

District Data Brief

Strong Demand, Limited Supply, and Rising Prices: The Economics of Pandemic-Era Housing

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When the coronavirus pandemic began, many feared the housing market would collapse again as it did in the mid-2000s. Instead, the industry has struggled to keep up with an influx of demand for homes. Over the course of the pandemic, the Federal Reserve Bank of Cleveland has monitored activity in residential real estate and construction. Below we highlight key developments in the industry over the last 18 months. The pandemic-era housing market has been marked by a supply that is not meeting demand, leading to rapidly rising prices. In recent conversations, realtors report that they expect activity to remain steady during the next 12 months, but they expect price growth to normalize.

The Federal Reserve Bank of Cleveland regularly surveys a broad cross-section of businesses in the region it serves and convenes business advisory councils in eight of the region's major metropolitan areas. The information collected through these surveys and conversations points to trends that are not yet apparent in the data and fills gaps in researchers' understanding of our region's economy. The information is helpful to Federal Reserve policymakers during their discussions about the nation's monetary policy. Anecdotes herein have been edited for length and clarity.

Start of the pandemic: Coronavirus fears and government-mandated shutdowns curtailed home sales

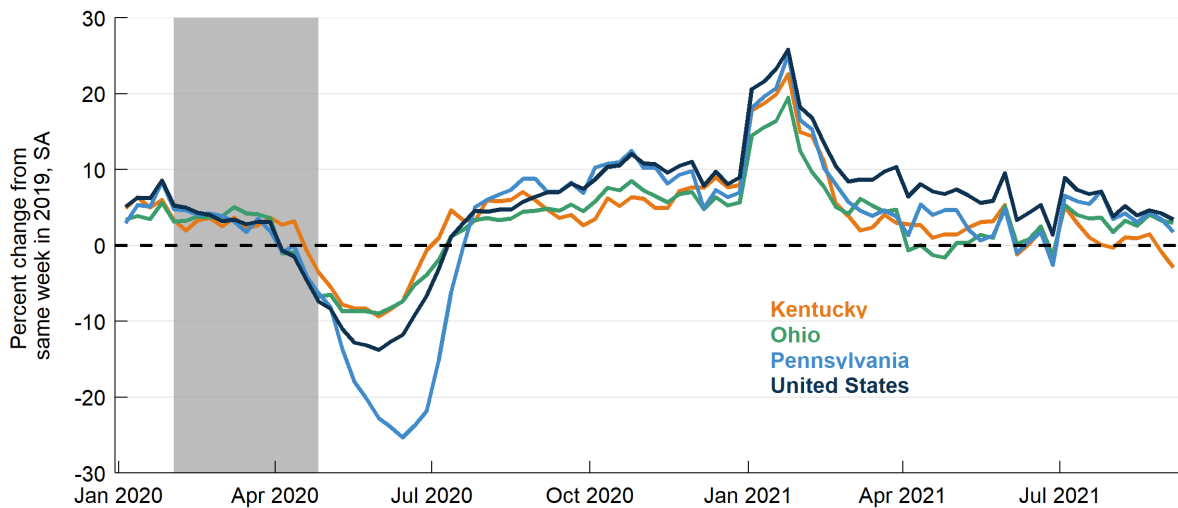
In March and April 2020, government-mandated shutdowns and stay-at-home orders made it difficult to show homes, and uncertainty about the market and the virus [led many sellers to refrain from listing their homes](#). Home sales declined amid deteriorating consumer confidence. In the four weeks ending May 31, 2020, home sales in the United States bottomed out almost 14 percent lower than in the same period in 2019, according to data from [Redfin](#) (see Figure 1). The drop was smaller in Ohio and Kentucky, but the pattern was similar. In Pennsylvania, [construction and real estate were not deemed essential services](#), so the decline in home sales was much steeper.¹ While construction continued in most states, homebuilders

¹ All or parts of Ohio, Pennsylvania, Kentucky, and West Virginia make up the Fourth Federal Reserve District, for which the Federal Reserve Bank of Cleveland is responsible. Because of data limitations, West Virginia is excluded.

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reported that the elimination of walk-in business hurt demand for new projects. Despite these depressed conditions, contacts expressed optimism that conditions would improve as the summer months approached and [interest rates were expected to remain favorable](#).² That said, there was considerable uncertainty about the outlook because little was known about the virus.

Figure 1. Home Sales Relative to 2019



Notes: Sales are the sum of all sales in available Multiple Listing Service (MLS) regions within the stated geography. The data are weekly, and we seasonally adjust each series, take a four-week moving average, and compare with the same week in 2019. Sources: Redfin and FRBC calculations. Last data point: Week ending September 5, 2021.

Summer and fall 2020: The housing market made a strong rebound that persisted, defying normal seasonal patterns

Consistent with expectations, as the economy reopened in the late spring and summer of 2020, housing demand rebounded. Sales picked up in June, and by the end of July, they had surpassed sales in the same period during 2019 in Fourth District states and nationally. Contacts suggested that [low mortgage interest rates](#) encouraged undecided buyers to “get off the fence,” and they said that many buyers had a newfound need for additional square footage as they coped with remote work and distance learning and generally spent more time at home. Despite strong demand, many people were still hesitant to list their homes, and sales might have been even stronger were more inventory available.

² On March 15, 2020, the Federal Open Market Committee (FOMC) [lowered its target for the federal funds rate](#) to 0 to ¼ percent, and began to signal that it would maintain that target for some time. Additionally, the FOMC has been purchasing Treasury securities and agency mortgage-backed securities (MBSs) to support the smooth functioning of financial markets and to further ease financial conditions. On June 10, 2020, [the FOMC indicated](#) that it would continue to purchase these securities at the current pace (\$40 billion in MBSs and \$80 billion in Treasury securities each month), which continues as of this writing.

- August 17, 2020: A regional homebuilder based in Northeast Ohio said that the lack of available existing homes, low interest rates, and rising home prices pushed some clients to buy now rather than wait.

[Residential real estate is a seasonal business](#); demand is usually strongest in the spring and summer months before softening in the fall as the weather cools and children return to school. In a mid-August 2020 survey, the median expectation from residential real estate and construction contacts was for fourth quarter 2020 revenues to be around 11 percent below what they were in the first quarter of 2020 (prepandemic levels), reflecting this seasonal pattern. However, in a survey fielded September 28 through October 5, the median response was that fourth quarter revenue would equal its prepandemic level as activity remained stronger than anticipated.

- October 1, 2020: A realtor in Toledo, Ohio, said, “Normally demand and sales would begin to decline slightly after Labor Day and the beginning of the school year. Not so this year. It seems that the normal strong markets of May–July continued at least through August and September.”

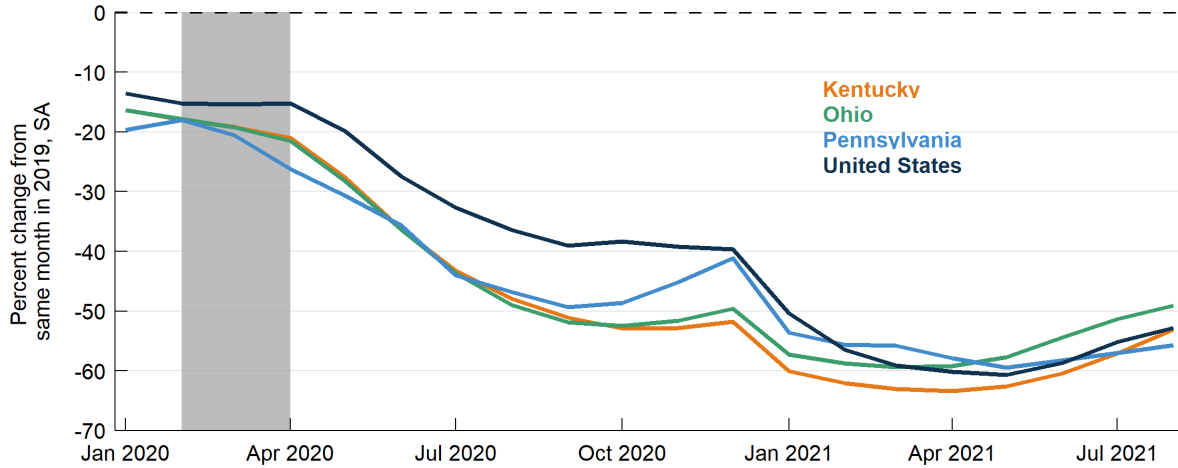
Winter 2020–2021: Demand endured, but reports of supply chain constraints became more widespread

Home sales stabilized in November and December but were higher than what is typical for those months. In addition to seasonal factors, contacts attributed the evening out to the increase in COVID-19 cases. Reports of supply chain challenges also became more widespread as extended lead times and rising construction costs meant that some building projects were paused.

- November 19, 2020: A representative from a construction trade association in Lexington, Kentucky, said that some projects had been put on hold until lumber prices went down, and certain builders started to use escalation clauses as the price of lumber rose. He also noted that the time to build a home had increased from 7 to 8 months to 10 months because of limited labor and supplies.

Nevertheless, according to the Redfin data, sales surged in January 2021 across the nation and in Fourth District states. Contacts continued to say that the low inventory pushed buyers to quickly move forward with purchases, which led to a further reduction in inventory. [According to Realtor.com](#), in January 2021, the number of active listings was about half of its January 2019 level in the nation as a whole (see Figure 2). Listings were even lower in Ohio and Kentucky. In Pennsylvania, they increased in November and December, relative to those months in 2019, but reversed course in January.

Figure 2. Active Residential Real Estate Listings Relative to 2019



Source: Realtor.com. Last data point: August 2021.

Spring 2021: Demand accelerated further, but supply constraints became more binding and put additional upward pressure on prices

Consistent with expectations that housing demand would follow the typical seasonal patterns, contacts reported that demand picked up in March 2021 from a low in February. However, inventory challenges and supply chain constraints hurt sales. Sales remained above same-period 2019 levels in the United States as a whole, but in Ohio, Kentucky, and Pennsylvania, sales slowed to close to 2019 levels toward the end of the first quarter of 2021 and have been relatively stable since then.

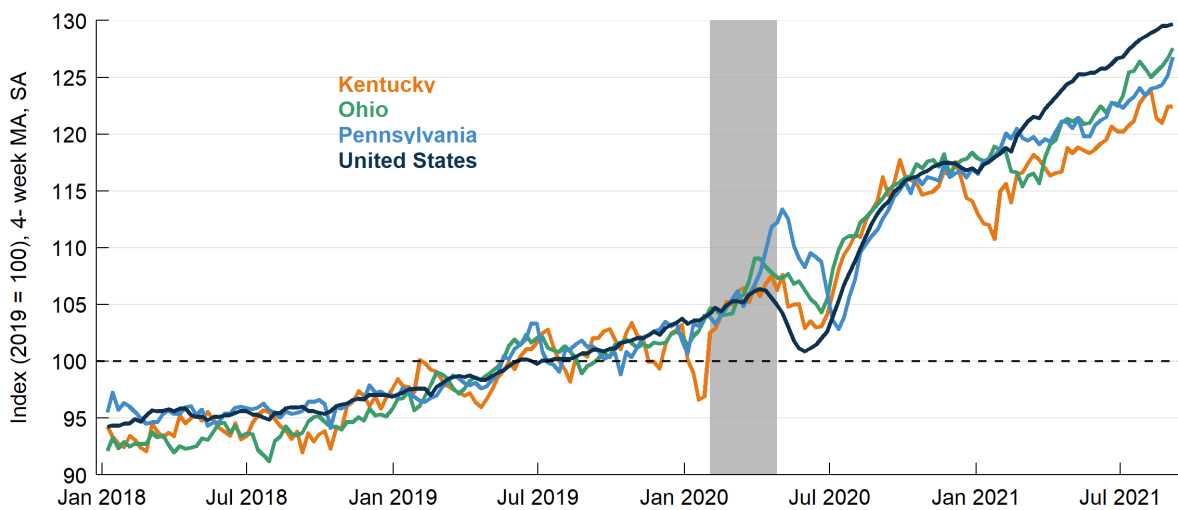
- March 8, 2021: A real estate agent in Erie, Pennsylvania, said that sales could be higher if not for the shortage of inventory, and some potential sellers were reluctant to list their homes for fear they would not be able to find another home to purchase. She noted that in the Erie market, listings were around a quarter of what is typical during that time of year.

Reflecting concerns about supply side constraints, in a mid-April survey, contacts downgraded their expectations for revenue growth in the second half of the year compared with a previous survey in early February. Lead times for all sorts of materials—steel, plywood, windows, cabinets, and screws, to name a few—stretched out, and prices rose substantially. As one highly publicized example, the next-contract futures price for lumber peaked at \$1,686 per thousand board feet on May 7, 2021, almost four times higher than the average price in February 2020 (\$439/mbf). While the average price subsequently declined, it was more than \$500/mbf in early September. Furthermore, other materials costs continue to increase.

- September 1, 2021: A homebuilder based in Pittsburgh, Pennsylvania, said that about half of the savings from the recent decline in lumber prices had been “eaten up” by price increases for other materials.

Because of strong demand and limited supply, home prices rose as well (see Figure 3). Homebuilders reported that they increased their prices as much to “stave off” demand as they did to account for increased materials prices. In fact, several builders reported that selling price increases more than offset the increased building costs.

Figure 3. Median Home Prices



Note: Sales-weighted average of median prices for available MLS regions within stated geography.
Sources: Redfin and FRBC calculations. Last data point: Week ending September 5, 2021.

Nationally, home prices grew 16.0 percent, [on an annualized basis](#), during the first eight months of 2021, following a 12.8 percent annual increase during 2020 (see Table 1). These growth rates are significantly higher than in recent years: for comparison, prices grew only 7.1 percent during 2019. Home prices in Kentucky, Ohio, and Pennsylvania are lower than the national median, but have experienced similar trends.

Table 1. Median Home Prices

	September 5, 2021		Year-end 2020	Year-end 2019
	Thousands of dollars	Percent change from year-end 2020, annualized	Year-over-year percent change	Year-over-year percent change
Kentucky	231.8	10.6	10.6	5.8
Ohio	212.3	11.4	15.7	6.8
Pennsylvania	273.3	12.4	14.9	4.9
United States	354.9	16.0	12.8	7.1

Sources: Redfin and FRBC calculations.

Summer 2021: Demand continues to outpace supply, but buyers are backing off and price growth is expected to slow

Demand for homes remained strong through the summer of 2021, far outpacing supply: [Researchers at the Federal Reserve Board calculated](#) that new for-sale listings would have had to expand by 20 percent to keep up with the pandemic-era surge in demand. Instead, active listings were well below 2019 levels. While inventory levels have improved somewhat over the past few months, active listings in August 2021 were still less than half of what they were in August 2019 in the United States as whole, and realtors continue to cite the dearth of available homes as the top factor impeding sales.

Most residential construction contacts report increased backlogs, and some are booked through 2022. Supply chain disruptions have not improved: According to the [Census Bureau's Small Business Pulse Survey](#), nationally the share of construction firms reporting domestic supplier delays has hovered around 60 percent since the last week of May 2021, an increase from 40 percent in early March. Some builders are attempting to limit the number of new contracts in order to finish current projects on schedule. Many contacts now anticipate supply disruptions will persist longer than they had previously predicted, and they are increasingly unsure about when conditions might normalize.

- July 23, 2021: A realtor in Pittsburgh, Pennsylvania, noted that since the Great Recession, housing starts have lagged and available inventory has been tightening. The recent surge in demand has only exacerbated the problem, and he does not expect inventories to normalize anytime soon.
- August 11, 2021: A homebuilder in Columbus, Ohio, indicated that the lack of available lots, labor, and materials had extended construction cycles so much that many major builders were pulling back on their volume of new projects to focus on homes currently under construction.

Fatigue from bidding wars and consistently increasing prices have [begun to keep some potential buyers out of the market](#). A [July survey by Fannie Mae](#) showed an increasing belief that this is a bad time to buy a home, and contacts reported that some potential buyers have opted to rent for a year rather than keep

searching for a home to purchase. In recent conversations, realtors reported making fewer offers per client, and they noted that some houses stayed on the market a little longer than they would have a few months ago. Generally, they expect price growth will slow to a more normal pace. They are optimistic that stabilizing prices, low interest rates, [demographic factors bringing first-time homebuyers to the market](#), and a continued desire for additional space will keep demand for homes strong (though somewhat less robust than in the last year) over the next 12 months.

- August 16, 2021: A realtor based in Cincinnati, Ohio, noted that there are still many buyers actively looking for properties, and others are waiting to re-enter the market until prices stabilize and inventories recover further. She expects that over the next 12 months, “instead of super hot, it will be a warm market, where [demand and supply] will start to balance out.”

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