdp/2008/ppdp0802.pdf

[5] Between the first quarter of 2000 and the fourth quarter of 2006, for instance, house prices in Indiana appreciated by 14.4 percent, according to the FHFA expanded data set. Only Michigan (11.9 percent) had a lower rate of appreciation over this period and Ohio's mark (14.8 percent) was only a shade better. Nebraska had the fourth-lowest rate of appreciation over this period yet its pace (24.3 percent) was 10 percentage points higher than Indiana's was.

called FHA loans—the third highest share among states.[6] Additionally, at 12 percent of all mortgages in the fourth quarter of 2011, Indiana ranked sixth nationally in its share of mortgages that were subprime. When combined together, Indiana had the nation's largest share of FHA and subprime loans at 35 percent of all mortgages. By contrast, FHA loans (15 percent) and subprime loans (10 percent) combine to account for 25 percent of all U.S. mortgages, according to the Mortgage Bankers Association.

In Indiana, 5.1 percent of FHA loans were in foreclosure at the end of 2011 compared to 3.4 percent for the state's prime mortgages. The state's foreclosure rate for subprime loans stands at 13.1 percent, which is lower than the U.S. mark of 14.5 percent. So while these loans account for a little more than one-third of Indiana's home loans, they represent 55 percent of Indiana's foreclosure inventory because of their comparatively high default rates (see **Figure 11**). These higher-risk loans account for 45 percent of the foreclosure inventory nationwide.

FIGURE 11: FHA AND SUBPRIME LOANS AS A SHARE OF ALL MORTGAGES AND FORECLOSURE INVENTORY, 2011:4



Source: National Delinquency Survey, Mortgage Bankers Association

The Role of Foreclosure Laws

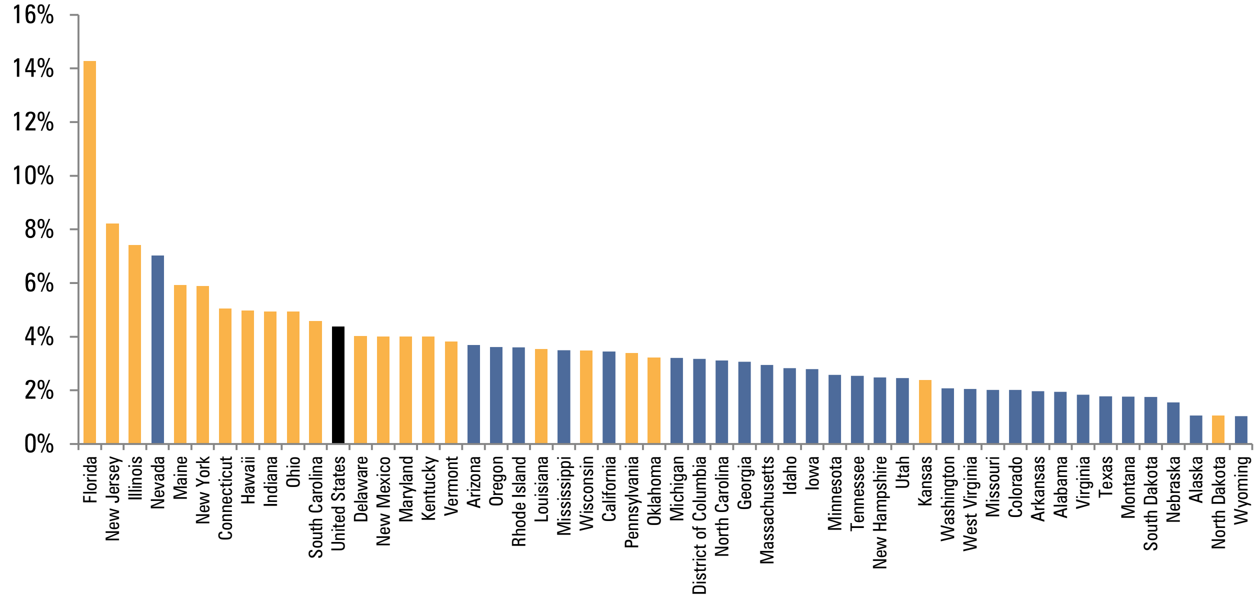
It's important to note that the comparison of foreclosure rates across states can be misleading because foreclosure laws vary by state. According to the MBA, Indiana is one 21 states that require a judicial review of all foreclosures. In all other states, lenders may proceed with a

[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.

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 January 2012, loans in the foreclosure inventory of judicial review states had been delinquent for an average of 24 months while the average length of delinquency in non-judicial states was 17 months—a 41 percent difference, according to Lender Processing Services (LPS).[7]

As a result, judicial review states have a greater backlog of foreclosures (see **Figure 12)**. Of the 16 states with the highest foreclosure rates at the end of 2011, 15 were judicial review states. Nevada is the lone non-judicial review state to crack the top 15 while other non-judicial states that were at the epicenter of the housing bust like Arizona and California have comparatively low foreclosure rates. According to LPS, the combined foreclosure rate in judicial states as of March 2012 (6.5 percent) was more than two-and-a-half times greater than the rate in non-judicial states (2.5 percent).

FIGURE 12: SHARE OF MORTGAGES IN FORECLOSURE BY STATE, 2011:4



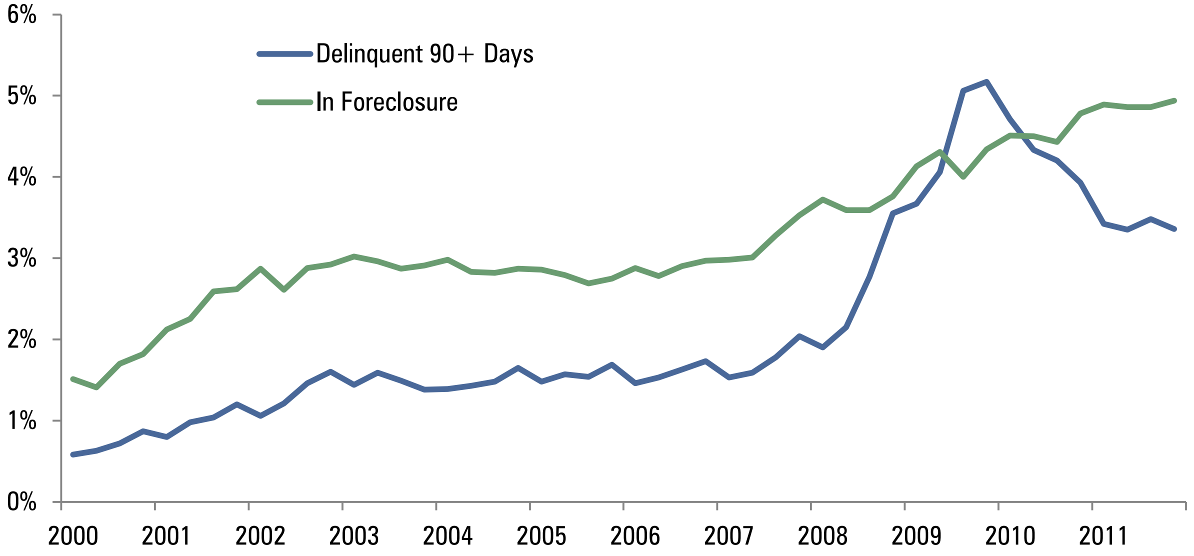
Note: Gold bars indicate judicial review states.
Source: National Delinquency Survey, Mortgage Bankers Association

Given the collateral effect of these laws on inventory, the current foreclosure trend in Indiana—while still a major problem—is somewhat better than the foreclosure rate suggests. Most

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

notably, as **Figure 10** outlined, the U.S. foreclosure rate started to fall in late 2010 while Indiana's continues to creep upwards. This difference is due in part to the bottleneck in Indiana's foreclosure pipeline. While Indiana's foreclosure rate has remained high, the share of the state's mortgages that are at least three months past due has declined sharply since peaking in late 2009 (see **Figure 13**). At the end of 2011, this measure was about halfway back to its average rate between 2003 and 2007. This decline has leveled-off in the last three quarters of 2011 but Indiana's trend in this pre-foreclosure category has been nearly identical to the U.S. trend over the last two years.

FIGURE 13: SHARE OF INDIANA MORTGAGES THAT ARE 90+ DAYS PAST DUE OR IN FORECLOSURE



Source: National Delinquency Survey, Mortgage Bankers Association

So while Indiana's foreclosure inventory remains high, the flow of homes into foreclosure is on the decline. And when comparing across states, it's the flow into foreclosure that offers a clearer contrast. In the fourth quarter of 2011, 0.99 percent of Indiana's home loans entered foreclosure, according to the MBA. This mark was identical to the U.S. rate and ranked 17th among states (compared to 9th for the total foreclosure rate). Florida (1.7 percent), Arizona (1.5 percent), Nevada (1.4 percent) and Georgia (1.4 percent) had the nation's highest foreclosure start rates at the end of 2011.

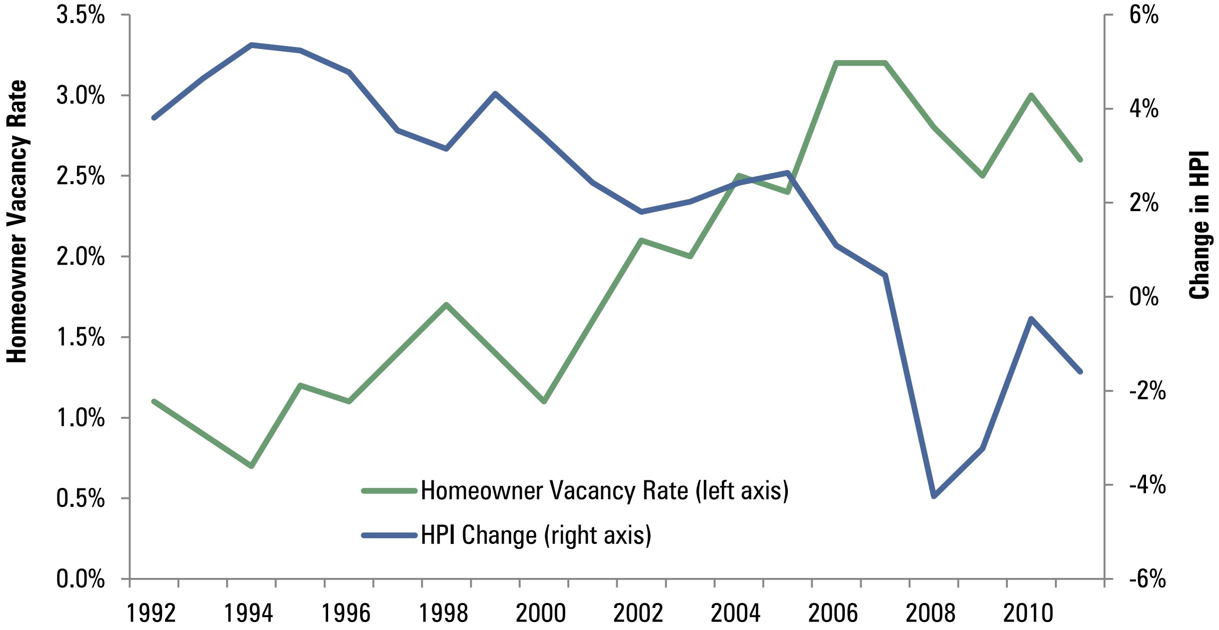
Implications of High Foreclosure Rates

In addition to the social toll on families and communities, the large numbers of foreclosures in recent years impact the housing market by placing downward pressure on house prices and undercutting demand for new construction. Foreclosures affect prices in several ways. First, the foreclosed properties themselves often sell at lower prices because distressed homeowners are unable to afford basic maintenance or improvements. The bank or other entity that owns the property after the foreclosure sale is typically unwilling to make any upgrades and often will sell at a discount in an attempt to unload the home quickly.

The large stock of foreclosed properties also has an impact on prices by adding to the supply of homes on the market at a time of weak demand. Furthermore, unlike most homes sold under typical circumstances, foreclosed properties often sit vacant for an extended period. All of these factors—homes falling into disrepair, increase in supply and long periods of vacancy—have spillover effects that depress home values in the surrounding neighborhood as well.[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 2004, this annual measure has averaged 2.8 percent with peaks of 3.2 percent in 2006 and 2007. As **Figure 14** highlights, the rise in the homeowner vacancy rate has a strong negative correlation with the annual change in Indiana's house price index (-0.79), meaning that the weakening in Indiana's house price appreciation has been consistent with the rise in vacancies.

FIGURE 14: INDIANA HOMEOWNER VACANCY RATE AND ANNUAL CHANGE IN HOUSE PRICE INDEX



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

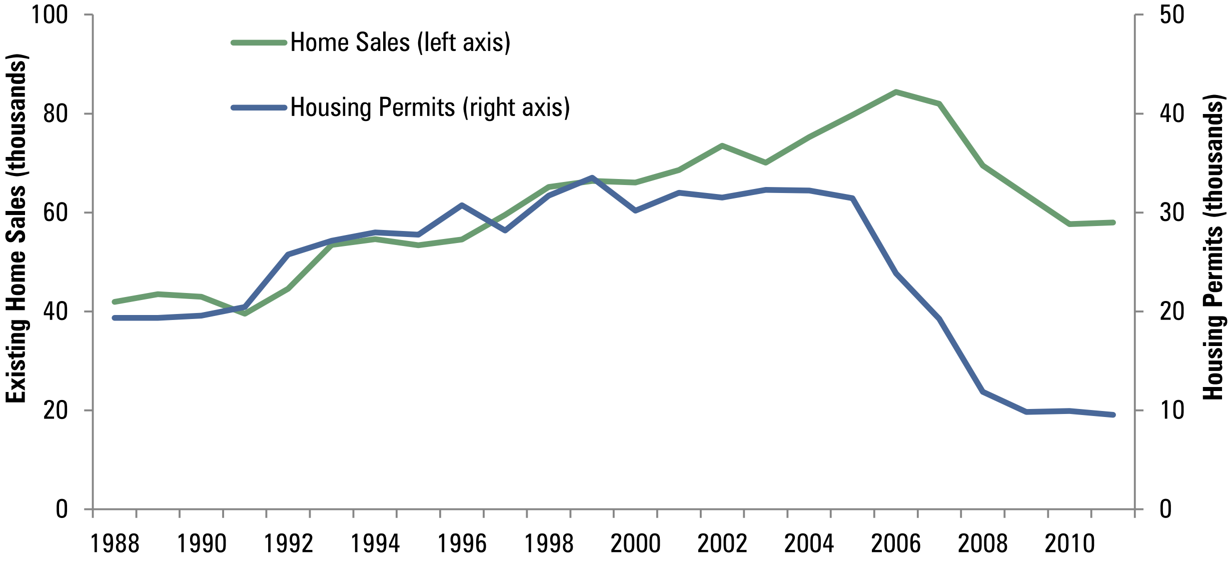
[8] Stephan Whitaker, "Foreclosure-Related Vacancy Rates," Federal Reserve Bank of Cleveland, July 2011, www.clevelandfed.org/research/commentary/2011/2011-12.cfm.

The large inventory of foreclosures has also helped to suppress demand for new homes. This is a trend that the economics blog *Calculated Risk* has termed the "distressing gap," in reference to the large number of distressed home sales in recent years. Over at least a dozen years leading up to the housing bust, there was a consistent ratio of five or six existing home sales for each new home sold at the national level. Since the beginning of 2007, however, the housing demand that still exists has tilted even more heavily toward increasingly affordable existing homes. As a result, the ratio of existing home sales to new homes has climbed to roughly 14 by early 2012. The price discount on existing homes brought on by the large inventory of foreclosures and other distressed properties at least partially explains this widening gap.[9]

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 15**). From 1988 to 2005, there were approximately two existing home sales for each single-family housing permit in Indiana. Even through the 1990s when the number of annual housing permits increased by 14,000, there was a corresponding increase in existing home sales. Since 2006, the number of housing permits has plummeted but existing home sales have not dropped in proportion, resulting in a ratio of six existing home sales for every permit in 2011. Since finding a bottom in 2009, single-family residential construction activity has been stuck at a level last seen in the early 1980s.

[9] "Home Sales: Distressing Gap," *Calculated Risk* (blog), March 23, 2012, www.calculatedriskblog.com/2012/03/home-sales-distressing-gap.html.

FIGURE 15: INDIANA EXISTING HOME SALES AND SINGLE-FAMILY HOUSING PERMITS



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

Looking Ahead

The Indiana housing market will continue to face challenges. The state's large foreclosure inventory means that more distressed properties will hit the market in 2012, which will act as a weight on all house prices. The availability of affordable existing homes will likely continue to suppress residential construction in the next year as well.

Even in the face of these obstacles, there are signs that Indiana's housing market is turning the corner. The share of mortgages in the late stages of delinquency continues to fall, suggesting that the flow of homes into foreclosure is slowing. This trend reflects modest improvements in the economy, as well as a return to prudent lending practices.

According to LPS, mortgages that were originated after 2008 are performing much better than those issued during the bubble era. At the national level, for instance, roughly 1.2 percent of loans issued in 2006 and 2007 were 90 or more days overdue two years after origination. In contrast, only about 0.2 percent of mortgages issued in 2009 had reached that stage of delinquency two years later. Loans issued in 2010 and 2011 appear to be performing even better.[10] Thus, many of the most troublesome mortgages issued before the bust have already found their way into foreclosure and those originated after are far less likely to default. As a

[10] "LPS Mortgage Monitor," Lender Processing Services, November 2011.

result, Indiana's shadow inventory—the number of homes not for sale currently but that will hit the market soon—should start to decline once the current foreclosure backlog subsides.

Furthermore, given Indiana's comparatively mild house price declines, the state's pool of homeowners who remain at risk of foreclosure is smaller than many other states. According to CoreLogic, 10.7 percent of Indiana's mortgages were in a negative equity position in the fourth quarter of 2011. Another 4.4 percent were near negative equity (i.e., the outstanding mortgage is at least 95 percent of the home value). While these are sizeable numbers, they pale in comparison to the nation as a whole, where 28 percent of mortgages were either underwater or near negative equity. Indiana ranks 35th out of the 44 states for which data are available in the share of mortgages in or near negative equity.[11] Newly expanded eligibility guidelines for the federal government's mortgage refinancing and modification programs (i.e., HARP and HAMP) could help more Hoosiers avoid foreclosure in the future.

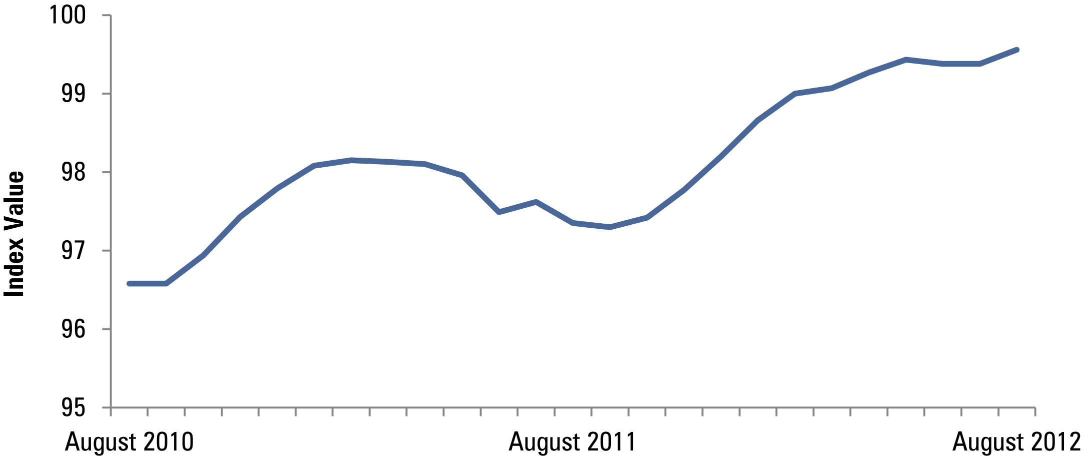
Another positive sign for the market is the uptick in home sales over the last 18 months. Indiana's five-year slide in existing home sales finally ended in 2011, when transactions increased 0.4 percent over 2010. Home sales were off to an even stronger start through the first half of 2012 with sales up by 14 percent over the same period a year ago.

Of course, a strong economic recovery is the key to improving the housing market. On this front, there are reasons for cautious optimism. In April 2012, for instance, Indiana's unemployment rate dropped below 8 percent for the first time since late 2008. While the unemployment rate has inched up slightly since, the latest forecast from the IBRC and the Center for Econometric Model Research at Indiana University indicates that the state will add roughly 160,000 jobs over the next two years and the unemployment rate will be in the low 6 percent range by the end of 2014.

Certainly, the recovery is progressing slower than anyone would like and there are still potential stumbling blocks, such as high fuel prices and possible spillover from European economic troubles. That said, even with a few pauses over the past year, Indiana's economy seems to be on a path to recovery (see **Figure 16**). Any improvement in the employment situation will be a boost to Indiana's housing market.

[11] "Negative Equity Report," CoreLogic, March 2012, www.corelogic.com/about-us/researchtrends/asset_upload_file866_14435.pdf.

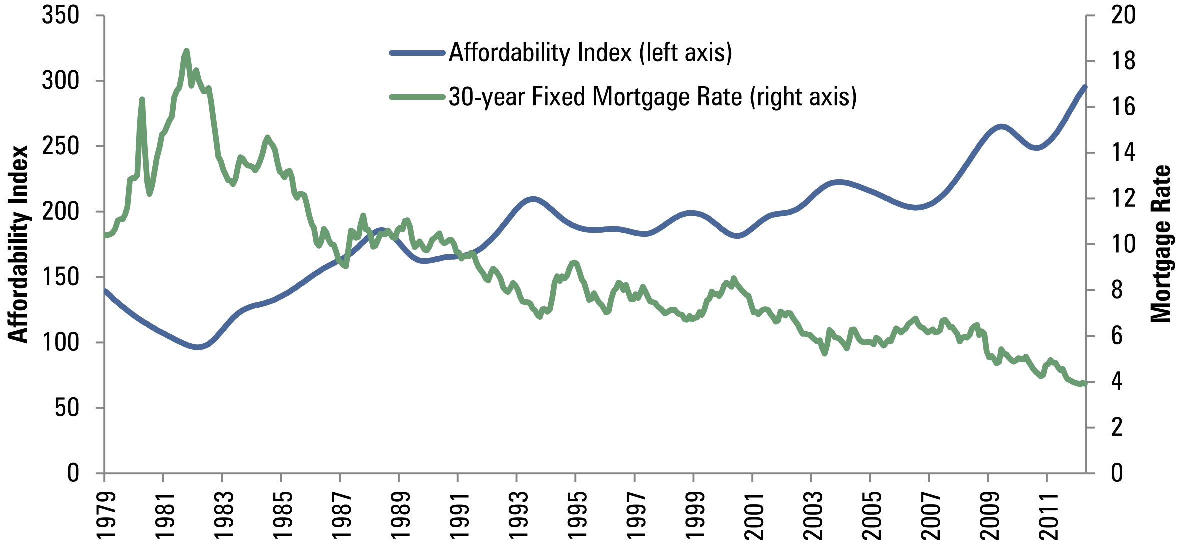
FIGURE 16: LEADING INDEX FOR INDIANA



Note: The Leading Index for Indiana provides a signal for the changes in the general direction of the Indiana economy.
Source: Indiana Business Research Center, Indiana University Kelley School of Business

When the employment recovery hits full swing, unprecedented affordability conditions should draw more homebuyers to the market (see **Figure 17**). Not only have the state's house prices come down, but mortgage rates are at historically low levels. According to Freddie Mac, the 30-year conventional rate was 3.91 percent in April 2012, up only slightly from a three-decade low of 3.89 percent in February 2012. Factor in the low house price-to-income ratio discussed earlier, and Indiana has some of the most affordable housing in the country.

FIGURE 17: MORTGAGE INTEREST RATES AND INDIANA HOUSING AFFORDABILITY INDEX, JANUARY 1979 TO APRIL 2012



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 295 in April 2012, meaning that the state's median household income was 295 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 2012 index values are a forecast.

Source: Freddie Mac and Moody's Economy.com

While the low interest rates should be a powerful incentive for those considering whether to buy, there is a growing concern that some creditworthy potential buyers cannot access them. Borrowers with good credit ratings and adequate down payments don't have any trouble getting loans but, as a recent white paper from the Federal Reserve points out, lenders are still reluctant to extend credit on somewhat riskier mortgages—even when these loans meet Fannie Mae and Freddie Mac (GSEs) standards.[12] So while lenders appropriately tightened lending standards after the housing bust, those standards may now be too conservative, and an impediment to a housing recovery. As the Federal Reserve points out, some of this reluctance on the part of lenders is simply a response to GSE efforts to shift some of their risk back to the mortgage originators, along with other regulatory uncertainties. An improving economy will be the key driver in a housing recovery, 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.

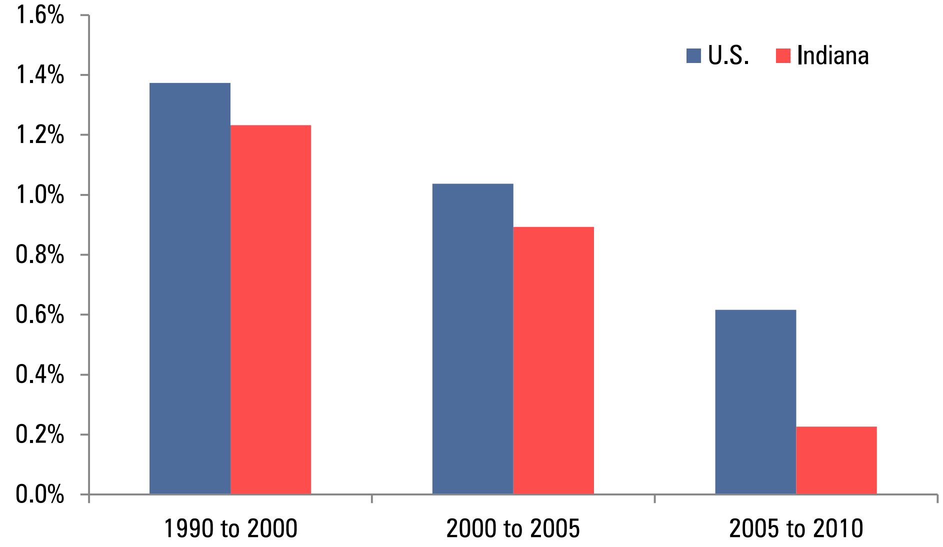
[12] "The U.S. Housing Market: Current Conditions and Policy Considerations," Board of Governors of the Federal Reserve System, January 2012 http://www.federalreserve.gov/publications/other-reports/files/housing-white-paper-20120104.pdf

Demographic Fundamentals

Household Formations Slow Dramatically

One reason that housing demand has been so low is that fewer households have cropped up in recent years. The rate of Indiana's household growth slowed dramatically in the latter part of the last decade. Between 2005 and 2010, the number of households in the state grew by an average rate of 0.2 percent per year—compared to 0.9 percent annually in the first half of the decade and 1.2 percent throughout the 1990s (see **Figure 18**). These rates translate to a decline from approximately 21,300 new households per year between 2000 and 2005 to 5,600 between 2005 and 2010. The nation as a whole has had higher rates of household formation but has still seen a similar decline in this measure.

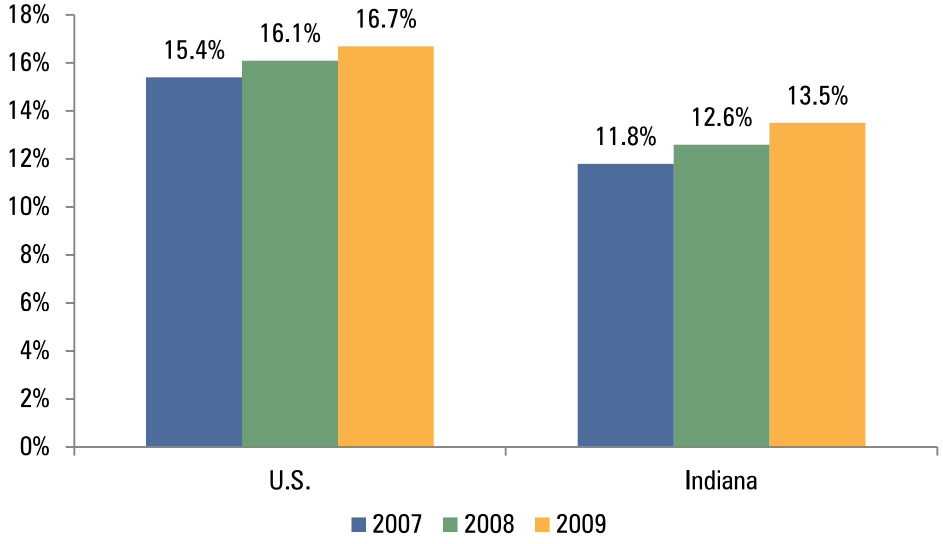
Figure 18: Average Annual Household Formation Rates, 1990 to 2010



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

Several factors have contributed to the decline in household formation. First, economic hardships like unemployment, foreclosure or decreased income may have forced many adults to move-in with family or friends—a process commonly called "doubling up." A recent surge in the number of multi-generational households illustrates this trend. According to a recent Pew Research Center analysis of American Community Survey (ACS) data, the share of Indiana residents that lived in multi-generational households increased from nearly 12 percent in 2007 to 13.5 percent in 2009 (see **Figure 19**).[13] These figures translate to a jump from an estimated 749,000 Hoosiers living in multi-generational households in 2007 to 867,000 just two years later—a 16 percent increase.

FIGURE 19: SHARE OF POPULATION LIVING IN MULTI-GENERATIONAL HOUSEHOLDS, 2007 TO 2009



Source: Pew Research Center, using American Community Survey data

The Pew study suggests that the ability to move in with relatives is providing an important economic safety net for many that are reeling during the downturn. For instance, multi-generational households nationwide had a poverty rate of 11.5 percent in 2009 compared to 14.6 percent for all other households.[14]

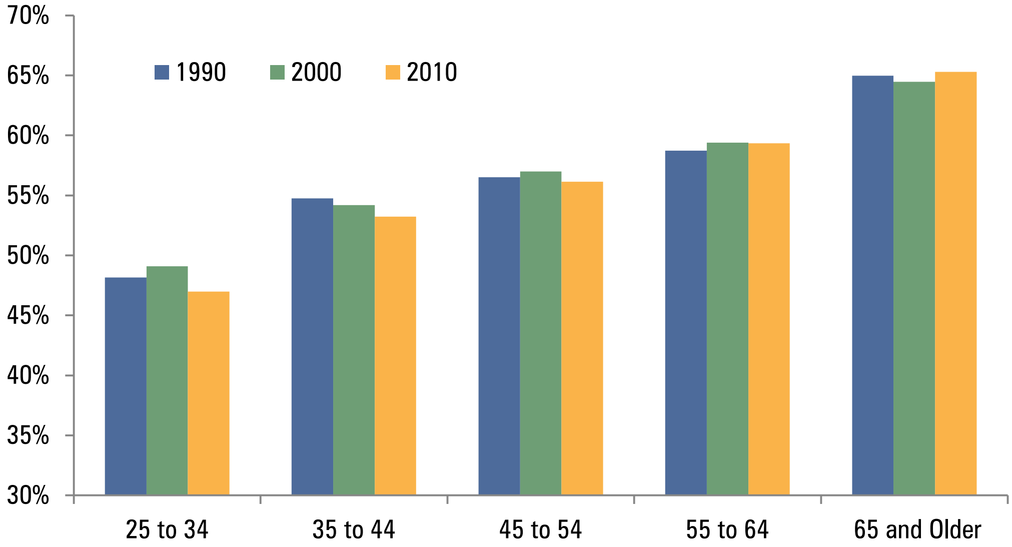
Doubling up is also evident in Indiana's declining headship rates (i.e., the number of households divided by population), particularly among younger age groups. The share of Indiana residents between the ages of 25 and 34 that headed their own household dropped 2.1 percentage points between 2000 and 2010 (see **Figure 20**). This relatively steep decline for young

[13] For this report, the Pew Research Center defined multi-generational households as a household that includes a parent and an adult child (age 25 or older), three or more generations living together, or grandparents raising grandchildren alone.

[14] "Fighting Poverty in a Tough Economy, Americans Move in with Their Relatives," Pew Research Center, October 2011, www.pewsocialtrends.org/files/2011/10/Multigenerational-Households-Final1.pdf.

adults makes sense given that this group has higher unemployment rates than older adults, according to ACS data for Indiana. Headship rates are also down for the 35 to 54 age group, yet slight gains in the population over the age of 65 help to offset some of these losses. To give these figures some context, the state would have had roughly 46,500 more households in 2010 had the headship rates held at 2000 levels.

FIGURE 20: INDIANA HEADSHIP RATE BY AGE, 1990 TO 2010



Source: U.S. Census Bureau, Decennial Census

A Sharp Decline in Migration

Another factor suppressing household formations is the dramatic decline in migration in the wake of the recession. According to Census Bureau estimates, Indiana had a net out-migration of nearly 1,900 residents between July 2010 and July 2011. This is only the third time since 1990 that the state had a one-year net outflow of population (the other years were 2002 and 2010).[15] Because of this out-migration, along with lower birth rates, Indiana's population increased by only 0.4 percent in 2011—the state's lowest one-year growth rate since 1988. Slow growth has been the dominant population trend around the country. The Census Bureau reports that in 2011 the U.S. had its lowest one-year growth rate since the mid-1940s.

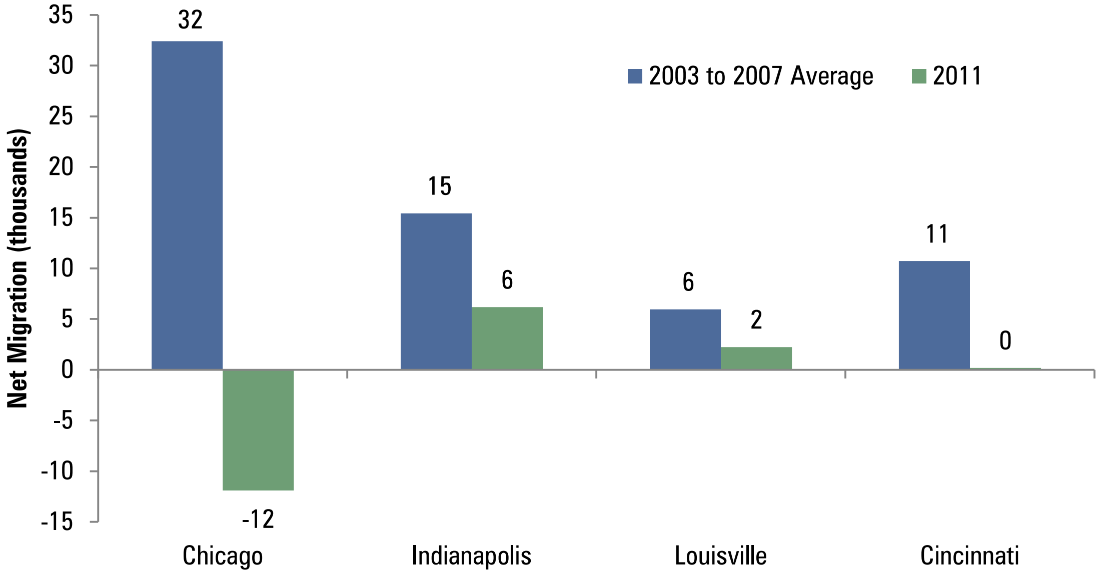
Movement within the state is also down as the slumping housing market and employment insecurity forced many potential movers to sit tight. This is particularly true among homeowners. Data from the ACS shows that the share of Hoosier homeowners that reported

[15] In years like 2010 when the Census Bureau conducts a decennial census, they publish estimates for only a portion of that year.

moving within the state over the previous year declined from 7.4 percent in 2006 to 5.7 percent in 2010. Dampened mobility within Indiana along with low levels of migration from elsewhere has meant that many fast-growing communities saw far fewer new residents than usual in recent years. This is most evident in the suburbs of large metro areas.

Figure 21 compares the 2011 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 nine suburban counties of the Indianapolis area averaged a net in-migration of roughly 15,400 residents a year between 2003 and 2007.[16] However, the net influx dropped to 6,200 in 2011—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 2011. Comparing the same periods, the net in-migration marks for Hendricks and Johnson counties were down 2,000 residents and 1,200 residents, respectively.

FIGURE 21: 2011 NET MIGRATION ESTIMATE COMPARED TO 2003 TO 2007 AVERAGE FOR SUBURBAN COUNTIES OF SELECT METRO AREAS



Source: U.S. Census Bureau population estimates

[16] In the case of the Indianapolis metro area, the suburban counties are Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, 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 slowed.

The 13 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. These 13 counties combined to average a net in-migration of 32,000 residents a year between 2003 and 2007 yet had a large net out-migration in 2011. Of this group, Indiana's Lake County had the second-largest 2011 net out-migration at roughly 2,500 residents. Net migration in the Louisville and Cincinnati suburbs, which also include Indiana counties, is down since the recession too.

Homeownership in Retreat

The rate of household formation is down, but this trend should improve as the economy does. A 2010 study indicated that a 2 percentage point drop in the U.S. unemployment rate between 2010 and 2012 would increase the nation's household formations by 2 percentage points over the same period.[17] But will these new households be looking to buy at the same levels seen prior to the housing crash, or will they continue to tilt more heavily toward the rental market? Given tighter lending standards, the continued fallout from the foreclosure crisis and lagging incomes in Indiana, the latter seems more likely.

Indiana's homeownership rate has already dropped precipitously 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 2010 Census, the state's homeownership rate now stands at 69.9 percent, which is below the mark measured in 1990 (70.2 percent) and 2000 (71.4 percent).

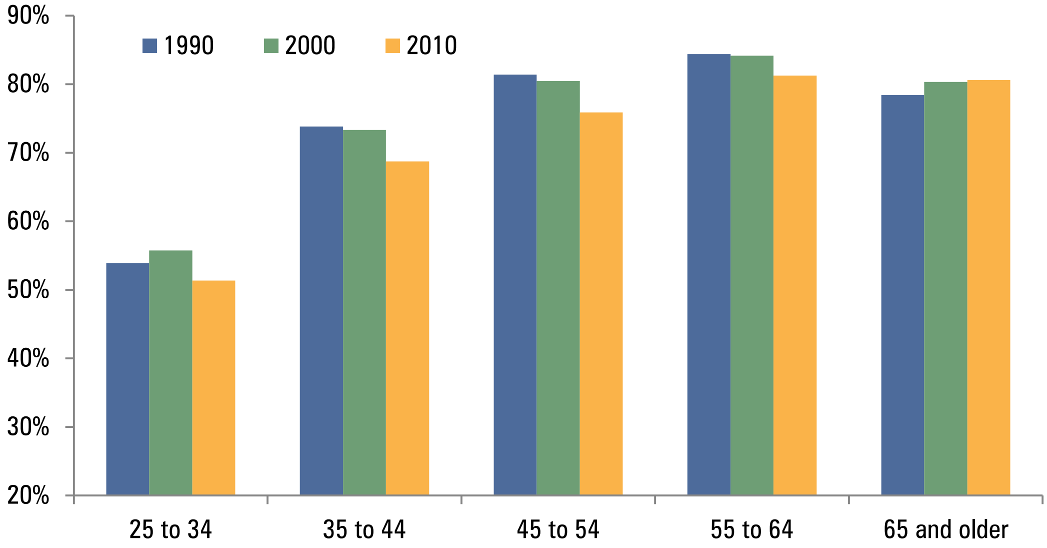
Indiana's overall rate in 2010 masks what is an even more dramatic fall in homeownership. Under normal conditions, Indiana's homeownership rate would have risen simply because the state is growing older and homeownership increases with age. Baby boomers are now between the ages of 45 and 65, meaning that this age group holds a larger share of the state's population than ever before. This is also the prime age group for homeownership. The expansion of this age group should boost this measure, even if age-specific homeownership rates held constant.

However, Indiana's age-specific homeownership rates are down significantly. The homeownership rates for each 10-year age group between the ages of 25 and 54 are down roughly 4.5 percentage points when compared to the 2000 Census (see **Figure 22**). The homeownership rate for the 55-to-64 age group was down 2.9 percentage points to 81.3 percent, while the share of Indiana seniors that owned their home increased slightly to 80.6 percent.

[17] Gary Painter, "What Happens to Household Formation in a Recession?" Research Institute for Housing America, April 2010.

These data underscore the toll that the foreclosure crisis and the economic downturn have taken on homeownership.

FIGURE 22: INDIANA HOMEOWNERSHIP RATES BY AGE, 1990 TO 2010



Source: U.S. Census Bureau, Decennial Census

It may well be appropriate that more Hoosiers look to rent. While Indiana didn't experience the run-up in house prices like many other areas, the state did have something of a homeownership bubble before the crash. However, a shift away from homeownership would have near-term implications for the housing recovery. The more households that enter the rental market, the longer it will take to work through the swollen inventory of distressed properties (unless more of these properties are converted to rentals). Such a scenario would prolong the downward pressure on home prices and continue to stifle residential construction.

An Increasingly Diverse Indiana

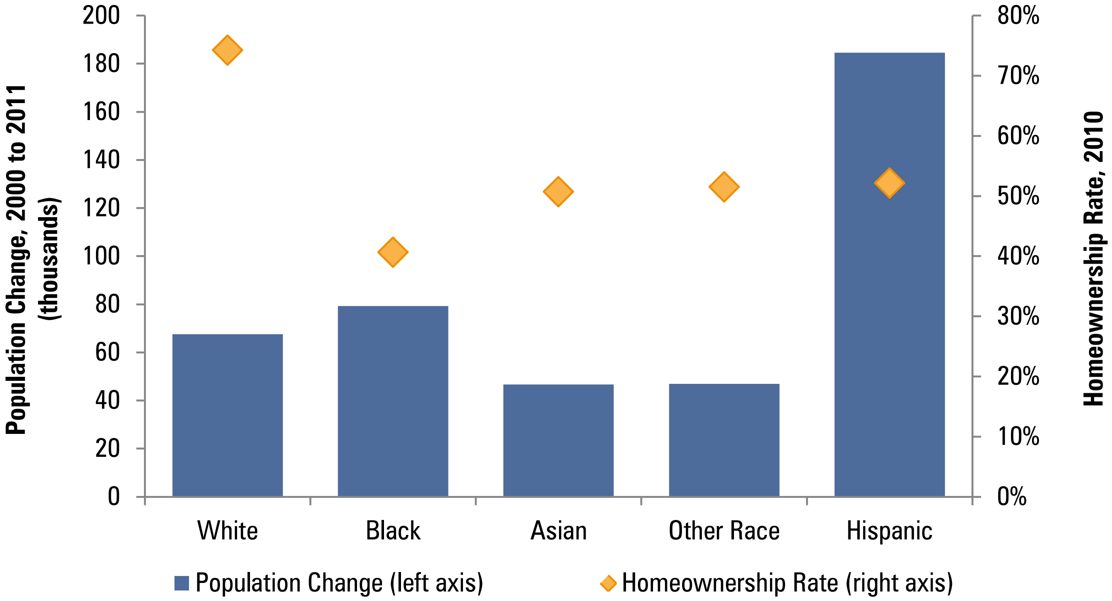
Another factor that could continue to tilt the balance between homeownership and renting is Indiana's increasing racial and ethnic diversity. Since 2000, an additional 185,000 Hispanic residents called Indiana home—an 84 percent increase. The state's black population grew by 79,000 while the number of white residents increased by nearly 68,000.[18] With these different growth rates, Indiana's white population went from 86 percent of the state's total in 2000 to 81

[18] The term Hispanic refers to an ethnicity and not a race, so Hispanic residents can be of any race. The figures reported for specific race groups in this section exclude the Hispanic residents of that race. Therefore, figures for the state's white population, for example, refer to non-Hispanic white residents.

percent in 2011. Meanwhile, the state's black and Hispanic populations now account for 9 percent and 6 percent of the total, respectively.

These are meaningful shifts considering that housing trends vary widely by race and ethnicity in Indiana. For instance, the homeownership rate for Indiana's white householders is 74 percent (see **Figure 23**). By contrast, 52 percent of the state's Hispanic households own their homes and just 41 percent of black households are owner-occupied.

FIGURE 23: INDIANA POPULATION CHANGE AND HOMEOWNERSHIP RATES BY RACE AND ETHNICITY



Source: U.S. Census Bureau

Wide income disparities certainly play a large role in the different rates of homeownership. The 2010 median household income for Indiana's white population was $47,200 compared to $33,200 for Hispanic households. The median household income for Indiana's black households was $30,000. Clearly, economic development and improved educational outcomes will be critical to closing the gaps in income and homeownership.

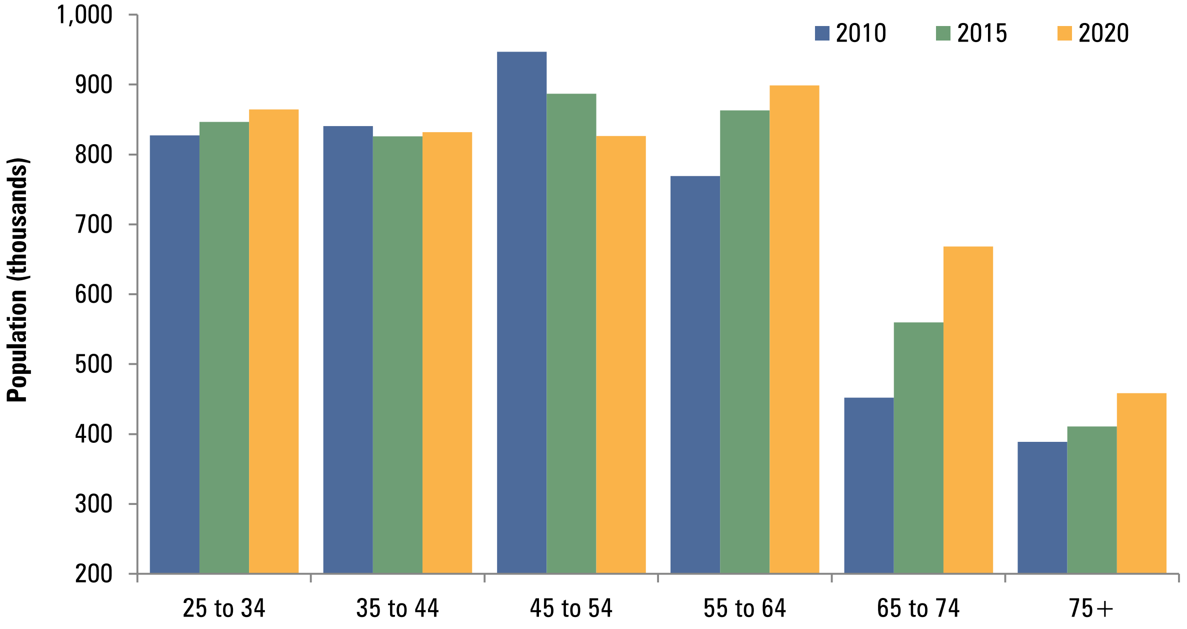
One hopeful sign that this gap could already be closing is the improved homeownership rate of Indiana's Hispanic population. Between 2000 and 2010, the state's Hispanic homeownership rate increased by nearly 4 percentage points. Unfortunately, the experience for Indiana's black population has been far different. In 2000, 45.2 percent of Indiana's black householders owned their home, but this mark dropped to 40.6 percent by 2010. The homeownership rate for Indiana's white population also declined slightly over the decade.

Looking Ahead

Indiana will continue to become more diverse, even if migration stays slow for a while. With the Hispanic population, for instance, the youth of this population and its relatively high fertility rate will fuel growth. As it stands in 2011, the Hispanic population accounts for just 5 percent of Indiana's adults but it claims 10 percent of the state's population under the age of 18. Indiana's black and Asian populations are also much younger than the state's white residents on average. Given this growing diversity, efforts to raise the incomes of all Hoosiers and to bring more minorities into the ranks of the homeowner will be important to the future of Indiana's housing market.

The aging of the baby boom population is another demographic trend that promises to transform the housing market. 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 population projections released by the Indiana Business Research Center earlier this year, Indiana can expect a slight increase in the state's population age 25 to 44 by 2020 (see **Figure 24**). The 45-to-54 set will decline as the boomers start to age out of this group but 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 24: 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, this relationship flips around the age of 65 with 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.[19] 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 does Indiana. If this trend plays out as projected, 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 would have to decline to draw more young buyers to the market. This scenario could also hinder residential construction in some areas.

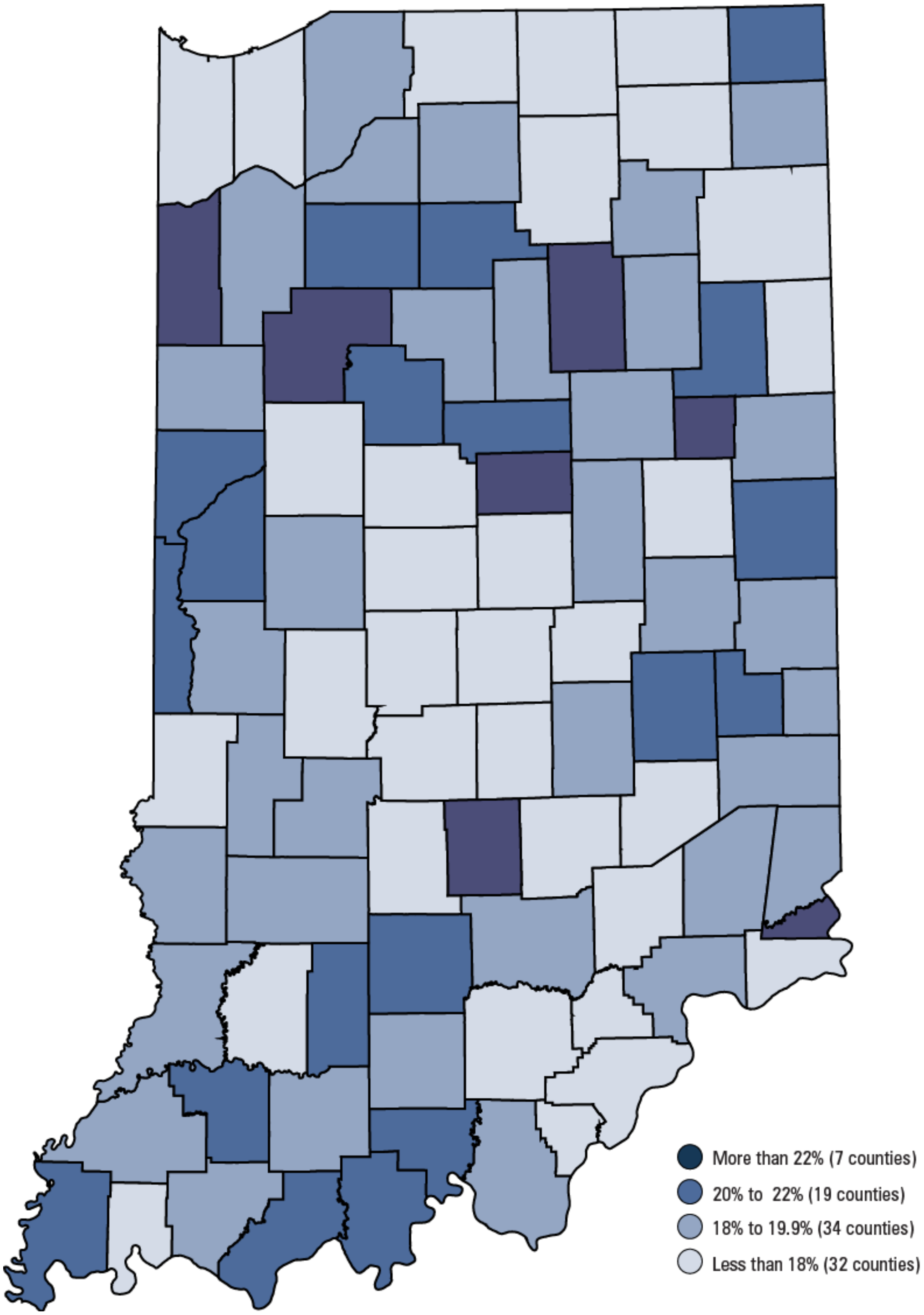
Some areas of the state will age more rapidly than others will. Fast growing suburban counties in the Indianapolis and Louisville metro areas will remain relatively young as families continue to move to these communities (see **Figure 25**). Continued strong growth in these areas should support the housing market. The state's largest urban counties and communities with large universities will also have comparatively young populations. Madison, LaPorte, Howard, Grant and Wayne counties are examples of larger Indiana communities that will have relatively older populations if their net out-migration of young adults and families continues. A generational housing bubble would most heavily affect counties with these type of migration trends.

This process could be muted in the near term as many homeowners have lost significant equity in their homes, leaving them unable or unwilling to sell.[20] This fact may have less of an impact in Indiana since home price declines have been comparatively mild, but a host of other economic concerns could keep Hoosier boomers at work and in their current homes longer than anticipated.

[19] 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.

[20] David Rosnick and Dean Baker, "The Impact of the Housing Crash on the Wealth of the Baby Boom Cohorts," *Journal of Aging and Social Policy*, April 2010.

FIGURE 25: PROJECTED SHARE OF POPULATION AGE 65 OR OLDER IN 2020


More than 22% (7 counties)
20% to 22% (19 counties)
18% to 19.9% (34 counties)
Less than 18% (32 counties)

Source: Indiana Business Research Center Population Projections

Housing and the Economy

Residential Construction Remains 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] Since 1950, RFI has accounted for 4.7 percent of U.S. GDP on average. As the demand for new homes has nosedived, however, RFI's share of economic activity stood at just 2.2 percent in 2011—the lowest annual mark since the end of World War II.

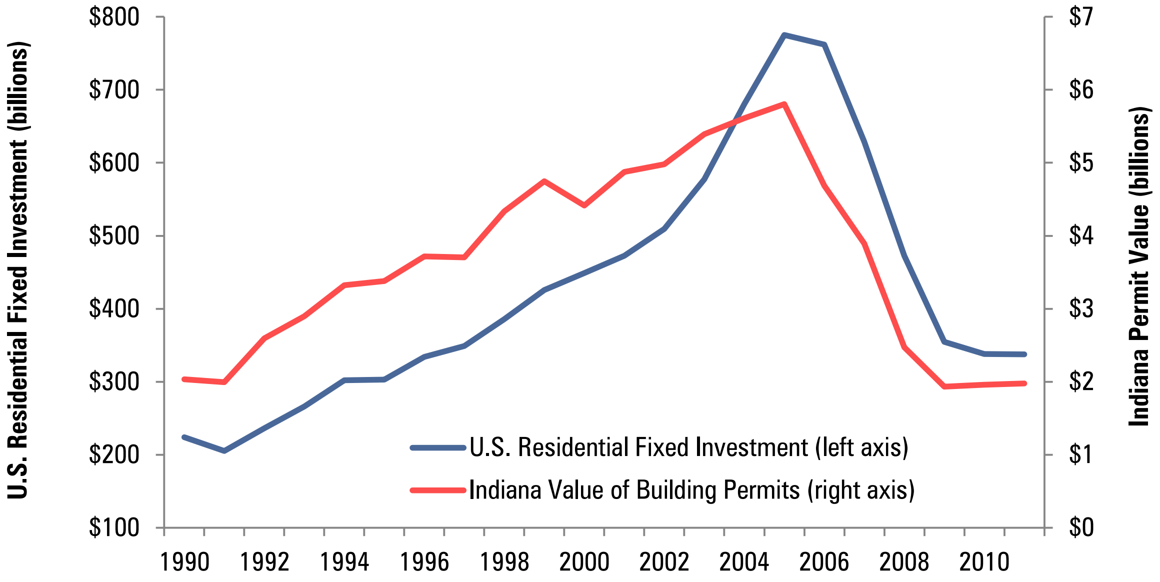
Following RFI during a recession is particularly important because this measure tends to be a leading indicator of economic activity.[22] That is, peaks in RFI generally precede periods of recession and RFI tends to rebound before a downturn ends, helping to pull the country out of recession. However, given housing's central role in this most recent economic downturn, RFI has been more a drag on this recovery than a boost. That trend could reverse in 2012, however. As of the second quarter of this year, RFI has made a positive contribution to economic growth for five consecutive quarters. That is the longest run of positive RFI growth since early 2006.

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 26** 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 has risen just 1 percent per year since then. The value of construction has fallen to an extent that the dollar total for permits in 2011, even when measured in nominal terms (i.e., not adjusted for inflation), was a shade below the level seen in 1990. This trend suggests that housing has been a drag on Indiana's recovery as well.

[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 26: U.S. RESIDENTIAL FIXED INVESTMENT AND INDIANA VALUE OF BUILDING PERMITS



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

Indiana is off to a much stronger start in 2012 with respect to the value of housing permits. Through April 2012, the value of permits in Indiana has increased year-over-year for six straight months. The total value of permits issued in the state between January and April of this year is 26 percent above the level from the same period in 2011. As with the increase in home sales though, some of this increase is likely attributable to unseasonably mild weather this past winter.

Housing's Impact on Employment

The drop in the number of permitted units has been even more dramatic than the drop in value. The number of units permitted in Indiana in 2011 was less than one-third of the peak level seen in 1999. Since 1960, the only years with fewer housing units authorized by permits were 1982 and 2009. Of course, this decline has had a dramatic effect on employment in the residential construction industry. Indiana lost nearly 7,700 residential construction jobs between 2005 and 2010—a 40 percent decline. By comparison, the state's total employment is down by 6 percent over the same period and manufacturing jobs are off by 22 percent.

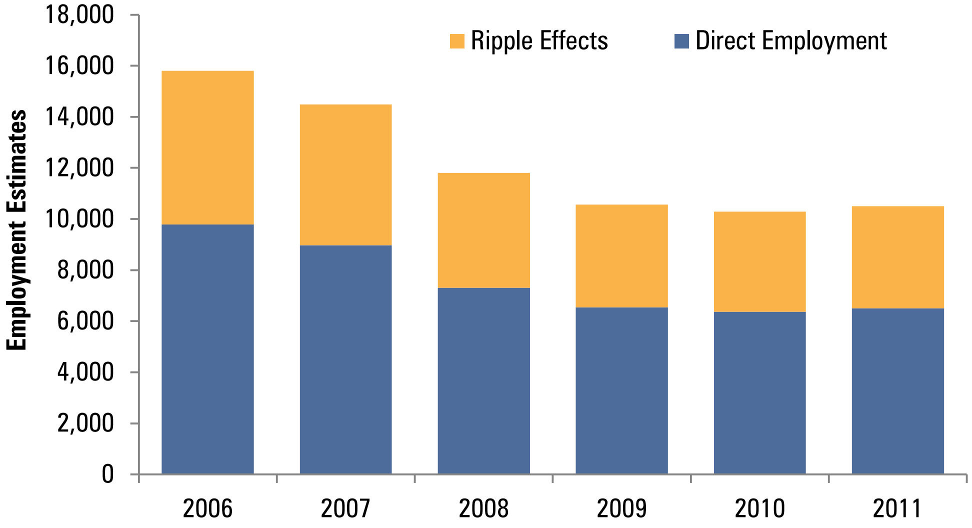
The employment impacts don't end with the construction industry. With fewer houses built, there is a reduced demand for other goods and services related to the industry such as architecture and design, building materials, and home furnishings. According to the IMPLAN economic modeling software, residential construction has an employment multiplier of 1.8 in Indiana, meaning that each job in this industry supports an additional 0.8 jobs in other industries throughout the state. If this multiplier holds, the decline of 7,700 construction jobs between 2005 and 2010 translates to a loss of an estimated 6,160 jobs in other industries in the state.

The Economic Impact of Home Sales

The sale of existing homes also has a significant 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 12 percent of the sale price. Borrowing this approach, a home selling at Indiana's 2011 median price of $112,900 injects roughly $13,500 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 1.4 meaning that each dollar generated by an existing home sale spurs another $0.40 in economic activity in the state. These ripple effects bring the total economic impact of a median priced home sale to $18,900.

In terms of employment, Indiana's total value of existing home sales in 2011 supported an estimated 6,500 jobs in industries directly related to these transactions. With a multiplier of 1.6, the total employment impact jumps to an estimated 10,500 jobs in the state. Of course, the dramatic decline in home sales since 2006 has had a negative impact on employment. **Figure 27** illustrates the estimated direct employment impact, along with the ripple effects, associated with the total value of existing home sales from 2006 to 2011. The decline in home sales over this period has cost the state an estimated 5,300 jobs.

FIGURE 27: ESTIMATES OF THE IMPACT OF EXISTING HOME SALES ON INDIANA EMPLOYMENT



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

Looking Ahead

Clearly, a boost 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 2012. Freddie Mac's recent forecast, for instance, predicts that housing starts at the national level will increase 19 percent in 2012 and home sales will be up 7 percent.[23] If these forecasts are on the mark, then housing will start to play a larger role in the economic recovery.

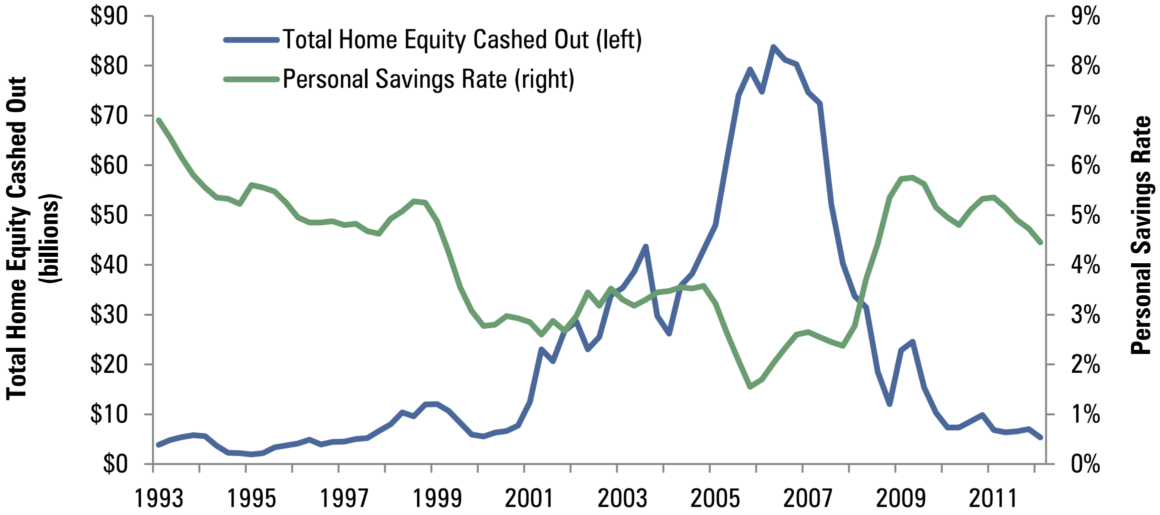
The housing market's influence on the economy extends beyond these core activities, however. Most notably, changes in home values can influence consumer spending. This was especially true during the bubble era when many homeowners reduced savings in response to what they viewed as permanent and ever-growing 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. Since early 2008, however, the personal savings rate has returned to levels last seen in the mid and late 1990s.

Additionally, 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 28** 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 86 percent of all refinancing originations.

[23] "May 2012 Economic and Housing Market Outlook," Freddie Mac, May 2012, www.freddiemac.com/news/finance/.

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

FIGURE 28: U.S. TOTAL HOME EQUITY CASHED OUT AND PERSONAL SAVINGS RATE, 1993:1 TO 2012:1



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 15 percent of all refinancing transactions in the fourth quarter of 2011.

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 as house prices collapsed and access to credit tightened.

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.

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

Conclusion

There are finally some positive signs in the Indiana housing market. Most notably, housing demand is up slightly and the flow of homes into foreclosure is declining. However, indicators in other areas, such as house prices and residential construction, have reached a bottom and stayed there. So, is a recovery underway or will the housing market settle for some time in a new normal?

In all likelihood, the market's separate issues will have to be resolved in turn. That is, housing demand and the foreclosure situation must continue to improve before there can be a true rebound in prices and construction. Of course, none of this will happen until there is progress in the broader economy. There are hopeful signs on this front, too. Over a 12-month period ending in July 2012, Hoosier businesses have added 62,500 jobs and the state's unemployment rate dropped 1 percentage point. Add in affordable prices and historically low mortgage interest rates, and the pieces are in place for a housing recovery. To be sure, the Indiana housing market continues to face challenges and progress may be slow, but most signs point to a market on the mend.

Appendix

Home Sales and Median Sales Price by County, April 2010 to March 2012, Year-over-Year Change

County	Sales, April 2010 to March 2011	Sales, April 2011 to March 2012	Percent Change	Median Price, April 2010 to March 2011	Median Price, April 2011 to March 2012	Percent Change
Indiana Total	56,914	59,607	4.7%	$112,500	$113,500	0.9%
Adams	227	234	3.1%	$75,000	$75,000	0.0%
Allen	3,846	4,086	6.2%	$106,500	$104,000	-2.3%
Bartholomew	739	821	11.1%	$132,000	$147,925	12.1%
Benton	59	60	1.7%	$65,750	$57,850	-12.0%
Blackford	54	74	37.0%	$49,900	$55,450	11.1%
Boone	694	806	16.1%	$175,494	$180,000	2.6%
Brown	183	150	-18.0%	$154,450	$149,000	-3.5%
Carroll	147	143	-2.7%	$84,000	$74,000	-11.9%
Cass	259	273	5.4%	$53,500	$53,500	0.0%
Clark	1,062	1,155	8.8%	$123,700	$120,000	-3.0%
Clay	192	167	-13.0%	$70,000	$79,900	14.1%
Clinton	197	220	11.7%	$75,500	$75,000	-0.7%
Crawford	40	49	22.5%	$65,700	$75,000	14.2%
Daviess	222	199	-10.4%	$87,500	$85,000	-2.9%
Dearborn	357	390	9.2%	$129,900	$130,000	0.1%
Decatur	215	203	-5.6%	$105,250	$101,000	-4.0%
DeKalb	319	315	-1.3%	$85,450	$85,000	-0.5%
Delaware	828	861	4.0%	$79,000	$75,000	-5.1%
Dubois	296	334	12.8%	$125,250	$122,500	-2.2%
Elkhart	1,587	1,613	1.6%	$89,000	$95,000	6.7%
Fayette	153	126	-17.6%	$62,000	$59,900	-3.4%
Floyd	674	758	12.5%	$125,000	$134,000	7.2%
Fountain	39	41	5.1%	$71,500	$65,000	-9.1%
Franklin	26	16	-38.5%	$80,000	$95,000	18.8%
Fulton	156	174	11.5%	$65,000	$80,000	23.1%
Gibson	274	232	-15.3%	$83,000	$94,000	13.3%
Grant	495	471	-4.8%	$64,950	$63,500	-2.2%
Greene	122	117	-4.1%	$69,900	$68,500	-2.0%
Hamilton	3,970	4,320	8.8%	$196,000	$195,000	-0.5%
Hancock	714	833	16.7%	$128,900	$125,000	-3.0%
Harrison	261	252	-3.4%	$125,000	$113,900	-8.9%
Hendricks	1,758	1,989	13.1%	$140,980	$139,850	-0.8%

County	Sales, April 2010 to March 2011	Sales, April 2011 to March 2012	Percent Change	Median Price, April 2010 to March 2011	Median Price, April 2011 to March 2012	Percent Change
Henry	294	272	-7.5%	$60,000	$60,000	0.0%
Howard	903	975	8.0%	$73,000	$70,000	-4.1%
Huntington	395	404	2.3%	$70,000	$67,500	-3.6%
Jackson	294	319	8.5%	$95,700	$99,950	4.4%
Jasper	234	240	2.6%	$125,000	$125,000	0.0%
Jay	75	85	13.3%	$35,375	$52,450	48.3%
Jefferson	235	231	-1.7%	$99,950	$101,000	1.1%
Jennings	100	135	35.0%	$79,450	$85,750	7.9%
Johnson	1,649	1,757	6.5%	$119,950	$122,000	1.7%
Knox	245	267	9.0%	$70,000	$84,500	20.7%
Kosciusko	748	749	0.1%	$125,000	$117,500	-6.0%
LaGrange	218	244	11.9%	$95,000	$110,000	15.8%
Lake	3,920	3,937	0.4%	$125,000	$125,000	0.0%
LaPorte	925	854	-7.7%	$100,000	$99,000	-1.0%
Lawrence	410	346	-15.6%	$75,000	$76,500	2.0%
Madison	1,003	1,056	5.3%	$70,000	$72,000	2.9%
Marion	9,051	9,495	4.9%	$96,125	$99,000	3.0%
Marshall	310	333	7.4%	$95,000	$100,250	5.5%
Martin	50	40	-20.0%	$76,000	$108,750	43.1%
Miami	273	260	-4.8%	$40,000	$45,700	14.3%
Monroe	1,170	1,229	5.0%	$150,000	$148,500	-1.0%
Montgomery	386	415	7.5%	$86,000	$91,000	5.8%
Morgan	679	683	0.6%	$119,933	$118,000	-1.6%
Newton	97	90	-7.2%	$103,000	$75,000	-27.2%
Noble	382	475	24.3%	$85,000	$87,200	2.6%
Ohio	40	31	-22.5%	$106,000	$82,975	-21.7%
Orange	26	29	11.5%	$56,500	$51,250	-9.3%
Owen	137	114	-16.8%	$83,130	$75,000	-9.8%
Parke	48	42	-12.5%	$58,500	$45,500	-22.2%
Perry	46	54	17.4%	$60,000	$75,500	25.8%
Pike	92	83	-9.8%	$81,250	$73,900	-9.0%
Porter	1,501	1,581	5.3%	$155,000	$156,000	0.6%
Posey	183	209	14.2%	$110,000	$111,250	1.1%
Pulaski	42	35	-16.7%	$72,250	$81,250	12.5%
Putnam	279	312	11.8%	$93,000	$97,000	4.3%
Randolph	84	108	28.6%	$50,000	$53,000	6.0%
Ripley	162	152	-6.2%	$99,950	$119,950	20.0%
Rush	10	4	-60.0%	$29,900	$75,000	150.8%
Scott	140	143	2.1%	$78,750	$69,900	-11.2%
Shelby	393	433	10.2%	$85,703	$89,900	4.9%
Spencer	125	130	4.0%	$113,450	$100,500	-11.4%
St. Joseph	2,390	2,531	5.9%	$101,500	$100,000	-1.5%

County	Sales, April 2010 to March 2011	Sales, April 2011 to March 2012	Percent Change	Median Price, April 2010 to March 2011	Median Price, April 2011 to March 2012	Percent Change
Starke	160	164	2.5%	$80,000	$73,400	-8.3%
Steuben	389	377	-3.1%	$108,500	$100,000	-7.8%
Sullivan	113	80	-29.2%	$55,000	$67,000	21.8%
Switzerland	46	55	19.6%	$55,000	$90,000	63.6%
Tippecanoe	1,595	1,654	3.7%	$123,500	$123,300	-0.2%
Tipton	109	90	-17.4%	$79,900	$99,000	23.9%
Union	15	12	-20.0%	$64,900	$99,000	52.5%
Vanderburgh	1,804	1,894	5.0%	$109,000	$109,000	0.0%
Vermillion	75	83	10.7%	$54,750	$42,000	-23.3%
Vigo	863	959	11.1%	$84,900	$85,000	0.1%
Wabash	225	228	1.3%	$64,500	$68,000	5.4%
Warren	41	38	-7.3%	$115,000	$84,500	-26.5%
Warrick	663	695	4.8%	$142,900	$147,650	3.3%
Washington	141	142	0.7%	$65,000	$58,250	-10.4%
Wells	249	243	-2.4%	$92,250	$87,500	-5.1%
White	218	227	4.1%	$92,500	$95,000	2.7%
Whitley	299	302	1.0%	$110,000	$112,225	2.0%

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, 2010 to 2011

	Number of Units, 2010	Number of Units, 2011	Percent Change, 2010 to 2011	Value of Permits ($ thousands), 2010	Value of Permits ($ thousands), 2011	Percent Change, 2010 to 2011
Indiana Total	13,083	12,618	-3.6%	1,960,776	1,975,558	0.8%
Adams	44	38	-13.6%	5,326	5,937	11.5%
Allen	721	657	-8.9%	122,589	116,691	-4.8%
Bartholomew	131	178	35.9%	23,921	36,630	53.1%
Benton	7	7	0.0%	1,101	1,499	36.1%
Blackford	8	5	-37.5%	1,038	600	-42.2%
Boone	767	530	-30.9%	85,761	71,194	-17.0%
Brown	136	39	-71.3%	25,779	7,343	-71.5%
Carroll	37	39	5.4%	2,998	5,397	80.0%
Cass	15	16	6.7%	2,300	1,716	-25.4%
Clark	276	271	-1.8%	39,723	40,339	1.6%
Clay	15	60	300.0%	1,683	3,757	123.2%
Clinton	13	33	153.8%	880	4,955	463.1%
Crawford	0	0	-	0	0	-
Daviess	42	41	-2.4%	6,244	4,151	-33.5%
Dearborn	68	36	-47.1%	11,368	7,528	-33.8%
Decatur	31	26	-16.1%	5,820	5,383	-7.5%

	Number of Units, 2010	Number of Units, 2011	Percent Change, 2010 to 2011	Value of Permits ($ thousands), 2010	Value of Permits ($ thousands), 2011	Percent Change, 2010 to 2011
DeKalb	70	50	-28.6%	11,200	9,166	-18.2%
Delaware	50	82	64.0%	7,887	10,358	31.3%
Dubois	81	80	-1.2%	12,900	14,905	15.5%
Elkhart	234	146	-37.6%	35,050	26,429	-24.6%
Fayette	4	4	0.0%	283	283	0.0%
Floyd	133	101	-24.1%	28,418	24,784	-12.8%
Fountain	5	6	20.0%	524	749	42.9%
Franklin	26	30	15.4%	5,228	5,559	6.3%
Fulton	10	19	90.0%	1,953	2,561	31.1%
Gibson	45	48	6.7%	7,302	7,573	3.7%
Grant	46	33	-28.3%	9,273	5,017	-45.9%
Hamilton	1,975	1,891	-4.3%	310,799	339,128	9.1%
Hancock	151	208	37.7%	25,286	32,400	28.1%
Harrison	88	48	-45.5%	1,900	20,003	952.8%
Hendricks	631	814	29.0%	113,178	114,080	0.8%
Henry	22	23	4.5%	3,712	4,299	15.8%
Howard	13	22	69.2%	2,041	3,478	70.4%
Huntington	79	34	-57.0%	11,176	6,522	-41.6%
Jackson	111	114	2.7%	14,726	14,583	-1.0%
Jasper	80	72	-10.0%	14,615	11,474	-21.5%
Jay	14	13	-7.1%	2,340	1,736	-25.8%
Jefferson	37	44	18.9%	4,419	5,222	18.2%
Jennings	37	44	18.9%	3,375	4,646	37.7%
Johnson	651	414	-36.4%	92,817	73,722	-20.6%
Knox	17	29	70.6%	2,597	4,565	75.8%
Kosciusko	193	225	16.6%	30,057	26,690	-11.2%
LaGrange	74	106	43.2%	14,207	13,733	-3.3%
Lake	818	626	-23.5%	139,744	116,514	-16.6%
LaPorte	228	143	-37.3%	27,474	23,132	-15.8%
Lawrence	8	12	50.0%	1,704	1,844	8.2%
Madison	80	75	-6.3%	17,237	14,735	-14.5%
Marion	1,404	1,185	-15.6%	154,998	142,560	-8.0%
Marshall	88	76	-13.6%	16,469	15,903	-3.4%
Martin	0	3	-	0	350	-
Miami	10	10	0.0%	1,392	1,489	7.0%
Monroe	261	236	-9.6%	37,149	33,049	-11.0%
Montgomery	42	37	-11.9%	4,618	5,362	16.1%
Morgan	89	96	7.9%	14,355	12,705	-11.5%
Newton	18	4	-77.8%	3,033	493	-83.7%
Noble	66	75	13.6%	10,539	11,285	7.1%
Ohio	15	11	-26.7%	2,322	1,482	-36.2%
Orange	5	4	-20.0%	763	604	-20.8%

	Number of Units, 2010	Number of Units, 2011	Percent Change, 2010 to 2011	Value of Permits ($ thousands), 2010	Value of Permits ($ thousands), 2011	Percent Change, 2010 to 2011
Owen	2	0	-	293	0	-
Parke	29	28	-3.4%	3,571	3,556	-0.4%
Perry	38	18	-52.6%	4,978	2,819	-43.4%
Pike	34	26	-23.5%	3,661	3,037	-17.0%
Porter	251	237	-5.6%	65,601	56,576	-13.8%
Posey	60	36	-40.0%	9,713	5,962	-38.6%
Pulaski	13	15	15.4%	1,712	1,998	16.7%
Putnam	63	34	-46.0%	7,624	5,598	-26.6%
Randolph	12	7	-41.7%	1,255	1,556	24.0%
Ripley	68	71	4.4%	10,440	10,505	0.6%
Rush	10	13	30.0%	1,670	2,375	42.2%
St. Joseph	44	27	-38.6%	4,811	2,484	-48.4%
Scott	54	48	-11.1%	6,785	5,646	-16.8%
Shelby	38	36	-5.3%	4,549	5,135	12.9%
Spencer	311	392	26.0%	48,096	55,746	15.9%
Starke	31	33	6.5%	4,579	5,403	18.0%
Steuben	71	92	29.6%	15,792	22,917	45.1%
Sullivan	1	4	300.0%	130	375	188.5%
Switzerland	44	41	-6.8%	2,564	2,389	-6.8%
Tippecanoe	487	1,198	146.0%	82,645	169,022	104.5%
Tipton	5	17	240.0%	613	2,144	249.8%
Union	0	9	-	0	895	-
Vanderburgh	277	226	-18.4%	30,873	27,698	-10.3%
Vermillion	9	10	11.1%	1,789	1,782	-0.4%
Vigo	164	349	112.8%	20,505	26,675	30.1%
Wabash	23	23	0.0%	3,799	3,369	-11.3%
Warren	11	14	27.3%	693	1,960	182.8%
Warrick	197	183	-7.1%	37,806	40,681	7.6%
Washington	31	26	-16.1%	4,410	3,583	-18.8%
Wayne	149	33	-77.9%	11,352	5,061	-55.4%
Wells	71	29	-59.2%	11,012	5,828	-47.1%
White	72	17	-76.4%	8,195	3,893	-52.5%
Whitley	93	57	-38.7%	13,669	10,598	-22.5%

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