The State of Indiana's Housing Market

Prepared for

Indiana Association of REALTORS®

KELLEY SCHOOL OF BUSINESS
INDIANA UNIVERSITY
Indiana Business Research Center

REALTOR®

The State of Indiana's Housing Market

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Executive Summary

The Indiana housing market is in a bit of a standoff. For several years, the state has seen both a strengthening of homebuyer demand—as evidenced by four consecutive years of existing home sales growth through 2018—and a dwindling of market supply. In 2019, however, the state seems to be bumping up against the limits of both measures.

For instance, existing home sales in Indiana remain strong, yet the sales rate through the first half of 2019 is slightly off the record pace set last year. Meanwhile, Indiana's so-called "months supply" of inventory measure in June 2019 was at an exceptionally low 3.4 months—the same as it was in June 2018.

The housing market stalemate extends to residential construction as well. While strong demand and short supply would suggest there should be a healthy market for new homes, Indiana has seen a decline in new housing starts so far in 2019 (see **Table 1**).

These stubbornly tight market conditions have fueled a surge in home prices. Existing house prices in Indiana were up 6.9 percent year-over-year in the first quarter of 2019. This pace of gain is lower than that seen last year, but is still a significantly higher growth rate than the state has seen at any time before these current market dynamics took hold. Even with the 30-year mortgage rate once again falling well below 4 percent, these strong price gains will raise affordability concerns for more and more Hoosiers.

Table 1: Indiana Housing Market by the Numbers

	U.S.	Indiana
Existing Home Sales, July 2018 to June 2019, Year-over-Year Change	-4.0%	-0.9%
House Price Appreciation, 2018:1 to 2019:1	5.8%	6.9%
Residential Building Permits, Number of Units, January 2019 to June 2019, Year-over-Year Change	-3.5%	-6.5%
Foreclosure Rate, 2019:2	0.9%	1.2%
Months Supply of Inventory, June 2019	4.4	3.4
Rental Vacancy Rate, 2019:2	6.8%	7.9%

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

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, foreclosures, 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 89,125 sales in 2018. The market has remained strong so far in 2019 with 41,448 sales in the first half of the year. However, this mark is 3 percent lower than the sales tally for the same period in 2018.
- While homebuyer demand remains healthy, the inventory of homes on the market is still exceptionally low. Over the 12-month period ending in June 2019, Indiana's average monthly inventory was roughly 24,640 existing homes on the market, which is down 4.8 percent year-over-year and more than 17 percent off the same period in 2017. 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 3.4 months in June 2019, which was lower than the U.S. mark of 4.4 months.
- Indiana's median price for existing home sales is up to $163,000 over the 12-month period ending in June 2019—a 6.9 percent increase year-over-year. The Federal Housing Finance Agency's House Price Index shows that Indiana had the 11th-fastest one-year rate of price growth among states in the first quarter of 2019.
- With Indiana's foreclosure rate holding at between 1.1 percent and 1.2 percent over the last year, foreclosures in the state have fallen to their lowest levels since 1998. Indiana's foreclosure rate remains slightly higher than the U.S. average and ranks 16th-highest nationally.
- After plunging nearly 4 percentage points from 72.1 percent in 2006 to 68.2 percent in 2015, Indiana's homeownership rate appears to have stabilized in the last couple of years and actually crept up to 69 percent in 2017. Indiana had the nation's 13th-highest homeownership rate in 2017.
- After climbing through much of 2018, the 30-year conventional mortgage rate has dropped sharply through the first half of the year and sits at roughly 3.6 percent in August 2019. Even with rates expected to remain low over the next year, rapidly rising house prices mean that a growing number of prospective homebuyers could face affordability concerns. In Indiana, however, housing remains comparatively 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 2018.
- Indiana's household formation rate hit 0.9 percent in 2017—that state's highest level since 2007. According to Census Bureau estimates, Indiana had a significant uptick in migration to the state in 2018 (with a net inflow of 12,780 people), so look for another strong household formation rate for 2018 when the data are released later this year.
- Residential construction in Indiana has stalled so far in 2019. The number of new housing units permitted for construction in the first half of the year is down 6.5 percent over the same time in 2018. Comparing these same periods, new multi-family units are off by 8.8 percent, while single-family starts are down 5.6 percent.

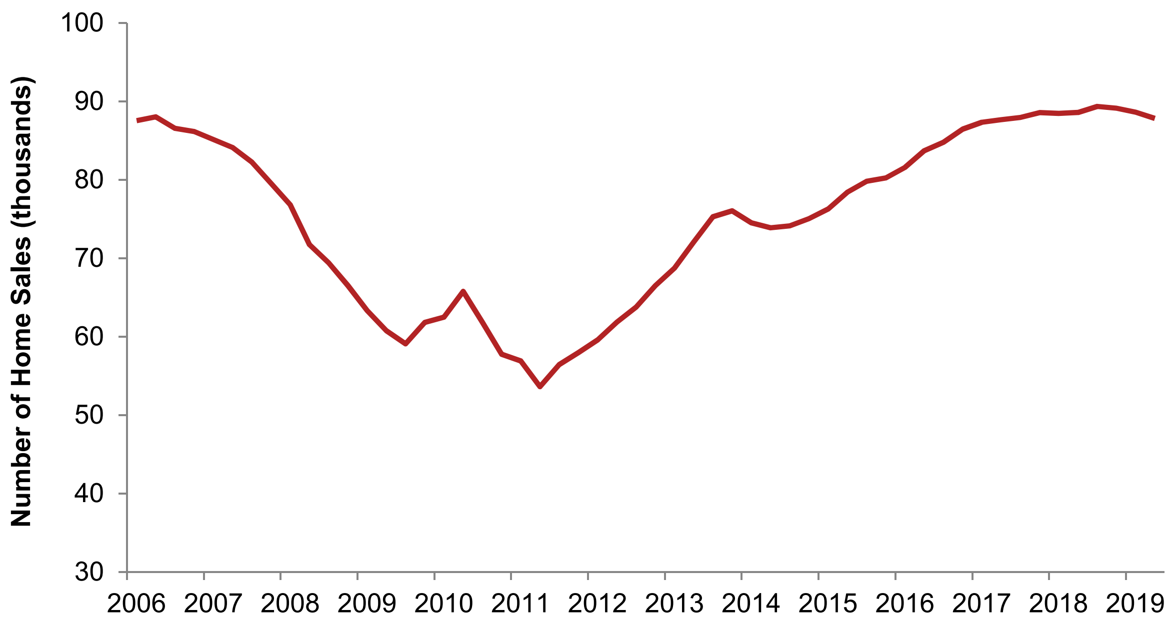
Market Conditions

Existing Home Sales Hit a Plateau

Indiana is off to another strong year for existing home sales in 2019, although with the inventory homes on the market still at an exceptionally low level, the sales tally through the first half of the year is slightly off the state's record pace set in 2018. The roughly 41,450 sales over the first six months of 2019 represents a 3 percent decline over the same period in 2018. Meanwhile, over the last 12 months, existing home sales are down 0.9 percent year-over-year.

Even if sales end up taking a slight step back in 2019, homebuyer demand has clearly rebounded since its low point in the middle of 2011 when the state registered only 53,600 existing home sales over the 12-month period (see **Figure 1**). By comparison, Indiana has registered more than 87,800 existing home sales over the 12-month period ending in June 2019, which is a 64 percent increase over the past eight years.

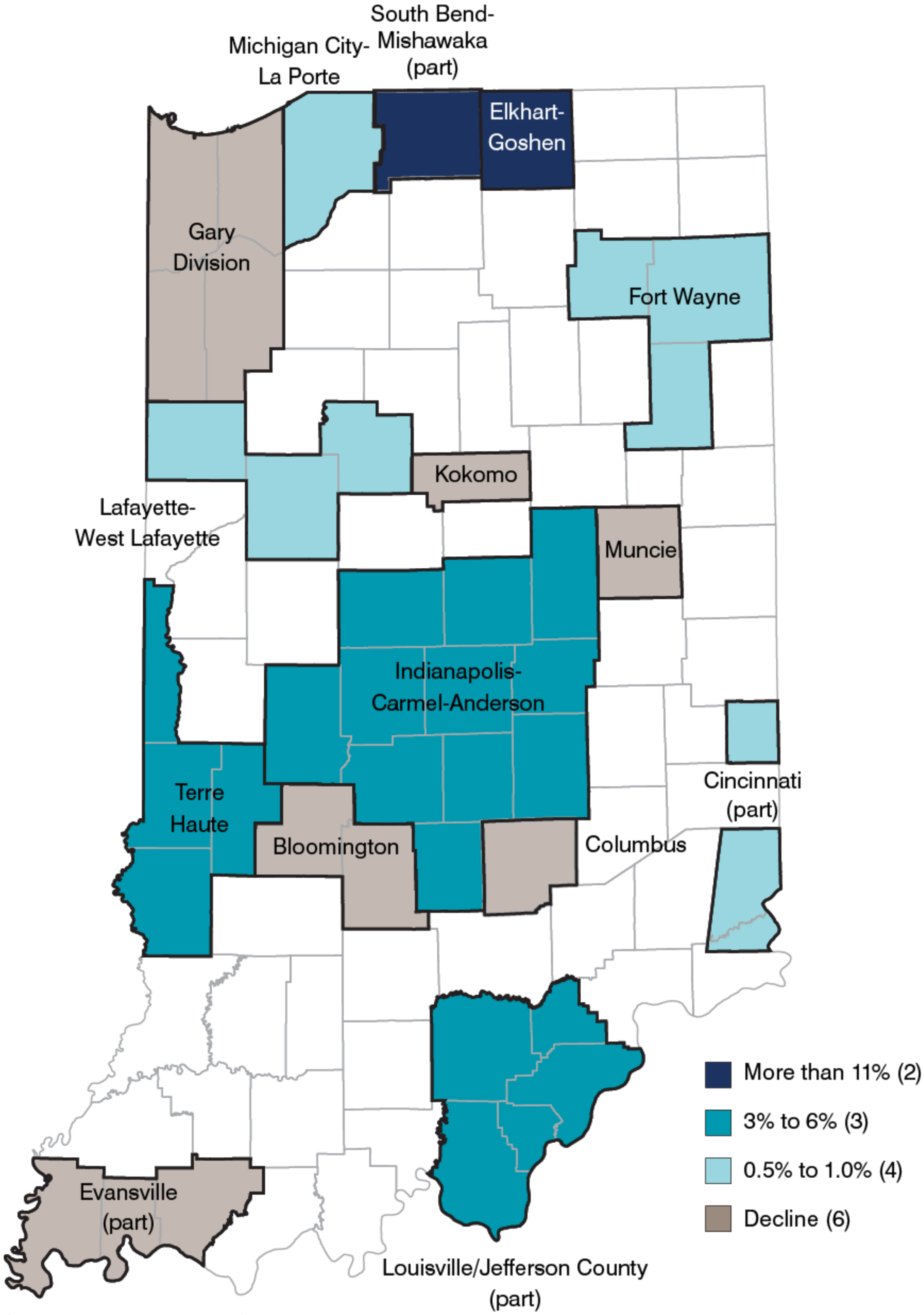
Figure 1: Indiana Home Sales, Moving Four-Quarter Total, 2006:1 to 2019:2



Source: Indiana Association of Realtors

The dip in existing home sales was evident in nearly all Indiana metro areas. Among the state's 15 metros, only South Bend-Mishawaka, Evansville (Indiana portion only) and Kokomo posted a year-over-year increase in sales in the last 12 months (see **Figure 2**). At the other end of the spectrum, the Columbus metro and the Indiana portion of the Cincinnati area each saw a roughly 10 percent decline in sales in the last year. The Indianapolis-Carmel-Anderson metro had a 0.5 percent drop over this period to approximately 34,700 sales, which accounts for 39 percent of the state's total existing home sales.

Figure 2: Total Existing Home Sales by Metro Area, Year-over-Year Change. July 2018 to June 2019



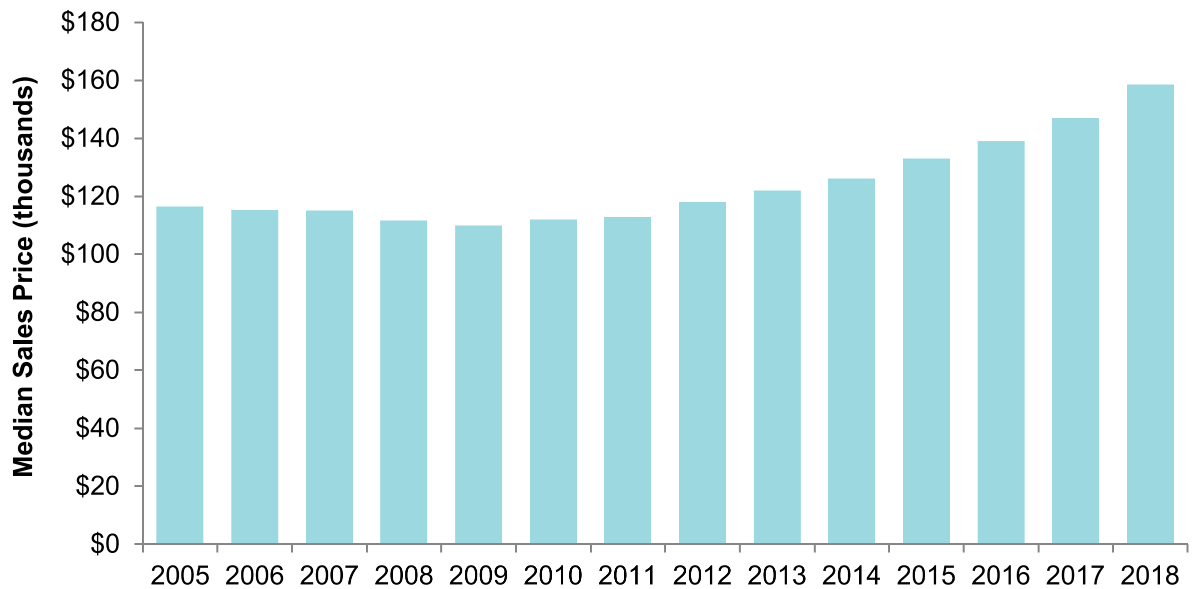
Source: Indiana Association of Realtors

The 48 Indiana counties that are not part of a metro area combined for a 2.0 percent uptick in sales over the last year. Of these non-metro counties with at least 200 sales, Randolph County had the largest increase at 21 percent, followed by Cass (15 percent), Decatur (14 percent) and Henry (11 percent) counties.[1]

Sales Prices Continue to Climb

The dramatic imbalance between strong demand and scant supply has triggered a spike in home prices as well. At $158,500 last year, the median sales price for existing homes increased by 7.9 percent in 2018—by far the strongest one-year increase on record and the seventh consecutive year with median price gains of at least 3 percent (see **Figure 3**). The surge in prices has continued into 2019, as Indiana's median price over the 12-month period ending in June 2019 was up to $163,000—a 6.9 percent uptick year-over-year.

Figure 3: Indiana Median Sales Price, 2005 to 2018



Source: Indiana Association of Realtors

Looking around the state, the median sales price has increased in 75 of Indiana's 92 counties over the past year. For counties with at least 500 home sales between July 2018 and June 2019, Putnam (15.3 percent increase), Boone (12.7 percent) and Dearborn (12.2 percent) counties had the strongest price gains over this period. Over this same 12-month timeframe, six Indiana counties had a median sales price greater than $200,000, with Boone ($285,000 median sales price), Hamilton ($282,000), Brown ($234,900), Porter ($210,000), Monroe ($210,000) and Hendricks ($208,000) counties leading the way.

The sharp climb in prices over the last several years has been driven in large part by a shrinking inventory of existing homes for sale. Over the 12-month period ending in June 2019, Indiana's average

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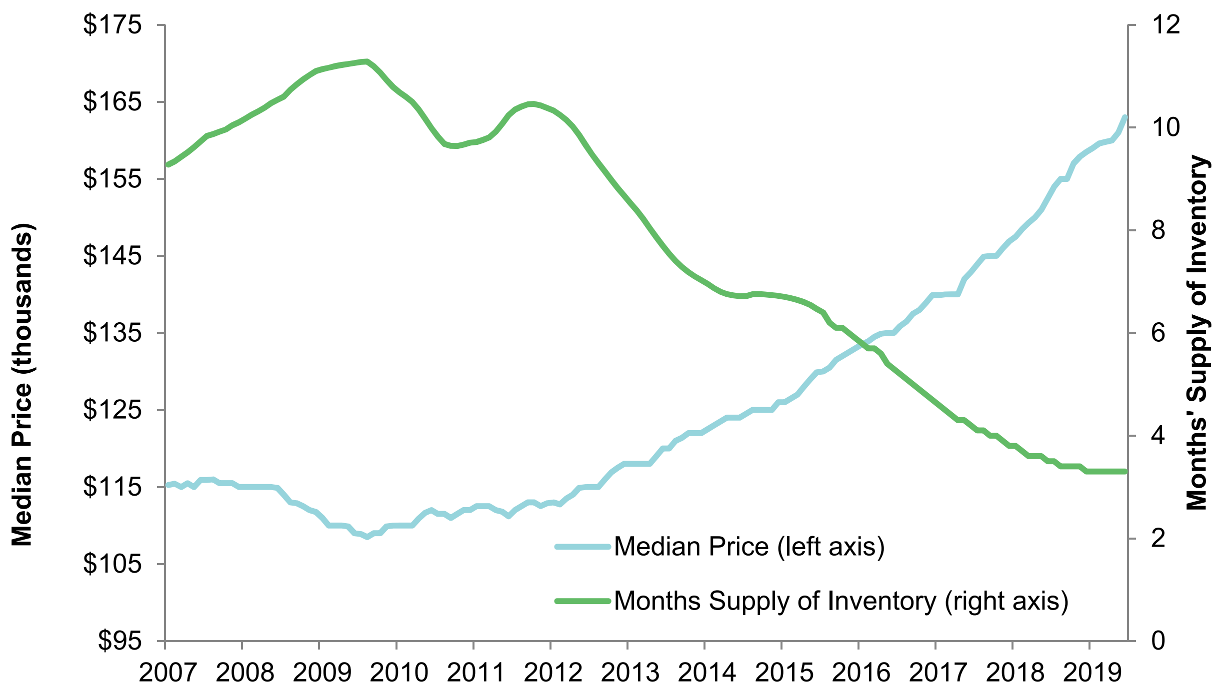
[1] See the appendix for home sales and median sales price data for all Indiana counties.

monthly inventory was roughly 24,640 existing homes on the market, which is down 4.8 percent year-over-year and more than 17 percent off the same period in 2017.

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 the previous year. As one would expect, there is a strong negative relationship between months supply and prices (correlation = -0.96), 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 June 2019

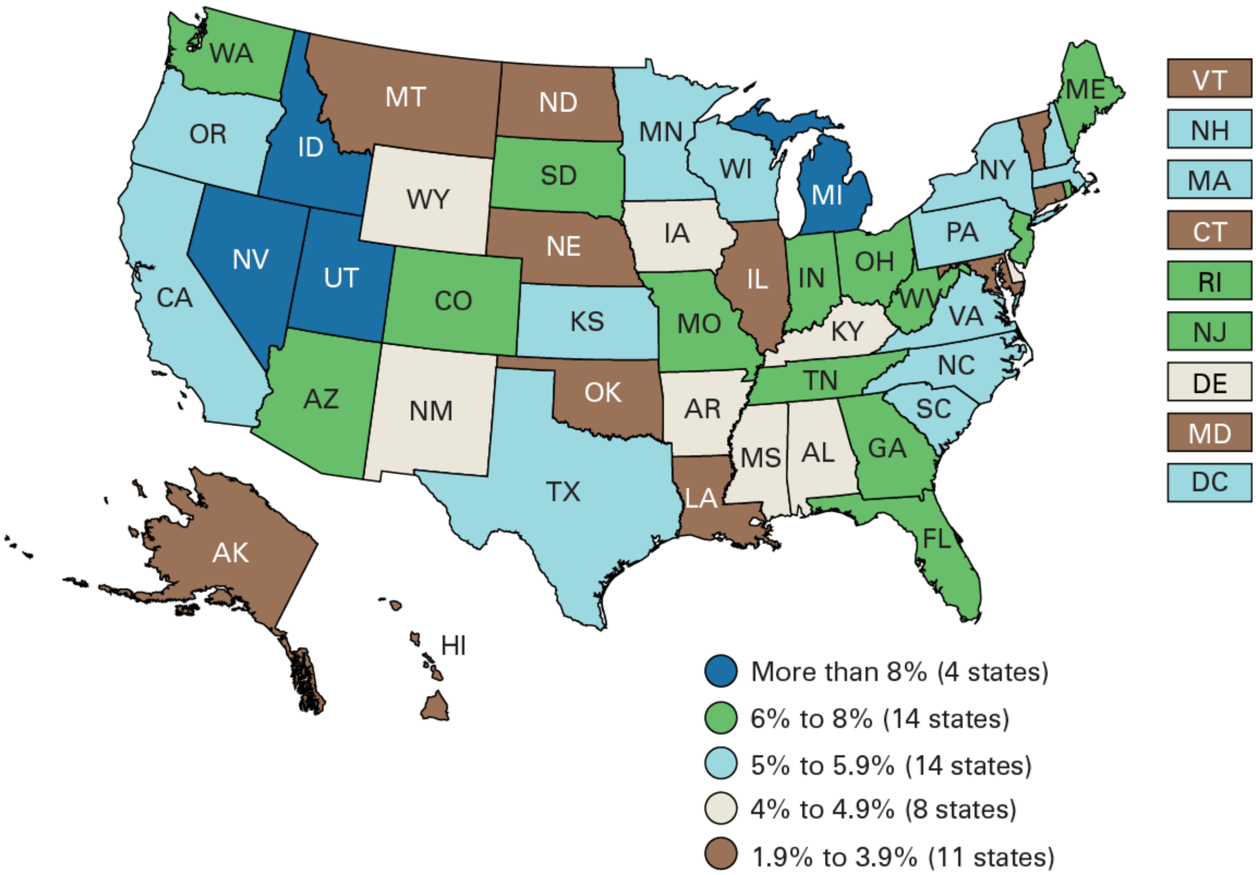


Source: Indiana Association of Realtors

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 21 consecutive quarters dating back to 2013, and the state's home prices in the first quarter of 2019 are up 6.9 percent year-over-year. This rate of appreciation ranked 11th-fastest nationally. In the past year, Indiana's growth in house prices lagged neighboring Michigan (8.3 percent), but outpaced Ohio (6.4 percent), Kentucky (4.9 percent) and Illinois (3.3 percent), as seen in **Figure 5**.

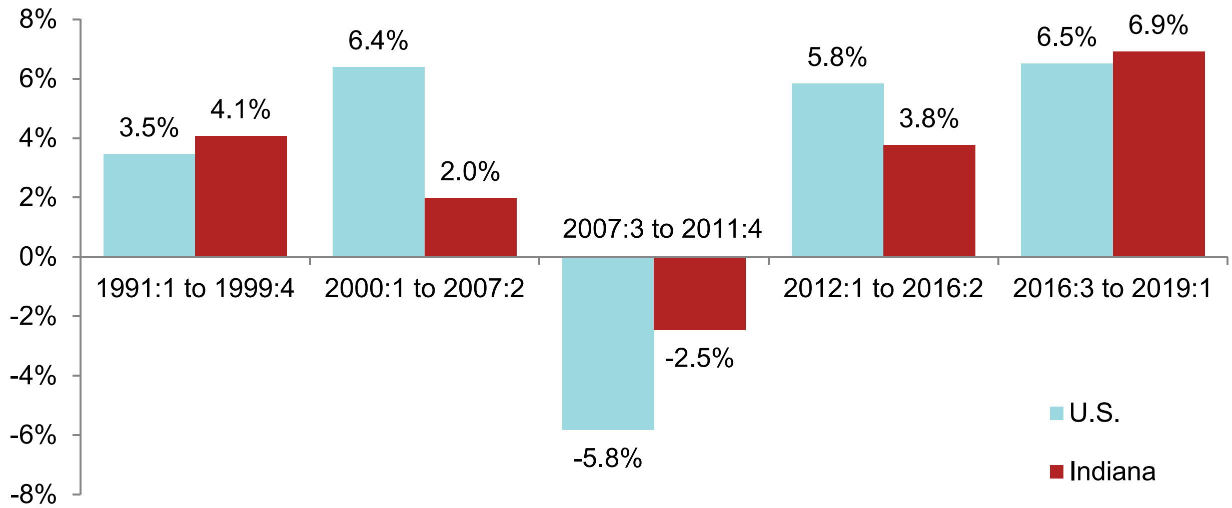
Figure 5: Change in House Price Index by State, 2018:1 to 2019:1



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

Figure 6 illustrates just how unusual the recent surge in house prices has been for Indiana. Over the past three decades, both Indiana and the U.S. have had several distinct periods of house price changes. 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 saw a return to house price appreciation starting in 2012. Since the middle of 2016, however, prices in Indiana have been growing at an average annualized rate of 6.9 percent—a much stronger pace of growth than the state has seen over a sustained period at any other time over the last 28 years.

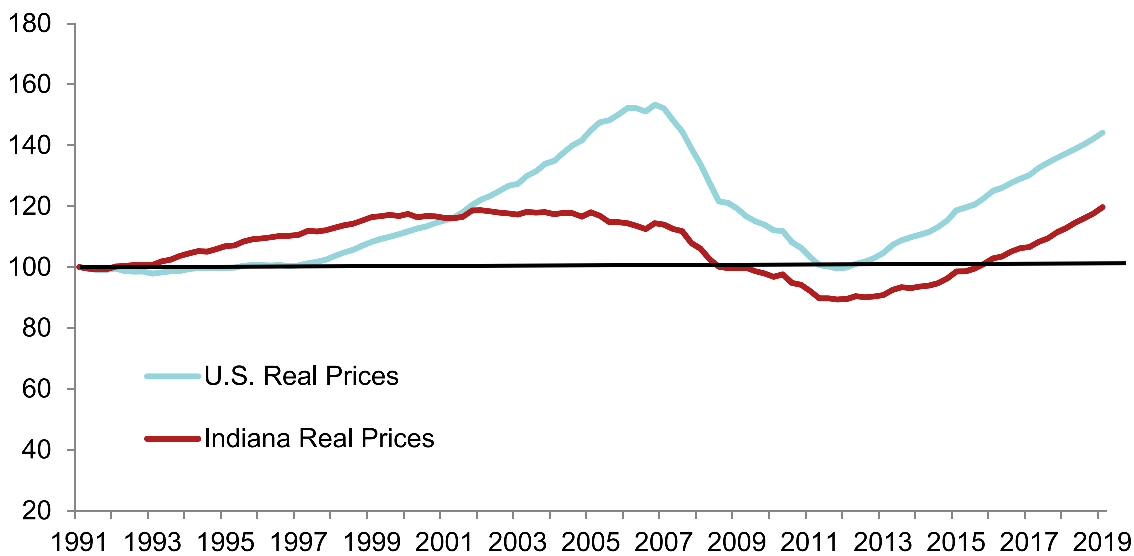
Figure 6: Average Annualized Growth in HPI over Select Periods, 1991:1 to 2019:1



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

By nominal price measures (i.e., not adjusted for inflation) such as the median sales price or the HPI, Indiana house prices fully recovered from the housing crash several years ago, and the state has continued to set new record highs in these measures year after year. When Indiana's house price trend is adjusted for inflation, however, the early 2000s had long represented the peak period for house prices in the state. That changed in the first quarter of 2019 as "real" house prices in Indiana eclipsed the previous record high set back in 2002 (see **Figure 7**). Given the current state of the market, Indiana can expect to see its real house prices continue climbing over the next year or two.

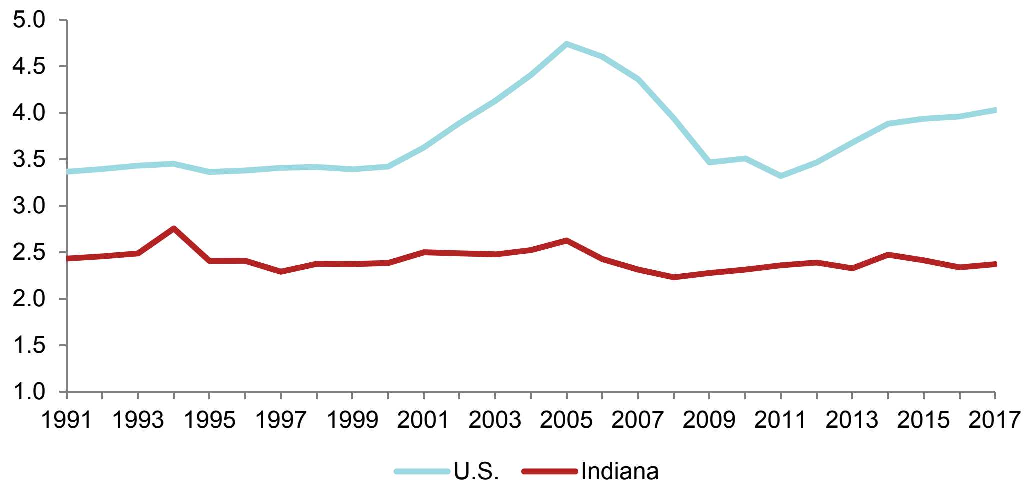
Figure 7: House Price Index Adjusted for Inflation, 1991:1 to 2019:1



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)

The key question is whether household incomes in Indiana can keep pace. Over the last three decades, the ratio of median sales prices to median household incomes (MHHI) in Indiana has held remarkably steady—even during the bubble years and subsequent crash (see **Figure 8**). However, Indiana has never experienced house price appreciation at the level seen over the last three years. Although data on MHHI is a bit dated, the roughly 7 percent average annual increase in Indiana's MHHI between 2014 and 2017 offers some hope that changes in house prices will continue to be tied to changes in income.

Figure 8: Ratio of Median Sales Price to Median Household Income, U.S. and Indiana, 1991 to 2017



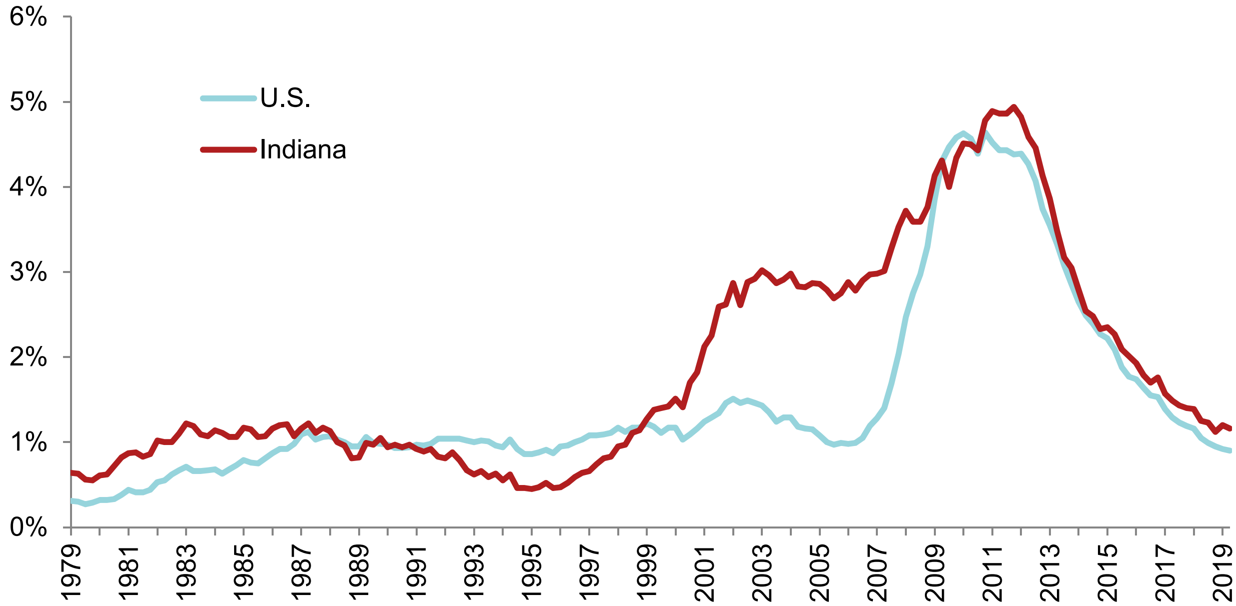
Source: U.S. Census Bureau, Indiana Association of Realtors, National Association of Realtors

Indiana Foreclosure Rate at Lowest Level since 1998

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 3.7 percentage points from its peak of 4.9 percent at the end of 2011 to 1.1 percent in the fourth quarter of 2018 (see Figure 9). This is Indiana's lowest foreclosure rate since 1998. Even with this drop, Indiana's foreclosure rate remains slightly above the U.S. average and ranks 16th-highest among states.

Figure 9: Share of Mortgages in Foreclosure, 1979:1 to 2019:2



Source: National Delinquency Survey, Mortgage Bankers Association

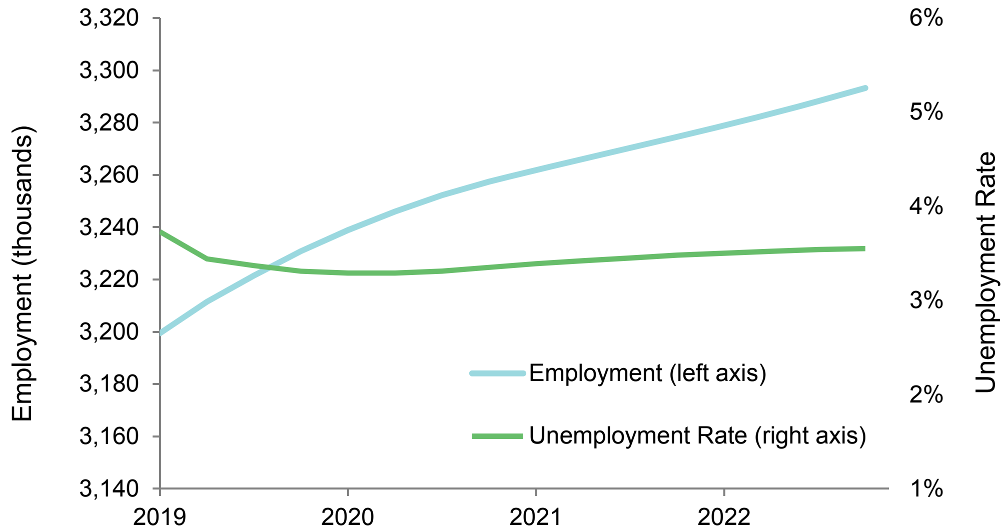
Looking Ahead

Over the last couple of years, Indiana's market for existing homes has been as strong as it has ever been, and homebuyer demand should remain healthy heading into 2020. 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 2.2 percent of Indiana homeowners with a mortgage had negative equity during the first quarter of 2019.[2] This mark is down sharply from nearly 12 percent at the beginning of 2013, and is well below the U.S. share of 4.1 percent. The combination of fewer homeowners with negative equity along with rising prices means that 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 10,650 jobs over the 12-month period ending in June 2019 and its unemployment rate sat at 3.5 percent. According to the latest forecast from the Indiana Business Research Center (IBRC) and the Center for Econometric Model Research (CEMR) at Indiana University, the state should see stronger employment growth in the next few years with an average annual gain of 20,800 jobs per year expected between 2020 and 2022 (see **Figure 10**). The state's unemployment rate is expected to remain low over this period, as well.

[2] "CoreLogic Homeowner Equity Insights," First Quarter 2019, www.corelogic.com/insights-download/homeowner-equity-report.aspx

Figure 10: Indiana Employment and Unemployment Rate Forecast, 2019:1 to 2022:4

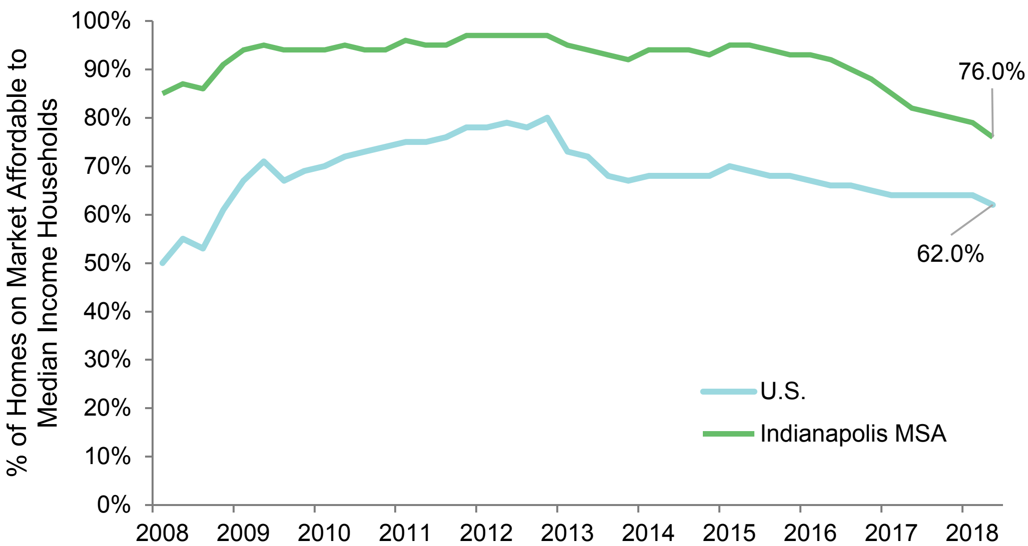


Source: Indiana University Center for Econometric Model Research and Indiana Business Research Center (released in June 2019)

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 U.S. metros in affordability in 2018.[3] That said, the sharp rise in home prices certainly has put a dent in affordability over the last couple of years. For instance, according to a new affordability measure developed by the FHFA, the share of homes on the market in the Indianapolis metro area that would be considered affordable to household at the area's median income level dropped from 95 percent at the end of 2015 to 76 percent by the midpoint of 2018 (see **Figure 11**). Rising prices will likely continue to impact affordability in the near term.

[3] "National Association of Realtors Housing Affordability Index," Metro Affordability 2018, www.nar.realtor/research-and-statistics/housing-statistics/housing-affordability-index

Figure 11: Housing Affordability Estimate, 2008 to 2018



Source: Federal Housing Finance Agency, Housing Affordability Estimate (Experimental Index)

Of course, mortgage interest rates also have a significant impact on housing affordability. After climbing through much of 2018, the 30-year conventional mortgage rate has dropped sharply through the first half of the year and sits at 3.8 percent in July 2019. Many market watchers expect to see mortgage rates remain low for some time. In their August 2019 economic forecasts, Freddie Mac predicted an average 30-year rate of 3.7 percent in 2020 while the Mortgage Bankers Association expects the mark to be only slightly higher at 4.0 percent for the same period.

Figure 12: 30-Year Conventional Mortgage Rate, January 2000 to July 2019

Source: Freddie Mac

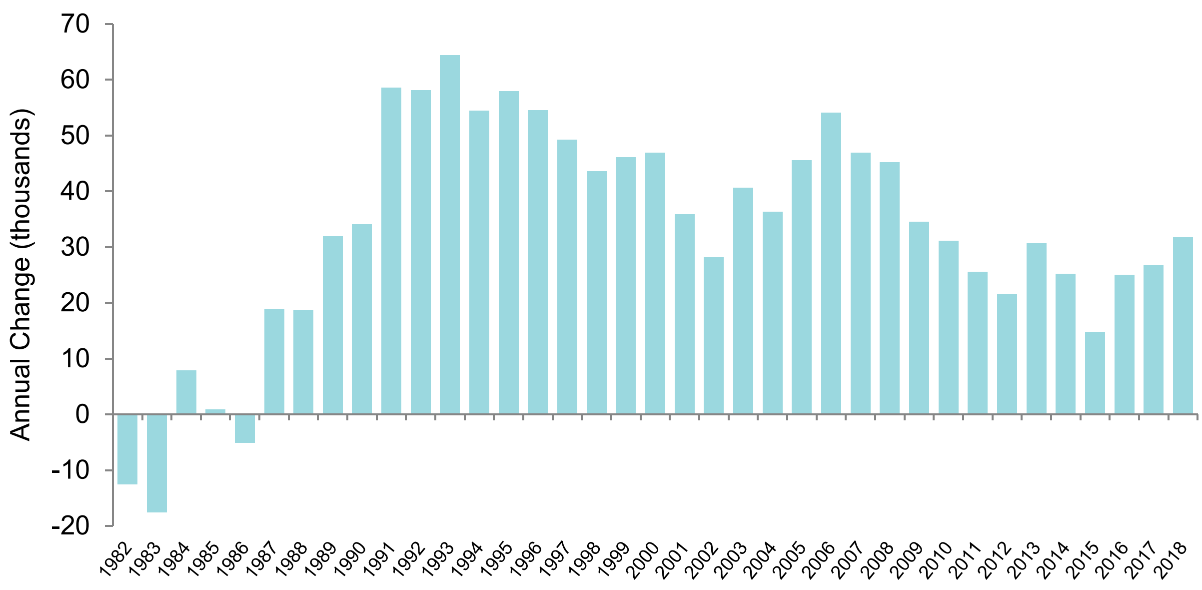
Demographic Fundamentals

Demographic Drivers of Housing Market on the Upswing

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 nearly 31,800 residents in 2018 was the state's largest annual gain since 2009 (see **Figure 13**). This relatively strong showing marks the third consecutive year that the state has shown improved population gains, and it offers some hope that population growth will rebound fully over the next few years. However, this doesn't change the fact that Indiana has been mired in its slowest stretch of population growth since the mid-1980s. Over the past eight years, Indiana has grown by an average of roughly 25,180 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, has grown by roughly 28,600 in 2017 and 2018. 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 13: Indiana Annual Population Change, 1982 to 2018

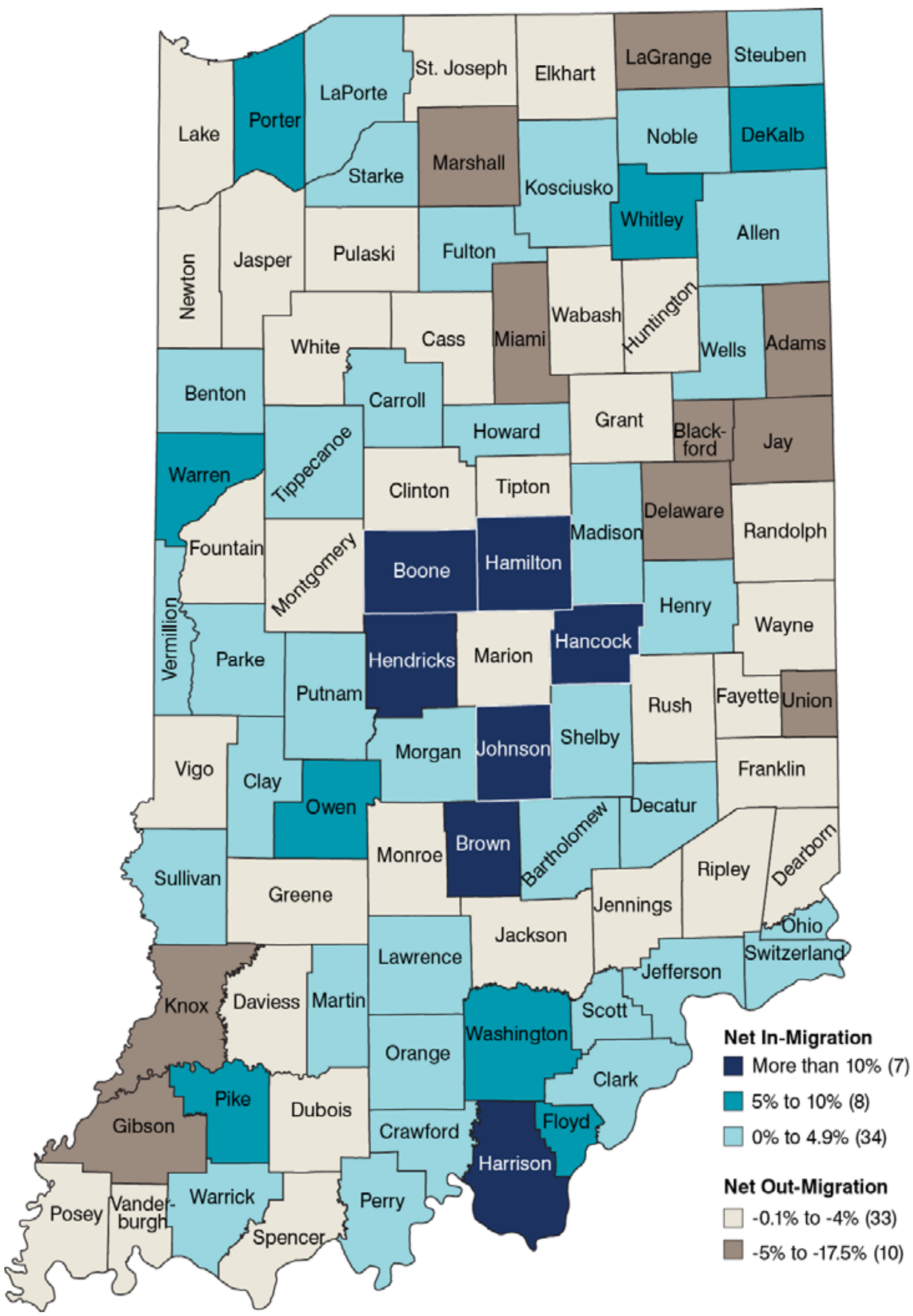


Source: U.S. Census Bureau population estimates

The state's uptick in population growth in 2018 was driven by a strong year for migration to the state. After averaging a net in-migration of just 1,880 residents per year between 2010 and 2017, Indiana had a net inflow of 12,780 residents last year.

Looking around the state, suburban counties bordering Indianapolis—along with Brown and Harrison counties in Southern Indiana—had the strongest net in-migration rates in 2018 (see **Figure 14)**. In all, 49 of the state's 92 counties had a net inflow of residents last year.

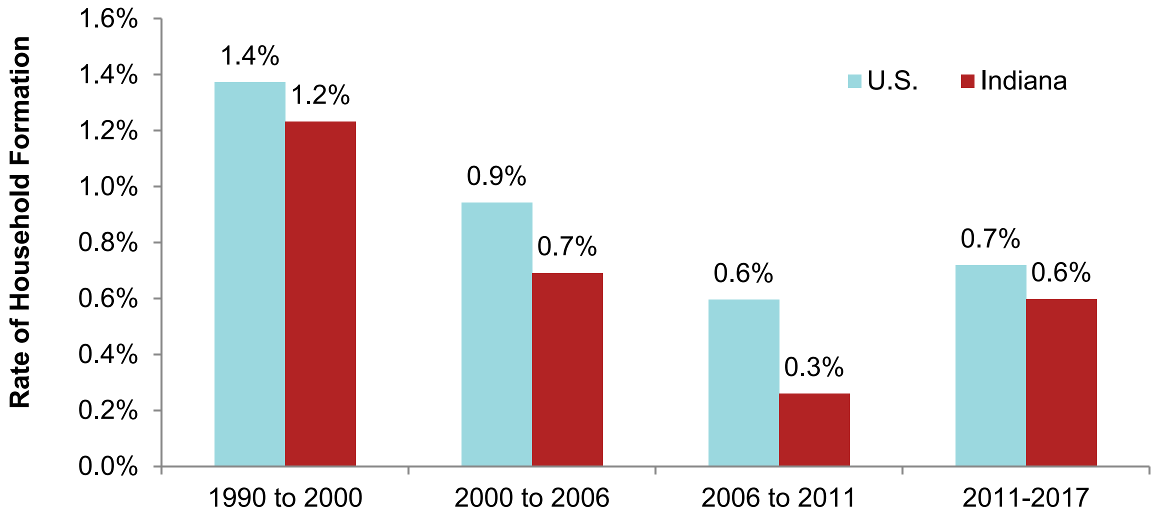
Figure 14: Net Migration Rates per 1,000 Residents, 2018



Source: U.S. Census Bureau population estimates

Along with the upbeat news on population gains, Indiana added an estimated 24,000 new households in 2017—the sixth consecutive year of household gains and the largest annual increase in that stretch. Indiana has had an average annual household formation rate of 0.6 percent over the past six years. This recent rate of household growth is slightly lower than the pace set between 2000 and 2006, but is a significant improvement over the “housing bust” era (see **Figure 15**).

Figure 15: Average Annual Household Formation Rates, 1990 to 2017



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

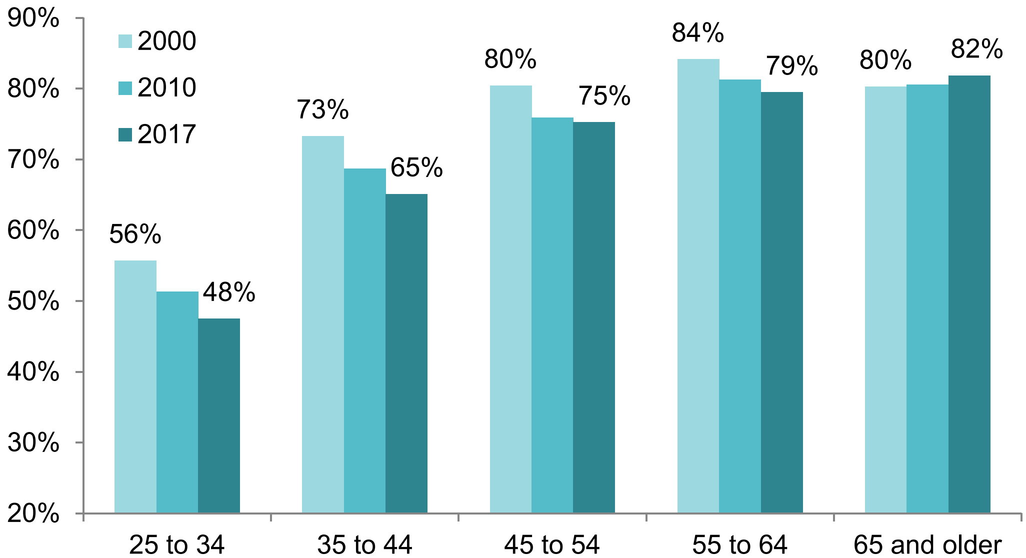
Indiana’s Homeownership Rate Improves in 2017

After plunging nearly 4 percentage points from 72.1 percent in 2006 to 68.2 percent in 2015, Indiana’s homeownership rate appears to have stabilized in the last couple of years and actually crept up to 69 percent in 2017.

While the recent uptick in homeownership is certainly a positive development for the state, this overall rate obscures the fact that the homeownership rates for most age groups in Indiana —particularly younger adults—is much lower than those seen 10 or 15 years ago. Since 2000, for instance, the homeownership rates for Hoosiers in the 25-to-34 and 35-to-44 age groups have each declined by 8 percentage points (see **Figure 16**). Over the same period, the homeownership rate for those between the ages of 45 and 64 has dropped 5 percentage points. Only Indiana’s senior age group has seen an uptick in its homeownership rate over the last 17 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 55 and 73, 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 16: Indiana Homeownership Rates by Age, 2000 to 2017



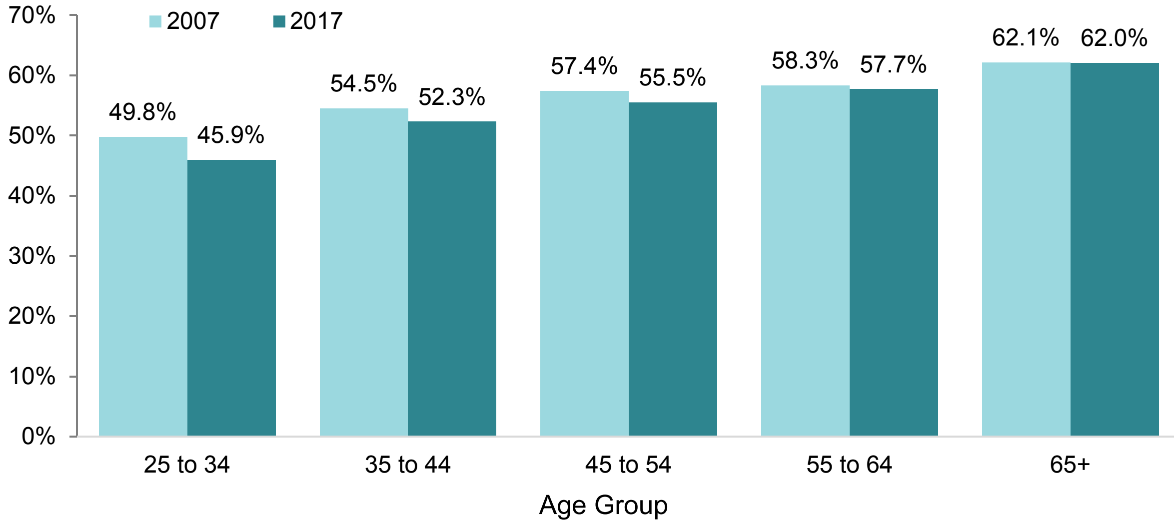
Source: U.S. Census Bureau, Decennial Census and American Community Survey

Looking Ahead

The key demographic question for the Indiana housing market in the near term will be whether or not household formation rates continue to improve. The state has seen stronger 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 23 and 38 in 2019), 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 2017 (see **Figure 17**). There are sizeable declines for the 35-to-44 and 45-to-54 age groups as well. If these pre-recession headship rates were still in effect in 2017, Indiana would have had approximately 66,000 more households.

Figure 17: Indiana Headship Rates by Age, 2007 and 2017

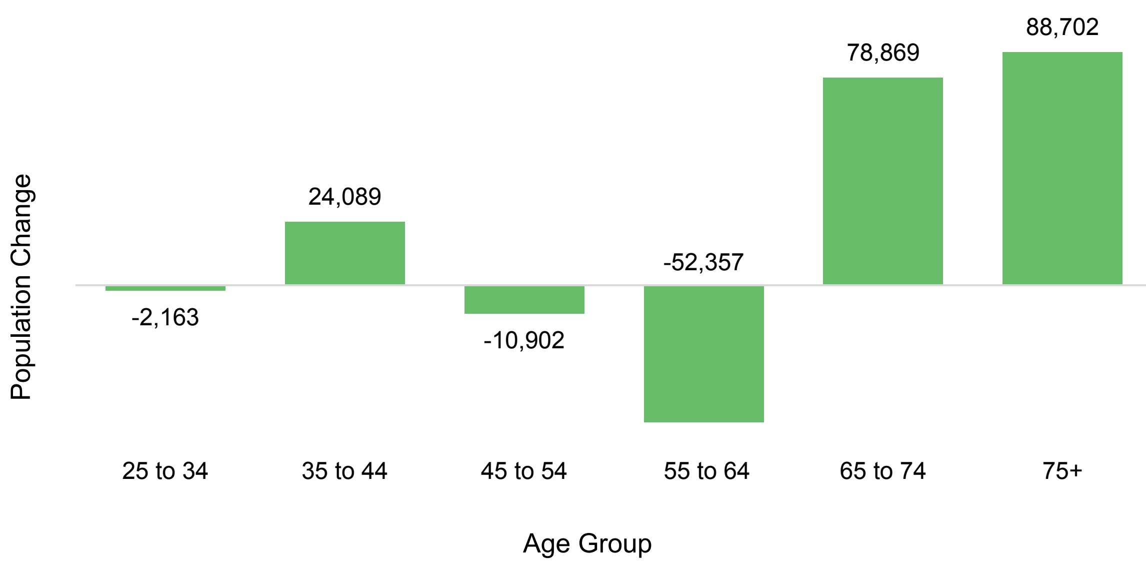


Source: U.S. Census Bureau, American Community Survey

This shortfall should represent a pool of potentially 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, any improvement on the current numbers—particularly among young adults—would boost housing demand.

The emergence of the large millennial generation will also provide a boost to household formation. As **Figure 18** illustrates, the number of Hoosiers between the ages of 25 and 44 will increase by a projected 22,000 residents between 2020 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 18: Indiana's Projected Population Change by Age Group, 2020 to 2025



Source: Indiana Business Research Center

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]

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 37 percent of all home sales in the U.S. in 2018—the largest share of any defined generation group.[5]

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 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.[6]

[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] "2019 Home Buyers and Sellers Generational Trends Report," National Association of Realtors, April 2019, www.nar.realtor/research-and-statistics/research-reports/home-buyer-and-seller-generational-trends.

[6] 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 Stalls in First Half of 2019

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.[7] 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.[8]

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 3.8 percent in 2018.

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 19** 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 roughly 14 percent per year over the last six years. Growth in this measure slowed to a 7.1 percent annual increase in 2018, however. Residential construction is off to a much slower start so far in 2019, with the value of building permits over the first half of the year down 8.6 percent compared with the same period in 2018.

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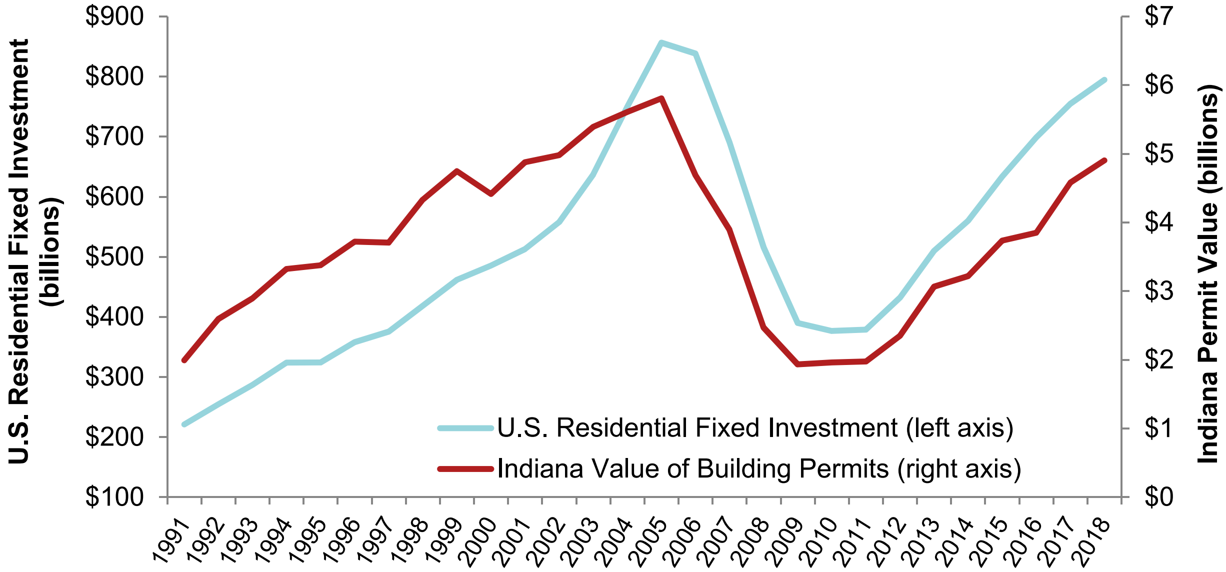
[7] According to the U.S. Bureau of Economic Analysis, RFI consists of the purchase of residential structures and the residential equipment that is owned by landlords and rented to tenants. Investment in residential structures includes the new construction of housing units, improvements to existing housing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

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

Figure 19: U.S. Residential Fixed Investment and Indiana Value of Building Permits, 1991 to 2018



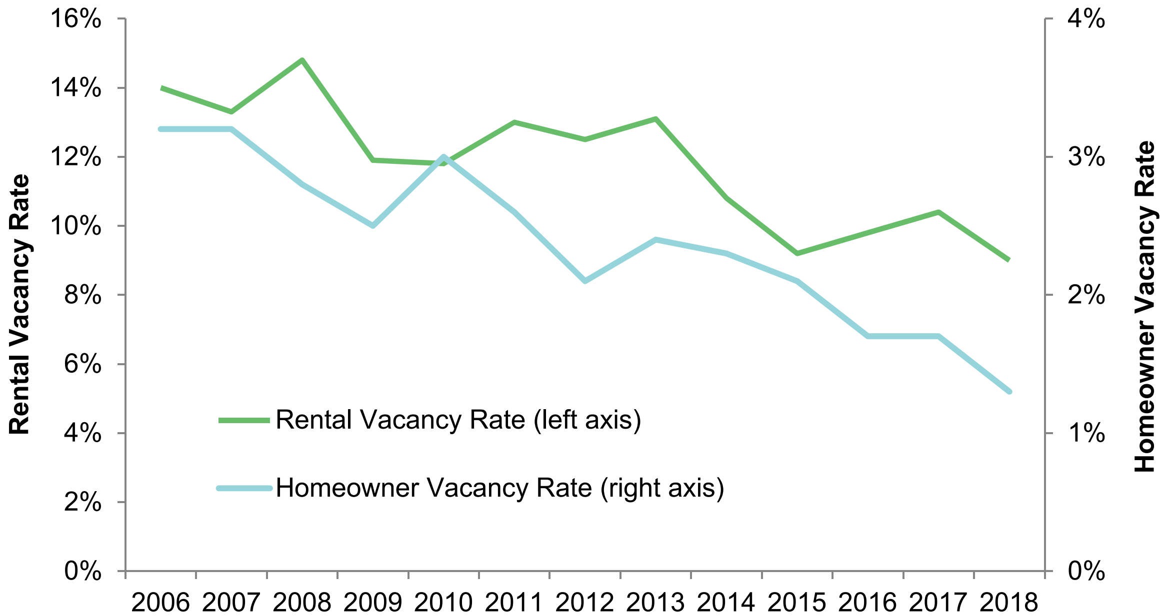
Source: U.S. Bureau of Economic Analysis and U.S. Census Bureau

Looking Ahead

Not only is residential construction down when measured by value, but the state has also seen fewer new units built so far this year. There were 10,522 new units added to the state's housing stock in the first six months of 2019—a 6.5 drop year-over-year. The number of new single-family homes is down 5.6 percent over the same period. The nation as a whole has seen a similar slip in new construction, but Freddie Mac's August 2019 outlook shows that they expect housing starts to begin to climb again in the second half of the year and through 2020. If the trend in Indiana were to follow a similar path, then housing will come closer to assuming its usual role in the state's economy.

Certainly, with an exceptionally low inventory of existing homes on the market, rapidly rising house prices and falling vacancy rates (see **Figure 20**), there are many indicators that point to the need for an uptick in residential construction in Indiana.

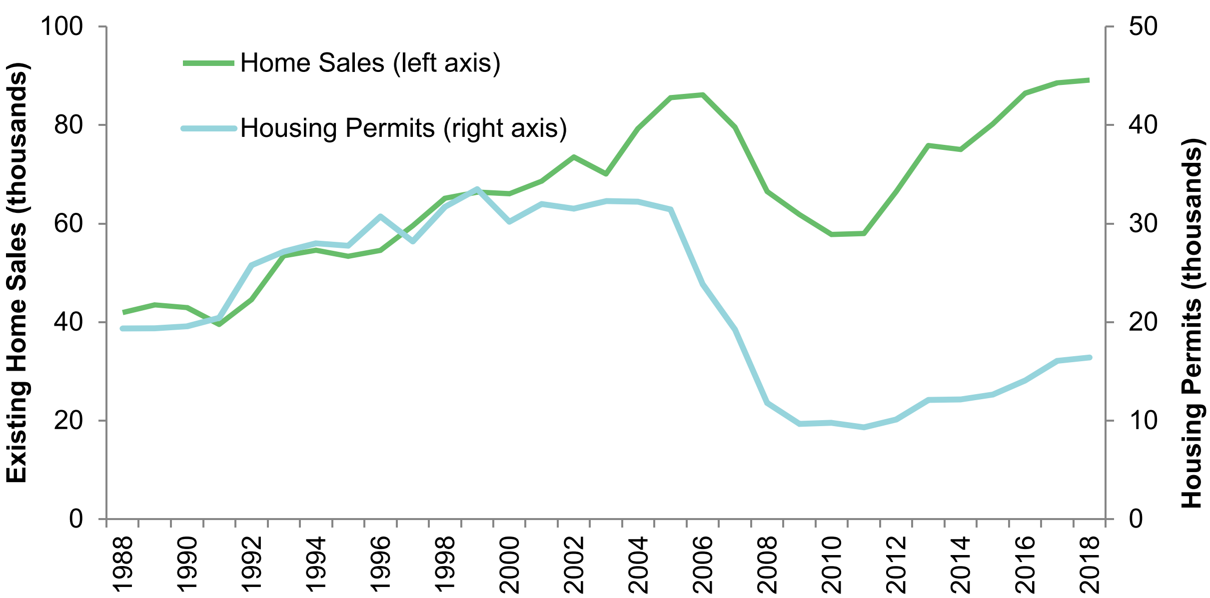
Figure 20: Indiana Homeowner and Rental Vacancy Rates, 2006 to 2018



Source: U.S. Census Bureau

Another sign that new construction will likely rebound 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 21**). In 2018, however, that ratio was more than five-to-one. Given the current market conditions, new home construction will almost certainly need to improve over the next few years.

Figure 21: Indiana Existing Home Sales and Single-Family Housing Permits, 1989 to 2018



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

Conclusion

The Indiana housing market seems to be in a holding pattern so far in 2019. With strong existing home sales numbers and declining vacancy rates, housing demand remains strong. Yet supply is still remarkably tight, and with residential construction activity weakening in 2019, it does not appear that there will be any boost to inventory in the near term.

Residential construction and housing inventory will be the indicators to watch over the next year. Factors such as surging prices for existing homes, exceptionally low mortgage rates, the emergence of the comparatively large millennial generation and somewhat stronger net in-migration to the state all point to the need for sustained improvement in these measures. As always, though, much rests on the strength of the economy. If Indiana sees continued—and hopefully improved— growth in employment and wages, then we may begin to see some balance return to the state's housing market.

Appendix

Table 2: Home Sales and Median Sales Price by County

County	Existing Home Sales, July '17 to June '18	Existing Home Sales, July '18 to June '19	Percent Change	Median Sales Price, July '17 to June '18	Median Sales Price, July '18 to June '19	Percent Change
Indiana	88,588	87,826	-0.9%	$152,500	$163,000	6.9%
Adams	268	279	4.1%	$105,500	$106,000	0.5%
Allen	5,528	5,532	0.1%	$142,000	$155,000	9.2%
Bartholomew	1,238	1,109	-10.4%	$175,000	$179,500	2.6%
Benton	92	87	-5.4%	$78,500	$85,000	8.3%
Blackford	111	93	-16.2%	$60,000	$68,425	14.0%
Boone	1,245	1,253	0.6%	$252,900	$285,000	12.7%
Brown	310	283	-8.7%	$199,500	$234,900	17.7%
Carroll	160	201	25.6%	$137,500	$123,500	-10.2%
Cass	330	380	15.2%	$76,950	$84,500	9.8%
Clark	2,164	2,106	-2.7%	$160,000	$169,900	6.2%
Clay	221	218	-1.4%	$94,950	$105,320	10.9%
Clinton	223	218	-2.2%	$102,950	$138,900	34.9%
Crawford	75	75	0.0%	$110,950	$100,000	-9.9%
Daviess	226	218	-3.5%	$100,750	$118,500	17.6%
Dearborn	591	538	-9.0%	$163,500	$183,500	12.2%
Decatur	282	320	13.5%	$126,550	$136,000	7.5%
DeKalb	587	533	-9.2%	$126,000	$135,000	7.1%
Delaware	1,176	1,141	-3.0%	$90,000	$96,500	7.2%
Dubois	382	373	-2.4%	$147,000	$155,802	6.0%
Elkhart	2,249	2,223	-1.2%	$146,500	$158,000	7.8%
Fayette	126	161	27.8%	$69,000	$73,450	6.4%
Floyd	1,287	1,216	-5.5%	$165,000	$174,900	6.0%
Fountain	66	83	25.8%	$89,000	$90,000	1.1%
Franklin	175	180	2.9%	$165,000	$160,000	-3.0%
Fulton	175	166	-5.1%	$104,000	$89,450	-14.0%
Gibson	282	301	6.7%	$109,450	$116,100	6.1%
Grant	639	689	7.8%	$85,000	$89,000	4.7%
Greene	184	175	-4.9%	$100,500	$109,700	9.2%
Hamilton	7,135	7,061	-1.0%	$269,000	$282,000	4.8%
Hancock	1,376	1,373	-0.2%	$182,500	$194,000	6.3%

County	Existing Home Sales, July ’17 to June ‘18	Existing Home Sales, July ’18 to June ‘19	Percent Change	Median Sales Price, July ’17 to June ‘18	Median Sales Price, July ’18 to June ‘19	Percent Change
Harrison	482	484	0.4%	$164,900	$160,000	-3.0%
Hendricks	3,229	3,117	-3.5%	$192,000	$208,000	8.3%
Henry	376	418	11.2%	$86,000	$93,250	8.4%
Howard	1,300	1,302	0.2%	$109,500	$111,225	1.6%
Huntington	448	474	5.8%	$107,500	$119,900	11.5%
Jackson	469	485	3.4%	$122,450	$132,875	8.5%
Jasper	348	352	1.1%	$158,500	$180,000	13.6%
Jay	128	98	-23.4%	$75,000	$76,250	1.7%
Jefferson	329	345	4.9%	$124,750	$139,925	12.2%
Jennings	201	206	2.5%	$98,250	$120,000	22.1%
Johnson	2,875	2,815	-2.1%	$175,000	$187,500	7.1%
Knox	301	289	-4.0%	$83,000	$95,000	14.5%
Kosciusko	1,016	999	-1.7%	$163,000	$167,000	2.5%
LaGrange	206	210	1.9%	$157,500	$153,500	-2.5%
Lake	6,195	6,035	-2.6%	$157,000	$167,000	6.4%
LaPorte	1,307	1,253	-4.1%	$130,000	$139,900	7.6%
Lawrence	499	498	-0.2%	$102,500	$115,950	13.1%
Madison	1,639	1,662	1.4%	$105,000	$116,900	11.3%
Marion	14,745	14,839	0.6%	$142,000	$153,000	7.7%
Marshall	383	363	-5.2%	$135,619	$142,500	5.1%
Martin	49	54	10.2%	$106,500	$117,000	9.9%
Miami	304	319	4.9%	$79,000	$82,900	4.9%
Monroe	1,876	1,842	-1.8%	$190,000	$210,000	10.5%
Montgomery	518	564	8.9%	$118,500	$125,000	5.5%
Morgan	1,094	1,070	-2.2%	$159,900	$169,999	6.3%
Newton	160	166	3.8%	$120,000	$119,900	-0.1%
Noble	513	467	-9.0%	$120,000	$135,000	12.5%
Ohio	62	53	-14.5%	$135,000	$129,000	-4.4%
Orange	45	55	22.2%	$99,000	$89,500	-9.6%
Owen	222	170	-23.4%	$124,950	$136,500	9.2%
Parke	42	51	21.4%	$89,500	$80,000	-10.6%
Perry	156	142	-9.0%	$95,250	$115,500	21.3%
Pike	85	90	5.9%	$92,500	$81,750	-11.6%
Porter	2,448	2,408	-1.6%	$190,000	$210,000	10.5%
Posey	195	206	5.6%	$136,500	$133,000	-2.6%
Pulaski	90	85	-5.6%	$84,250	$95,000	12.8%
Putnam	532	528	-0.8%	$135,500	$156,250	15.3%

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Randolph	195	236	21.0%	$75,000	$79,400	5.9%
Ripley	242	224	-7.4%	$139,000	$135,000	-2.9%
Rush	7	8	14.3%	$33,750	$86,500	156.3%
Scott	161	223	38.5%	$113,750	$119,950	5.5%
Shelby	549	571	4.0%	$124,000	$135,000	8.9%
Spencer	218	225	3.2%	$120,750	$139,950	15.9%
St. Joseph	3,537	3,651	3.2%	$132,000	$140,000	6.1%
Starke	218	241	10.6%	$109,900	$102,500	-6.7%
Steuben	478	470	-1.7%	$150,000	$155,500	3.7%
Sullivan	121	138	14.0%	$75,000	$72,500	-3.3%
Switzerland	52	78	50.0%	$132,500	$130,000	-1.9%
Tippecanoe	2,425	2,232	-8.0%	$160,000	$170,000	6.3%
Tipton	158	138	-12.7%	$128,700	$115,450	-10.3%
Union	6	2	-66.7%	$36,000	$59,140	64.3%
Vanderburgh	2,556	2,538	-0.7%	$129,000	$133,700	3.6%
Vermillion	96	92	-4.2%	$67,500	$69,900	3.6%
Vigo	1,167	1,042	-10.7%	$102,000	$102,275	0.3%
Wabash	297	314	5.7%	$86,750	$90,000	3.7%
Warren	46	51	10.9%	$115,000	$140,000	21.7%
Warrick	906	953	5.2%	$179,000	$198,000	10.6%
Washington	279	261	-6.5%	$105,000	$117,750	12.1%
Wells	353	351	-0.6%	$120,000	$132,500	10.4%
White	275	282	2.5%	$125,000	$138,000	10.4%
Whitley	476	406	-14.7%	$140,450	$155,300	10.6%

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