The State of Indiana's Housing Market

Prepared for

Indiana Association of REALTORS®

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KELLEY SCHOOL OF BUSINESS
INDIANA UNIVERSITY
Indiana Business Research Center

REALTOR®

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Prepared for
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Table of Contents

Index of Figures

Index of Tables

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Executive Summary

Indiana's housing market continues to be marked by a dramatic imbalance between strong demand and scant supply. Hoosiers purchased a record number of existing homes in 2017, with total sales up 2.4 percent over the previous year (see **Table 1**). Meanwhile, the average monthly inventory of homes on the market in 2017 was nearly 14 percent lower than in 2016 (which itself was down 15 percent over the previous year).

These tight market conditions are fueling a surge in home prices. Existing-house prices in Indiana were up 6.6 percent year-over-year at the end of 2017—the state's largest annual increase on record dating back to 1991. While a boon to those looking to sell their homes, rising prices—coupled with declining rental vacancy rates and the expectation of rising mortgage interest rates—could begin to impact housing affordability for some in the state.

Table 1: Indiana Housing Market by the Numbers

	U.S.	Indiana
Existing-Home Sales, Percent Change between 2016 and 2017	1.1%	2.4%
House Price Appreciation, 2016 Q4 to 2017 Q4	7.0%	6.6%
Residential Building Permits, Number of Units, Percent Change between 2016 and 2017	6.2%	15.8%
Foreclosure Rate, 2017 Q4	1.2%	1.4%
Months Supply of Inventory, 2017 Average	4.4	3.8
Rental Vacancy Rate, 2018 Q1	7.0%	8.5%

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

Not surprisingly, rising prices and short supply have paved the way for a relatively strong increase in new construction. The number of new residential building permits issued in Indiana increased nearly 16 percent in 2017. While this marks a significant improvement, residential construction remains slow by historic standards. The number of permits issued for new single-family homes last year, for instance, is still only half as large as the average annual number of permits issued between 1998 and 2005.

By most measures, however, the Indiana housing market has shown great improvement in recent years, but there remain areas for improvement. The state will likely have to see continued progress in its economic and demographic fundamentals for the market to receive a clean bill of health.

This report examines the latest data 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 generational shifts in the population. Finally, we consider the role of housing in Indiana's economy with a look at construction trends.

Key Findings

- Indiana recorded its largest number of existing-homes sales on record last year with nearly 88,566 sales in 2017. This mark represents a 2.4 percent increase over the previous year.
- While homebuyer demand was strong in 2017, the inventory of homes on the market was exceptionally low. The average inventory of homes for sale in 2017 was down 14 percent from 2016 and 15 percent lower than in 2015. The state's average months supply of inventory—a measure of how long it would take to exhaust the existing stock of homes on the markets at the current sales rate—was down to 3.8 months in 2017, which was lower than the U.S. mark of 4.4 months.
- Indiana's median price for existing-home sales rose to $146,900 in 2017—a nearly 6 percent increase over the previous year and 34 percent above the low point in 2009. The Federal Housing Finance Agency's House Price Index shows that Indiana had the 24th-fastest rate of price appreciation among states in the last year.
- Indiana's foreclosure rate has declined dramatically of late, falling to its lowest point since 2000. The state's foreclosure rate has dropped by more than 3.5 percentage points since the end of 2011 and now sits at 1.4 percent. Over this period, Indiana has improved from the nation's ninth-highest foreclosure rate to 20th-highest.
- One of the many positive effects of a lower foreclosure rate is that the state's homeownership rate appears to be stabilizing. Between 2006 and 2013, Indiana's homeownership rate dropped steadily from 72.1 percent to 68.5 percent. Between 2014 and 2016, however, the share of homeowners was essentially unchanged at around 68 percent. Indiana had the nation's 15th-highest homeownership rate in 2016.
- Rising prices and mortgage interest rates could begin to affect housing affordability conditions. In Indiana, however, housing remains quite affordable. According to the National Association of Realtors, each of the Indiana metro areas for which they report data ranked in the top one-third of all metros for housing affordability in 2016.
- Indiana's household formation rate hit 0.7 percent in 2016—that state's highest level in three years. According to Census Bureau estimates, Indiana had a significant uptick in migration to the state in 2017 with a net inflow of 10,400 people, so look for another strong household formation rate for 2017 when the data are released later this year.
- The number of new housing units permitted for construction in Indiana in 2017 increased by nearly 16 percent compared to the previous year. Looking only at single-family units in the state, the number of permits issued for this type of home improved by 14 percent.

Market Conditions

Existing-Home Sales Reach Record Level in 2017

With low interest rates for much of the year, a strengthening economy and still relatively low levels of residential construction in 2017, the conditions were set for another strong year for existing-home sales in Indiana. The state tallied more than 88,500 existing-home sales last year—a new record for Indiana (see **Table 2**).

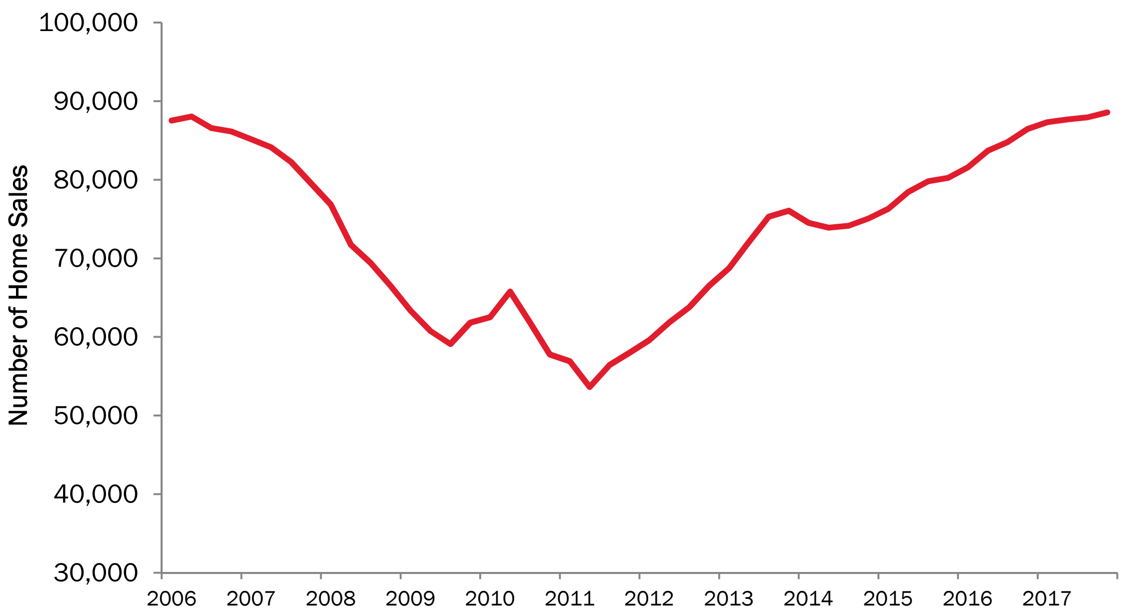
Table 2: Indiana Existing-Home Sales, 2010 to 2017

	2010	2011	2012	2013	2014	2015	2016	2017
Existing-Home Sales	57,942	58,334	66,871	76,257	75,055	80,244	86,043	88,566
Annual Percent Change	-6.3%	0.7%	14.6%	14.0%	-1.6%	6.9%	7.2%	2.9%

Source: Indiana Association of Realtors

With the exception of a brief lull in 2014, Indiana's existing-home market has been on the rebound since its low point in the middle of 2011 when the state registered only 53,600 existing-home sales over the previous 12-month period (see **Figure 1**). Comparing this trough to the current peak, the number of existing-home sales in Indiana has increased 65 percent over the past six years.

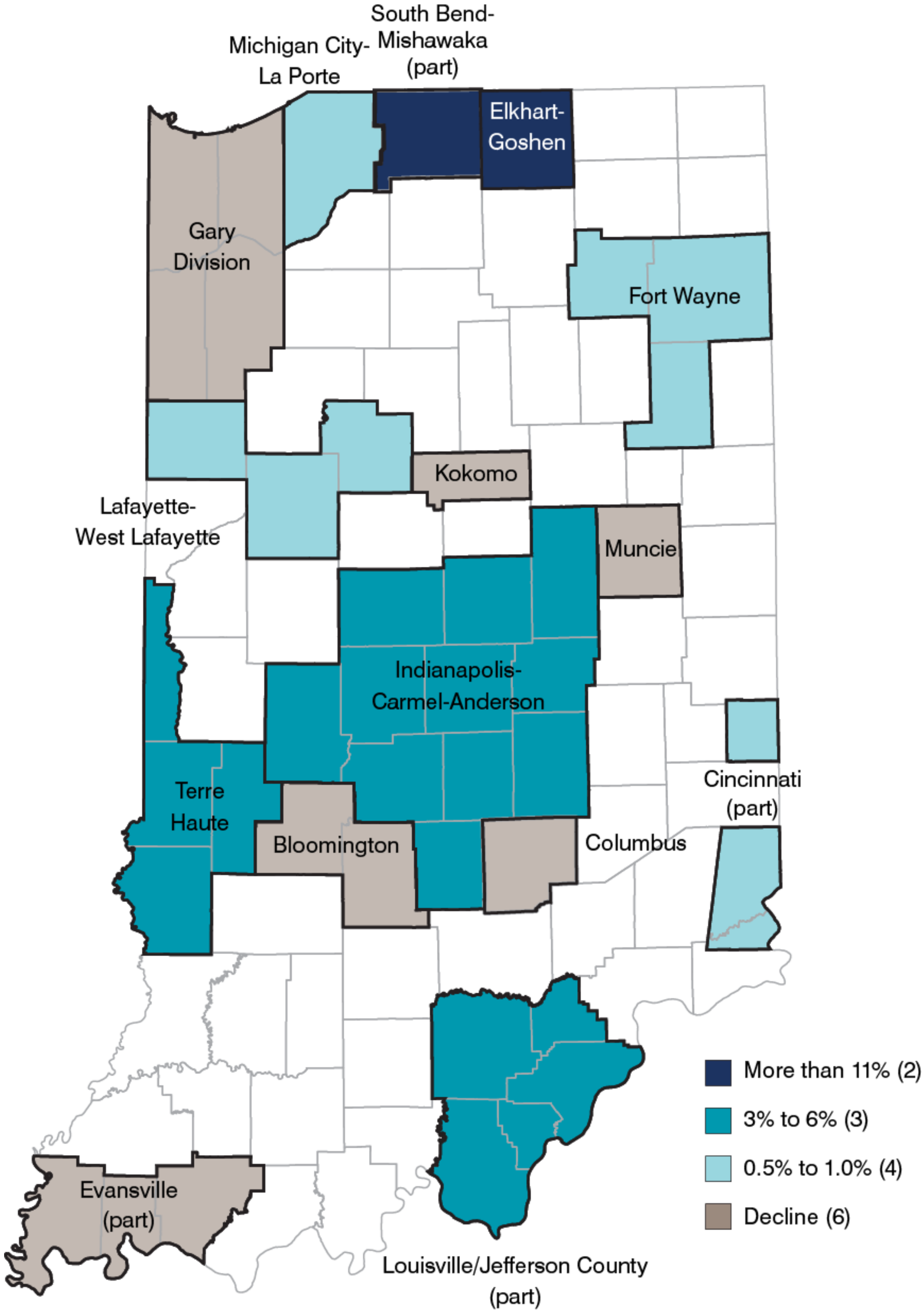
Figure 1: Indiana Home Sales, Moving Four-Quarter Total, 2006 Q1 to 2017 Q4



Source: Indiana Association of Realtors

Among the state's metro areas, the Elkhart-Goshen metro had the state's greatest increase in existing-home sales in 2017, with a 16.2 percent improvement last year (see **Figure 2**). The South Bend-Mishawaka also had a strong year with a gain of nearly 12 percent. Other metro areas including Louisville (Indiana portion only), Terre Haute and Indianapolis-Carmel-Anderson each had increases of better than 3 percent. A handful of Indiana metros saw existing-home sales slip in 2017, but many of these communities were coming off of strong years in 2016.

Figure 2: Change in Existing-Home Sales by Metro Area, 2016 to 2017



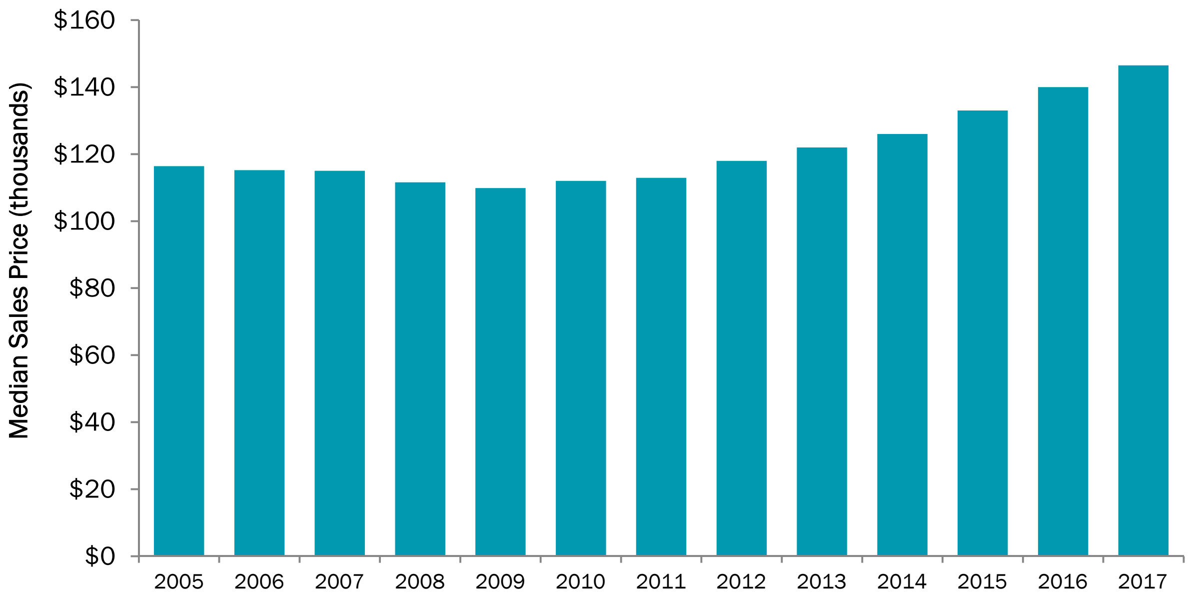
Source: Indiana Association of Realtors

The 48 Indiana counties that are not part of a metro area combined for a 3.1 percent uptick in existing-home sales last year. Of these non-metro counties with at least 200 sales, Jennings County had the largest increase at 30 percent, followed by DeKalb (17 percent), Jefferson (11 percent) and Spencer (10 percent) counties.[1]

Sales Prices Continue to Climb

The rise in demand in recent years has also sparked a steady increase in home prices. At nearly $147,000 last year, the median sales price for existing homes increased by 5.7 percent in 2017—the sixth consecutive year with median price gains of at least 3 percent (see **Figure 3**). Furthermore, the median price in 2017 was 34 percent above the low point in 2009.

Figure 3: Indiana Median Sales Price, 2005 to 2017



Source: Indiana Association of Realtors

Looking around the state, the median sales price held steady or increased in 72 of Indiana's 92 counties in 2017. For counties with at least 500 home sales last year, Madison (12.2 percent increase), Howard (11.3 percent) and Hancock (10.8 percent) counties had price gains of more than 10 percent last year. Among the state's larger markets, only LaPorte (-2.7 percent decline), Steuben (-0.3 percent) and Warrick (-0.1 percent) counties saw their median house prices decline in 2017.

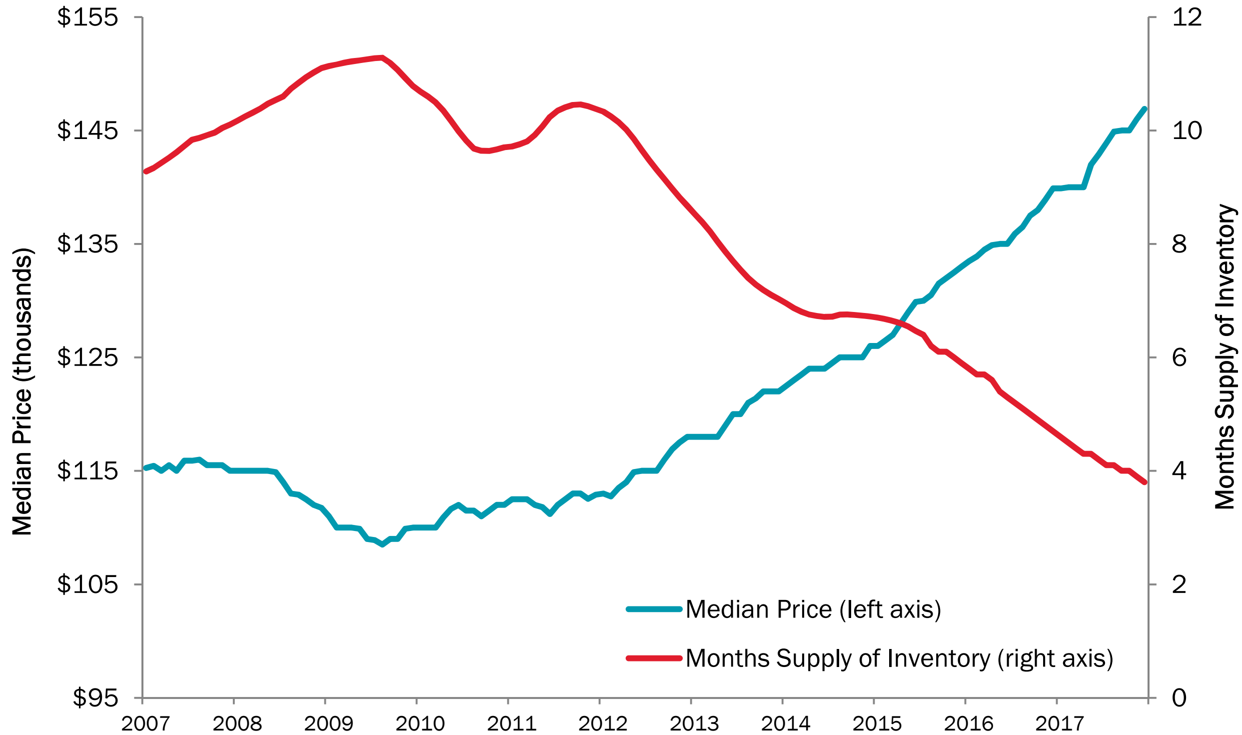
The sharp climb in prices over the last five years has been driven in large part by a shrinking inventory of existing homes for sale. In 2017, Indiana's average monthly inventory was roughly 27,970 existing homes on the market. To put this number in context, Indiana's inventory in 2017 was down nearly 14 percent from the previous year and was 60 percent lower than the highest average annual mark on record in 2007.

The decline in inventory coupled with strong buyer demand has led to a sharp drop 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

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

the previous year. As one would expect, there is a strong negative relationship between months supply and prices (correlation = -0.97), with prices increasing as supply began to drop in 2011 (see **Figure 4**).

Figure 4: Median Sales Price and Months Supply, 12-Month Moving Average, January 2007 to December 2017

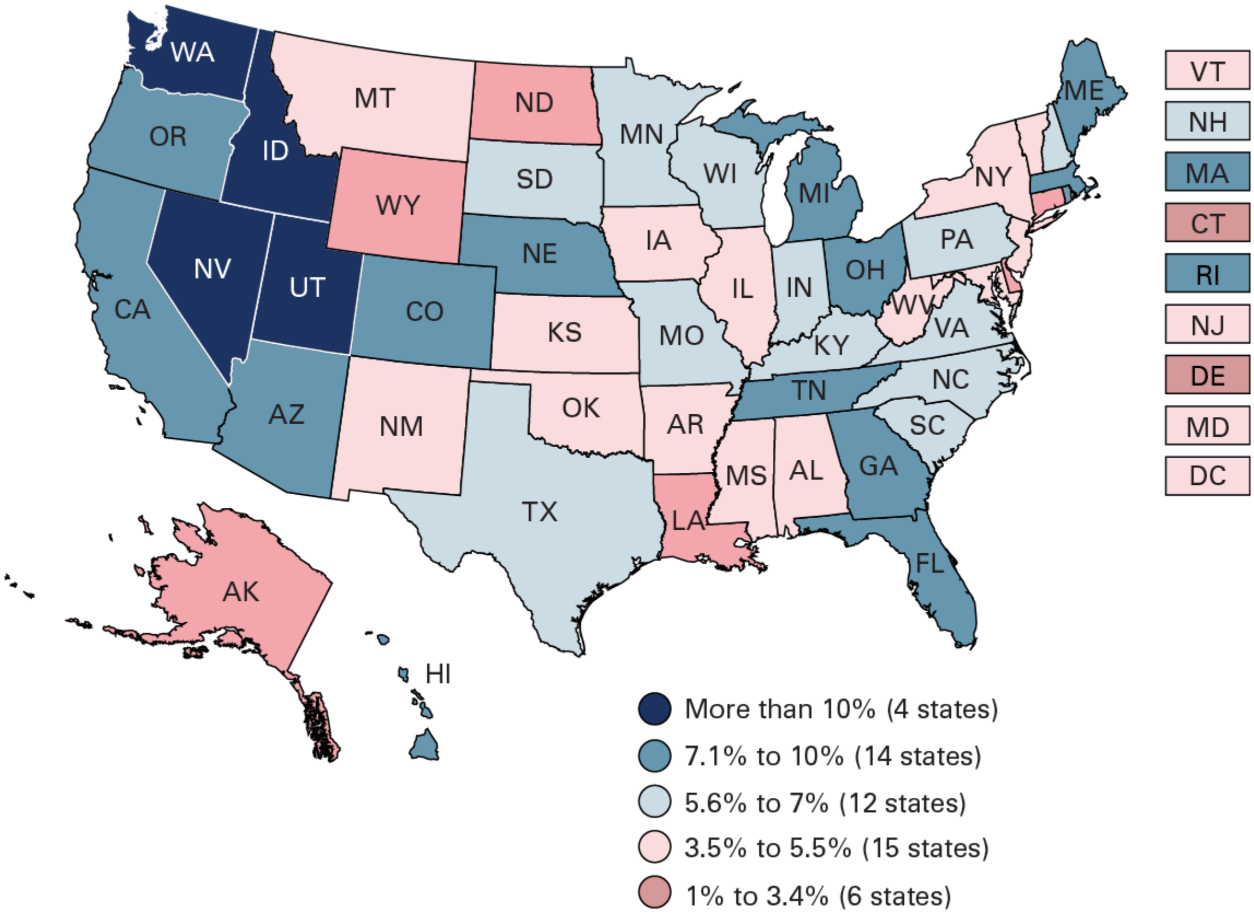


Source: Indiana Association of Realtors

Indiana House Prices in Perspective

Other measures also indicate that Indiana's house prices are climbing. According to the Federal Housing Finance Agency's House Price Index (HPI), Indiana has seen price appreciation for the past 24 consecutive quarters dating back to 2012, and the state's home prices in the fourth quarter of 2017 are up 6.6 percent year-over-year. This rate of appreciation ranked 24th-fastest nationally. In the past year, Indiana's growth in house prices lagged neighboring Michigan (9.6 percent) and Ohio (7.4 percent) but outpaced Kentucky (5.6 percent) and Illinois (5.0 percent), as seen in **Figure 5**.

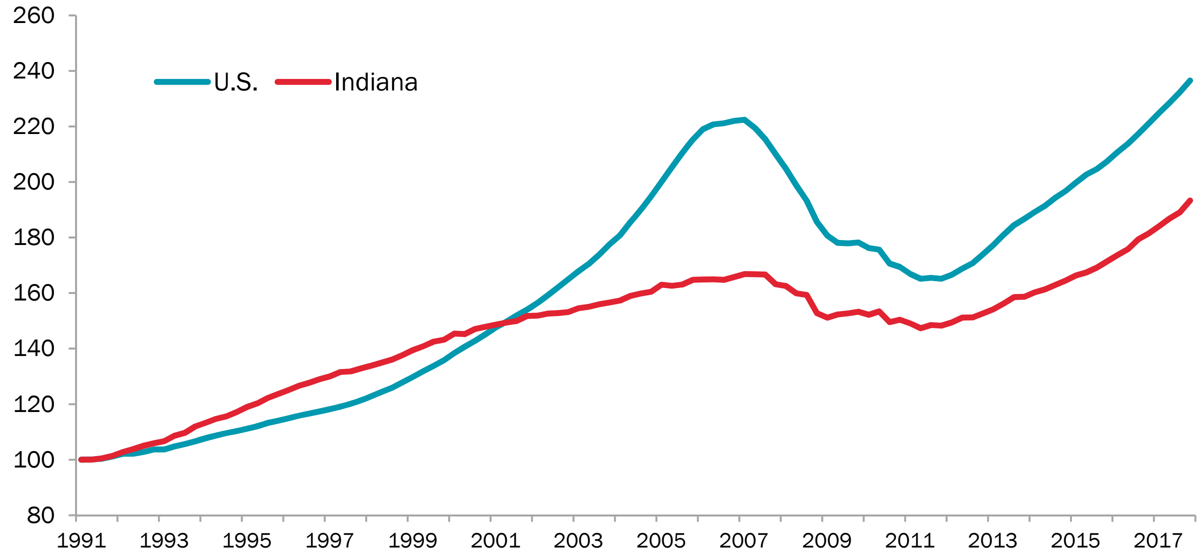
Figure 5: Change in House Price Index by State, 2016 Q4 to 2017 Q4



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 misleading. States like Michigan and Ohio are outpacing Indiana now because they are rebounding from far more severe price declines during the housing bust. House prices in Michigan declined by 45 percent after the crash and Ohio had a drop of 25 percent. Indiana had a comparatively mild 12 percent slide in prices between 2007 and 2011. In the fourth quarter of 2017, Indiana house prices were 16 percent above the pre-recession peak (see Figure 6). House prices in Ohio, meanwhile, are presently only 3 percent above its pre-recession peak while Michigan remains slightly below its previous high.

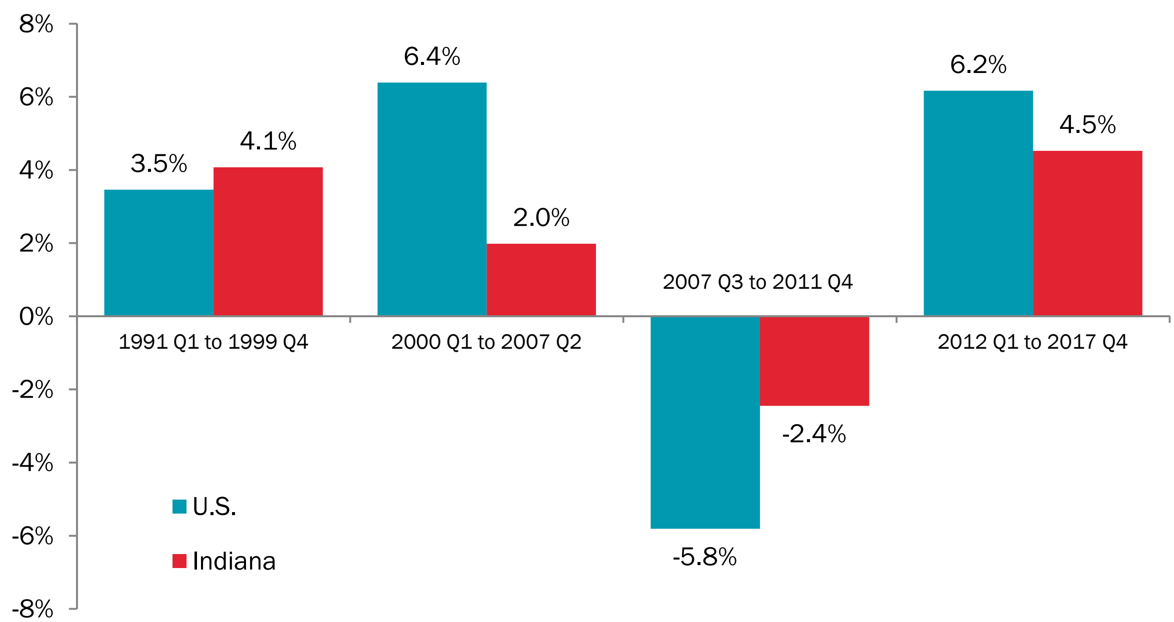
Figure 6: House Price Index, 1991 Q1 to 2017 Q4



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 had several distinct periods of house price changes 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 (see **Figure 7**). Since early 2012, prices in Indiana have been growing at an average annualized rate of 4.5 percent—much stronger than the pace the state set between 2000 and 2007 and slightly above the trend during the 1990s.

Figure 7: Average Annualized Growth in HPI over Select Periods, 1991 Q1 to 2017 Q4

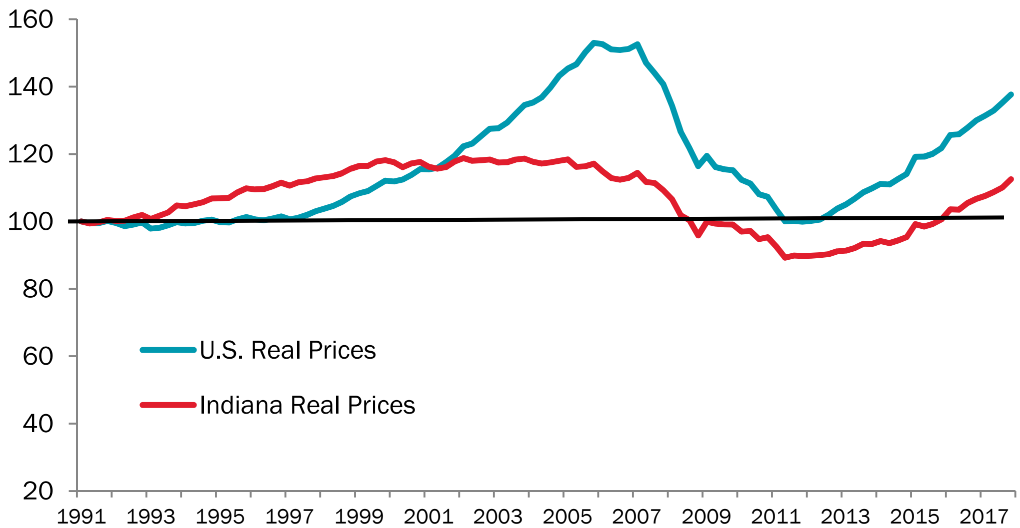


Source: Federal Housing Finance Agency, House Price Index (expanded data series, seasonally adjusted)

The HPI and median sales price data presented so far indicate that Indiana house prices are at an all-time high in 2017. Now that the worst of the housing slump is in the rearview mirror, prices should continue to set new records as long as there is inflation. But how do Indiana's current home values stack up when adjusted for inflation?

Figure 8 shows the trends in Indiana's and the nation's price index in "real terms" (i.e., adjusted for inflation). When measured in real terms, Indiana's house prices peaked in early 2002—when home values had appreciated nearly 19 percent over the previous 10 years. The state's real house prices in the fourth quarter of 2017 were still about 5 percent below this 2002 peak. Looking back over the past 25 years, the only periods of sustained real house price appreciation in Indiana have been from 1991 to 1999 and from 2013 to 2017.

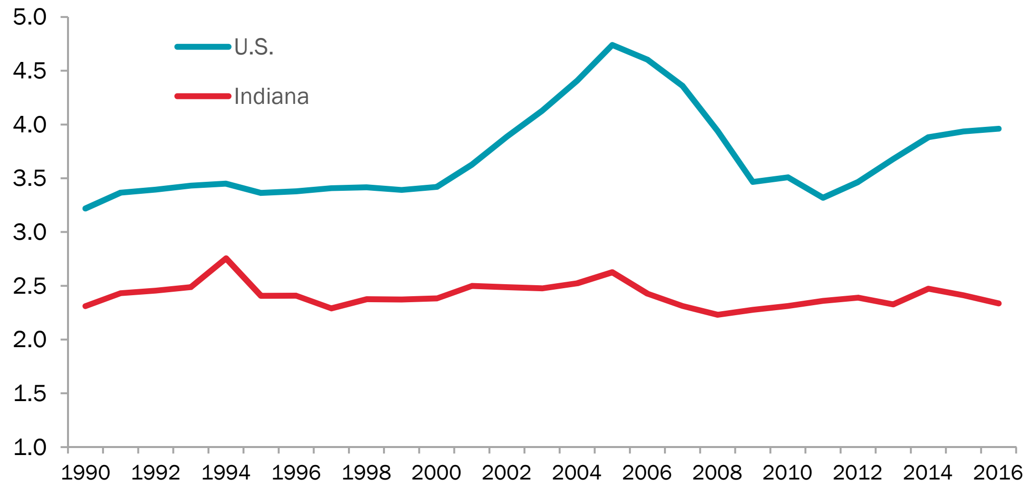
Figure 8: House Price Index Adjusted for Inflation, 1991 Q1 to 2017 Q4



Note: The HPI values are adjusted for inflation using the Consumer Price Index for all items less shelter (Series SA0L2)
Source: Federal Housing Finance Agency, House Price Index (expanded data series, seasonally adjusted)

Of course, the U.S. as a whole has also had periods where price gains outpaced inflation, with the housing bubble era the most notable example. In Indiana, however, changes in house price trends have historically been tied to the state's economic performance. During the 1990s, for example, the state's real house price appreciation was fueled by a rise in the state's real median household income that outpaced the national average. When income gains slowed or reversed in Indiana, the rate of house price appreciation slowed as well. As a result, the ratio of median sales prices to median household incomes in most Indiana housing markets has held remarkably steady over the last quarter century—even during the bubble years and subsequent crash (see **Figure 9**).

Figure 9: Ratio of Median Sales Price to Median Household Income, U.S. and Indiana, 1990 to 2016



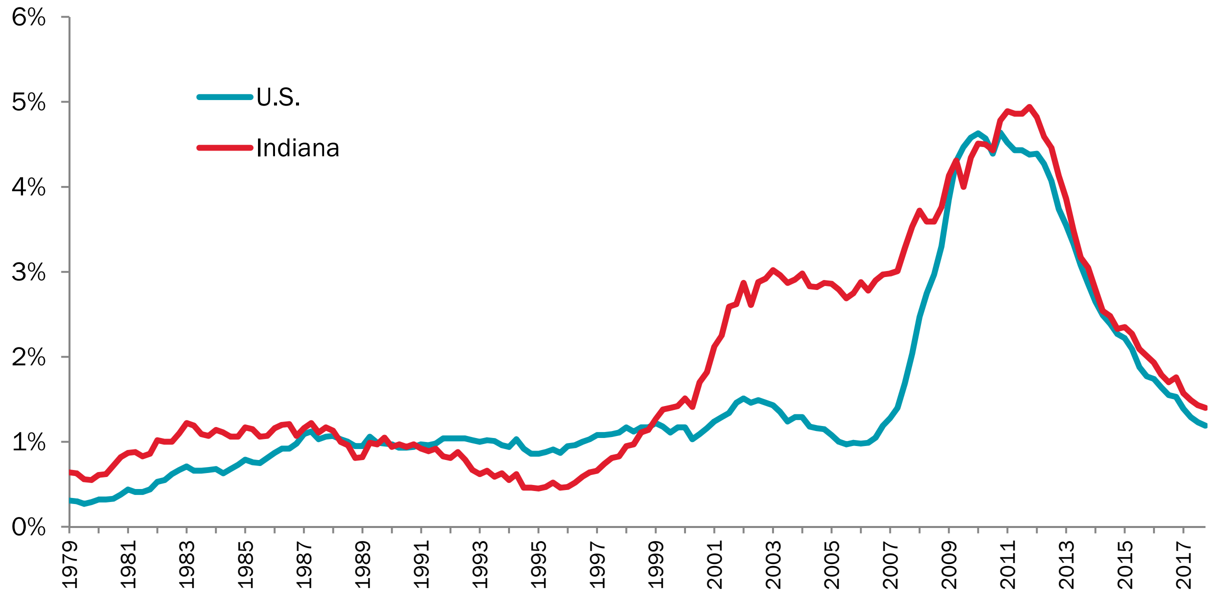
Source: U.S. Census Bureau, Indiana Association of Realtors, National Association of Realtors

Indiana Foreclosure Rate at Lowest Level since 2000

While certainly not a primary cause, one factor that has contributed to shrinking inventory and the boost in home prices is the dramatic decline in foreclosures. At the height of the housing crisis, not only did foreclosures sell at deep discounts, but they had negative effects on house prices across the board by adding to inventory at a time of weak demand and often depressing the value of homes located near foreclosed properties. The foreclosure situation has improved in recent years, however, and its effect on prices has certainly diminished.

According to the Mortgage Bankers Association, the state's foreclosure rate has dropped more than 3.5 percentage points from its peak of 4.9 percent at the end of 2011 to 1.4 percent in the fourth quarter of 2017 (see Figure 10). This is Indiana's lowest foreclosure rate since 2000. Even with this drop, Indiana's foreclosure rate remains slightly above the U.S. average and ranks 20th-highest among states.

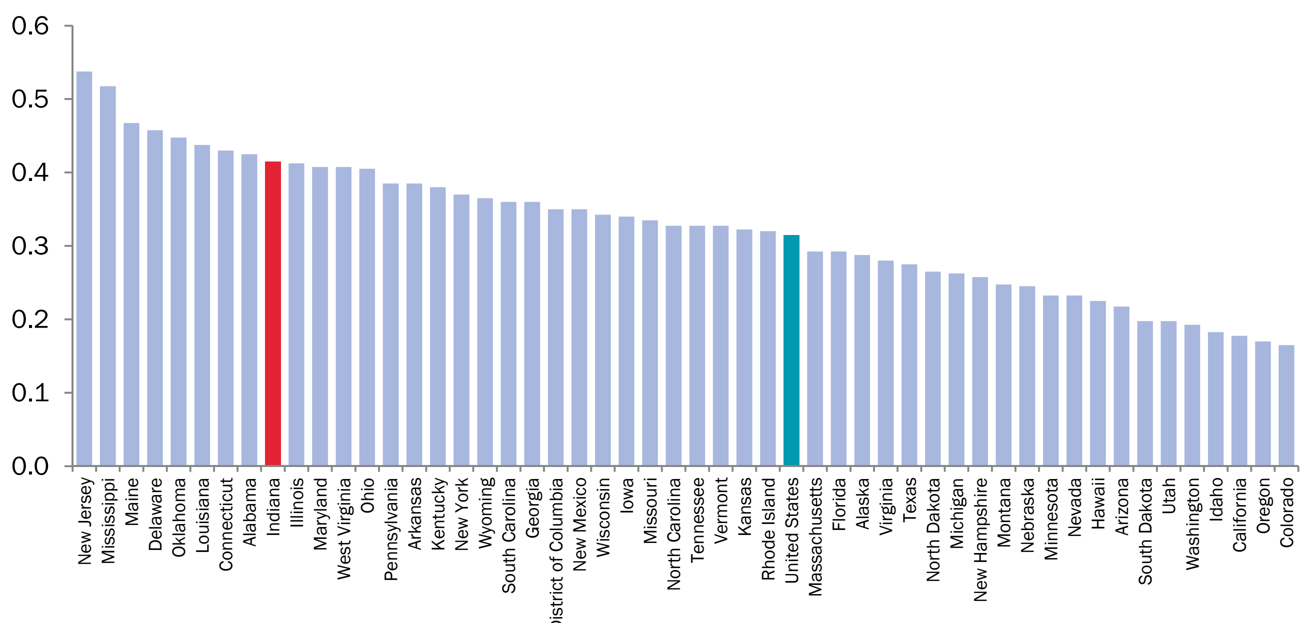
Figure 10: Share of Mortgages in Foreclosure, 1979 Q1 to 2017 Q4



Source: National Delinquency Survey, Mortgage Bankers Association

A similar trend has been in effect with respect to the rate of new foreclosure starts. Foreclosure starts peaked in the third quarter of 2010 when 1.4 percent of all mortgages in Indiana entered the foreclosure process. This measure has dropped more than 1 percentage point since then and sat at 0.37 percent by the end of 2017. While this marks a dramatic improvement in the foreclosure start rate, Indiana did rank on the higher end of the spectrum in this measure in 2017 (see **Figure 11**).

Figure 11: Share of Mortgages Starting a New Foreclosure, Four-Quarter Average, 2017 Q4



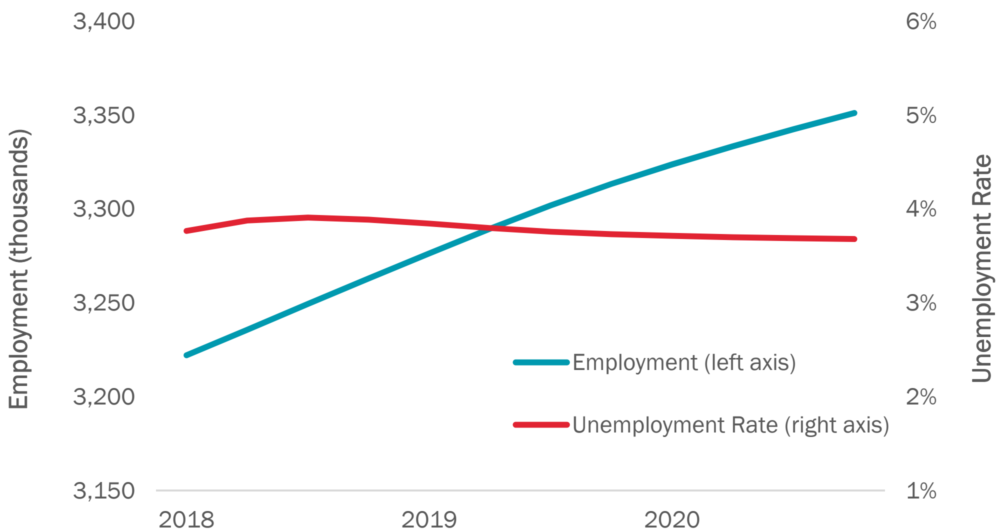
Source: National Delinquency Survey, Mortgage Bankers Association

Looking Ahead

Last year, Indiana's market for existing homes was as strong as it has ever been, and it should remain healthy in 2018. The state's foreclosure crisis is clearly in the rearview mirror, and foreclosure rates should stay low for the foreseeable future. One reason for such optimism is that, according to CoreLogic, only 2.4 percent of Indiana homeowners with a mortgage had negative equity during the third quarter of 2017.[2] This mark is down sharply from nearly 12 percent at the beginning of 2013, and is well below the U.S. share of 4.9 percent. Having relatively few homeowners with negative equity, along with tight inventory and rising prices, means that fewer and fewer Hoosiers are at risk of foreclosure in the event that they fall behind on their mortgage payments.

Of course, the most important factor influencing Indiana's housing market over the next few years will be the state of the economy. Fortunately, there is reason for optimism on that front, as well. Indiana added a modest 20,000 jobs in 2017 and its unemployment rate sat at 3.4 percent at year's end—the state's lowest mark since early 2001. According to the latest forecast from the Indiana Business Research Center (IBRC) and the Center for Econometric Model Research (CEMR) at Indiana University, Indiana should see stronger employment growth in the next few years, with an average annual gain of 43,000 jobs per year expected between 2018 and 2020 (see **Figure 12**). The state's unemployment rate is expected to remain low over this period as well.

Figure 12: Indiana Employment and Unemployment Rate Forecast, 2018 Q1 to 2020 Q4



Source: Indiana University Center for Econometric Model Research and Indiana Business Research Center (released in March 2018)

As for affordability, Indiana's housing markets are among the most buyer-friendly in the country. According to the National Association of Realtors, Indiana's metro areas ranked in the top one-third of all metros in affordability in 2016. Rising home prices certainly have an effect on affordability, but income gains in Indiana have been strong enough to ensure that housing in the Hoosier state remains far more affordable than the national average (see **Figure 13**).

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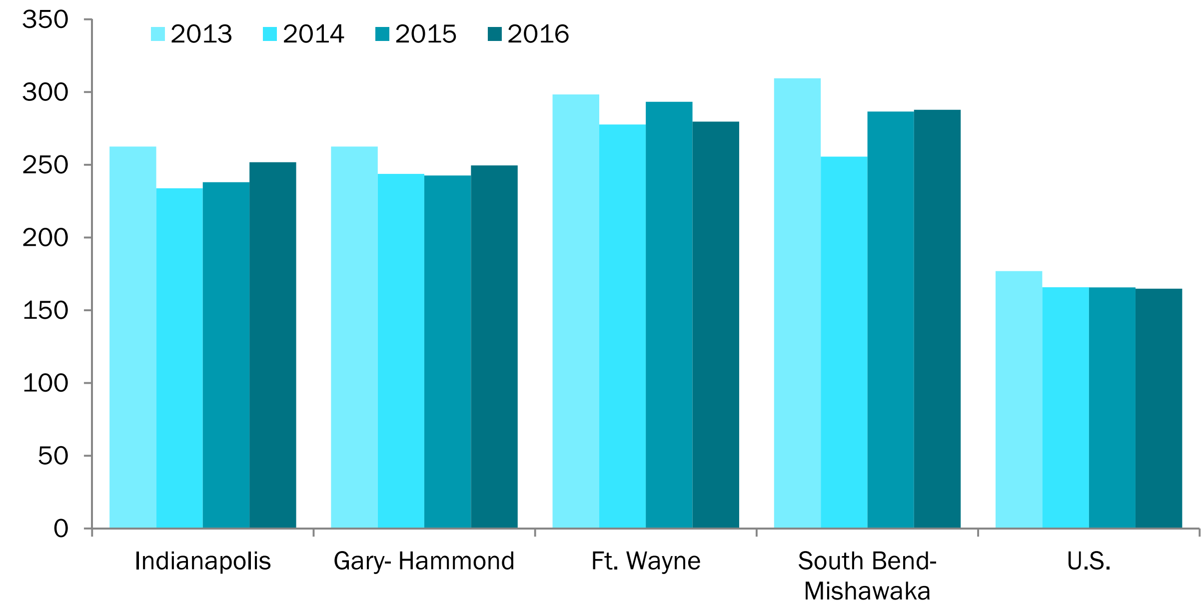
[2] "CoreLogic Homeowner Equity Insights," Third Quarter 2017, www.corelogic.com/insights-download/homeowner-equity-report.aspx.

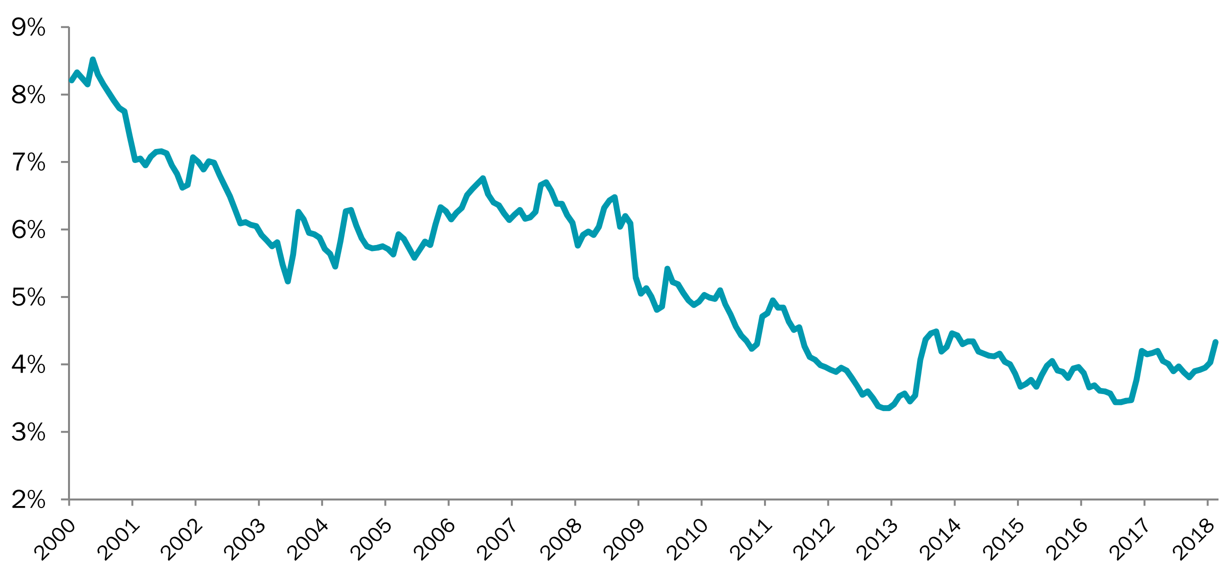
Figure 13: Housing Affordability Index, Select Metro Areas, 2013 to 2016



Note: An index value of 100 means that a metro's median household income is exactly enough to qualify for a mortgage on a home priced at the median level for that area. Values above 100 indicate that the median income is more than enough to qualify. Ft. Wayne's index value was 280 in 2016, meaning that its median household income was 280 percent of the income needed for a mortgage on the median-priced house.
Source: National Association of Realtors

Of course, mortgage interest rates also have a significant impact on housing affordability. After declining slightly through most of 2017, the 30-year conventional mortgage rate has jumped to 4.3 percent in February 2018—the highest mark since early 2014. Many market-watchers expect to see mortgage rates continue to climb. In their February 2017 economic forecasts, both Freddie Mac and the Mortgage Bankers Association predict that rates will be at 4.9 percent by the end of this year and will be north of 5 percent in 2019.

Figure 14: 30-Year Conventional Mortgage Rate, January 2000 to February 2018



Source: Freddie Mac

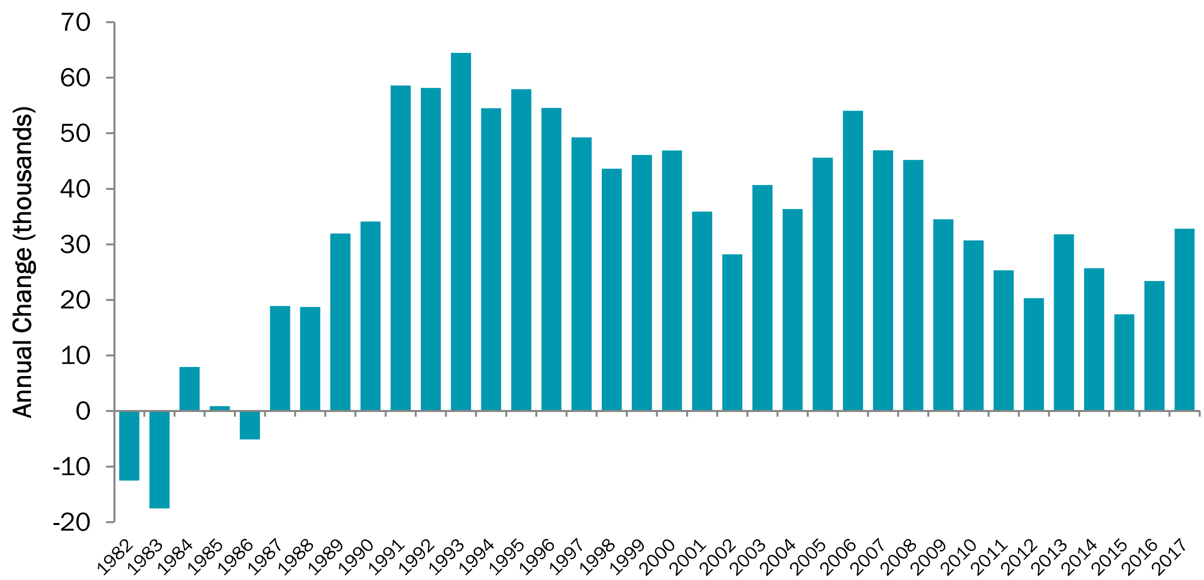
Demographic Fundamentals

Demographic Drivers of Housing Market Begin to Perk Up

After being a drag on Indiana's housing market for several years, the demographic drivers of the housing market are beginning to show some improvement. For instance, population growth of 32,800 residents in 2017 was the state's largest annual gain since 2009 (see **Figure 15**). This strong showing last year offers some hope that population growth will rebound fully over the next few years, but doesn't change the fact that the state has been mired in its slowest stretch of population growth since the mid-1980s. Over the past seven years, Indiana has grown by an average of roughly 25,300 people a year, which is less than half the average annual gain during the 1990s (53,600 per year) and still well below the average mark set during the 2000s (40,300).

An additional bright spot in the population numbers is that some important age groups—from the perspective of the housing market—are showing growth. Indiana's population between the ages of 25 and 44, for instance, grew by roughly 4,000 in 2016. This marks the fourth consecutive year that this young-adult group has grown after declining for at least 12 years previously. This age group, which is typically responsible for net gains in new households and home purchases, will continue to grow as the comparatively large millennial generation comes of age.

Figure 15: Indiana Annual Population Change, 1982 to 2017

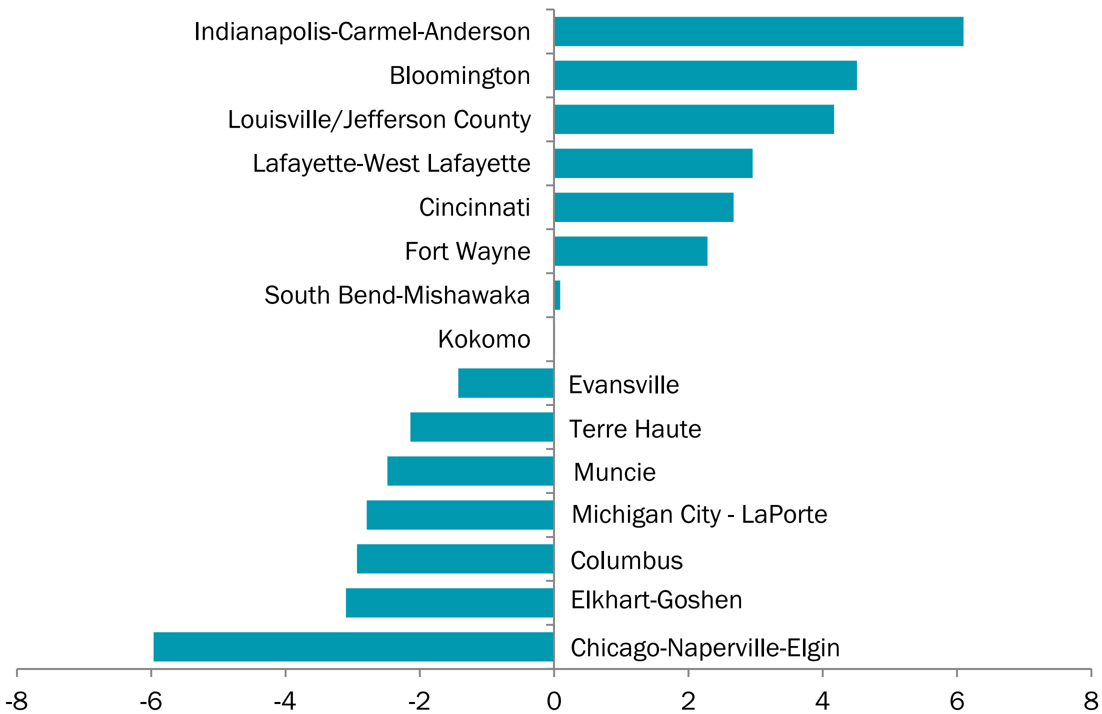


Source: U.S. Census Bureau population estimates

The state's uptick in population growth in 2017 was been driven by a relatively strong year for migration to the state. After averaging a net in-migration of just 940 residents per year between 2010 and 2016, Indiana garnered a net inflow of 10,400 residents in 2017.

Among metropolitan areas at least partially located in Indiana, the Indianapolis-Carmel-Anderson area had the highest migration rate in 2017 with roughly six net in-migrants for every 1,000 residents (see **Figure 16**). Other areas with strong migration rates include Bloomington, Louisville, Lafayette, Cincinnati and Fort Wayne. On the other hand, the Columbus, Elkhart and Chicago areas had the largest relative net outflows. The state's 48 counties not part of a metro area had a combined net out-migration rate of nearly four migrants per 1,000 residents.

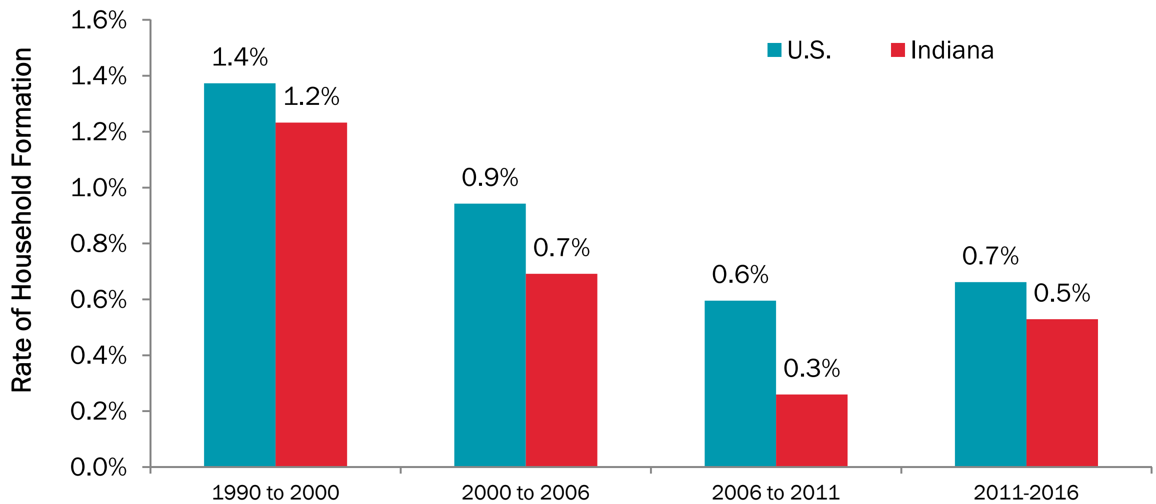
Figure 16: Net Migration Rates for Select Metro Areas, 2017



Source: U.S. Census Bureau population estimates

Along with the upbeat news on population gains, Indiana added an estimated 18,100 new households in 2016—the fifth consecutive year of household gains and the second-largest annual increase in that stretch. In all, Indiana has had an average annual household formation rate of 0.5 percent over the past five years. This recent rate of household growth lags the pace set between 2000 and 2006, but is an improvement over the "housing bust" era (see **Figure 17**).

Figure 17: Average Annual Household Formation Rates, 1990 to 2016



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

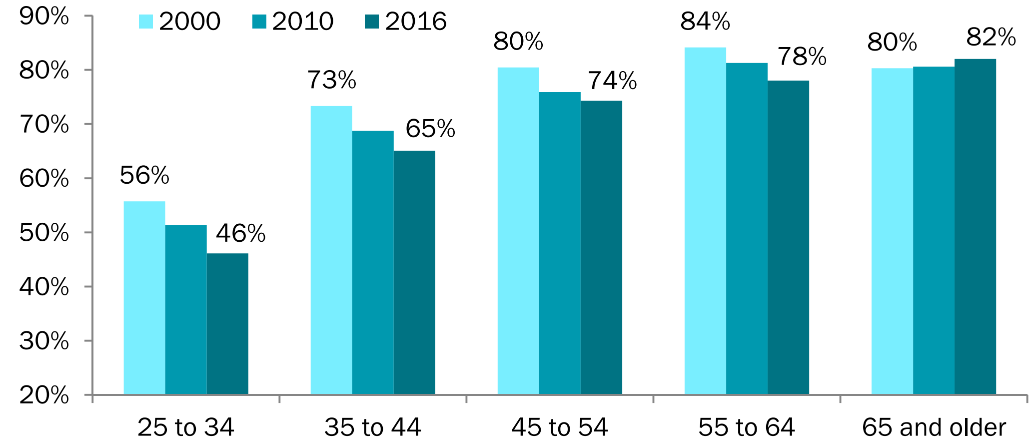
Indiana's Homeownership Rate Holds Steady in 2016

After plunging more than 3 percentage points from 72.1 percent in 2006 to 68.5 percent in 2013, Indiana's homeownership rate appears to have stabilized recently. The state's homeownership rate weighed-in at an estimated 68.3 percent in 2016, and there has not been any statistically significant shifts in this measure over the past three years.

While a stable homeownership rate is certainly a positive development for the state, this overall rate obscures the fact that Indiana has seen more significant declines for most age groups. Since 2000, for instance, the homeownership rates for Hoosiers in the 25-to-34 and 35-to-44 age groups have declined by 10 percentage points and 8 percentage points, respectively (see **Figure 18**). Over the same period, the homeownership rate for those between the ages of 45 and 64 has dropped 6 percentage points. Only Indiana's senior age group has seen an uptick in its homeownership rate over the last 16 years.

The difference between the comparatively small change in the state's overall homeownership rate compared to these sizable declines in many age groups is explained by 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 54 and 72, this age group holds a larger share of the state's population than ever before. This is also the prime age group for homeownership. As a result, the continued aging of this outsized cohort will boost the state's total homeownership rate, even if age-specific rates only hold constant going forward.

Figure 18: Indiana Homeownership Rates by Age, 2000 to 2016



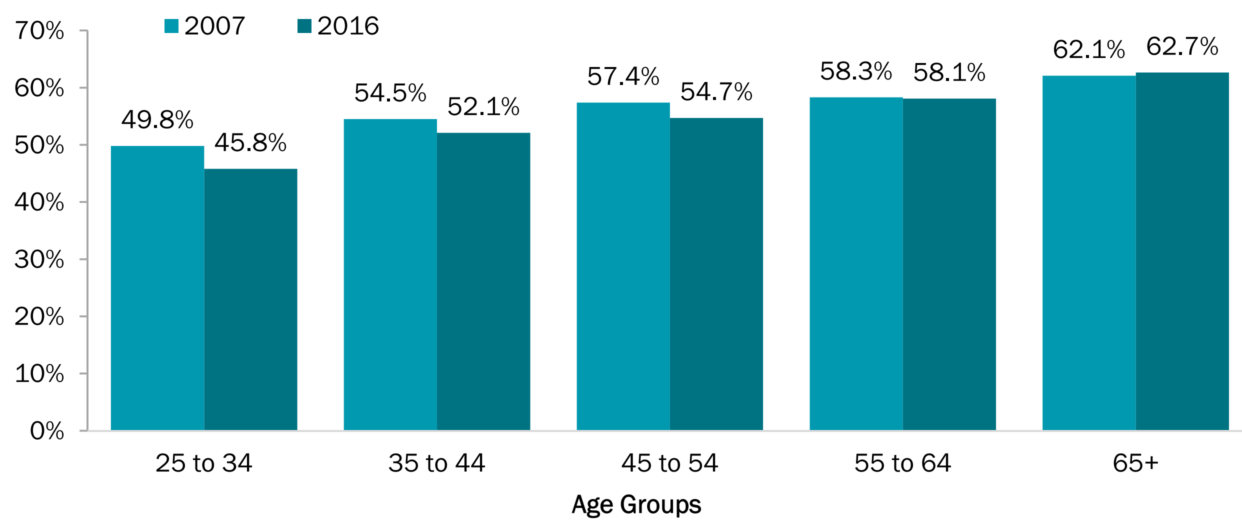
Source: U.S. Census Bureau, Decennial Census and American Community Survey

Looking Ahead

The key demographic question for the Indiana housing market in the near term will be whether or not household formation rates improve. The state has seen a slight uptick in household formation in recent years, driven primarily by the coming of age of the relatively large millennial generation (i.e., residents between the ages of 22 and 37 in 2018), but there is plenty of room for improvement in this measure.

The household formation rate is driven by two factors: so-called headship rates (i.e., the number of households divided by the adult population) and the level of migration to the state. With regard to headship rates, the negative effects of the Great Recession caused a decline in the share of adults who were the head of their own households, particularly among younger adults. In 2007, for instance, approximately 50 percent of Hoosiers between the ages of 25 and 34 headed a household, but this mark dropped to roughly 46 percent in 2016 (see **Figure 19**). There are also sizeable declines for the 35-to-44 and 45-to-54 age groups. If these pre-recession headship rates were still in effect in 2016, Indiana would have had approximately 74,000 more households.

Figure 19: Indiana Headship Rates by Age, 2007 and 2016



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

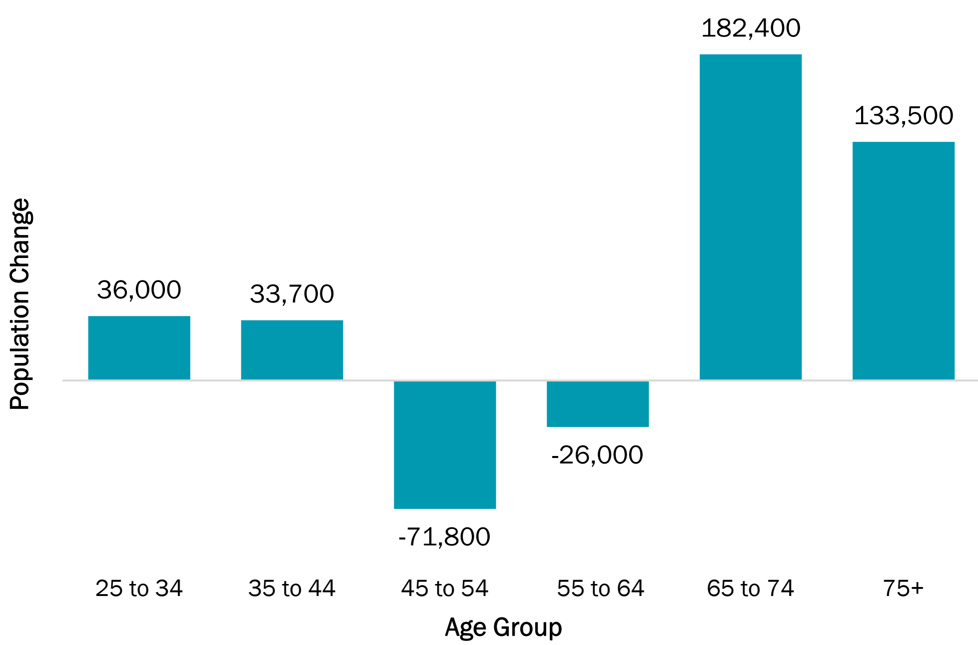
This shortfall should represent a pool of currently pent-up housing demand that could enter the market in the coming years. While Indiana's headship rates may not get back to 2007 levels, the state should see a rebound in this measure over the next few years if it is anything like the rest of the nation. An analysis from the Urban Institute indicates that the U.S. headship rate should improve by roughly 1.5 percentage points between 2013 and 2020.[3] This increase reflects both the effect of an aging population and more young adults starting households as the labor market improves.

As for migration, a strong net inflow of new residents to Indiana in 2017 offers hope that Indiana may start to attract more people to the state. Indiana had an estimated net inflow of 10,400 residents in 2017 compared to an average annual net inflow of just 940 residents over the previous six years.

The IBRC's recent population projections released in 2018 indicate that Indiana should expect an average annual net in-migration of nearly 4,200 residents per year between 2015 and 2025, and nearly 5,200 per year between 2025 and 2035. If Indiana can hit these marks in the years ahead and headship rates rebound as expected, then household formation should improve.

The emergence of the large millennial generation will also provide a boost to household formation. As Figure 20 illustrates, the number of Hoosiers between the ages of 25 and 44 will increase by a projected 70,000 residents between 2015 and 2025 (Millennials will be between 29 and 44 in 2025). While there has been plenty of speculation that this group may have different housing preferences than preceding generations, research indicates that millennials may not end up that different after all.

Figure 20: Indiana's Projected Population Change by Age Group, 2015 to 2025



Source: Indiana Business Research Center

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[3] Laurie Goodman, Rolf Pendall and Jun Zhu, "Headship and Homeownership: What Does the Future Hold?," The Urban Institute, June 2015, www.urban.org/sites/default/files/2000257-headship-and-homeownership-what-does-the-future-hold.pdf.

According to a Fannie Mae survey conducted in 2015, 72 percent of current renters between the ages of 25 and 34 feel that owning a home makes more financial sense than renting does, and 91 percent of millennials who currently rent expect to buy a home someday.[4] Meanwhile, a 2013 survey conducted by the Demand Institute indicates that nearly half of all millennials expect to settle in the suburbs compared to 38 percent who stated they prefer urban living.[5]

While the desire to buy a home may be there, the means may not. Sixty-two percent of the renters between the ages of 25 and 34 questioned in the Fannie Mae survey referenced above indicated they believe it would be difficult for them to get a mortgage at this time. Roughly 60 percent of renters in this age group who plan to buy say that they are waiting for their incomes or their credit ratings to improve before entering the market. Even with these caveats, millennials are already driving the market for existing homes, accounting for 36 percent of all home sales in the U.S. in 2017—the largest share of any defined generation group.[6]

The aging of the baby boom generation will also influence the housing market over the next two decades. The oldest members of this generation turned 65 in 2011 and the entire cohort will be of traditional retirement age by 2030. By that point, the share of Indiana's population that is age 65 or older will increase to 20 percent from 13 percent in 2010, according to the IBRC's population projections.

This process will impact the housing market in a number of ways, such as increasing demand for senior-oriented housing. That said, there is a lot of evidence that a healthy share of boomers plan to spend their retirement years in their current homes, or "age in place." A national survey of boomers by the Demand Institute in 2013 found that 63 percent of respondents did not plan to move after retirement. Of those who stated they did plan to move, two-thirds said that they wanted to remain in their current state of residence.[7]

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[4] "Millennials Look to Income Improvements as Key to Unlocking Homeownership," Fannie Mae National Housing Survey, August 2015, www.fanniemae.com/resources/file/research/housingsurvey/pdf/082115-topicanalysis.pdf.

[5] Jeremy Burbank and Louise Keely, "Millennials and Their Homes: Still Seeking the American Dream," The Demand Institute, September 16, 2014, www.demandinstitute.org/millennials-and-their-homes/.

[6] "Home Buyer and Seller Generational Trends 2018," National Association of Realtors, March 14, 2018, www.nar.realtor/sites/default/files/documents/2018-home-buyers-and-sellers-generational-trends-03-14-2018.pdf.

[7] Jeremy Burbank and Louise Keely, "Baby Boomers and Their Homes: On Their Own Terms," The Demand Institute, October 30, 2014, www.demandinstitute.org/baby-boomers-and-their-homes/.

Housing and the Economy

Residential Construction Beginning to Improve

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.[8] 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.[9]

While residential investment has picked up in recent years, it remains low by historical standards. Between 1950 and 2007, RFI accounted for 4.9 percent of annual U.S. GDP on average. As the housing crash and subsequent recovery have played out, however, RFI's share of economic activity bottomed out at 2.5 percent in 2011 and stood at 3.9 percent in 2017.

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 21 compares the change in national RFI to Indiana's annual value of building permits. Both indicators peaked in 2005 and fell dramatically through 2011. The value of residential construction in Indiana has rebounded since then with an average annual increase of 15.4 percent per year over the last six years. With a jump of 18.9 percent last year, however, 2017 represented the second-largest annual increase in this measure over this period.

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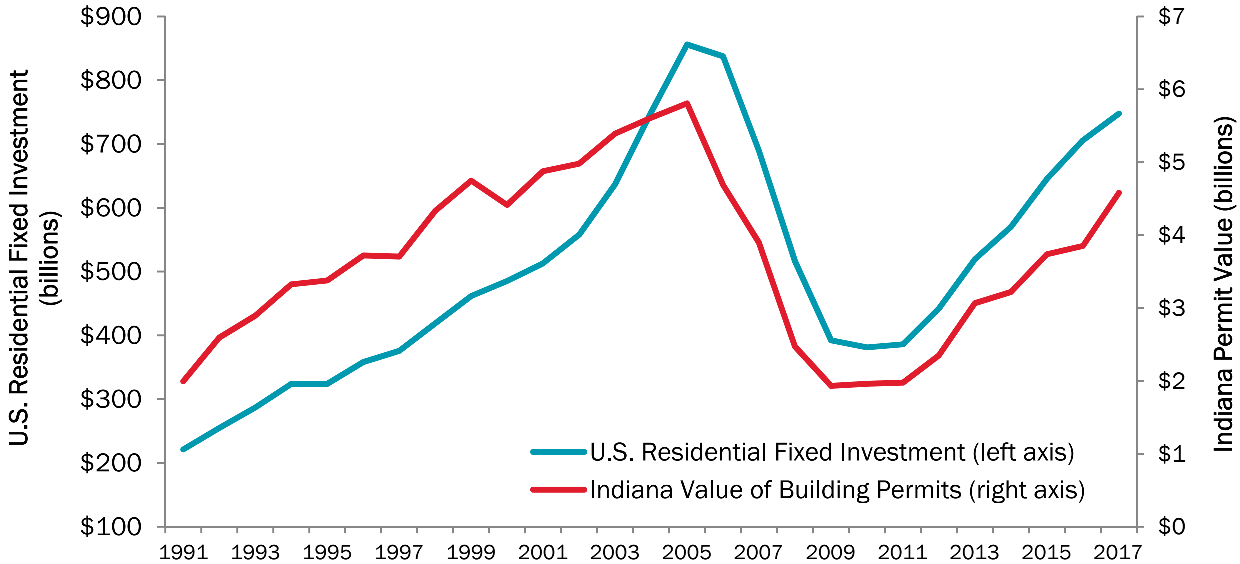
[8] According to the U.S. Bureau of Economic Analysis, RFI consists of the purchase of residential structures and the residential equipment that is owned by landlords and rented to tenants. Investment in residential structures includes the new construction of housing units, improvements to existing housing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

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

Figure 21: U.S. Residential Fixed Investment and Indiana Value of Building Permits, 1991 to 2017



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

Housing's Impact on Employment

Building permits were issued for 21,664 new residential units in Indiana in 2017. This represents a 16 percent increase over 2016 and is the state's highest total since 2007. New single-family homes account for the lion's share of the state's building permits in 2017 with 16,075 new units—a 14 percent increase year-over-year. While growth in residential constructions is a positive development, the number of new units in 2017 was still only 55 percent of the average annual number of new units built in Indiana between 1999 and 2005.

Of course, this lower level of new housing permits translates into fewer jobs available in residential construction. Indiana lost 7,850 jobs in this industry from 2005 through 2011, but has since regained 1,800 of those positions over the last five years. At the end of the day, however, Indiana has roughly 6,100 fewer residential construction jobs in 2016 than it had at its peak—a 32 percent decline.

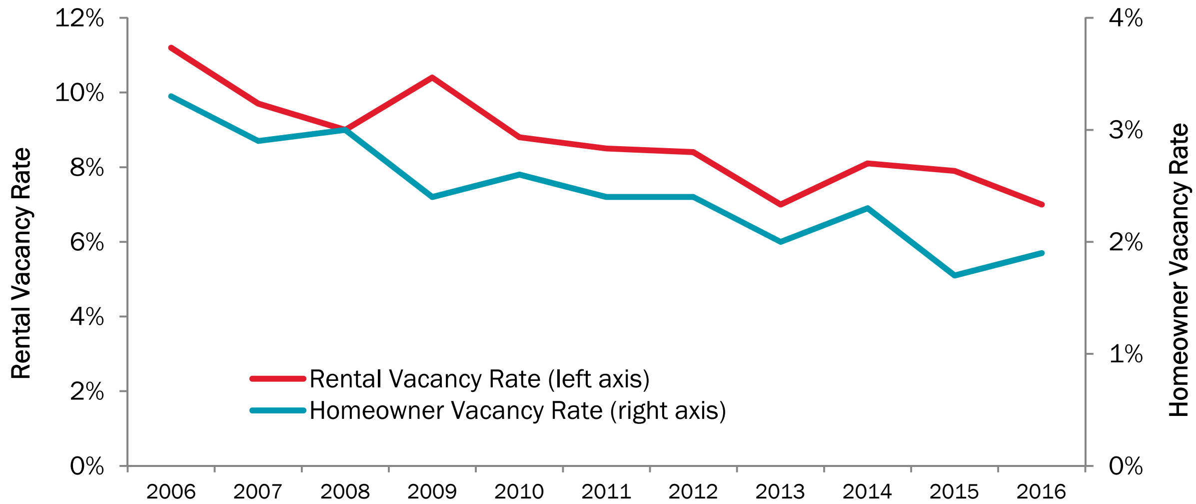
The employment impacts of this decline and slow recovery don't end with the construction industry. With fewer housing units built, there is a reduced demand for other goods and services related to the industry, such as architecture and design, building materials and home furnishings. According to IMPLAN economic modeling data, 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 deficit of 6,100 construction jobs in 2016 translates to a loss of an estimated 4,880 jobs in other industries in the state.

Looking Ahead

Clearly, continued growth in residential construction would be a shot in the arm for the Indiana economy. Several industry forecasts predict that construction activity at the national level will continue to pick up over the next couple of years. The Mortgage Bankers Association's April 2017 outlook, for instance, forecasts a 9 percent increase in housing starts in 2018. If residential construction could see a similar uptick in Indiana, then housing will come closer to assuming its usual role in the state's economy.

Several indicators show that construction is bound to improve further. First, vacancy rates continue to decline in Indiana, indicating a tightening housing market. Both the rental vacancy rate (7.0 percent) and the homeowner vacancy rate (1.9 percent) in Indiana have seen a general pattern of decline over the past decade (see **Figure 22**).

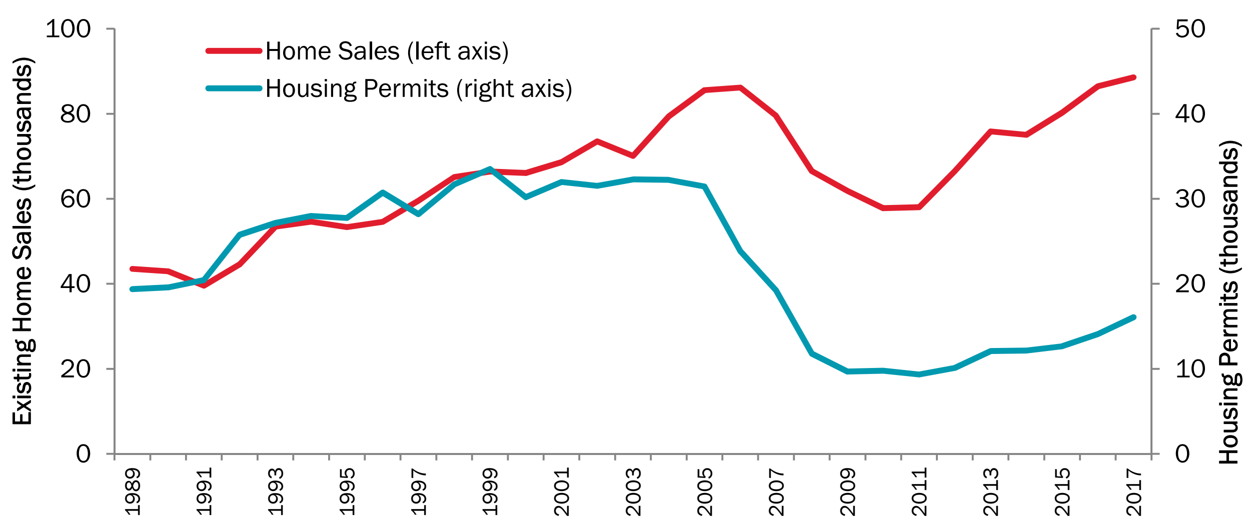
Figure 22: Indiana Homeowner and Rental Vacancy Rates, 2006 to 2016



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

Another sign that new construction should continue to improve is the wide gap between the number of existing-home sales in the state and the number of new single-family permits. From 1988 to 2005, there was a fairly consistent ratio of approximately two existing-home sales for each single-family building permit in Indiana (see **Figure 23**). In 2017, however, that ratio was roughly six-to-one. Given the current situation of strong buyer demand but low inventory of existing homes for sale, new home construction will almost certainly continue to improve over the next few years.

Figure 23: Indiana Existing-Home Sales and Single-Family Housing Permits, 1989 to 2017



Source: U.S. Census Bureau, Moody's Economy.com, Indiana Association of Realtors

Conclusion

Most indicators show that Indiana's housing market is in good shape. The state had a record number of existing-home sales in 2017 and house price appreciation is as strong as we have seen in the last quarter century. Additionally, Indiana's foreclosure rate continues to fall and residential construction is finally beginning to perk up. With Indiana's economy doing fairly well and mortgage rates likely to stay below 5 percent for a while longer, these facets of the housing market will likely remain strong.

Residential construction, in particular, should be the indicator to watch in 2018. Another leap forward in new home construction is sorely needed to help alleviate problems caused by the short supply of existing homes on the market. Inventory constraints could become even more of a concern if stronger net in-migration and the emergence of the millennial generation trigger stronger household formation rates over the next few years.

Of course, the strength of the Indiana economy will determine whether measures such as residential construction and household formation rates improve. Growth in employment and wages will draw more people to the housing market, and spur new construction. If the state's economy can continue to improve, the Indiana housing market could soon be hitting on all cylinders.

Appendix

Table 3: Home Sales and Median Sales Price by County

County	Existing-Home Sales			Median Sales Price		
	2016	2017	Percent Change	2016	2017	Percent Change
Indiana Total	**86,043**	**88,566**	**2.9%**	**$139,000**	**$146,900**	**5.7%**
Adams	259	261	0.8%	$90,000	$99,450	10.5%
Allen	5,664	5,658	-0.1%	$129,000	$136,900	6.1%
Bartholomew	1,399	1,193	-14.7%	$157,000	$169,125	7.7%
Benton	60	93	55.0%	$72,950	$884,000	15.1%
Blackford	100	95	-5.0%	$60,158	$57,750	-4.0%
Boone	1,249	1,262	1.0%	$234,000	$234,988	0.4%
Brown	295	318	7.8%	$190,000	$195,000	2.6%
Carroll	168	171	1.8%	$117,000	$105,000	-10.3%
Cass	359	335	-6.7%	$75,900	$70,000	-5.1%
Clark	2,038	2,149	5.40%	$144,000	$152,000	5.6%
Clay	233	227	-2.60%	$89,900	$93,000	3.4%
Clinton	223	228	2.20%	$93,000	$95,000	2.2%
Crawford	91	74	-18.7%	$80,400	$88,000	9.5%
Daviess	224	222	-0.9%	$99,500	$89,500	-10.1%
Dearborn	584	582	-0.3%	$154,000	$157,900	2.5%
Decatur	264	283	7.2%	$119,000	$125,000	5.0%
DeKalb	548	641	17.0%	$119,900	$123,700	3.2%
Delaware	1,161	1,157	-0.3%	$87,000	$87,500	0.6%
Dubois	388	380	-2.1%	$131,000	$148,000	13.0%
Elkhart	1,927	2,239	16.2%	$134,900	$143,000	6.0%
Fayette	120	121	0.8%	$71,900	$68,000	-5.40%
Floyd	1,257	1,313	4.5%	$152,000	$165,000	8.6%
Fountain	55	74	34.5%	$85,000	$71,750	-15.6%
Franklin	153	165	7.8%	$139,950	$155,000	10.8%
Fulton	179	184	2.8%	$86,200	$102,250	18.6%
Gibson	347	277	-20.2%	$110,500	$112,900	2.2%
Grant	596	652	9.4%	$79,900	$85,000	6.4%
Greene	190	180	-5.3%	$78,000	$93,000	19.2%
Hamilton	6,979	7,045	0.9%	$240,000	$257,500	7.3%
Hancock	1,334	1,372	2.8%	$157,950	$175,000	10.8%

County	Existing-Home Sales			Median Sales Price		
	2016	2017	Percent Change	2016	2017	Percent Change
Harrison	443	497	12.2%	$140,000	$157,950	12.8%
Hendricks	2,985	3,170	6.2%	$172,000	$185,000	7.6%
Henry	404	423	4.7%	$73,250	$86,500	18.1%
Howard	1,318	1,284	-2.6%	$96,950	$107,950	11.3%
Huntington	439	480	9.3%	$90,000	$97,150	7.9%
Jackson	437	446	2.1%	$117,250	$119,900	2.3%
Jasper	384	367	-4.4%	$145,500	$156,500	7.6%
Jay	103	126	22.3%	$75,000	$75,000	0.0%
Jefferson	321	357	11.2%	$115,000	$124,750	8.5%
Jennings	172	224	30.2%	$82,000	$97,000	18.3%
Johnson	2,800	2,808	0.3%	$155,000	$169,000	9.0%
Knox	302	316	4.6%	$93,000	$90,000	-3.2%
Kosciusko	1,028	942	-8.4%	$142,750	$154,000	7.9%
LaGrange	228	202	-11.4%	$129,950	$151,300	16.4%
Lake	5,948	6,116	2.8%	$142,500	$152,506	7.0%
LaPorte	1,305	1,326	1.6%	$128,000	$124,500	-2.7%
Lawrence	441	471	6.8%	$96,950	$101,400	4.6%
Madison	1,572	1,662	5.7%	$89,100	$100,000	12.2%
Marion	14,087	14,889	5.7%	$127,000	$135,000	6.3%
Marshall	399	432	8.3%	$132,400	$135,000	2.0%
Martin	62	56	-9.7%	$81,500	$91,250	12.0%
Miami	287	266	-7.3%	$70,750	$75,500	6.7%
Monroe	1,844	1,822	-1.2%	$168,958	$179,950	6.5%
Montgomery	513	525	2.3%	$110,000	$116,000	5.5%
Morgan	1,065	1,076	1.0%	$145,000	$153,700	6.0%
Newton	172	180	4.7%	$103,950	$112,000	7.7%
Noble	480	517	7.7%	$117,900	$122,850	4.2%
Ohio	51	59	15.7%	$119,000	$135,000	13.4%
Orange	42	45	7.1%	$60,050	$73,500	22.4%
Owen	194	207	6.7%	$112,000	$120,900	7.9%
Parke	42	41	-2.4%	$73,000	$85,000	16.4%
Perry	123	137	11.4%	$87,000	$89,450	2.8%
Pike	85	104	22.4%	$77,250	$89,900	16.4%
Porter	2,376	2,390	0.6%	$178,000	$185,500	4.2%
Posey	250	187	-25.2%	$127,900	$125,000	-2.3%
Pulaski	83	80	-3.6%	$81,000	$74,250	-8.3%
Putnam	517	482	-6.8%	$118,500	$132,000	11.4%
Randolph	190	190	0.0%	$65,050	$70,050	7.7%

County	Existing-Home Sales			Median Sales Price		
	2016	2017	Percent Change	2016	2017	Percent Change
Ripley	232	239	3.0%	$121,250	$129,900	7.1%
Rush	11	8	-27.3%	$45,000	$38,500	-14.4%
Scott	161	168	4.3%	$108,500	$107,750	-0.7%
Shelby	542	585	7.9%	$117,250	$117,500	0.2%
Spencer	217	238	9.7%	$121,000	$120,000	-0.8%
Starke	211	224	6.2%	$85,000	$103,700	22.0%
Steuben	488	512	4.9%	$146,200	$145,750	-0.3%
St. Joseph	3,103	3,464	11.6%	$120,625	$130,000	7.8%
Sullivan	113	115	1.8%	$75,000	$72,500	-3.3%
Switzerland	66	65	-1.5%	$102,500	$120,000	17.1%
Tippecanoe	2,390	2,375	-0.6%	$150,000	$151,000	0.7%
Tipton	137	160	16.8%	$113,450	$110,750	-2.4%
Union	6	3	-50.0%	$60,000	$135,000	125.0%
Vanderburgh	2,609	2,616	0.3%	$125,000	$126,000	0.8%
Vermillion	97	91	-6.2%	$65,000	$67,900	4.5%
Vigo	1,077	1,153	7.1%	$97,000	$99,000	2.1%
Wabash	297	325	9.4%	$83,700	$84,950	1.5%
Warren	67	53	-20.9%	$83,500	$120,000	43.7%
Warrick	953	951	-0.2%	$170,250	$170,000	-0.1%
Washington	283	277	-2.1%	$95,450	$90,000	-5.7%
Wells	317	333	5.0%	$109,000	$116,000	6.4%
White	293	296	1.0%	$120,000	$114,200	-4.8%
Whitley	437	462	5.7%	$133,000	$135,000	1.5%

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