

Migration and Housing Inflation

How rents impacted pandemic migrations, and migrations shape rent growth

By Paul Williams

Takeaways

- **Today's rent inflation exhibits significant geographic variation.** The southern US, which ran steadily below national rent inflation in the 18 months leading up to the pandemic, now has the highest rent inflation in the country. The western US, which ran a full point hotter than the rest of the country prior to the pandemic, sank to national average levels.
- **This variation is driven in part by migrations from higher-cost to lower-cost metro areas.** Metros with rents higher than the national average saw more population exodus during the pandemic (facilitated in part by the shift to remote work), and metros with rents lower than the national average saw more population gains.
- **Some—but not all—of the cities with large population influxes have also seen significant supply response in the form of housing permits.** Bigger metros like Atlanta, Dallas and Houston have all seen an increase in homes permitting which can ease pressures of the demand influx.
- **These changes are partly a rebalancing of demand, but increases in second home purchases and household formation also push up total demand.** Policies that give incumbent renters protection from the effects of demand surges and policies that increase the supply of housing could prevent displacement and inflation in the future.

Introduction

To understand what's driving housing price growth as the economy continues emerging from the pandemic, this report looks to the basics of supply and demand.

On the demand side, we describe the significant changes in migration patterns observed over the course of the pandemic, their relationship to rental prices, and their subsequent impact on prices. On the supply side, we show how these demand shocks do indeed appear to be driving a residential construction permits response. Nationally, this response will help keep housing costs somewhat in check, but whether the response will be large and fast enough to prevent harmful local effects will depend on many conditions, including local regulations on price growth, or constraints on new construction.

The regional distribution of rental cost growth pre- and post-pandemic recession helps to illustrate the changing geographic trends on the demand side. In Figure 1, below, price growth in the South region (red) hovered around half a percentage point below the national average in the 18 months before the pandemic. Rental growth in the West region (yellow), on the other hand, sat at about a full percentage point above the national average over the same period.

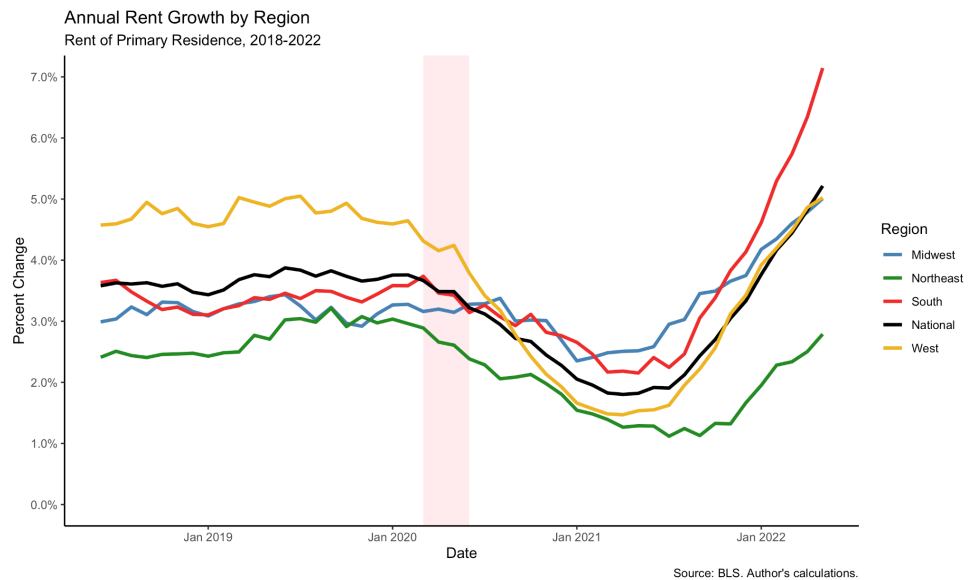


Figure 1: Rental price annual growth by Census region, May 2018 through May 2022.

In the two years since the start of the pandemic, these differences have nearly reversed. Rental growth in the South region is now more than a full percentage point above the weighted national average, while the West region sits just on par with that average—still below its lowest point in the pre-pandemic period. The Northeast region, too, remains below its lowest pre-pandemic point.

While the geographic distribution of rental price pressures has shifted around, the overall trend in rental housing costs has continued to move upward. All else equal, a shift in demand from region to region would not be expected to increase overall rent growth. However, the shifts seen over the course of the pandemic were not simply moving demand from one place to another: several types of activity have contributed to an increase in housing demand, alongside the shifts in regional demand.

First, a significant increase in the number of second home sales over the course of the pandemic contributed to overall price pressures in the housing market. According to a February 2022 [report from Redfin](#), “[homebuyer] demand for second homes was up 87% from pre-pandemic levels in January, the highest level in a year and just shy of the record 90% gain in September 2020.”

Additionally, dramatic recovery in household formation rates from their early pandemic lows have played a role in housing demand. According to a May 2022 [FEDS Note](#) from the Federal Reserve Board, “[Over] the past year and a half there has been a remarkable rebound in the headship rate, driven in large part by a return to the pre-pandemic rates at which younger adults lived with parents or older family members. This rebound has been an important contributor to a huge increase in housing demand.”

With all of these factors, May’s Consumer Price Index showed rental housing costs up 5.2% year over year. For additional context, over the five year period between from January 2015 to January 2020, rental housing costs averaged an annual growth rate of 3.7%. This puts the current trend at 1.5 percentage points higher than the pre-pandemic trend. And most industry measures indicate that rents, in the aggregate, will continue to rise over the next six to twelve months. The dynamics contributing to ongoing price growth and potential future cooling are discussed in detail below.

Data and Background

Government housing cost burden measures which classify households as cost burdened when they spend more than 30% of their income on housing services have found that an increasing share of renter households are cost burdened. Most recently, those [figures](#) show about half of all renter households meet the

government's definition of cost burdened. As shifting demand over the course of the pandemic has added or removed pressures in local housing markets, those households with the lowest incomes and with the highest cost burdens will be least able to weather the storm.

The recent release of 2021 Vintage Population Estimates from the Census Bureau show rates of population growth (or loss) across the country. Unfortunately, the figures are only available as annual estimates, not on a monthly basis.

The United State Postal Service (USPS), however, publishes a dataset of monthly Change of Address requests by ZIP code, which serves as a reliable measure of migration flows and has been used to model migrations by [several researchers](#) over the past year. While USPS change of address tallies are not a perfect measure, changes in the direction and magnitude of net migration flows, when compared against a reasonable baseline, provide insight into real-time moving patterns that align closely with the Census population estimates. For a more detailed discussion of how the USPS data was used, see the methodology notes below.

In addition, estimates of rental prices at the metropolitan area level that may impact migration trends come from ApartmentsList industry data. These rental price estimates, like most industry data sources, are not average rents for the total population of rental contracts. Instead, they are based on new contract rent listings. While not appropriate for all cases, new contract rents would be expected to have an influence on household migration (especially for in-migration, perhaps less so for out-migration).

The Census [Building Permits Survey](#), which is also provided at the metropolitan area level on a monthly basis, provides reliable data to estimate the supply response of shifting demand trends. And finally, the Consumer Price Index provides national, regional, and a limited set of metropolitan area rent inflation statistics.

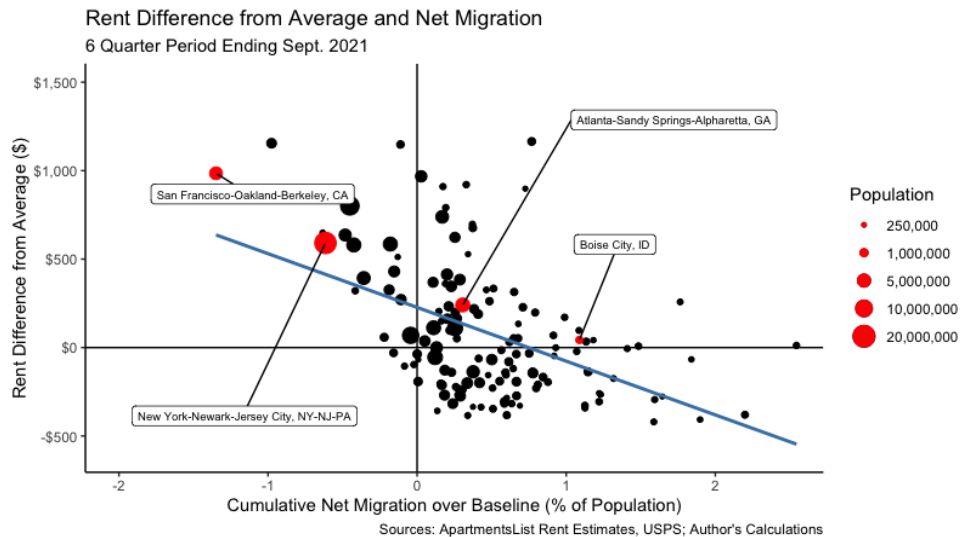
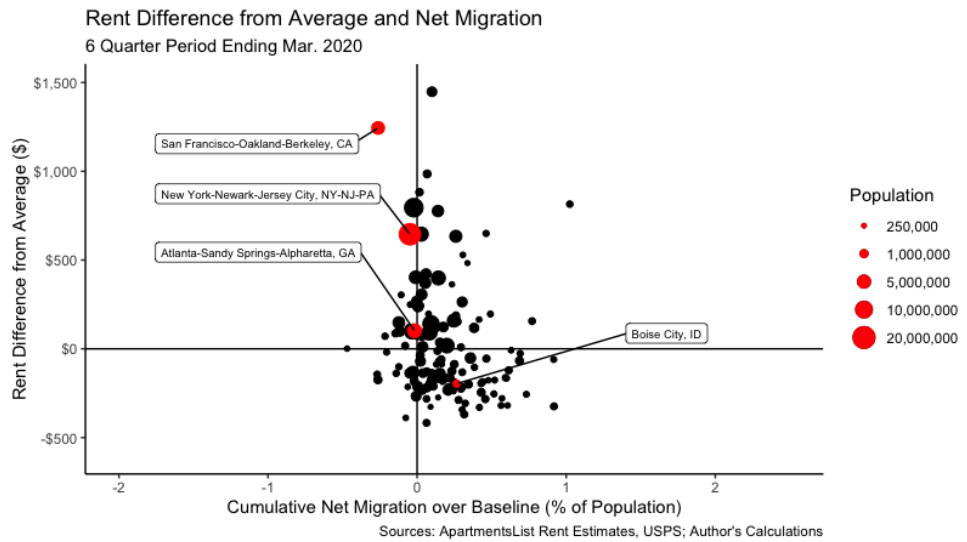
Pulling everything together, we took each metropolitan area's market rent as a percentage of the national average market rent, migrations over a pre-pandemic baseline as a percent of population, and total permits over the period. These data paint an informative picture of some of the trends shaping rental housing costs across the country today, and provide some insight into the causes of those trends.

Migration Trends

As Figure one above indicates, the geographic distribution of rent growth shifted over the course of the pandemic. To get a more fine-tuned sense of the changes in rents and what factors may be driving them, we compared migration trends from USPS moving data to new rental contract prices across the country.

Below are two figures describing the shift in migration trends. Figure two shows the 18 month period ending March 2020, and Figure three shows the six quarter period ending September 2021, around the end of the summer moving season and when mortgage rates were just beginning to climb back up. March 2020 marks the passing of the CARES Act, stimulus payments, unemployment insurance expansion, and the eviction moratorium. Along with the transition to working from home, these policies all likely contributed to changes in housing market dynamics.

Rental differences on the vertical axis show the difference between average new lease rents in a given city and the national average price for a new lease, so metropolitan areas below the origin line have below average rents. Migration growth, on the horizontal axis, is a slightly more complicated measure designed to capture the *changes* in local migration trends, which may have been negative, flat, or positive pre-pandemic. To account for the seasonality of moving trends, the baseline for each period comes from a 12-month moving average of net migrations. In the end, the measure is a sum of net migrations less the baseline, all over the 2019 population estimate for the metropolitan area. Ultimately, this gives us a useful statistic of the changing popularity of each metropolitan area over time.



Over the 18 month period from March 2020 through September 2021, migration patterns saw significant swings. [Other research](#) has explained some of the changes to migration patterns by looking at the work-from-home policies from employers in many white collar industries, particularly in the technology sector. Indeed, much ink has been spilled on anecdotes of high-paid workers at San Francisco technology companies moving to cities across the West, such as Boise, ID or Phoenix, AZ. The data show these anecdotes are, in fact, part of larger migration trends.

These results paint a picture of highly localized demand shocks in the housing market, driven in part by rental price differentials. Put bluntly, many workers—in

some cities, as many as 1% to 2%—left expensive coastal cities and moved into less expensive inland cities like Atlanta, Dallas, and St. Louis. With that demand shock, one would expect prices to not only recover from their pandemic lows quickly, but also to rise further still until a supply response can relieve the pressure.

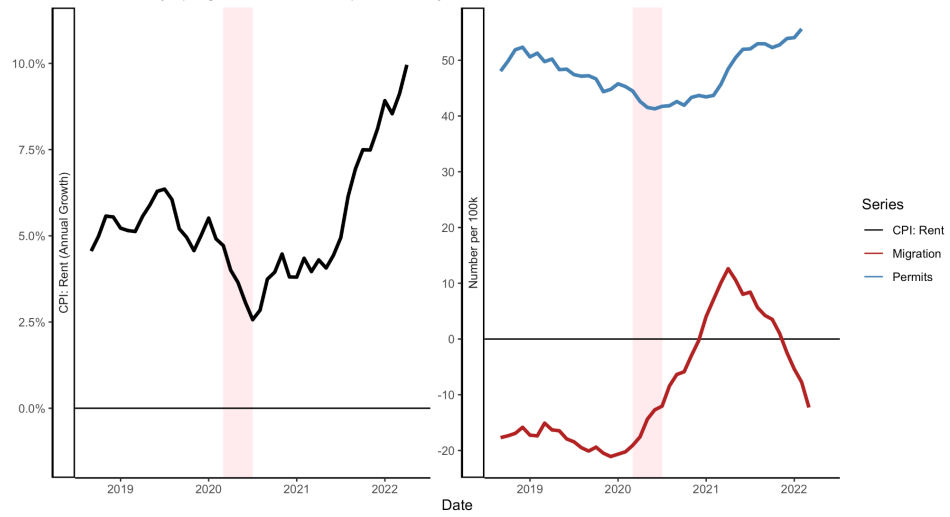
Regional Supply Response

While the national trends are somewhat more clear, conditions within cities and metropolitan areas are unique. In general, rental price growth moves in predictable directions when faced with increased demand from in-migration. Similarly, supply responses reflect changes in migration, and can be expected to have an impact on rental growth, albeit with lag. Supply chain issues have increased prices and wait times for many construction materials, increasing that lag time.

Notably, one of the most significant barriers to supply response is local land use and planning policies that can make certain types of construction difficult, expensive and time consuming, particularly through strict zoning ordinances. All of these factors: the availability of credit, [local land use policies](#), and the [availability of materials](#) and labor, [will impact housing supply elasticities](#). A question for cities becomes: just how responsive, or elastic, is our regional housing market to changes in demand?

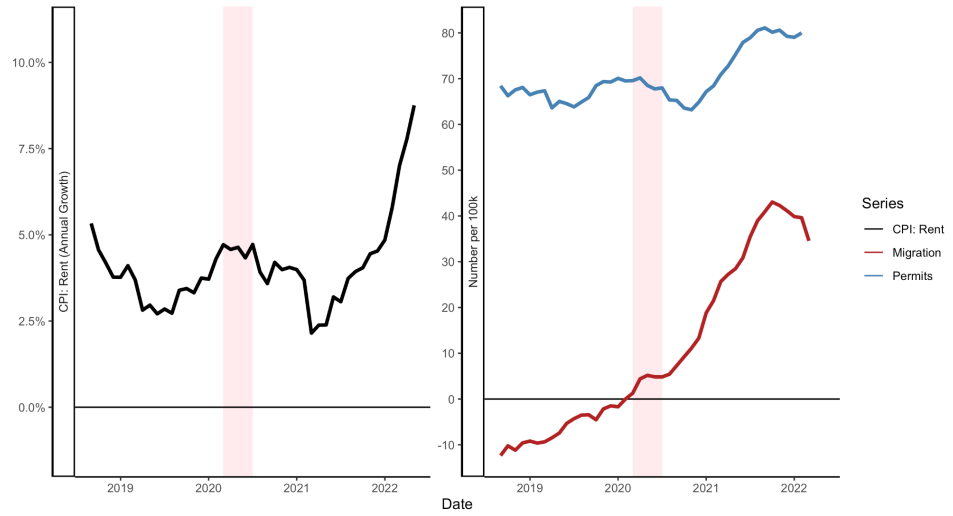
Below is a series of figures showing rental inflation alongside trends in migrations and new housing starts (building permits) in several metropolitan areas. The four areas shown below saw some of the most significant changes in migration flows over the pandemic period, either in-migration, out-migration, or temporary spikes. Additionally, some of these areas (Atlanta, Dallas and Houston) have seen resultant increases in housing permits—that is, the new households moving in have incentivized investments in new supply. Other cities, like San Francisco, saw an initial outflow of people that was followed by a partial return to the city.

Rent Inflation, Net Migration and Permits
Atlanta-Sandy Springs-Roswell, GA — Sep 2018 to May 2022



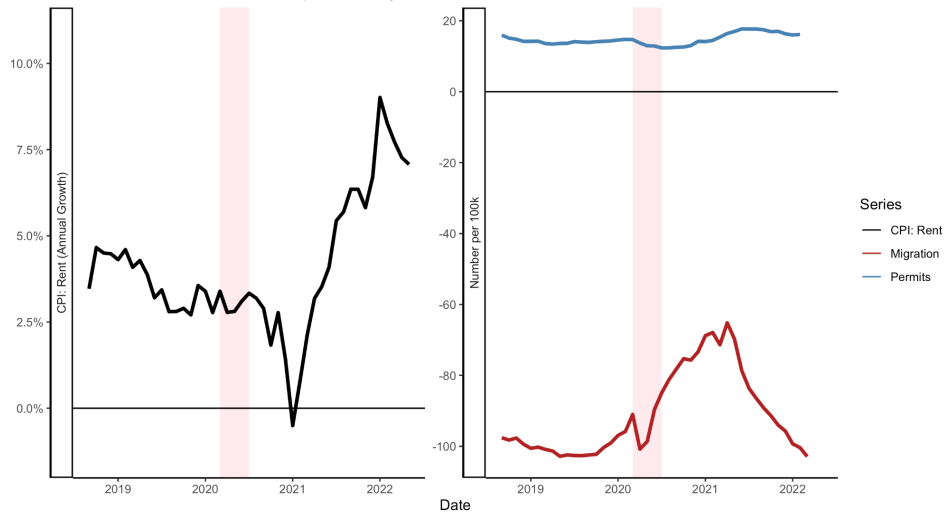
Sources: BLS, Census, USPS. Author's calculations.

Rent Inflation, Net Migration and Permits
Dallas-Fort Worth-Arlington, TX — Sep 2018 to May 2022



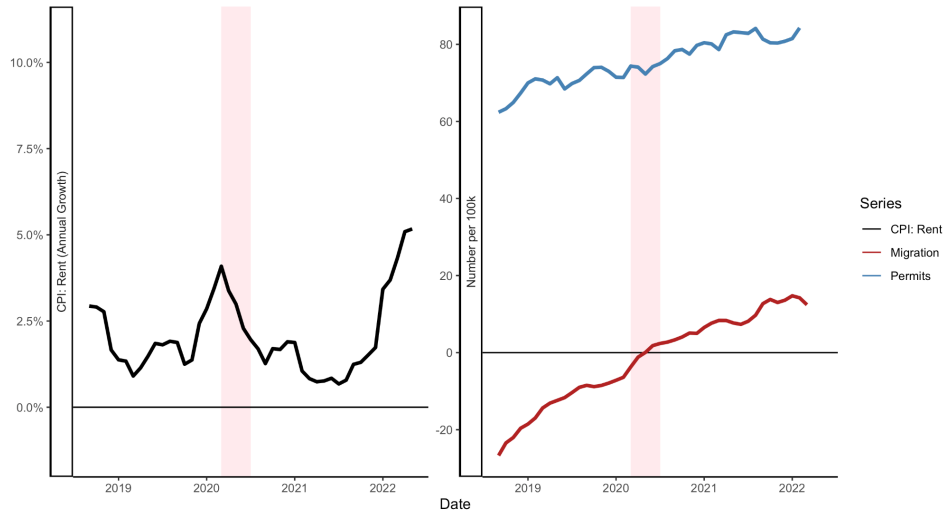
Sources: BLS, Census, USPS. Author's calculations.

Rent Inflation, Net Migration and Permits
Detroit-Warren-Dearborn, MI — Sep 2018 to May 2022

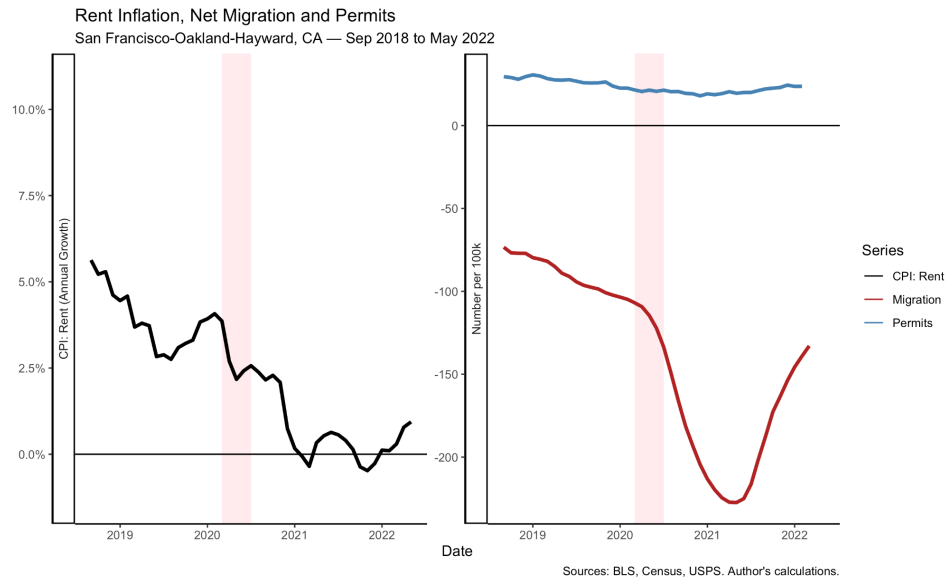


Sources: BLS, Census, USPS. Author's calculations.

Rent Inflation, Net Migration and Permits
Houston-The Woodlands-Sugar Land, TX — Sep 2018 to May 2022



Sources: BLS, Census, USPS. Author's calculations.



As inflation on durable goods and pandemic-impacted services begins to cool over the next year, it is likely that rents will continue to rise and in some areas grow beyond their pre-pandemic trends. It will be important for policymakers to understand the drivers of these trends and the policy levers at their disposal to impact them.

Conclusion

Broad brush interventions like the monetary policy may not be able to fine-tune a solution to these challenges. Rather, a sustained supply response is needed in both the single-family and multifamily construction markets. A tightening of credit may make it [more difficult](#) to finance new construction projects, both in the multifamily rental market where credit comes from large investor pools, and in the single-family market where construction is closely tied to household demand.

Instead, interventions that can help facilitate a heightened supply response, and policies to protect low-income incumbent residents unable to absorb temporary price shocks before new supply is added will likely be more effective at reducing displacement and price volatility. For example, land use reforms that allow dense, multifamily construction projects in core urban areas and in [residential areas near transit stations](#) would likely increase supply elasticities. Across the country, low-income residents may be unable to absorb price shocks—governments at all

levels should consider protective policies for those renters, such as rent regulations and [good cause eviction laws](#). Low-income renters are neither responsible for the demand shock, nor for land use regulations that in many cases hamper supply responses—but without anti-gouging measures, will bear some brunt of their impacts.

Methodological Notes

USPS Change of Address Data

Change of Address requests are tabulated by individual moves and entire household moves. For individual moves, each request was counted as one person. For entire household moves, each request was counted as 2.53 people, reflecting the most recent estimate of average household size. These ZIP code measures were then aggregated by Core-Based Statistical Area.

To measure how the pandemic impacted existing migration trends in larger (greater than 500,000 residents) metropolitan areas, we first calculated a rolling, 12-month moving average of net inflows per month for each MSA. This rolling monthly average serves as a baseline which changes are measured against. The change in net inflows over a given period is a cumulative sum of the difference between that baseline and the actual monthly net inflows for each month in the period.