

The analysis presented in this report was completed prior to the COVID-19 outbreak in the United States and therefore the forecast estimates do not take into account the economic and housing market impacts of the actions taken to limit contagion of the virus. At this time, the duration and depth of the economic disruption are unclear, as are the extent and effectiveness of countermeasures. HUD will continue to monitor market conditions in the HMA and provide an updated report/addendum in the future.

COMPREHENSIVE HOUSING MARKET ANALYSIS

Pittsburgh, Pennsylvania

**U.S. Department of Housing and Urban Development,
Office of Policy Development and Research**

As of January 1, 2020



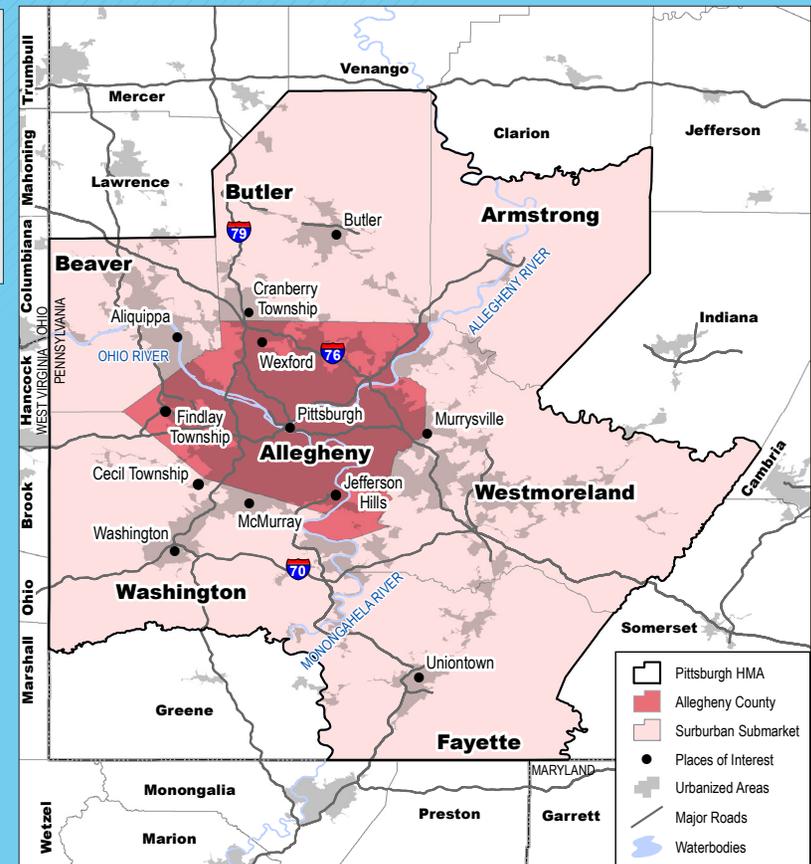
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Executive Summary

Housing Market Area Description

The Pittsburgh Housing Market Area (HMA), which is coterminous with the Pittsburgh, PA Metropolitan Statistical Area (MSA), includes seven counties in southwestern Pennsylvania. For purposes of this report, the HMA is divided into two submarkets: the Allegheny County submarket, which includes the city of Pittsburgh, and the Suburban submarket, which includes the surrounding counties of Armstrong, Butler, Beaver, Fayette, Washington, and Westmoreland. The principal city of Pittsburgh, located where the Allegheny and Monongahela Rivers come together to form the Ohio River, has been named the “most livable city” in the nation six times since 2000 by *The Economist*, *Forbes*, and *Places Rated Almanac*.



Tools and Resources

Find interim updates for this HMA, and selected geographies nationally, at PD&R’s Market-at-a-Glance [tool](#).
 Additional data for the HMA can be found in this report’s [supplemental tables](#).
 For information on HUD-supported activity in this area, see the Community Assessment Reporting [Tool](#).



Market Qualifiers

Economy



Stable. Total nonfarm payrolls increased 0.4 percent during 2019.

Economic conditions in the Pittsburgh HMA have improved since 2010. During 2019 nonfarm payrolls increased by 4,600 jobs, or 0.4 percent, to 1.19 million jobs, with the mining, logging, and construction sector adding the most jobs. The education and health services sector is the largest sector, accounting for 22 percent of nonfarm payrolls. The unemployment rate averaged 4.1 percent during 2019, down from 4.3 percent a year earlier. Nonfarm payrolls are expected to grow by an average annual rate of 0.5 percent during the 3-year forecast period.

Sales Market



Balanced. Sales of new and existing homes declined by 5 percent during 2019, while home sales prices increased by 3 percent.

The sales housing market in the HMA is currently balanced. The estimated sales vacancy rate is 1.4 percent, down from 2.0 percent in 2010. During 2019, new and existing home sales totaled 36,700, down 5 percent from a year earlier, while the average home sales price increased 3 percent to \$191,500. During the next 3 years, demand is expected for 9,000 new homes in the HMA. The 1,100 homes currently under construction will satisfy some of the demand in the first year.

Rental Market



Balanced. The vacancy rate for the overall rental market is estimated to be 7.5 percent, while the apartment market is tight, with a 3.2 percent vacancy rate.

The rental housing market in the HMA is currently balanced, with an overall estimated vacancy rate of 7.5 percent, down from 8.9 percent in 2010. The apartment market is tight, with a 3.2-percent vacancy rate, down from 4.0 percent a year ago, and an average asking rent of \$1,175, up 6 percent from a year ago (RealPage, Inc.). During the forecast period, demand is expected for 7,625 new rental units. The 4,625 units under construction will satisfy all the demand during the first year and a portion of the demand during the second year of the 3-year forecast period.

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	3-Year Housing Demand Forecast					
	Sales Units			Rental Units		
	Pittsburgh HMA Total	Allegheny County Submarket	Suburban Submarket	Pittsburgh HMA Total	Allegheny County Submarket	Suburban Submarket
Total Demand	9,000	4,350	4,650	7,625	6,025	1,600
Under Construction	1,100	550	550	4,625	3,100	1,525

Notes: Total demand represents estimated production necessary to achieve a balanced market at the end of the forecast period. Units under construction as of January 1, 2020. The forecast period is from the current date (January 1, 2020), to January 1, 2023.
Source: Estimates by the analyst



Economic Conditions

Largest Sector: Education and Health Services

Nonfarm payrolls have, on average, grown steadily since the end of the Great Recession, with nonfarm payroll jobs reaching the pre-recessionary peak by 2012.

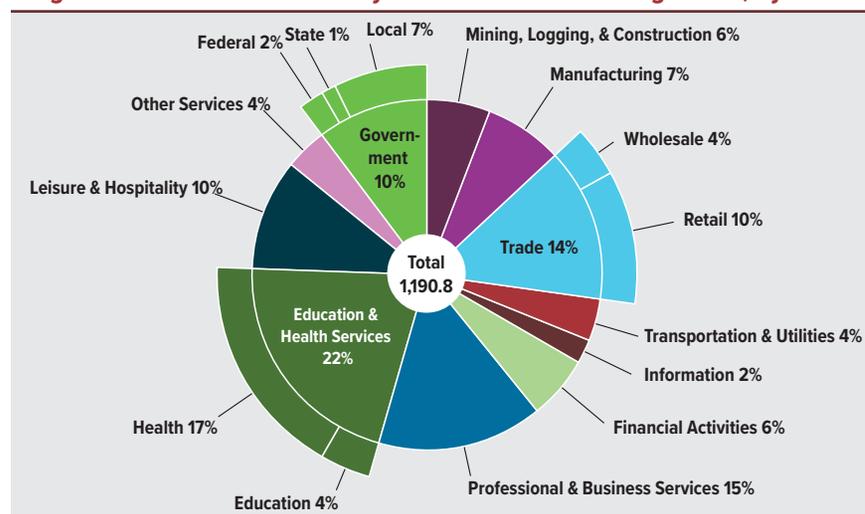
Primary Local Economic Factors

The economy of the Pittsburgh HMA, an industrial epicenter renowned for steel manufacturing during the 19th and 20th centuries, has changed considerably during the past few decades. Currently, the education and health services sector accounts for 22 percent of all nonfarm payrolls in the Pittsburgh HMA (Figure 1), up from 17 percent in 2000. Two of the largest employers in the HMA, the University of Pittsburgh Medical Center (UPMC) and Highmark Health, employ 46,500 and 20,000 people, respectively (Table 1). The HMA is home to several colleges and universities, including the University of Pittsburgh and Carnegie Mellon University, named for the Pittsburgh industrial magnates who founded the school in the early 20th century. In 2017, the economic impact of colleges and universities in the HMA was estimated at more than \$9 billion due to ongoing construction, student and visitor spending, federal aid, and research grants (Fourth Economy).

Current Conditions—Nonfarm Payrolls

The number of jobs in the HMA increased modestly during the past 12 months. During 2019, 4,600 jobs were added in the HMA, a rate of 0.4 percent (Table 2). The mining, logging, and construction sector added the most jobs and was the fastest growing sector in the HMA, increasing by a total of 2,400 jobs, representing annual growth of 3.4 percent. Growth in this sector was in part due to ongoing construction of the Shell Pennsylvania Petrochemicals Complex in Beaver County. During 2019, approximately 6,000 people were employed in the construction of the complex, up from 3,000 during the previous year.

Figure 1. Share of Nonfarm Payroll Jobs in the Pittsburgh HMA, by Sector



Notes: Total nonfarm payroll is in thousands. Percentages may not add to 100 percent due to rounding. Based on 12-month averages through December 2019. Source: U.S. Bureau of Labor Statistics

Table 1. Major Employers in the Pittsburgh HMA

Name of Employer	Nonfarm Payroll Sector	Number of Employees
UPMC Health System	Education & Health Services	46,500
Highmark Inc.	Education & Health Services	20,000
University of Pittsburgh	Government	12,000
PNC Financial Services Group, Inc.	Financial Activities	10,000
Walmart Inc.	Wholesale & Retail Trade	9,000
Giant Eagle, Inc.	Wholesale & Retail Trade	8,150
The Bank of New York Mellon Corporation	Financial Activities	6,800
Excelsa Health	Education & Health Services	5,000
Carnegie Mellon University	Education & Health Services	4,750
United States Steel Corporation	Manufacturing	4,200

Note: Excludes local school districts. Source: Economy.com

During 2019, the professional and business services and the leisure and hospitality sectors continued to add jobs, as they had since 2010. Payrolls in the professional and business services sector grew by 2,200 jobs, a rate of 1.2 percent, while the leisure and hospitality sector increased by 2,100 jobs, or 1.7 percent. During the past year, six hotels were built in the HMA, four of which were in the city of Pittsburgh, adding approximately 775 rooms to the hotel inventory.

The education and health services sector is the largest sector in the HMA, with 256,300 jobs, or 22 percent of total nonfarm payrolls, but growth has been slow. During 2019, the education and health services sector added 100 jobs, less than 0.1 percent, essentially unchanged from the previous year. The manufacturing

Table 2. 12-Month Average Nonfarm Payroll Jobs (1,000s) in the Pittsburgh HMA, by Sector

	12 Months Ending December 2018	12 Months Ending December 2019	Absolute Change	Percentage Change
Total Nonfarm Payroll Jobs	1,186.2	1,190.8	4.6	0.4
Goods-Producing Sectors	157.0	157.2	0.2	0.1
Mining, Logging, & Construction	70.4	72.8	2.4	3.4
Manufacturing	86.6	84.3	-2.3	-2.7
Service-Providing Sectors	1,029.2	1,033.6	4.4	0.4
Wholesale & Retail Trade	164.2	162.4	-1.8	-1.1
Transportation & Utilities	46.7	47.1	0.4	0.9
Information	19.5	19.9	0.4	2.1
Financial Activities	74.8	74.9	0.1	0.1
Professional & Business Services	182.2	184.4	2.2	1.2
Education & Health Services	256.2	256.3	0.1	0.0
Leisure & Hospitality	120.3	122.4	2.1	1.7
Other Services	50.6	51.5	0.9	1.8
Government	114.8	114.7	-0.1	-0.1

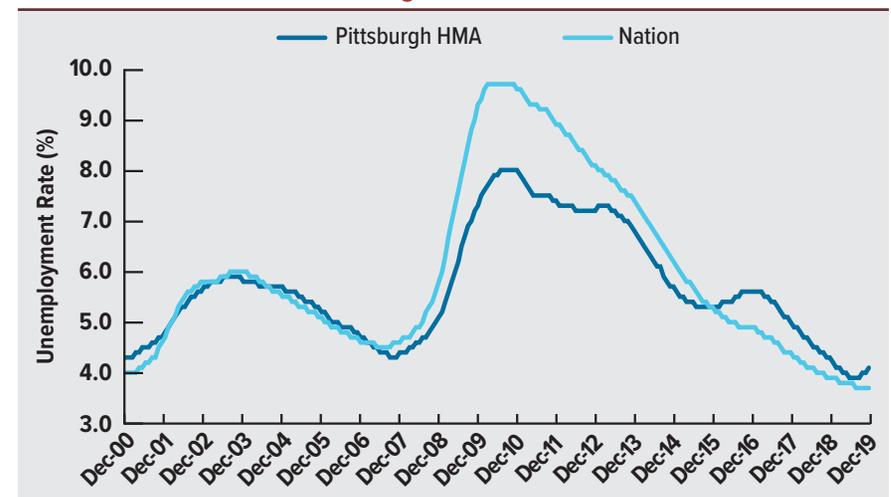
Notes: Based on 12-month averages through December 2018 and December 2019. Numbers may not add to totals due to rounding. Data are in thousands.
Source: U.S. Bureau of Labor Statistics

sector had the greatest number of jobs lost and at the highest rate, declining by 2,300 jobs, or 2.7 percent. The decline in the sector was partly due to Riverbend Foods, LLC laying off 400 employees after closing a food manufacturing facility in the HMA in mid-2019.

Current Conditions—Unemployment

The unemployment rate averaged 4.1 percent during 2019, down from 4.3 percent during the previous 12 months. The current figure is the lowest unemployment rate since 2000 and is nearly one-half of the 2010 average of 8.0 percent (Figure 2). The unemployment rate in the HMA is currently slightly below the Pennsylvania average of 4.4 percent, but above the national average of 3.7 percent during 2019.

Figure 2. 12-Month Average Unemployment Rate in the Pittsburgh HMA and the Nation



Note: Based on the 12-month moving average.
Source: U.S. Bureau of Labor Statistics

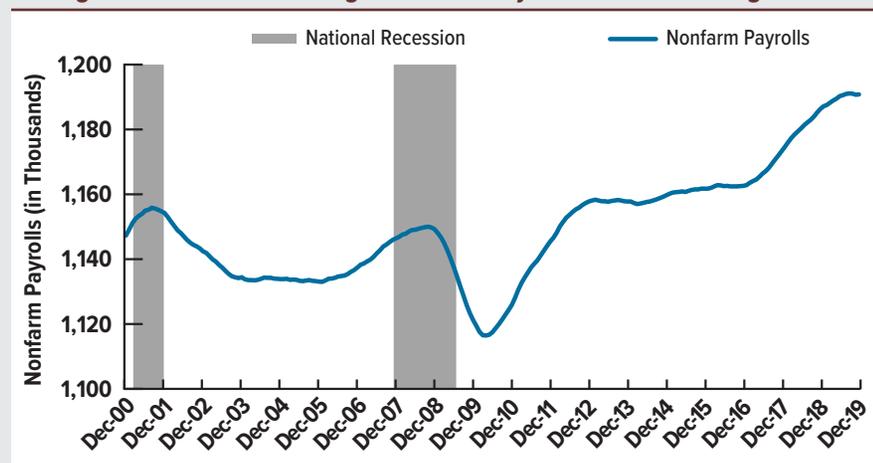


Economic Periods of Significance

2001 through 2005

The impact of the 2001 national recession on the economy of the HMA was drawn out due to the existing decline in the manufacturing sector in the HMA that began in the 1970s with increasing global competition and improving automation. After an increase of 6,900 jobs, or 0.6 percent, during 2001, from 2002 through 2005, nonfarm payrolls in the HMA declined by an average of 5,300, or 0.5 percent, a year (Figure 3). The manufacturing sector declined by an average of 5,800 jobs, or 5.0 percent, a year, while the transportation and utilities sector, which was largely dependent on the manufacturing sector, lost 2,400 jobs a year at a rate of 4.7 percent. In the summer of 2004, Standard Steel, LLC, a railway wheel and axle manufacturer, closed a production facility in Westmoreland County, laying off all 117 employees. During this period, the education and health services sector was the fastest growing sector, with an average of 4,500 jobs, or 2.1 percent, added

Figure 3. 12-Month Average Nonfarm Payrolls in the Pittsburgh HMA



Note: 12-month moving average.
Sources: U.S. Bureau of Labor Statistics; National Bureau of Economic Research

annually. Expansions at local universities include the opening of the Collaborative Innovation Center at Carnegie Mellon University. Opened in 2005, the center includes 136,000-square-foot of office and lab space for the purpose of facilitating research between the university and technology companies. The leisure and hospitality and the professional and business services sectors also expanded overall during the period, with average annual growth of 1,400 and 1,100 jobs, or 1.4 and 0.8 percent, respectively.

2006 through 2008

Nonfarm payrolls in the HMA began to recover in 2006, but the period of recovery was shortened due to the Great Recession. From 2006 through 2008, nonfarm payrolls in the HMA grew by an average of 5,400, or 0.5 percent a year. The mining, logging, and construction sector grew by 1,300 jobs each year, an annual rate of 2.2 percent, a reversal from the previous period when the sector declined by 2.4 percent annually. Growth in this sector coincides with the discovery of natural gas reserves in the Marcellus Formation, which encompasses 104,000 square miles and stretches across Pennsylvania and West Virginia and into southeast Ohio and upstate New York. It is the largest source of natural gas in the United States, with drilling in the HMA beginning in 2007. The most jobs in the HMA were added in the professional and business services and the education and health services sectors, which grew by 5,000 and 3,500 jobs, or 3.3 and 1.6 percent, each year, respectively. The area has been particularly attractive to tech companies because of its numerous universities. In 2007, Carnegie Mellon University won the DARPA (Defense Advanced Research Projects Agency) Urban Challenge, an autonomous vehicle competition, helping to establish Pittsburgh as a center for A.I. (artificial intelligence) and robotic research. The retail trade subsector was down 1,600 jobs, or 1.2 percent, annually. In 2008, with the onset of the Great Recession, Boscov's Department Store, LLC, a regional department store, closed two stores in Allegheny County, laying off 300 employees. The manufacturing sector continued to decline, but at a slower rate compared with the previous period, with annual losses of 800 jobs, or 0.8 percent.



2009

The period of nonfarm payroll decline due to the recession was brief in the HMA. During 2009, the HMA lost 28,100 jobs, or 2.4 percent. The manufacturing sector lost the greatest number of jobs and at the fastest rate of decline, down 9,500 jobs, a drop of 9.7 percent. In Westmoreland County, Sony Corporation closed its last remaining television manufacturing plant in the United States, laying off 560 employees. The professional and business services sector declined by 6,100 jobs, or 3.8 percent, while the mining, logging, and construction sector lost 4,400 jobs, or 7.1 percent, during the year. Losses in both sectors were largely due to the tightening credit market limiting demand for single-family homes. While overall nonfarm payrolls declined, the education and health services sector continued to grow, increasing by 3,000 jobs, or 1.3 percent, in 2009. That year, the UPMC Children's Hospital of Pittsburgh campus opened in the Lawrenceville neighborhood of Pittsburgh, which included a 1.5-million-square-foot hospital with 315 beds and a 10-story research center.

2010 through 2012

Economic conditions in the HMA began to improve in 2010, and by 2012, the economy of the HMA had recovered from both recessions of the 2000s. From 2010 through 2012, nonfarm payrolls increased by an average of 12,200 jobs, or 1.1 percent, annually. The professional and business services sector led the HMA in both total jobs added and rate of growth, up 6,000 jobs, or 3.7 percent, a year. Google, LLC expanded its operations in the HMA during the period, adding approximately 300 jobs. The education and health services sector grew by 2,600 jobs, or 1.1 percent, annually, a slower rate of growth compared with 2009 when the economy of the HMA was contracting. During this period, UPMC added 1,300 new jobs in the healthcare and social assistance subsector. The mining, logging, and construction sector added an average of 2,000 jobs a year, or 3.3 percent, annually. The mining and logging subsector grew from 5,600

to 10,000 jobs during this period, representing growth of 21.3 percent annually due to an increase of natural gas mining in the HMA. Since 2007, when drilling first began, to 2011, 729 wells were drilled in the HMA, 99 percent of which were in the Suburban submarket (Gauging the Economic Impact of Marcellus Shale Drilling in the Pittsburgh Region, Allegheny Institute, July 2011). Both the leisure and hospitality and the financial activities sectors grew 1.7 percent each, or by 1,800 and 1,100 jobs, a year, respectively. Cigna Corporation, a health insurance provider, added more than 450 jobs in the HMA during this period.

2013 through 2018

During the 2013-through-2018 period, nonfarm payrolls increased by 4,800, or 0.4 percent, annually. The education and health services sector added 2,500 jobs, or 1.0 percent, a year, the most jobs added in the HMA. In 2015, UPMC opened a new research facility, contributing 375 new jobs to this sector. The professional and business services sector gained 1,600 jobs, or an average 0.9-percent increase, each year. Uber Technologies, Inc. (Uber) opened an Uber Advanced Technologies Group facility in 2016 to develop technology for driverless automobiles, creating an estimated 380 jobs. The leisure and hospitality sector continued to grow as well, with an average annual increase of 1,400 jobs, or 1.2 percent. In 2013, the Lady Luck Casino opened in Fayette County, adding 500 jobs to this sector. The mining, logging, and construction sector grew by 1,100 jobs, or 1.6 percent, annually. In 2017, construction began on the Shell Pennsylvania Petrochemicals Complex, a plastic pellet production facility in Beaver County. During 2018, approximately 3,000 people were employed in the construction of the facility. The number of new natural gas wells permitted in the HMA has slowed, however, limiting growth in this sector. During 2014, 450 new natural gas wells were drilled in the HMA, compared with 283 during 2018 (Pennsylvania Department of Environmental Protection). The mining and logging subsector peaked in 2014, averaging 11,800 jobs before declining to 11,100 jobs during 2018.



Employment Forecast

During the 3-year forecast period, the economy of the Pittsburgh HMA is expected to expand at a slightly faster rate relative to the 2013-through-2018 period. Total nonfarm payrolls are expected to grow by an average of 5,500 jobs, or 0.5 percent, annually. The education and health services sector is expected to contribute substantially to job growth in the HMA. UPMC is planning to add three new facilities, including UPMC Heart and Transplant Hospital at UPMC Presbyterian. The facility is expected to open in 2022 and will be approximately 940,000 square feet, with 620 private patient rooms. Rivers Casino Pittsburgh

will begin construction on The Landing Hotel in the city of Pittsburgh in 2020. Upon completion in 2021, the hotel will have 219 rooms and will link the Rivers Casino with the North Shore neighborhood in Pittsburgh. In addition, Amazon.com, Inc. is expanding and will create more than 800 full-time jobs in Allegheny County with the addition of a new 1-million-square-foot fulfillment center in Findlay Township, while the Shell Pennsylvania Petrochemicals Complex in Beaver County is expected to employ approximately 600 people upon completion within the next 3 years.



Population and Households

Current Population: 2.32 million

The population of the Pittsburgh HMA has declined slightly for the past 6 years due to net out-migration and net natural decline.

Population Trends

As of January 1, 2020, the population of the HMA was estimated at nearly 2.32 million, representing an average annual population decline of 4,200 people, or 0.2 percent, since 2010 (Table 3). Despite economic growth since 2010, population growth has been negative since 2011, partly due to the net out-migration of retirees from the HMA coupled with declines in net natural change. According to the United Vans’ National Mover Survey, more than 25 percent of people moving out of the state of Pennsylvania are over the age of 65. The Pittsburgh MSA has the greatest annual out-of-state net out-migration to the

Tampa-St. Petersburg-Clearwater, FL MSA. (U.S. Census Bureau 2013–2017 Metro-to-Metro Migration Flows). From 2000 to 2005, when the economy was in decline, population loss averaged 0.4 percent, with net out-migration averaging 7,450 people a year from the HMA and a net natural decline of 3,350 (U.S. Census Bureau population estimates as of July 1). From 2005 to 2008, as the economy expanded, population growth continued to decline, but at a slower rate of 0.2 percent, with net out-migration and net natural decline averaging 3,400 and 2,500 people a year, respectively. From 2008 to 2010, a period that includes the Great Recession, the population declined by less than 0.1 percent annually, as net in-migration averaged 2,875 people a year, mostly offsetting the annual net natural decline of 3,175. The change from net out-migration to net in-migration during the recession was partly due to fewer retirees leaving the HMA as the value of assets, including homes and retirement funds, depreciated during the housing crisis and an increase of people coming into the HMA as the number of gas wells in the HMA increased.

After the recession, as the economy recovered, net in-migration further increased in response to the greater activity on the Marcellus Shale. From 2010 to 2013, net in-migration averaged 4,225 people a year; however, population growth was less than 0.1 percent annually as net natural decline averaged 3,150 people annually. Since 2013, there has been net out-migration from the HMA due to a decline in the natural gas industry as gas prices declined, and an increase in retirees leaving the HMA as asset portfolios improved. During this period, despite economic growth, the population of the HMA declined by an average of 6,850 people, or 0.3 percent, with net out-migration and net natural decline of 2,775 and 4,075 people, respectively. Figure 4 shows the components of the population change in the HMA from 2000 to the forecast date.

Table 3. Pittsburgh HMA Population and Household Quick Facts

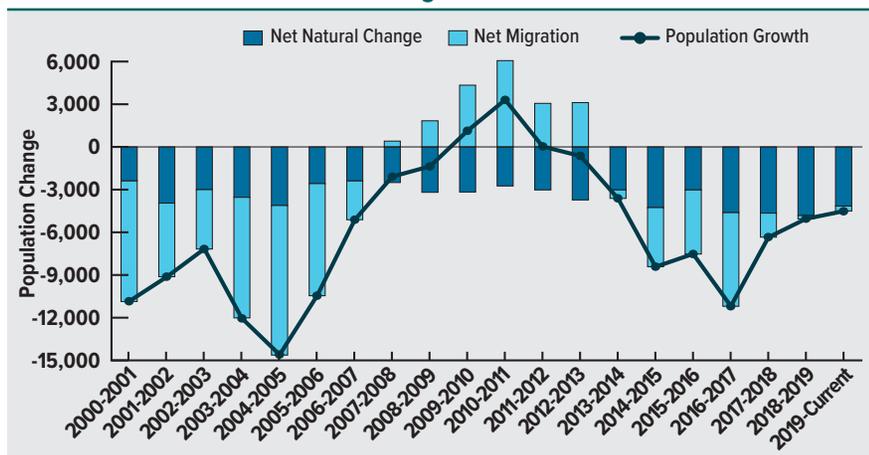
	2010	Current	Forecast	
Population Quick Facts	Population	2,356,285	2,315,000	2,301,000
	Average Annual Change	-7,475	-4,200	-4,750
	Percentage Change	-0.3	-0.2	-0.2
Household Quick Facts	Households	1,001,627	1,019,000	1,023,000
	Average Annual Change	610	1,750	1,625
	Percentage Change	0.1	0.2	0.2

Notes: Average annual changes and percentage changes are based on averages from 2000 to 2010, 2010 to current, and current to forecast. The forecast period is from the current date (January 1, 2020), to January 1, 2023.

Sources: 2000 and 2010–2000 Census and 2010 Census; current and forecast—estimates by the analyst



Figure 4. Components of Population Change in the Pittsburgh HMA, 2000 Through the Forecast



Notes: Net natural change and net migration totals are average annual totals over the time period. The forecast period is from the current date (January 1, 2020), to January 1, 2023.
Sources: U.S. Census Bureau; current to forecast—estimates by the analyst.

Allegheny County Submarket

Population trends in the Allegheny County submarket closely reflect those of the HMA. From 2000 to 2005, the population of the submarket declined by 8,925 people, or 0.7 percent, each year, with 83 percent of the loss due to net out-migration. From 2005 to 2008, population loss continued, but at a slower rate of 0.4 percent, with net out-migration approximately one-half of what it had been during the previous period, averaging 3,725 people. From 2008 to 2013, the population grew by 2,525, or 0.2 percent, annually, as fewer retirees left and people came to the HMA to work during the natural gas boom, with net in-migration averaging 3,125 people. From 2013 to 2018, the population once again declined, losing an average of 3,275 people, a rate of 0.3 percent, annually, as retirees’ asset portfolios recovered, gas prices fell, and wells closed. Net out-migration averaged 2,625 people during this period. Net out-migration

has recently slowed, however, averaging 400 people since 2018, while the total population of the submarket declined by an average of 1,350 people, or 0.1 percent, a year.

Suburban Submarket

The Suburban submarket had less total and less volatile decline compared with the Allegheny County submarket, with most of the population decrease due to net natural decline as the population is much older compared with the Allegheny County submarket, as detailed below. From 2000 to 2005, the population declined by an average of 1,850 a year, or 0.2 percent, with all the population loss due to net natural decline. From 2005 to 2008, the population decreased by an average of 1,325 people, or 0.1 percent, each year. The slower decline was due to an increase in net in-migration to an average of 330 people, as net natural decline was relatively unchanged from the previous period. From 2008 to 2012, the population continued to decline by 0.1 percent, but net migration and net natural change diverged further. Net in-migration increased to an average of 900 people each year, coinciding with the expansion of the natural gas industry, while annual net natural decline increased to 2,450 people. From 2012 to 2018, like the Allegheny County submarket, the population declined at an increased rate despite the improving economy. Losses averaged 4,025 people each year, or 0.4 percent, with a net natural decrease of 3,225 people and net out-migration of 800. Since 2018, the population continued to decline at a slightly slower rate of 0.3 percent due to net in-migration of 100 people annually.

Age Cohort and Student Population Trends

The population of the HMA is notably older than the state and the nation, leading to a net natural decline in the HMA for the past 20 years. From 2000 to 2010, net natural decline averaged 3,075 people a year and grew to an average of 3,775 people a year since 2010. Approximately 20.0 percent of the current population

in the HMA is 65 and older, compared with 17.3 percent in 2010 (U.S. Census Bureau decennial census counts and population estimates as of July 1). As of July 2018, the median age in the HMA was estimated at 43.1 years, higher than the Pennsylvania median age of 40.8 years and the national median age of 38.2 years. In the Suburban submarket, the median age in each county ranges from a low of 43.7 years in Butler County to a high of 47.4 years in Westmoreland County.

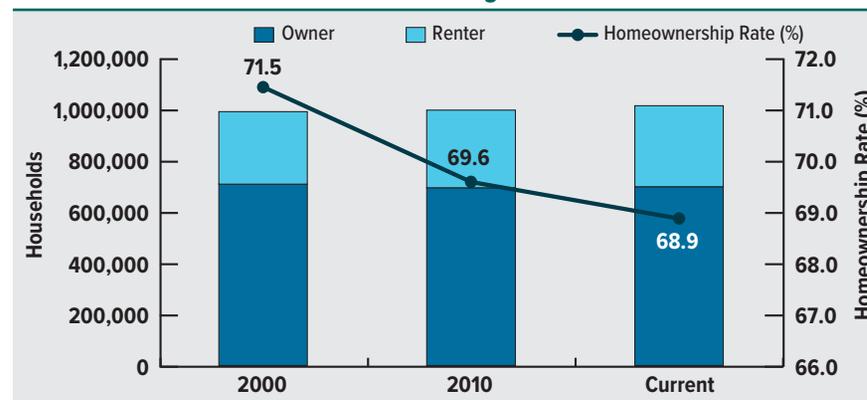
The median age in the Suburban submarket is notably higher than in the Allegheny County submarket, however, with the city of Pittsburgh in Allegheny County having numerous public and private 4-year colleges and universities and an urban environment more attractive to young professionals. As of July 2018, the median age in Allegheny County was estimated at 40.5 years, higher than the national average but slightly lower than the Pennsylvania median age. Currently, nearly 63,000 students are enrolled at one of the 4-year universities in the Allegheny County submarket, up from 60,000 students during 2010, an increase of 0.5 percent, annually, outpacing the population growth of the county and HMA. In the city of Pittsburgh, where the University of Pittsburgh, Carnegie Mellon University, and Duquesne University main campuses are located, the median age was considerably lower than the HMA at 34 years. While the population of the city of Pittsburgh accounts for approximately 25 percent of the population of the Allegheny County submarket, 47 percent of people age 18–24 in the county live in the city of Pittsburgh.

The city has also drawn young professionals into Allegheny County. Approximately 21.9 percent of people in Allegheny County are between the ages of 25 and 39, while this age cohort accounts for an estimated 27.5 percent of the population of Pittsburgh. From 2010 to 2018, the population of this cohort grew by 2.5 and 2.2 percent each year in the city of Pittsburgh and Allegheny County, respectively.

Household Trends

The HMA has an estimated 1.02 million households as of January 1, 2020, an increase of 1,750 households, or 0.2 percent, annually since 2010. By comparison, household growth averaged 610, or 0.1 percent, annually from 2000 to 2010. Average household size has declined with a decrease in births, an increase in deaths, and a greater share of relatively smaller households headed by householders aged 65 and older. The homeownership rate is currently estimated at 68.9 percent, down from 69.6 percent in 2010. The decline in homeownership is because of the tighter credit market earlier in the decade. As of July 2018, the homeownership rate in Pennsylvania was estimated at 68.6 percent, compared with 63.9 percent nationally. Currently, the estimated homeownership rate in the Allegheny County submarket is 63.8 percent, well below the 74.8 percent rate in the Suburban submarket. Figure 5 shows the number of households by tenure from 2000 to the current date.

Figure 5. Households by Tenure and Homeownership Rate in the Pittsburgh HMA



Note: The current date is January 1, 2020.

Sources: 2000 and 2010—2000 Census and 2010 Census; current—estimates by the analyst

Forecast

During the 3-year forecast period, the population of the HMA is expected to decline by approximately 4,750 a year, or 0.2 percent, annually with an estimated population of 2.30 million by January 2023. Net out-migration of retirees is expected to continue as home prices rise, but overall net out-migration will continue to decline from the level since 2016 as younger people move into the HMA, specifically into Allegheny County. In the Allegheny County and Suburban submarkets, the populations are estimated to decrease by averages of 1,700 and 3,050 people, or 0.1 and 0.3 percent, respectively.

The number of households in the HMA is anticipated to increase by an average of 1,625, or 0.1 percent, annually, to approximately 1.02 million during the next 3 years. In the Allegheny County and Suburban submarkets, the number of households is expected to annually increase by averages of 1,175 and 430 households, or 0.2 and 0.1 percent, respectively.



Home Sales Market

Market Conditions: Balanced

Home sales market conditions have improved since 2010, and homes are largely affordable compared with the rest of the nation.

Current Conditions

Sales housing market conditions in the Pittsburgh HMA are balanced, with an estimated vacancy rate of 1.4 percent, down from 2.0 percent in April 2010 (Table 4). The decline in the vacancy rate occurred despite a loss in population as the decrease in the rate of new construction has allowed for the absorption of excess inventory after the foreclosure crisis. The inventory of homes for sale was down from a 4.3-month supply in December 2018 to a 3.3-month supply as of December 2019, well below the 9.6 months of inventory in December 2010 (CoreLogic, Inc.).

Table 4. Home Sales Quick Facts in the Pittsburgh HMA

	Pittsburgh HMA	Nation
Vacancy Rate	1.4%	NA
Months of Inventory	3.3	2.9
Total Home Sales	36,700	5,732,000
1-Year Change	-5%	2%
New Home Sales Price	\$372,900	\$411,400
1-Year Change	1%	2%
Existing Home Sales Price	\$181,900	\$312,300
1-Year Change	3%	3%
Mortgage Delinquency Rate	1.9%	1.4%

NA = data not available.

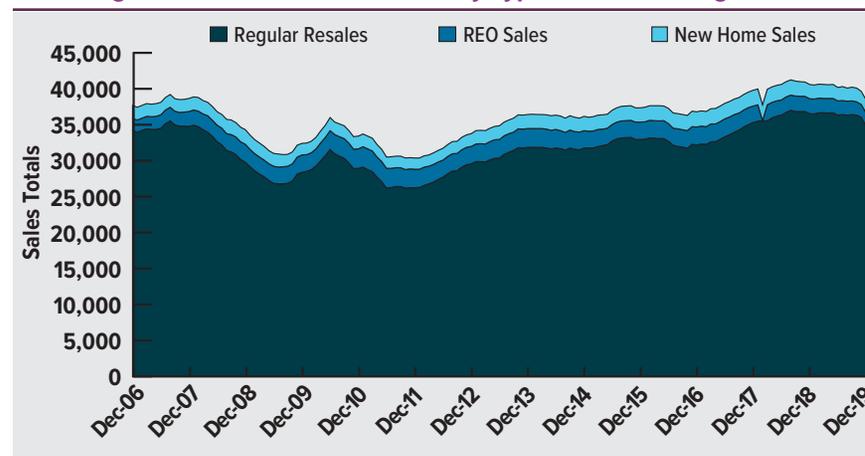
Notes: The vacancy rate is as of the current date (January 1, 2020); home sales and prices are for the 12 months ending December 2019; and months of inventory and mortgage delinquency data are as of December 2019.

Sources: CoreLogic, Inc.; Metrostudy, A Hanley Wood Company

Home Sales

The sale of new and existing homes decreased during the past year after 7 consecutive years of growth, with new home sales accounting for approximately 5 percent of total sales. During 2019, approximately 36,700 new and existing homes sold, a decrease of 1,825 homes, or nearly 5 percent, compared with 2018, when homes sales exceeded the previous pre-recession peak (CoreLogic, Inc., with estimates by the analyst). During this period, new home sales declined by 6 percent, while existing home sales fell by 5 percent due to a decline in available for-sale inventory. Sales activity, however, increased an average of 5 percent annually from 2012 through 2018 in response to improving economic conditions. The current level of home sales is up 32 percent compared with the recent low of 27,800 homes sold during 2011. Figure 6 shows the 12-month average sales totals by sales type in the HMA since 2006, and Figure 7 shows the number of new and existing home sales by price range during 2019.

Figure 6. 12-Month Sales Totals by Type in the Pittsburgh HMA

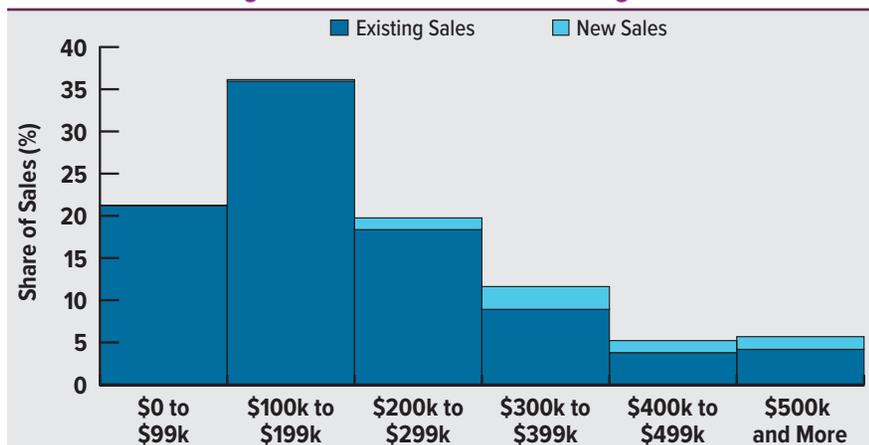


REO = real estate owned.

Source: CoreLogic, Inc., with adjustments by the analyst



Figure 7. Share of Sales by Price Range During the 12 Months Ending December 2019 in the Pittsburgh HMA



Note: New and existing sales include single-family homes, townhomes, and condominiums.
Source: Metrostudy, A Hanley Wood Company

REO Sales and Delinquent Mortgages

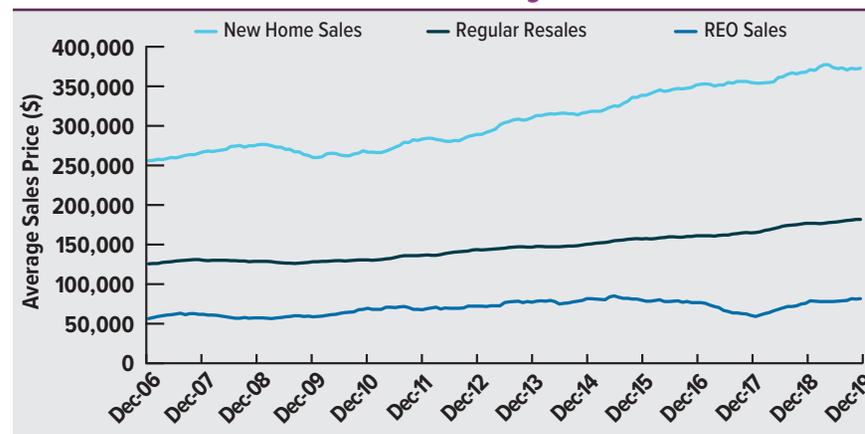
Many foreclosed homes entered the market during the Great Recession, although a substantial number have since been sold. During 2019, distressed home sales (real estate owned [REO] and short sales) accounted for approximately 5 percent of total sales, well below a high of 11 percent in 2011 (CoreLogic, Inc.). During 2019, the sales price of an REO home in the HMA averaged \$81,900, representing an 8 percent increase in price from the previous 12-month period. Despite the significant increase during the past year, the average price of an REO home was 56 percent less than the average price for a regular resale home. In December 2019, 1.9 percent of home loans in the Pittsburgh HMA were seriously delinquent or had transitioned into REO status, down from 2.3 percent in December 2018 and a peak of 5.7 percent in January 2010 (CoreLogic, Inc.). Nationally, this rate

peaked in January 2010 at 8.6 percent. The current rate is the same as the statewide rate but higher than the national rate of 1.4 percent.

Home Sales Prices

During 2019, the average sales price of new and existing homes (including distressed sales and regular resales) increased 3 percent in the HMA, to \$191,500. While this is below the 6-percent rate of growth during 2018, it is equal to the average level of home sales price growth in the HMA from 2009 through 2017 (Figure 8). Due to the modest increase in prices since the Great Recession, homes are relatively affordable in the HMA compared to the nation. According to the National Association of Home Builders (NAHB)/Wells Fargo Housing Opportunity Index (HOI) for the HMA, only 62 out of the 237 MSAs measured, or 26 percent of MSAs in the nation, had greater housing affordability than the Pittsburgh HMA.

Figure 8. 12-Month Average Sales Price by Type of Sale in the Pittsburgh HMA



REO = real estate owned.
Source: CoreLogic, Inc., with adjustments by the analyst

Forecast

During the 3-year forecast period, demand is estimated for 9,000 new single-family homes, townhomes, and condominiums in the HMA (Table 5). The 1,100 homes under construction will satisfy some of this demand. Demand is expected to slightly increase each year because of economic growth and is estimated to be strongest in the Suburban submarket where homeownership is highest.

Table 5. Demand for New Sales Units in the Pittsburgh HMA During the Forecast Period

Sales Units	
Demand	9,000 Units
Under Construction	1,100 Units

Note: The forecast period is from January 1, 2020, to January 1, 2023.

Source: Estimates by the analyst

Allegheny County Submarket

Market Conditions: Balanced

While new and existing home sales declined at a greater rate in the Allegheny County submarket than the HMA during 2019, the vacancy rate and months of inventory are below the HMA average.

Current Conditions

Sales housing market conditions in Allegheny County are balanced, with an estimated vacancy rate of 1.3 percent, down from 2.1 percent in April 2010 (Table 6). The decline in the vacancy rate was greater than the HMA overall due to a slowdown in population decline and continued household growth. The inventory of homes for sale was down from a 3.6-month supply in December 2018 to a 3.1-month supply as of December 2019 (CoreLogic, Inc.).

Table 6. Home Sales Quick Facts in the Allegheny County Submarket

	Allegheny County Submarket	Pittsburgh HMA
Vacancy Rate	1.3%	1.4%
Months of Inventory	3.1	3.3
Total Home Sales	18,650	36,700
1-Year Change	-8%	-5%
New Home Sales Price	\$412,800	\$372,900
1-Year Change	5%	1%
Existing Home Sales Price	\$201,200	\$181,900
1-Year Change	4%	3%
Mortgage Delinquency Rate	1.8%	1.9%

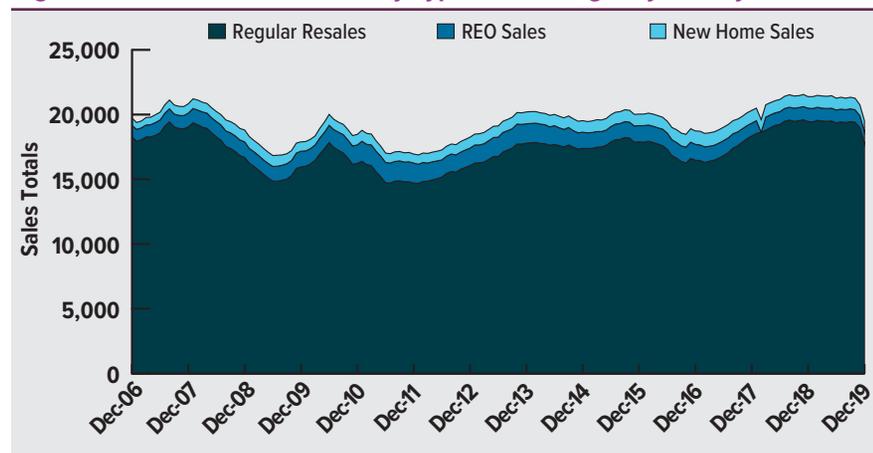
Notes: The vacancy rate is as of the current date (January 1, 2020); home sales and prices are for the 12 months ending December 2019; and months of inventory and mortgage delinquency data are as of December 2019.

Sources: CoreLogic, Inc.; Metrostudy, A Hanley Wood Company

Home Sales

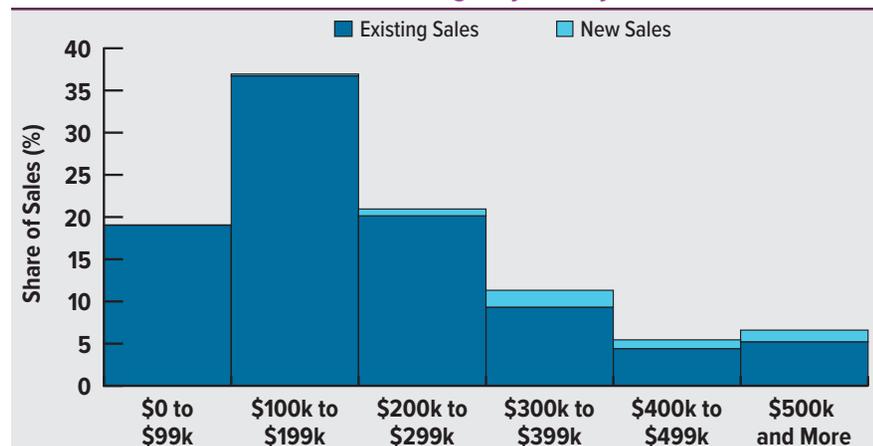
Home sales started to increase in the submarket in 2012, after generally declining from 2008 through 2011. The current levels of homes sold, including new and existing single-family homes, townhomes, and condominiums, however, have declined during the past year but are at levels above the pre-recession peak. During 2019, home sales, approximately 5 percent of which are new homes, totaled 18,650, down 8 percent compared with 20,375 home sales during the previous 12-month period (CoreLogic, Inc., with adjustments by the analyst). By comparison, from 2000 through 2007, new and existing home sales averaged 19,150 annually, declining by less than 1.0 percent each year. When the national housing market crashed, sales in the HMA declined an average of 1,550, or 8 percent, each year from 2008 through 2009, with all the decline due to a drop in existing home sales while new home sales were unchanged. From 2010 through 2012, total home sales were unchanged, on average, during this period before the market began to improve in 2013. From 2013 through 2017, during a period of economic expansion in the HMA, new and existing home sales both grew by 3

Figure 9. 12-Month Sales Totals by Type in the Allegheny County Submarket



REO = real estate owned.
Source: CoreLogic, Inc., with adjustments by the analyst

Figure 10. Share of Sales by Price Range During the 12 Months Ending December 2019 in the Allegheny County Submarket



Source: Metrostudy, A Hanley Wood Company

percent each year. Figure 9 shows the 12-month average sales totals by sales type in the Allegheny County submarket since 2006, and Figure 10 shows the number of new and existing home sales by price range during 2019.

Distressed and REO Sales

During 2019, distressed home sales accounted for approximately 5 percent of total sales, well below a high of 12 percent in 2011 (CoreLogic, Inc.). During 2019, the sales price of an REO home in the Allegheny County submarket averaged \$103,500, representing a 12 percent increase in price from the previous 12-month period. Despite the significant increase during the past year, the average price of an REO home was one-half that of a regular resale home. By comparison, during 2011, the average price of an REO home was \$60,050, or 40 percent of the price of a regular resale home. In December 2019, 1.8 percent of home loans in the Allegheny County submarket were seriously delinquent or had transitioned into REO status, down from 2.1 percent in December 2018 and a peak of 5.5 percent in January 2010 (CoreLogic, Inc.).

Home Sales Prices

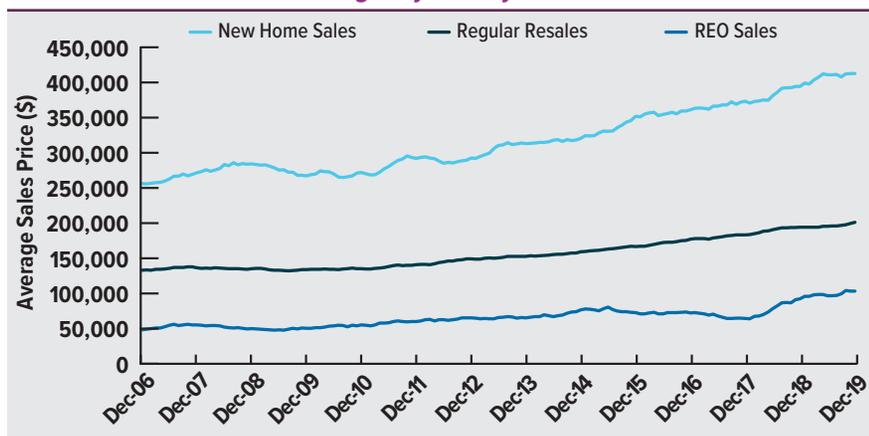
During 2019, the average new and existing home sales price in the Allegheny County submarket increased 4 percent, to \$210,800, compared with 5 percent growth during the previous 12-month period (CoreLogic, Inc., with adjustments by the analyst). From 2010 through 2017, the average price of new and existing homes grew by 4 percent each year.

While home sales prices declined during the Great Recession, the impact of the foreclosure crisis in the Allegheny County submarket was limited. From 2001 through 2007, the price of a home grew by 4 percent annually, with prices of new and existing homes increasing by 6 and 4 percent, respectively. By comparison, from 2008 through 2009, when home sales contracted, the average sales price in



the Allegheny County submarket declined at a modest rate of 1 percent annually for both new and existing homes. Figure 11 shows the 12-month average home sales price by sales type in the Allegheny County submarket from December 2006 through the current date.

Figure 11. 12-Month Average Sales Price by Type of Sale in the Allegheny County Submarket



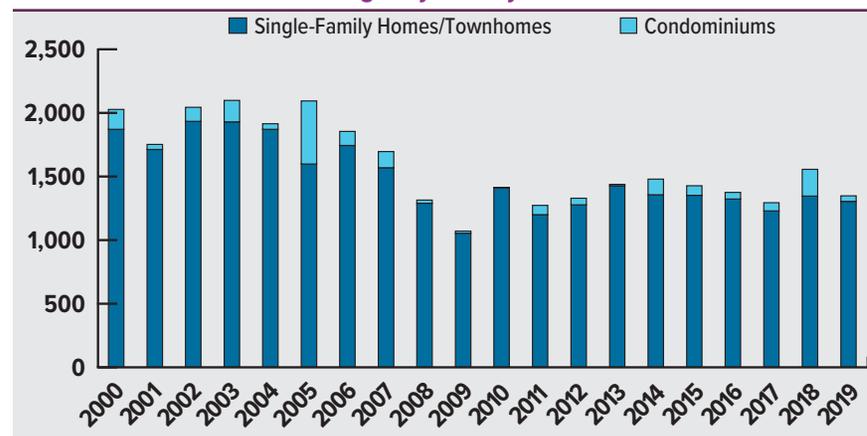
REO = real estate owned.
Source: CoreLogic, Inc., with adjustments by the analyst

Sales Construction Activity

As net out-migration from the submarket continues, new home construction, as measured by the number of single-family homes, townhomes, and condominiums permitted, has remained relatively flat since 2010 (Figure 12). During 2019, 1,350 sales units were permitted, approximately 3 percent of which were condominiums (preliminary data). From 2010 through 2018, the number of sales units permitted averaged 1,400, ranging from a low of 1,275 in 2011 to 1,550 in 2018. By comparison, home construction averaged 1,975 each year from 2000 through 2005, before declining an average of 15 percent a year to a low of 1,075

units in 2009. The construction of condominiums has been limited because single-family homes are relatively affordable in the HMA. During the past 10 years, condominiums accounted for approximately 5 percent of sales construction activity, compared with 7 percent during the previous 10 years.

Figure 12. Average Annual Sales Permitting Activity in the Allegheny County Submarket



Notes: Includes single-family homes, townhomes, and condominiums. Data for 2019 are through December 2019.
Sources: U.S. Census Bureau, Building Permits Survey; 2000 through 2017—final data and estimates by the analyst; 2018 and 2019—preliminary data and estimates by the analyst

New Construction

There are currently an estimated 550 single-family homes under construction in the submarket, with development concentrated near major commuting arteries. The Villas at English Farms is a single-family luxury home community currently in its final phase of development in the town of Wexford in northern Allegheny County near Interstates 76 and 79. Upon completion, the development will consist of 24 homes, 15 of which have already been built. Homes are built as they are sold, with four-bedroom townhomes starting at \$670,000. Hunters Preserve is a

single-family home community under development in the Jefferson Hills borough, near Route 51, a direct 11-mile drive to Pittsburgh. Currently, 16 of a planned 26 lots are for sale, with three-bedroom homes starting at \$309,000.

Forecast

During the next 3 years, demand is expected for 4,350 new homes in the Allegheny County submarket, with demand increasing each year as net out-migration slows. Demand is expected in areas accessible to major highways and public transportation for easy travel into the city of Pittsburgh. The 550 homes currently under construction will satisfy a portion of the demand (Table 7).

Table 7. Demand for New Sales Units in the Allegheny County Submarket During the Forecast Period

Sales Units	
Demand	4,350 Units
Under Construction	550 Units

Note: The forecast period is from the current date (January 1, 2020), to January 1, 2023.
Source: Estimates by the analyst

Suburban Submarket

Market Conditions: Balanced

The inventory of homes for sale dropped significantly during the past year in the Suburban submarket as sales and prices remained steady, and new home construction was down compared with earlier in the decade.

Current Conditions

Sales housing market conditions in the Suburban submarket are balanced, with an estimated vacancy rate of 1.5 percent, down from 1.9 percent in April 2010

(Table 8). The modest decline in the vacancy rate occurred despite continued population loss because lower levels of new construction, compared with the previous decade, have limited the supply of available inventory. The inventory of homes for sale was down significantly, from a 5.0-month supply in December 2018 to a 3.6-month supply as of December 2019 (CoreLogic, Inc, with estimates by the analyst.).

Table 8. Home Sales Quick Facts in the Suburban Submarket

	Suburban Submarket	Pittsburgh HMA
Vacancy Rate	1.5%	1.4%
Months of Inventory	3.6	3.3
Total Home Sales	18,050	36,700
1-Year Change	0%	-5%
New Home Sales Price	\$338,600	\$372,900
1-Year Change	-2%	1%
Existing Home Sales Price	\$161,900	\$181,900
1-Year Change	3%	3%
Mortgage Delinquency Rate	2.0%	1.9%

Notes: The vacancy rate is as of the current date (January 1, 2020); home sales and prices are for the 12 months ending December 2019; and months of inventory and mortgage delinquency data are as of December 2019.

Sources: CoreLogic, Inc.; Metrostudy, A Hanley Wood Company

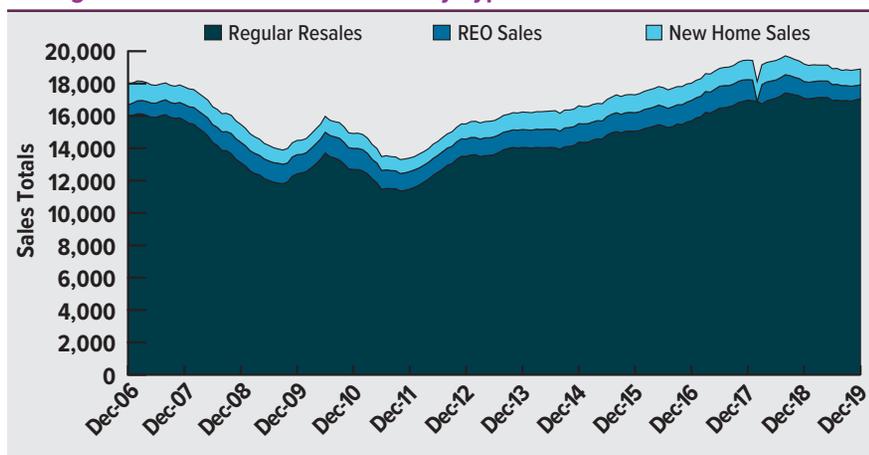
Home Sales

After declining, on average, from 2006 through 2011, home sales began to increase in 2012. The current level of homes sold, including new and existing single-family homes, townhomes, and condominiums, however, has declined slightly during the past year. During 2019, home sales totaled 18,050, down less than 1 percent compared with 18,150 during 2018 (CoreLogic, Inc., with adjustments by the analyst). By comparison, from 2000 through 2005, new and existing home sales averaged 14,350 annually, reaching a peak in 2004



of 18,225 homes sold. When the national housing market crashed, sales in the Suburban submarket declined an average of 6 percent each year from 2006 through 2011, with new and existing homes declining annually by 7 and 6 percent, respectively, before the housing market began to recover in 2012. From 2012 through 2017, homes sales increased an average of 7 percent with new and existing homes increasing by 6 and 7 percent each year, respectively. Figure 13 shows the 12-month average sales totals by sales type in the Suburban submarket since 2006.

Figure 13. 12-Month Sales Totals by Type in the Suburban Submarket



REO = real estate owned.
Source: CoreLogic, Inc., with adjustments by the analyst

Distressed and REO Sales

Like the Allegheny County submarket, during 2019, distressed home sales accounted for approximately 5 percent of total sales, below a high of 11 percent in 2010 (CoreLogic, Inc.). During 2019, the sales price of an REO home in the Suburban submarket averaged \$58,900, representing a 2 percent decline in

price from the previous 12-month period. While REO homes are approximately 65 percent lower than the \$167,450 price of a resale home, regular resale homes are an affordable option for people living in the HMA. In December 2019, 2.0 percent of home loans in the submarket were seriously delinquent or had transitioned into REO status, down from 2.5 percent in December 2018 and a peak of 5.9 percent in January 2010 (CoreLogic, Inc.).

Home Sale Prices

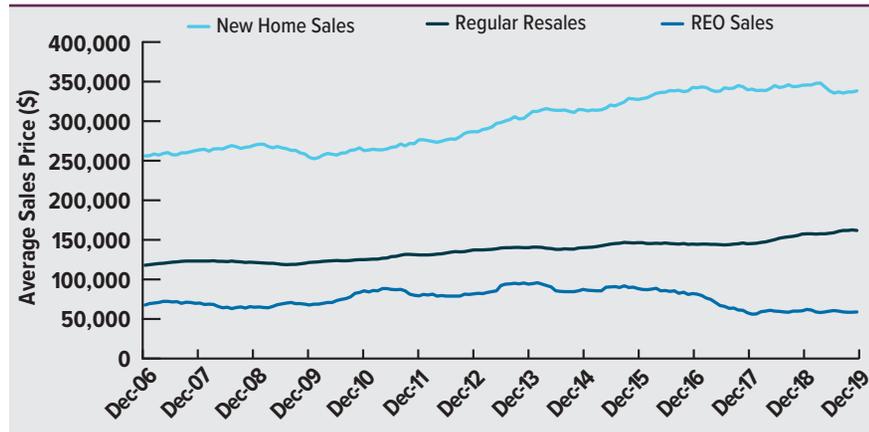
During 2019, the average new and existing home sales price increased 2 percent, or by \$3,275, to \$171,800. By comparison, home sale prices grew by 6 percent, or \$10,250, during the previous year (CoreLogic, Inc., with adjustments by the analyst). The impact of the foreclosure crisis on home prices was less severe in the Suburban submarket as job losses and net out-migration prior to the Great Recession limited speculation in the area. From 2001 through 2005, the price of a new home grew by 6 percent annually, while existing home prices increased 7 percent. From 2006 through 2008, the average sales price in the Suburban submarket continued to grow, but more slowly, at a 1-percent annual rate of growth. The only year during the recession when average prices decreased was 2009, with new home prices declining 6 percent and existing home prices unchanged, resulting in an overall decline of 2 percent. From 2010 through 2017, the average price of a home grew by approximately \$3,500 each year, or a rate of 2 percent. Figure 14 shows the 12-month average sales price by type in the Suburban submarket since 2006. Figure 15 shows the number of new and existing home sales by price range during the past 12 months.

Sales Construction Activity

Similar to the Allegheny County submarket, new home construction has remained relatively stable through the decade but has recently slowed (Figure 16). During 2018 and 2019, an estimated 1,650 homes were permitted each year

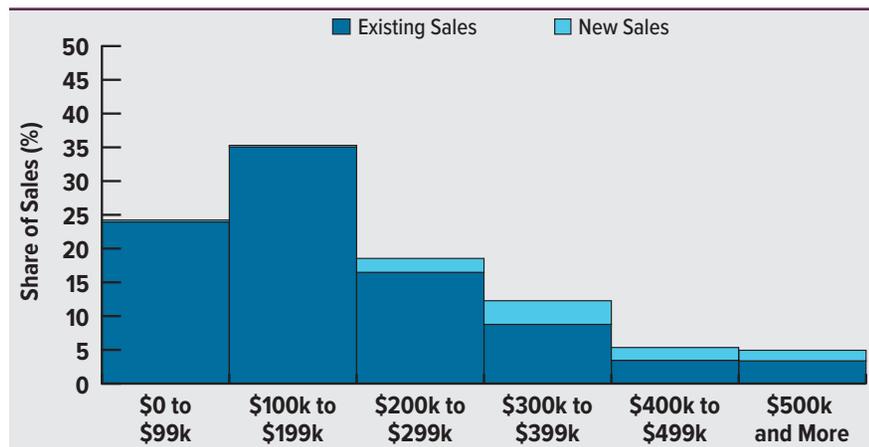


Figure 14. 12-Month Average Sales Price by Type of Sale in the Suburban Submarket



REO = real estate owned.
Source: CoreLogic, Inc., with adjustments by the analyst

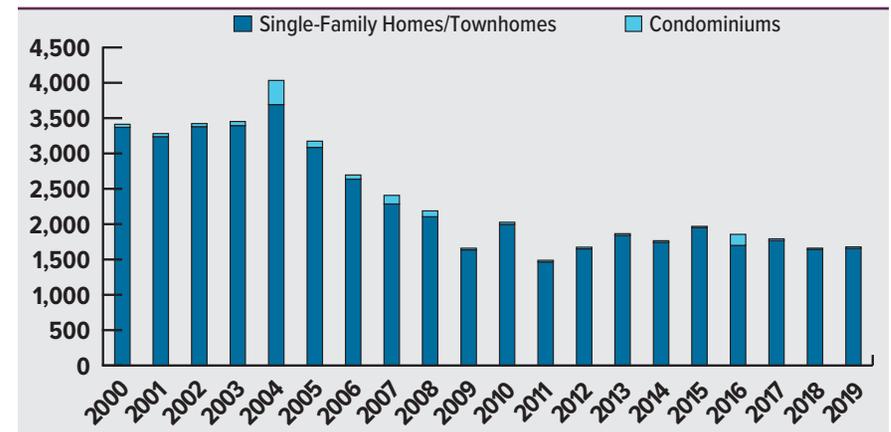
Figure 15. Share of Sales by Price Range During the 12 Months Ending December 2019 in the Suburban Submarket



Source: Metrostudy, A Hanley Wood Company

(preliminary data). On average, homebuilding activity is down considerably during this decade compared with the previous decade. From 2000 through 2009, new home construction averaged 2,975 each year, peaking in 2004 with 4,025 homes permitted, then falling to 1,650 homes during 2009, like current levels. By comparison, from 2010 through 2017, permitting averaged 1,800 per year.

Figure 16. Average Annual Sales Permitting Activity in the Suburban Submarket



Notes: Includes single-family homes, townhomes, and condominiums. Data for 2019 are through December 2019.
Sources: U.S. Census Bureau, Building Permits Survey; 2000 through 2017—final data and estimates by the analyst; 2018 and 2019—preliminary data and estimates by the analyst

New Construction

There are an estimated 550 single-family homes currently under construction in the submarket. Meeder is a residential and commercial development in Butler County, in the township of Cranberry, near the intersection of Interstates 76 and 79. Upon completion, the development will consist of 71 single-family homes and 260 townhomes, along with two apartment buildings. Currently, three-bedroom townhomes start at \$280,000, and four-bedroom single-family

homes start at \$409,000. The Courtyards at Windsor Woods is a patio home development located in Cecil Township, in Washington County near Interstate 79 and approximately 20 miles southwest of Pittsburgh. Fifty homes are currently planned, with two-bedroom homes starting at \$320,000.

Forecast

During the next 3 years, demand is expected for 4,650 new homes in the Suburban submarket, with demand declining each year as the population decreases. Demand is expected in areas accessible to major highways and public

transportation connecting the submarket to the city of Pittsburgh. The 550 homes currently under construction will satisfy a portion of the demand (Table 9).

Table 9. Demand for New Sales Units in the Suburban Submarket During the Forecast Period

Sales Units	
Demand	4,650 Units
Under Construction	550 Units

Note: The forecast period is from the current date (January 1, 2020), to January 1, 2023.
Source: Estimates by the analyst



Rental Market HMA

Market Conditions: Balanced

Despite population decline and increased levels of construction, the apartment market is balanced due to increased demand for rental units.

Current Conditions and Recent Trends

Rental housing market conditions in the Pittsburgh HMA are balanced, with the overall rental vacancy rate estimated at 7.5 percent as of January 1, 2020, down from the April 2010 rental vacancy rate of 8.9 percent (Table 10). The unit mix of occupied multifamily housing has changed little since 2010. As of July 2018, approximately 39 percent of all renter households lived in single-family homes, up slightly from 38 percent in 2010. An estimated 20 percent of renter households resided in buildings with two to four units, down 1 percent from 2010, while 39 percent of renter households resided in buildings with five or more units, up from 38 percent during the same period.

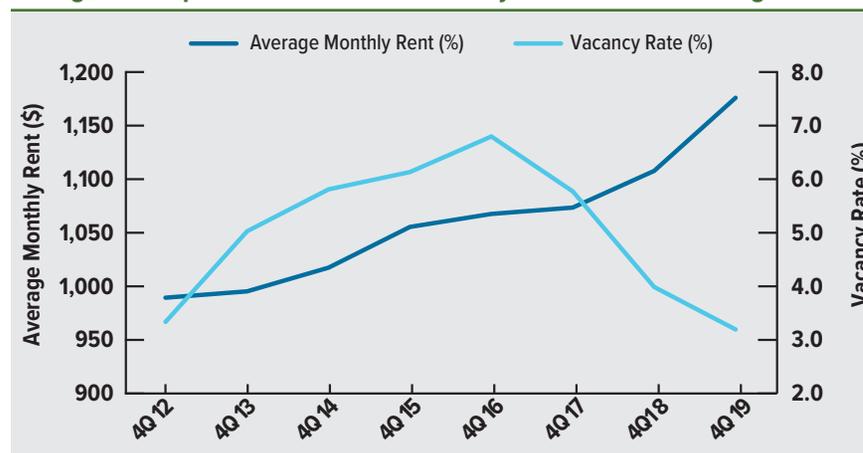
Although the overall rental housing market is balanced, the apartment market is slightly tight, with a vacancy rate of 3.2 percent during the fourth quarter 2019, down from 4.0 percent a year earlier (RealPage, Inc.). The current apartment vacancy rate in the HMA is down from a fourth quarter high of 6.8 percent during 2016 (Figure 17), when years of high levels of construction and net out-migration lead to an increase in vacancies. Rents in the fourth quarter of 2019 averaged \$1,175, up 6 percent from \$1,107 during the fourth quarter of 2018. The relatively high increase in rent during the past year is due, in part, to a significant number of new units entering the market.

Table 10. Rental and Apartment Market Quick Facts in the Pittsburgh HMA

	2010 (%)	Current (%)
Rental Vacancy Rate	8.9	7.5
Occupied Rental Units by Structure		
Single-Family Attached & Detached	38.0	39.0
Multifamily (2–4 Units)	21.0	20.0
Multifamily (5+ Units)	38.0	39.0
Other (Including Mobile Homes)	3.0	2.0

Notes: The current date is January 1, 2020. Percentages may not add to 100 due to rounding. Source: 2010 and 2018 American Community Survey, 1-year data

Figure 17. Apartment Rents and Vacancy Rates in the Pittsburgh HMA



4Q = fourth quarter. Source: RealPage, Inc.



Forecast

During the 3-year forecast period, demand is expected for 7,625 new rental units (Table 11). The 4,625 units currently under construction will satisfy some of the demand during the next 3 years, with a majority share of the demand in the Allegheny County submarket, in the city of Pittsburgh.

Table 11. Demand for New Rental Units in the Pittsburgh HMA During the Forecast Period

Rental Units	
Demand	7,625 Units
Under Construction	4,625 Units

Note: The forecast period is from the current date (January 1, 2020), to January 1, 2023.
Source: Estimates by the analyst

Allegheny County Submarket

Market Conditions: Balanced

Due to young professionals and students moving into and around the city of Pittsburgh, demand for multifamily rental housing has increased despite an overall population decline.

Current Conditions

Rental housing market conditions in the Allegheny County submarket are balanced, with the overall rental vacancy rate estimated at 7.7 percent as of January 1, 2020, down from the April 2010 rental vacancy rate of 8.9 percent (Table 12). As of July 2018, approximately 35 percent of all renter households lived in single-family homes, up from 32 percent in 2010. An estimated 20 percent of

renter households resided in buildings with two to four units, down 1 percent from 2010, while 45 percent of renter households resided in buildings with five or more units, down from 47 percent during the same period, but significantly higher than the HMA.

Table 12. Rental and Apartment Market Quick Facts in the Allegheny County Submarket

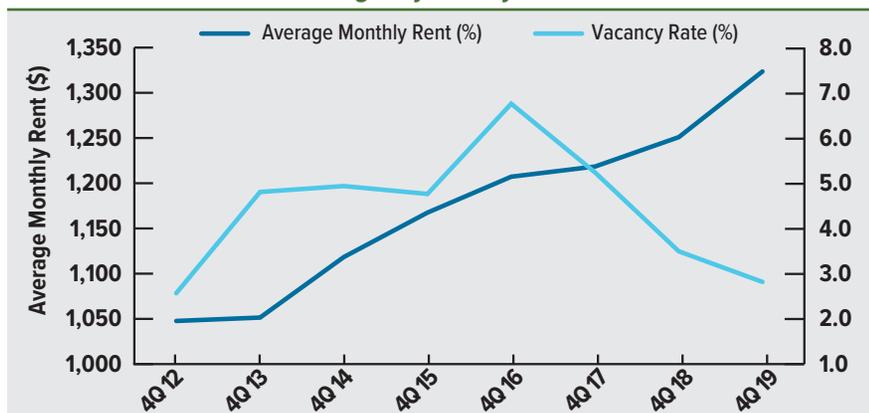
	2010 (%)	Current (%)
Rental Market Quick Facts		
Rental Vacancy Rate	8.9	7.7
Occupied Rental Units by Structure		
Single-Family Attached & Detached	32.0	35.0
Multifamily (2–4 Units)	21.0	20.0
Multifamily (5+ Units)	47.0	45.0
Other (Including Mobile Homes)	0.0	0.0

Notes: The current date is January 1, 2020. Percentages may not add to 100 due to rounding.
Source: 2010 and 2018 American Community Survey, 1-year data

Apartment Market Conditions

The apartment market in the Allegheny County submarket is currently tight. In the combined RealPage, Inc.-defined market areas of Central, East, and Oakland (an area which includes the city of Pittsburgh and parts of Allegheny County), the apartment vacancy rate during the fourth quarter of 2019 was 2.8 percent, down from 3.5 percent a year earlier (RealPage, Inc.). The current apartment vacancy rate in that area is down from a high of 6.8 percent during the fourth quarter of 2016 (Figure 18), when high levels of multifamily construction in the HMA were concentrated in Allegheny County. Rents in the fourth quarter of 2019 averaged \$1,323, up 6 percent from \$1,251 during the fourth quarter of 2018 as newer, more expensive units, became available for rent.

Figure 18. Apartment Rents and Vacancy Rates in the Allegheny County Submarket



4Q = fourth quarter.
Source: RealPage, Inc.

Student Housing

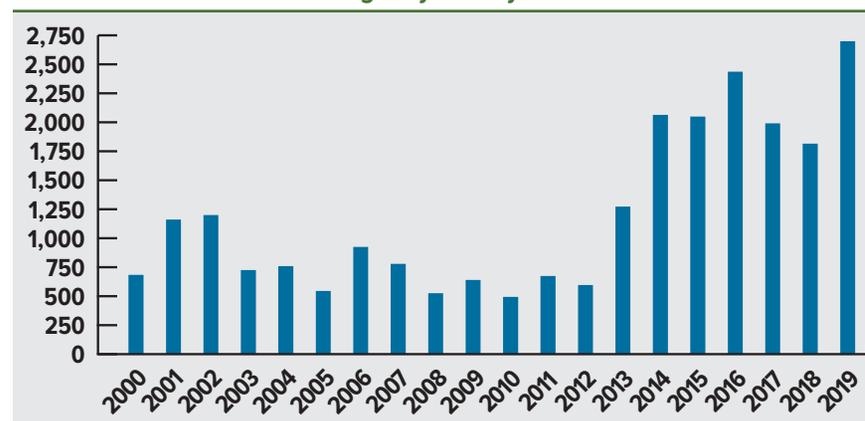
The numerous universities in and around Pittsburgh, including The University of Pittsburgh and Carnegie Mellon University, in particular, have had a significant impact on the rental market in the HMA and the city of Pittsburgh. From fall 2010 to fall 2019, overall undergraduate and graduate enrollment in local 4-year universities rose by an average of 290 students, or 0.5 percent, a year. This growth was largely due to increased enrollment at Carnegie Mellon University, with the student population increasing by an average of 350 students, or 2.7 percent, each year since 2010, offsetting losses at several smaller universities and colleges. Of the 62,600 undergraduate and graduate students in the Allegheny County submarket, approximately 18,700 are housed in on-campus dormitories and university-affiliated apartments. The remaining 43,900 students who live off-campus account for an estimated 7 percent of renter households in the HMA. Recently opened in fall 2019, The Bridge on Forbes is a new luxury off-campus student development located near UPMC, The University of Pittsburgh, and Carnegie Mellon University. Rents are priced per bed, with private studio and one-bedroom units starting at \$1,360 and \$1,750, respectively, and beds in two-

and three-bedroom units starting at \$1,145 and \$1,020, respectively. Construction recently began on a new residence hall at Carnegie Mellon University on the corner of Fifth and Clyde, in the city of Pittsburgh. Upon completion in 2021, the dormitory will add an additional 265 beds to the existing on-campus housing inventory.

Rental Construction Activity

Rental construction activity, as measured by the number of rental units permitted, increased during the past year and has been at high levels since 2014 as the population of students and young professionals in the city of Pittsburgh has continued to grow. During 2019, approximately 2,700 rental units were permitted, an increase of 875, or 48 percent, from the 1,825 units permitted during the previous 12 months (preliminary data). The 2,700 rental units permitted during the past year was an all-time high (Figure 19). From 2000 through 2007, rental construction was volatile, averaging 850 units per year, with a high of 1,200

Figure 19. Average Annual Rental Permitting Activity in the Allegheny County Submarket



Notes: Includes apartments and units intended for rental occupancy. Data for 2019 are through December 2019.

Sources: U.S. Census Bureau, Building Permits Survey; 2000 through 2017—final data and estimates by the analyst; 2018 and 2019—preliminary data and estimates by the analyst



in 2002 to a low of 550 units in 2005. From 2008 through 2012, multifamily permitting in the HMA averaged 590 units a year before increasing substantially during the next 2 years. During 2013 and 2014, permits increased an average of 740 units, or 86 percent, each year, to 2,075 units. From 2015 through 2017, rental permitting rose further, averaging 2,175 units annually.

New Construction

The District is a 442-unit apartment building, part of the second residential phase of Riverfront Landing, a 28-acre planned residential and commercial development in the Pittsburgh Strip District along the Allegheny River. Expected to be completed in 2021, the development will consist of studio, one-, and two-bedroom apartment units with modern amenities such as a rooftop common area, fitness center, and pool. While rents are not currently available, the project is comparable to the nearby Edge 1909 opened in 2018, where the average rent is \$2,250. Terminal 21 is a residential conversion of the historic Try Street Terminal building in downtown Pittsburgh. Completed in the winter of 2019, the development consists of studio, one-, and two-bedroom loft-style apartments starting at \$1,300, \$1,600, and \$2,100, respectively.

Forecast

During the 3-year forecast period, demand is expected for 6,025 new rental units (Table 13). The 3,100 units currently under construction will satisfy some of the demand for the next 3 years, with most of the demand in the city of Pittsburgh.

Table 13. Demand for New Rental Units in the Allegheny County Submarket During the Forecast Period

Rental Units	
Demand	6,025 Units
Under Construction	3,100 Units

Note: The forecast period is from the current date (January 1, 2020), to January 1, 2023.
Source: Estimates by the analyst

Suburban Submarket

Market Conditions: Balanced

While the apartment market in the Suburban submarket is tight, and rents increased 6 percent during 2019, the asking rent in the Suburban submarket is 18 percent lower than in the Allegheny County submarket.

Current Conditions

Rental housing market conditions in the Suburban submarket are balanced, with the overall rental vacancy rate estimated at 7.1 percent as of January 1, 2020, down from the April 2010 rental vacancy rate of 8.8 percent (Table 14). As of July 2018, approximately 44 percent of all renter households lived in single-family homes, down slightly from 46 percent in 2010, significantly higher than the Allegheny County submarket, as the construction of multifamily developments in the area has been more limited than in the Allegheny County submarket. Approximately 30 percent of renter households resided in buildings with five or more units, up from 27 percent during the same period due to a recent increase in multifamily construction.

Table 14. Rental and Apartment Market Quick Facts in the Suburban Submarket

	2010 (%)	Current (%)
Rental Market Quick Facts		
Rental Vacancy Rate	8.8	7.1
Occupied Rental Units by Structure		
Single-Family Attached & Detached	46.0	44.0
Multifamily (2–4 Units)	20.0	20.0
Multifamily (5+ Units)	27.0	30.0
Other (Including Mobile Homes)	7.0	6.0

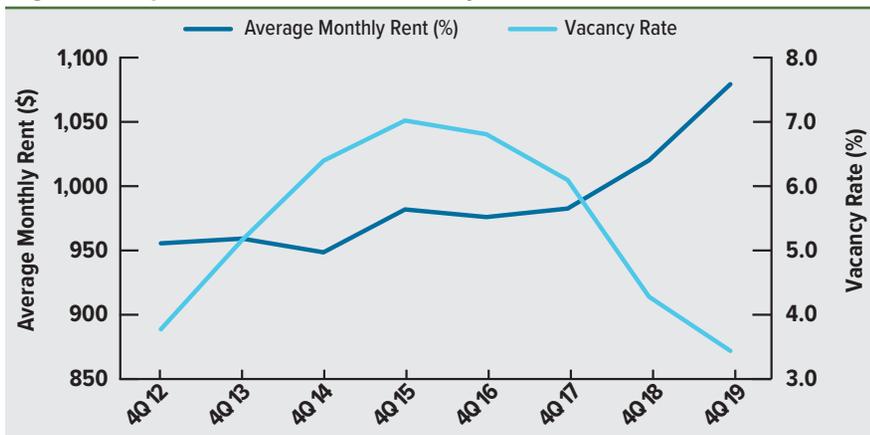
Notes: The current date is January 1, 2020. Percentages may not add to 100 due to rounding.
Source: 2010 and 2018 American Community Survey, 1-year data



Apartment Market Conditions

The apartment conditions in the combined RealPage, Inc.-defined North/South/West/Westmoreland-Fayette Counties market areas, which includes parts of Armstrong, Beaver, Butler, Fayette, Washington, and Westmoreland Counties, and parts of Allegheny County outside of the city of Pittsburgh, an area which best represents the Suburban submarket, is tight. During the fourth quarter of 2019, the apartment vacancy rate was 3.4 percent, down from 4.3 percent a year earlier (RealPage, Inc.). The current apartment vacancy rate in the submarket is down from a fourth quarter high of 7.0 percent during 2015 (Figure 20). The peak vacancy rate occurred in the Suburban submarket 1 year before the peak in the Allegheny County submarket, as a large influx of units permitted in 2013 became available for lease. Rents in the fourth quarter of 2019 averaged \$1,079, up 6 percent from \$1,020 during the fourth quarter of 2019. While growth was like that in the Allegheny County submarket, rents are 18 percent lower in the Suburban submarket.

Figure 20. Apartment Rents and Vacancy Rates in the Suburban Submarket

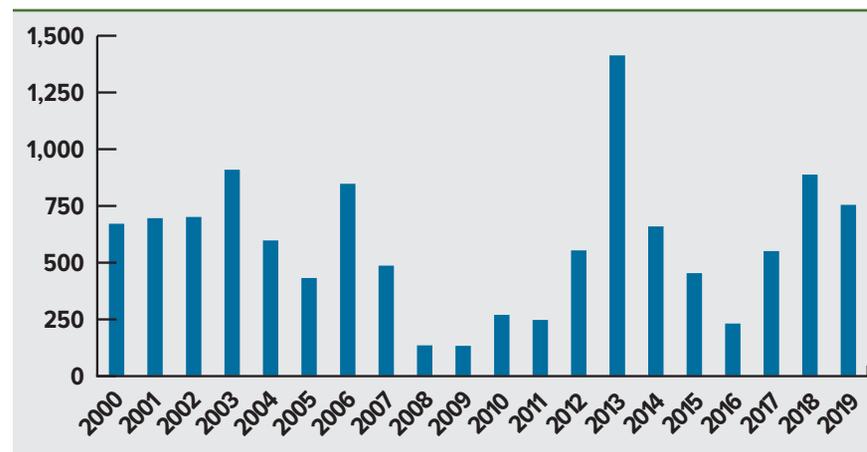


4Q = fourth quarter.
Source: RealPage, Inc.

Rental Construction Activity

Rental construction activity, as measured by the number of rental units permitted, declined during the past year, but has been at relatively high levels during the past 2 years. During 2019, approximately 760 rental units were permitted (Figure 21), a decline of 130, or 15 percent, from the 890 units permitted during the previous 12 months (preliminary data). From 2000 through 2007, the number of units permitted averaged 670 each year, falling to an average of 190 from 2008 through 2011. Permitting increased substantially since 2012 but has been extremely volatile. From 2012 through 2017, permitting averaged 640 units each year, lower than the level of permitting prior to the Great Recession, ranging from a high of 1,425 units in 2013 to a low of 230 in 2016.

Figure 21. Average Annual Rental Permitting Activity in the Suburban Submarket



Notes: Includes apartments and units intended for rental occupancy. Data for 2019 are through December 2019.
Sources: U.S. Census Bureau, Building Permits Survey; 2000 through 2017—final data and estimates by the analyst; 2018 and 2019—preliminary data and estimates by the analyst



New Construction

Rental units under construction in the Suburban submarket include the previously mentioned Meeder residential and commercial development in Butler County, which will include two apartment buildings, along with a townhouse and single-family home development. During the forecast period, two apartment buildings with 138 units each are planned for development, along with an additional 28 apartment units on the second floor of a mixed-use commercial and residential building. The Waters of McMurray is a senior living and continuing care development community currently under construction in the town of McMurray in Washington County, which will consist of 127 one- and two-bedroom apartments. This is the second Waters community in the HMA after The Waters of Wexford in the Allegheny County submarket opened in the summer of 2018. Rents at The Waters of Wexford start at a base price of approximately \$2,600 before additional services are added.

Forecast

During the 3-year forecast period, demand is expected for 1,600 new rental units (Table 15). The 1,525 units currently under construction will satisfy most of the demand for the next 3 years. Builders should delay construction so that new units come on the market after year 3 to satisfy demand in year 4.

Table 15. Demand for New Rental Units in the Suburban Submarket During the Forecast Period

Rental Units	
Demand	1,600 Units
Under Construction	1,525 Units

Note: The forecast period is from the current date (January 1, 2020), to January 1, 2023.

Source: Estimates by the analyst



Terminology Definitions and Notes

A. Definitions

Building Permits	Building permits do not necessarily reflect all residential building activity that occurs in an HMA. Some units are constructed or created without a building permit or are issued a different type of building permit. For example, some units classified as commercial structures are not reflected in the residential building permits. As a result, the analyst, through diligent fieldwork, estimates this additional construction activity. Some of these estimates are included in the discussions of single-family and multifamily building permits.
Demand	The demand estimates in the analysis are not a forecast of building activity. They are the estimates of the total housing production needed to achieve a balanced market at the end of the 3-year forecast period given conditions on the as-of date of the analysis, growth, losses, and excess vacancies. The estimates do not account for units currently under construction or units in the development pipeline.
Distressed Sales	Short sales and real estate owned (REO) sales.
Forecast Period	1/1/2020–1/1/2023 Estimates by the analyst.
Great Recession	December 2007–June 2009
Home Sales/ Home Sales Prices	Includes single-family home, townhome, and condominium sales.



Net Natural Change	The difference between resident births and resident deaths.
Rental Market/ Rental Vacancy Rate	Includes apartments and other rental units such as single-family, multifamily, and mobile homes.
Seriously Delinquent Mortgages	Mortgages 90+ days delinquent or in foreclosure.

B. Notes on Geography

1.	The metropolitan statistical area definition noted in this report is based on the delineations established by the Office of Management and Budget (OMB) in the OMB Bulletin dated February 28, 2013.
2.	Urbanized areas are defined using the U.S. Census Bureau 2010 Census Urban and Rural Classification and the Urban Area Criteria.
3.	The census tracts referenced in this report are from the 2010 Census.

C. Additional Notes

1.	The NAHB Housing Opportunity Index represents the share of homes sold in the HMA that would have been affordable to a family earning the local median income, based on standard mortgage underwriting criteria.
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2.	<p>Other Vacant Units in this analysis conducted by the U.S. Department of Housing and Urban Development (HUD), other vacant units include all vacant units that are not available for sale or for rent. The term therefore includes units rented or sold but not occupied; held for seasonal, recreational, or occasional use; used by migrant workers; and the category specified as “other” vacant by the Census Bureau.</p>
3.	<p>This analysis has been prepared for the assistance and guidance of HUD in its operations. The factual information, findings, and conclusions may also be useful to builders, mortgagees, and others concerned with local housing market conditions and trends. The analysis does not purport to make determinations regarding the acceptability of any mortgage insurance proposals that may be under consideration by the Department.</p>
4.	<p>The factual framework for this analysis follows the guidelines and methods developed by the Economic and Market Analysis Division within HUD. The analysis and findings are as thorough and current as possible based on information available on the as-of date from local and national sources. As such, findings or conclusions may be modified by subsequent developments. HUD expresses its appreciation to those industry sources and state and local government officials who provided data and information on local economic and housing market conditions.</p>
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