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Landscape


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## Executive Summary

This study examines rental housing trends from 2006 to 2015 in the 53 metropolitan areas of the U.S. that had populations of over one million in 2015 ("metros"), with a particular focus on the economic recovery period beginning in 2012.

Median rents grew faster than inflation in virtually every metro between 2012 and 2015, especially in already high rent metros.

Despite rising rents, the share of renters ${ }^{1}$ spending more than 30 percent of their income on rent (defined as rent burdened households) fell slightly between 2012 and 2015, as did the share spending more than 50 percent (defined as severely rent burdened households). Still, these shares were higher in 2015 than in 2006, and far higher than in earlier decades.

The number and share of renters has increased considerably since 2006 and continued to rise in virtually every metro from 2012 to 2015 . Within that period, the increase in renter share was relatively larger for high socioeconomic status households. That said, the typical renter household still has lower income and less educational attainment than the typical non-renter household.

Following years of decline during the Great Recession, the real median income of renters grew between 2012 and 2015, but this was primarily driven by the larger numbers of higher income households that are renting and the increasing incomes of renter households with at least one
member holding a bachelor's degree or higher. The real median income of renter households with members with just a high school degree or some college grew more modestly and remained below 2006 levels in 2015.

Thus, the recent decline in the share of rent burdened households should be cautiously interpreted. The income of the typical renter household increased as the economy recovered, but part of this increase came from a change in the composition of the renter population as more high socioeconomic status households chose to rent their homes.

For almost every metro, the median rent in 2015 for units that had been on the market within the previous year was higher than that for other units, suggesting that renters would likely face a rent hike if they moved. The share of recently available rental units that were affordable to households earning their metro's median income fell between 2012 and 2015. And in 2015, only a small share of recently available rental units were affordable to households earning half of their metro's median income.

## 1. Introduction

## The Great Recession has had widespread effects on the U.S. economy, including the rental landscape. This report examines developments in rental housing markets from 2006 to 2015, focusing on rental affordability.

While the recession officially ended in 2009, unemployment remained stubbornly high for several years, staying above nine percent through the middle of 2011. But by 2012, it finally dropped below eight percent, ending an extended period of unusually high unemployment. ${ }^{2}$ The unemployment rate fell to five percent by 2015. Household incomes followed a similar trend, with real median household income in the U.S. falling into a trough in 2012, before beginning to improve. ${ }^{3}$ Along with rising incomes and employment, the years from 2012 and 2015 also brought changes

2 Source: U.S. Bureau of Labor Statistics, unemployment rate, series LNS14000000.

3 Source: U.S. Bureau of the Census, real median household income, MEHOINUSA672N.
to rental housing markets, and this report pays particular attention to the developments during this period of economic recovery.

We examine trends in rental housing and in the characteristics of renters from 2006 to 2015 in all of the U.S. metropolitan areas with populations over one million in 2015 ("metros"), using data from the American Community Survey. These 53 metros contained 165 million people ( 65 million households), representing 63 percent of the U.S. population and 60 percent of U.S. housing units in 2015. Figure 1.1 shows the geographic distribution and population of these metros. Appendix Figure 1A provides further details on the number of households in these metros and their incomes.

Figure 1.1: U.S. Metro Areas with a Population of at Least One Million, 2015


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center Note: The map shows the location and 2015 population of the 53 metropolitan areas in this study.

## Rental housing market trends in America's largest metros

## 2. Rents

## Rents continued to rise in almost every metro, and rose the most in already high rent metros.

Figure 2.2 shows the range of median monthly gross rent (which includes rent and utility costs) across the 53 metros in 2015. The median across all of the metros was $\$ 1,050$ per month, but the variation was wide, with the median renter paying $\$ 1,840$ per month in San Jose, but only $\$ 710$ in Birmingham. The highest rent metros were concentrated in California and the Northeast's largest cities, with Seattle, Miami, and Denver rounding out the top 10 . The lowest rent metros were predominantly in the Rust Belt or the South.

The rankings remain similar if we separate units by their number of bedrooms. Appendix Figures $2 \mathrm{~A}, 2 \mathrm{~B}$, and 2 C provides this breakdown. Across the 53 metros, the median rent for a studio or onebedroom unit in 2015 was $\$ 900$, a two-bedroom unit was $\$ 1,050$, and a three- or more-bedroom unit was $\$ 1,271$.

Virtually all of the metros saw increases in their inflation-adjusted median rents between 2012 and 2015. Figure 2.1 shows how each metro's real median gross rent changed between 2012 and 2015, plotted against the metro's median rent in 2012. The fitted line in the figure makes clear that rents and rent growth are positively related: metros that had high rents in 2012 grew even more expensive relative to other metros by 2015. ${ }^{4}$ Across the 53 metros as a group, median rent increased at an annualized rate of 1.9 percent, but ranged from 6.6 percent in Denver, to decreases of 0.1 percent in Memphis and Cleveland. ${ }^{5}$

While rents rose steadily, 2012 was a low point for home prices following the housing market peak in 2006. Since 2012, home prices rose considerably faster than rents: both the national and the 20-city composite home price index from $\mathrm{S} \& \mathrm{P} /$ Case-Shiller increased at an annualized real rate of more than five percent between 2012 and 2015.

[^0]Figure 2.1: Change in Real Median Rent 2012-2015 versus Real Median Rent in 2012


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The figure shows the real 2012-15 annualized percent growth in median rent in each of the 53 metros versus the median rent in 2012 (in 2015 dollars). Each data point represents a metro.

Figure 2.2: Median Rent in 2015 by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

## Rental housing market trends in America's largest metros

In virtually all metros, rents were higher for units that were recently on the market.
Particularly for metros with rapidly rising rents, median rent levels do not paint the whole picture as they do not reflect the options available to a household that wants to move to a different location or to a larger or smaller unit. Most households that move rent, rather than buy, their next home. ${ }^{6}$ Therefore, the rent of recently available units is relevant not just for a metro's existing renters, but also any renter or owner household who wants to relocate there.

Figure 2.3 highlights the difference between the median rent paid by households that moved into a two-bedroom home within the past 12 months and the median rent paid by all households for twobedroom units. Across the 53 metros, the median rent of recently available two-bedroom units was 4.8 percent higher than the median rent of all twobedroom units. But there is a great deal of variation. At one extreme, recently marketed rentals commanded a 33 percent premium in San Jose and a 29 percent premium in San Francisco. At the other extreme, recent renters in Minneapolis and in Grand Rapids enjoyed a one percent discount compared to the median rent paid for all two-bedroom units. Analogous data for studios, one- and three- or more-bedroom units show similar patterns (see Appendix Figures 2D and 2E). In each case, there were only one or two metros where the median rent paid by recent movers was less than the median rent for all renters.

The percent premium paid by recent movers in 2015 was larger in metros where rents were already high, and where rents had been rising more rapidly. ${ }^{7}$ When market rents are rising rapidly, the rent paid by renters that remain in their units is likely to be substantially below the market because rental leases adjust relatively infrequently, and in some metros, rent increases for existing tenants are regulated. As a result, landlords are more likely to use tenant turnover as an opportunity to recalibrate rents to market levels, leading to higher premiums in high rent growth markets. That said, some of the rent premium paid by recent movers may reflect higher quality among units that are recently rented, for example, because landlords are likely to make improvements when tenants turnover, or because new construction or conversions completed within the past year are included in this group. Nonetheless, the data makes it clear that units that were recently on the market command higher rents than those that were not, and many renters would likely face a rent hike if they moved.

Figure 2.3: Median Rent of Two-Bedroom Units by Metro, 2015
$\square$ All Two Bedroom Units $\quad$ Recently Available Two Bedroom Units


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The metros are sorted by the rent of recently available units.

## Rental housing market trends in America's largest metros

## 3. Rent Burden

Rising rents have implications for housing affordability. We next examine rent burden, a frequently used measure of affordability based on the fraction of income that a household spends on rent. A rent burdened household is defined to be one that spends more than 30 percent of pre-tax income on rent, and a severely rent burdened household as one that spends more than 50 percent of pretax income on rent. A high rent burden implies fewer resources available for other expenditures such as food, healthcare, and education.

Despite rising rents, the share of rent burdened and severely rent burdened households fell slightly from 2012 to 2015. Rent burden, however, is still higher than in 2006, and far higher than in earlier decades.

The increase in rents notwithstanding, the share of households that paid more than 30 percent of their income in rent fell between 2012 and 2015. Across the 53 metros, the share of rent-burdened households fell from 48.9 percent in 2012 to 47.7 percent in 2015. This modest drop of 1.2 percentage points over three years still leaves the share rent burdened above what it was in 2006 (47.1\%); nonetheless, the reversal of a previously increasing trend is an encouraging sign. ${ }^{8}$

Figure 3.1 shows the share of households that were rent burdened in 2012 and 2015 for each of the 53 metros. The metros are sorted with the highest share rent burdened in 2015 at the top. The range was large, from 58.6 percent of renter households in Miami in 2015 to 39.0 percent in Kansas City, but there was a decline in the share rent burdened in over two thirds of the metros, and even when the share increased, the changes were always less than two percent.

A similar picture emerges if we consider households paying more than half of their income in rent. Figure 3.2 shows the distribution across metros. For the metros as a group, the share severely rent burdened fell from 25.8 percent to 24.4 percent, with three quarters of the metros seeing a decline. The slight drop still left the share of renter households severely rent burdened higher than what it had been in 2006 (24.0\%).

Figure 3.1: Share of Renter Households that were Rent Burdened by Metro


Figure 3.2: Share of Renter Households that were Severely Rent Burdened by Metro


Across the metros, the median share of income spent on rents was 29.5 percent in 2015, a decline of 0.5 percent since 2012. Appendix Figure 3A shows the breakdown by metro.

When analyzed over a longer time horizon, the 2010s represent a high point in the rent burdened share of households. Since metropolitan area definitions can change considerably over decades, we have used data from the U.S. Census to track rent
burdens nationwide. Figure 3.3 displays the time series from 1960 to 2015. In 2015, the national share of renter households that were rent burdened was 46.0 percent, similar to the share for the 53 metros (47.7\%). In 2000, however, the nationwide share was only 35.7 percent, and in 1970, it was lower still at 24.7 percent. Severe rent burden has a similar pattern, with a sharp increase in the share of severely rent burdened households during the 2000s.

Figure 3.3: Share of U.S. Renter Households that were Rent Burdened and Severely Rent Burdened, 1960-2015
$\square$ Rent Burdened $\square$ Severely Rent Burdened


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Centerr
Note: The figure shows the percent of all U.S. renter households that spent 30 percent or more (rent burdened) and 50 percent or more (severely rent burdened) of their household income on rent. Rent for 1960 is coded to the midpoint of the range (e.g. rent is coded as $\$ 54.5$ if the range is $\$ 50-\$ 59$ ).

It is premature to be overly encouraged by the recent decline in the rent burdened share of households. At the recent rate of decrease (a 1.2 percentage point decline between 2012 and 2015), it would take over 30 years before the share returned even to the level of 2000.

## The share of households that were rent burdened has fallen even for a wide range of different types of households.

 The share of households that were rent burdened has not just fallen in most metros, but also for most household types when disaggregated by income, employment status, education, race, ethnicity, and the presence of children or seniors in the household. Figure 3.4 shows how the rent burdened share of households has changed between 2012 and 2015 among these different groups; the numbers refer to the percentage point difference. The income categories are presented in terms of area median income (AMI), defined as the median household income for each metropolitan area. AMI values are shown in Appendix 1A. For households earning between 80 percent and 120 percent of AMI, the share that were rent burdened was 21.2 percent in 2015. But for households earning less than 50 percent of AMI, that share was 79.0 percent.A similar pattern is also apparent when we disaggregate by the highest educational attainment of members of the household, which we would expect given that income tends to increase with education. The share of high education households (where at least one member has a bachelor's degree or higher) that were rent burdened was 34.3 percent, but among low education households (where all members have high school or less), the share was 58.6 percent. Variation by race and ethnicity is also apparent, with the share of black and Hispanic households that were rent burdened 10 percentage points higher than the rent burdened share of white and Asian households.

Across all the household characteristics, the share of households that were rent burdened either declined or held steady between 2012 and 2015. The largest percentage point declines were for households with children (from $54.3 \%$ to $51.7 \%$ ) and for households with incomes between 50 percent and 80 percent of AMI (from $54.2 \%$ to $51.5 \%$ ).

Figure 3.4: Share of Renter Households that were Rent Burdened by Household Characteristics, All Large Metros


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The figure shows the percent of renter households across all 53 metros that spent 30 percent or more of their household income on rent. The numbers indicate the percentage point change between 2012 and 2015.

Figure 3.5: Share of Renter Households that were Severely Rent Burdened by Household Characteristics, All Large Metros


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The figure shows the percent of renter households across all 53 metros that spent 50 percent or more of their household income on rent. The numbers indicate the percentage point change between 2012 and 2015.

Similarly, the share of renter households that were severely rent burdened fell between 2012 and 2015, as shown in Figure 3.5. Black and Hispanic households, as well as households with children, saw the largest percentage point declines. Further disaggregation of these household types by metro can be found in Appendix 3B.

The declining rent burdened share of households, albeit small, coupled with rising rents, suggests that the income of renters was rising. To complete the picture we next consider changes in the renter population, and in their incomes.

## 4. Renters and Their Incomes

We have shown that rents continued to rise between 2012 and 2015, especially in already highrent metros, yet during this time rent burdens fell slightly. This would normally indicate that there must have been an increase in renter incomes over this period. Digging deeper, however, we see that there has been a large increase in the number of renters and in the share of all households that rent since 2006, and this trend continued in the economic recovery period that began in 2012. The increases were widespread across all metros in our analysis and were coupled with a change in the type of households that rent: compared with renters in 2012, renters in 2015 were more likely to be of higher socioeconomic status (SES). This suggests we need to be cautious in interpreting the rise in renter incomes-part of the rise came from higher income households becoming renters, rather than existing renter households earning more income.

The number and share of households that rent have continued to increase in virtually every metro.
The share of households that rent their homes in the 53 metros was 40.0 percent in 2015, but varied widely. Figure 4.1 shows renter shares with the metros ordered from the highest renter share of households (52.0\% in Los Angeles) to the lowest (28.7\% in Grand Rapids).

Figure 4.1 also shows that the share of households that are renters increased in all 53 metros between 2006 and 2012, and in almost all metros between 2012 and 2015. That the renter share increased during the earlier period is not surprising given that many homeowners became renters during the residential foreclosure crisis that began in 2007. The number of completed foreclosures reached a national peak in 2010 and has been steadily falling since, according to data from CoreLogic. ${ }^{9}$ The sustained increase in renter share after 2012 is notable given this declining foreclosure rate, the general economic recovery, and falling unemployment. Across all 53 metros, the increase from 2012 to 2015 was 0.9 percentage points.

Figure 4.1: Share of Households that were Renters by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

## Rental housing market trends in America's largest metros

## Higher socioeconomic households became increasingly likely to rent.

Figure 4.2 shows how the renter share varied by household characteristics across the 53 metros. In 2015, 63.9 percent of households with incomes below 50 percent of AMI were renters, whereas only 21.2 percent of households with incomes above 120 percent of AMI were. About 40 percent of households with children rented their homes, but only a quarter of households with seniors did so. There were also substantial differences by race and ethnicity: the majority of black households and Hispanic households rented their homes, but less than a third of white households did so.

Figure 4.2 also shows the percentage point change in renter share between 2012 and 2015 for the various types of households. The increase was larger for higher income households: among households with incomes above 120 percent of AMI the renter share rose by 1.2 percentage points, whereas it fell by 0.2 percentage points among households with income below 50 percent of AMI. The renter share of households with at least one employed member rose by 1.5 percentage points, but fell 1.1 percentage points among households with no employed members. By educational attainment, high and medium education households (bachelor's degree or more, and some college, respectively) had greater percentage point increases in renter share than did low education households (high school or less). In short, higher SES households became increasingly likely to rent.

Figure 4.2: Share of Households that were Renters by Household Characteristics, All Large Metros


[^1]
## Rental housing market trends in America's largest metros

Still, renter households were more likely to have lower incomes and less education than owner households.
Despite the relatively larger increase in renter share among higher SES groups, renter households in the 53 metros were still dominated by lower SES groups. Figure 4.3 shows the different household characteristics of renters and of owneroccupants in the 53 metros. While 41.6 percent of
renter households earned less than 50 percent of AMI in 2015, only 15.7 percent of owner households did. Similarly, only 21.4 percent of renter households earned more than 120 percent of AMI, whereas 53.0 percent of owner households did. In terms of educational attainment, the majority of owner households had a bachelor's degree compared with just 35.0 percent of renter households.

Figure 4.3: Distribution of Household Characteristics among Renter and Owner Households, All Large Metros, 2015


High school / Some college / Bachelor's degree



Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

## Rental housing market trends in America's largest metros

## Real median income of renters grew between 2012 and 2015, but this was primarily driven by high education renter households.

In line with national trends, real median household income in America's large metropolitan areas has been increasing since 2012, following years of decline during and immediately after the Great Recession. Between 2006 and 2012, real median household incomes fell from \$62,899 to \$57,811 (in 2015 dollars), as noted in Table 4.1. By 2015 median income had grown 1.8 percent to reach $\$ 61,000$, but was still below 2006 levels.

The real median household income of renters grew at a faster rate than the median income for all households, although renters started from far lower levels. In 2006, the median income (in 2015 dollars) among renter households in the 53 metros was $\$ 37,622$, falling to $\$ 36,132$ in 2012, but then increasing to $\$ 39,800$ in 2015 . However, it is important to bear in mind the change in renter composition noted earlier: even if every household's income remained the same, median renter
income would increase as more high SES households chose to rent.

Focusing on household income by educational attainment allows us to get around these compositional changes to some extent, as education is more of a stable characteristic than the decision to own or rent. Table 4.1 shows that the real median income of low education renter households (high school or less) and medium education renter households (some college) grew more modestly and by 2015, they remained below 2006 levels. In contrast, the median income of high education renter households (bachelor's degree or more) in 2015 was considerably more than in 2006 and 2012. This implies that the rise in median renter household income was largely driven by higher SES households. ${ }^{10}$

10 The data is not a panel and we cannot directly measure income changes among households who were renters in both 2012 and 2015. Therefore, we are unable to separate the extent to which the increase in median renter household income is due to the larger share of high SES households that are renting, versus the relatively larger growth in their incomes.

Table 4.1. Median Household Income and Median Renter Household Income, All Large Metros

|  |  |  |  |  | alized change |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2006 | 2009 | 2012 | 2015 | 2006-2015 |
| Median household income (201) |  |  |  |  |  |
| All households | \$62,899 | \$62,641 | \$57,811 | \$61,000 | -0.3\% |
| Bachelor's degree or more | \$99,933 | \$100,093 | \$93,942 | \$98,000 | -0.2\% |
| Some college | \$60,547 | \$57,449 | \$51,617 | \$53,200 | -1.4\% |
| High school or less | \$36,328 | \$34,248 | \$30,970 | \$32,700 | -1.2\% |
| Median renter household inco |  |  |  |  |  |
| All renter households | \$37,622 | \$38,667 | \$36,132 | \$39,800 | 0.6\% |
| Bachelor's degree or more | \$62,311 | \$65,182 | \$61,940 | \$66,000 | 0.6\% |
| Some college | \$41,149 | \$39,772 | \$36,132 | \$38,500 | -0.7\% |
| High school or less | \$26,923 | \$25,631 | \$23,124 | \$25,000 | -0.8\% |

[^2]
## Rental housing market trends in America's largest metros

The growth in median income from 2006 to 2015 fell short of the growth in median rent, although they grew at similar rates from 2012 to 2015.
The increasing renter share among higher SES households means that comparing rent growth to the growth of renter income could be misleading. We therefore focus on comparing rent growth with the growth in income of all households, not just renters. ${ }^{11}$ From 2012 to 2015, real

11 This still likely understates the gap between rent increases and increases in the income of renter households that were already renters in 2012.
median rents grew at an annualized rate of 1.9 percent in the 53 metros, whereas real median household income increased by 1.8 percent. Figure 4.4 shows median rent growth compared with median income growth disaggregated by metro. If income growth were equal to rent growth, the data points would lie on the diagonal line. Points above the diagonal represent metros where rent growth exceeded income growth over the three years, and points below the diagonal represent metros where income growth exceeded rent growth. Roughly half fall into each category.

Figure 4.4: Growth in Median Rent versus Growth in Median Household Income by Metro, 2012-2015


## Rental housing market trends in America's largest metros

In Figure 4.5, we consider analogous growth rates over the longer 2006 to 2015 period. Virtually all of the points lie above the diagonal, that is, in the vast majority of metros, median rents rose
by more than median incomes between 2006 and 2015. Across the entire sample, rents increased at an annualized rate of 0.6 percent, but median incomes fell by 0.3 percent.

Figure 4.5: Growth in Median Rent versus Growth in Median Household Income by Metro, 2006-2015


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center Note: Each data point represents a metro.

Higher income metros have higher rents. Median rent and median household income of renters are highly correlated across metros. ${ }^{12}$ Figure 4.6 shows this tight relationship. Each point represents one of the 53 metros with the vertical axis showing the median monthly rent in that metro and the horizontal axis showing the median annual household income of renters in that metro. The line through the points is the
statistically-fitted linear relation. The slope of the fitted line shows how median rent changes across metros of different income levels: moving to a metro with a $\$ 1,000$ increase in the median annual income of renters is associated with a $\$ 295$ per year higher median rent ( $\$ 24.57$ per month). That is, a household that moves to a higher income metro should expect to spend 29.5 percent of their income gains on higher rent.

12 The correlation coefficient was +0.94 in 2015.

Figure 4.6: Median Rent versus Median Household Income of Renters by Metro, 2015


[^3]
## Rental housing market trends in America's largest metros

In Figure 4.7, we break out the median income and median rents shown in Figure 4.6 by educational attainment. The group of points to the left indicates renter households with low educational attainment (high school or less). This group has lower income, and as previously shown, has a higher share of rent burdened households. The slope of the fitted line implies that a metro with $\$ 1,000$ higher median annual income for low education renter households has $\$ 406$ per year higher median rent ( $\$ 33.81$ per month).

In contrast, a metro with $\$ 1,000$ higher median annual income for high education renter households (bachelor's degree or more) has just \$271 per year higher median rent (\$22.60 per month). This implies that for households considering moving to take advantage of higher incomes in another metro, those with low education will have to give up a greater fraction of any income gains towards paying higher rent. This is likely to impede their labor mobility.

Figure 4.7: Median Rent versus Median Household Income of Renters by Education by Metro, 2015


[^4]
## 5. Rent Affordability

 We present an alternate way of looking at rental housing affordability: the share of recently available units in each metro that is affordable to typical households in that metro. This measure gives a sense of the options available to a household that would like to move to a new rental unit.The share of recently available rental units that were affordable to households earning their metro's median income has fallen.

Across all 53 metros, a household earning the median household income of $\$ 61,000$ in 2015 that wanted to spend no more than 30 percent of income on rent could afford 75 percent of the rental units that were rented within the past 12 months. This is considerably lower than in 2006, when 82 percent of recently available units were affordable to the median income household.

Figure 5.1 shows the break down by metro. The range is large: from 95 percent of units being affordable in Salt Lake City for the median income Salt Lake City household in 2015, to only 43 percent of units in Miami being affordable for the median income Miami household. In over two thirds of the metros, affordability has fallen since 2006 for households at AMI.

Figure 5.1: Share of Recently Available Rentals Affordable to Households Earning AMI by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman CenterNote: The figure shows the percent of recently available rental units in each metro that are affordable for households earning AMI,

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## A very small fraction of recently available rental units were affordable to households earning half of their metro's median income.

Figure 5.2 shows the fraction of recently available rental units that were affordable for households earning half of their metro's median household income, again assuming that they spend no more than 30 percent of their income on rent. These very low income households had far fewer options: households making half of the median income for the 53 metros as a group ( $\$ 30,500$ in 2015) could only afford 17 percent of recently available units in 2015. Disaggregating this by metro, there were seven metros in which less than 10 percent of the recently available units were affordable for a household earning half of that metro's median income.

With such limited affordable rental housing options for very low income households, the only way to keep rent burden low may be to stay in place and not move. This may constrain households to homes that are not ideal for their labor market situation (for example, too far for a job opportunity or a long commute from work), or that are inappropriate for changing family size.

Figure 5.2: Share of Recently Available Rentals Affordable to Households Earning 50 Percent of AMI by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman CenterNote: The figure shows the percent of recently available rental units in each metro that are affordable for households earning AMI, assuming that they spend no more than 30 percent of their income on rent. The metros are sorted by the 2015 shares.

## Conclusion

The recent decline in the share of renter households that are rent burdened in America's large metropolitan areas is a good sign, but it should be celebrated only with caution. We have shown that rents continued to rise, and rose more quickly in metros that already had high rents. The income of the typical renter household increased along with overall incomes in the economic recovery period, but more of the renter households were highly educated, had higher incomes, and were employed. Therefore, not all of the measured increase in renter income was due to renters making more income per se; rather, part of it was due to a shift in who was choosing to rent.

Although we have shown that the share of rent burdened households declined recently in most metros, that fact paints a rosy picture that masks affordability challenges for lower income renters, particularly those who have not benefitted from the general rise in incomes that come with falling unemployment rates. These include retirees and others on fixed incomes or who are not in the labor force. As rents continue to rise in most metros, those renters may experience only the rent increases without the benefit of rising incomes.

Overall, the recent decline in rent burden is only one part of a bigger picture. The share of rent burdened households remains far higher than during the last decades of the 20th century, and the majority of renter households that earn less than half of their metro's median income still spend more than 50 percent of their income on rent.

## The Rental Housing Stock

## The rental housing stock grew in almost all metropolitan areas.

Across the 53 metros, the rental housing stock grew by 3.8 percent from 2012 to 2015 (an annualized rate of $1.3 \%$ ), outpacing the owned housing stock, which only grew by 1.1 percent over the same period (an annualized rate of 0.4\%).

Figure 1 shows the change in the number of rental and owned units, by metro, with the metros sorted by housing stock size in 2015. In about three quarters of the metros, the increase in rental units exceeded that of owned units. In over a quarter, the owned housing stock shrank, whereas the rental stock did so in only four metros. Considering the total housing stock in these metros, only a handful saw a net decline in total housing between 2012 and 2015 (Birmingham, Hartford, Cleveland, Baltimore, and Philadelphia).

## Rental vacancy rates have fallen.

Despite the increase in the rental stock, the expansion in the number of renting households was even greater in most metros, leading to a reduction in rental vacancy rates. Figure 2 shows vacancy rates for the 53 metros in 2006, 2012, and 2015, sorted by the 2015 rates. Across the 53 metros, the rental vacancy rate fell from 7.8 percent in 2006, to 6.4 percent in 2012, and 5.2 percent by 2015.

## There was little change in the distribution of rental units by building type between 2012 and 2015. Almost one third of renters lived in single family homes.

Figures 3 and 4 show how the distribution of building types and number of bedrooms changed between 2006 and 2015. A considerable share of renters lived in single family homes throughout this period. As detailed in last years' report, ${ }^{13}$ the earlier part of this period coincided with the foreclosure crisis during which many owner-occupied homes were converted to rentals. Some of these conversions were foreclosed homes that were converted by investors, and others had owners who could not find buyers willing to pay a price they would accept, in part due to the credit crunch brought about by the Great Recession. The share of renters living in single family homes increased from 27.0 percent in 2006 to 31.5 percent by 2012, while the share of owner-occupants living in single family homes remained steady.

The increase in the share of renters living in single family homes was even more pronounced for households with children. In 2006, 38.7 percent of renter households with children lived in single family homes, but by 2012, this had increased to 45.1 percent.

Between 2012 and 2015, there was very little change in the distribution of rental units by building type or by the number of bedrooms, suggesting the conversions that occurred following the foreclosure crisis appear to have abated. However, at least on net, there is no sign of a reversion of rental homes back into owner-occupied units.

13 NYU Furman Center (2016), Renting in America's Largest Metropolitan Areas.

Figure 1: Changes in the Rental and Owned Housing Stock by Metro, 2012-2015


Figure 2: Vacancy Rates for Rental Units by Metro


Rental housing market trends in America's largest metros

Figure 3: Distribution of Building Type Among Occupied Rental Units, All Large Metros


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

Figure 4: Distribution of Number of Bedrooms Among Occupied Rental Units, All Large Metros


[^5]
## Methods

## Definition of Metropolitan Areas

We studied the 53 metropolitan areas in the U.S. with a population of greater than one million in 2015 ("metros"). Metropolitan areas are Core-Based Statistical Areas (CBSAs) as described by the U.S. Office of Management and Budget's (OMB) 2013 definitions, which were based on the 2010 decennial census. Each metro is a collection of counties and may cross state lines. Indicators not disaggregated by geography include households in all 53 metros.

## Data Sources and Weighting Procedures

Unless otherwise noted, data are from the oneyear estimates of the American Community Survey (ACS), an annual survey conducted by the U.S. Census Bureau. In 2013, the OMB released new metropolitan area definitions based on the 2010 decennial census population count. Several of the metros in this study added or lost counties between 2006 and 2013, but because we always use the 2013 OMB definitions, indicators for all years are tabulated for the metros as they were defined in 2013.

In order to ensure consistency across years and geographies, and to calculate indicators for specific household types, we used person- and house-hold-level data from the ACS Public Use Microdata Sample (PUMS). The geographic unit of the PUMS data is the Public Use Microdata Area (PUMA), and PUMAs generally have borders that align with counties, and thus with metropolitan areas. This allows us to calculate estimates for the metros as they existed in 2015 for both 2006 and 2012. The PUMS data were extracted from the University of Minnesota's IPUMS-USA database.

Occasionally, however, a PUMA's boundaries may cross metro borders. For most indicators, we use relationship files provided by the Missouri Census Data Center to weight PUMAs by the fraction of housing units in 2010 that fell within a metro. When calculating medians, however, it is not possible to weight (and thus split) PUMAs. Therefore, median rent and median household income are derived from households in the PUMAs where 100 percent of its housing units fell within a metro.

## Inflation Adjustments

All dollar figures are presented in constant 2015 dollars, adjusted using the Consumer Price Index (CPI) for All Urban Consumers (Current Series) without seasonal adjustments from the Bureau of Labor Statistics over all major expenditure classes.

## Household Characteristics

We disaggregate households by the characteristics of household members. Household classifications are not necessarily mutually exclusive.

## Households Classified by Area Median Income

We classify households into mutually exclusive income categories based on percentage of area median income (AMI): (1) less than 50 percent of AMI; (2) 50 to 80 percent of AMI; (3) 80 to 120 percent of AMI; and (4) more than 120 percent of AMI. The AMI is based on the median household income for each metro, respectively.

## Households Classified by Employment Status

Employed households are households with at least one actively employed member while not working households are households with no employed members regardless of labor force participation status.

## Households Classified by Educational Attainment

We classify households into three mutually-exclusive categories based on the highest level of educational attainment of any household member: (1) high education-at least one household member has a bachelor's degree or higher; (2) medium education-at least one member has at least some college education, including an associate's degree, and no other household members have a bachelor's degree; and (3) low education-all household members have a high school diploma or less.

## Households Classified by Race and Ethnicity

Households are classified by race and ethnicity if any member in the household identifies as nonHispanic Asian, non-Hispanic black, Hispanic, or non-Hispanic white. These categories are not mutually exclusive.

## Households Classified by Age

Households with children have at least one household member aged 17 or younger. Senior households have at least one household member aged 65 or older. These categories are not mutually exclusive.

## Indicator Notes

Unless otherwise noted, all indicators are measured at the household level.

## Median Household Income

Household income is the total income of all members of a household aged 15 years or older.

## Median Rent

All rent data is for occupied units only. Rents are gross monthly rents and include utility cost.

## Recently Available or Recently Marketed Units

A unit is defined as recently available or recently marketed if every household member moved into the unit within the previous 12 months (prior to the date of their ACS interview, which could have happened at any time during the calendar year). Since vacant units in the ACS do not have rent data, vacant units are generally excluded from the set of recently available units. By definition, recently available units also include new units that became occupied.

## Rent Burden

A household is considered rent burdened if its gross rent, including utility costs, is more than 30 percent of the household's pre-tax income. A household is considered severely rent burdened if it spends more than 50 percent of the household's pre-tax income on gross rent.

## Rental Vacancy Rate

Vacant, for-rent housing units expressed as a percentage of all rental housing units.

Appendix 1A: America's Large Metropolitan Areas in 2015: Number of Households and Income
$\left.\begin{array}{llllll}\hline & & & \begin{array}{l}\text { Share of } \\ \text { households }\end{array} & \begin{array}{l}\text { Number } \\ \text { of renter } \\ \text { households }\end{array} & \begin{array}{l}\text { Median } \\ \text { household } \\ \text { income }\end{array} \\ \hline \text { houmber of } \\ \text { households }\end{array}\right)$

Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

Appendix 1A: America's Large Metropolitan Areas in 2015: Number of Households and Income

|  | Number of households | Median household income (AMI) | Share of households earning <50\% of AMI | Number of renter households | Median renter household income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pittsburgh, PA | 989,954 | \$53,000 | 24.8\% | 304,321 | \$29,200 |
| Portland-Vancouver-Hillsboro, OR-WA | 897,530 | \$62,000 | 24.0\% | 347,249 | \$40,000 |
| Providence-Warwick, RI-MA | 621,398 | \$60,000 | 28.0\% | 250,405 | \$33,000 |
| Raleigh, NC | 470,012 | \$63,700 | 25.1\% | 166,994 | \$40,000 |
| Richmond, VA | 482,700 | \$57,600 | 22.0\% | 172,535 | \$37,000 |
| Riverside-San Bernardino-Ontario, CA | 1,343,522 | \$56,000 | 25.9\% | 527,269 | \$37,000 |
| Rochester, NY | 427,857 | \$53,500 | 24.7\% | 140,302 | \$27,800 |
| Sacramento-Roseville-Arden-Arcade, CA | 809,295 | \$63,500 | 27.5\% | 333,215 | \$37,400 |
| Salt Lake City, UT | 1,106,255 | \$54,900 | 23.8\% | 351,297 | \$32,000 |
| San Antonio-New Braunfels, TX | 376,772 | \$65,000 | 23.5\% | 126,342 | \$39,700 |
| San Diego-Carlsbad, CA | 788,031 | \$54,000 | 25.1\% | 311,009 | \$37,500 |
| San Francisco-Oakland-Hayward, CA | 1,113,610 | \$68,000 | 25.0\% | 533,719 | \$50,000 |
| San Jose-Sunnyvale-Santa Clara, CA | 1,689,599 | \$88,000 | 27.9\% | 782,435 | \$61,000 |
| Seattle-Tacoma-Bellevue, WA | 651,508 | \$100,000 | 27.0\% | 284,487 | \$75,000 |
| St. Louis, MO-IL | 1,437,156 | \$75,000 | 25.0\% | 573,578 | \$50,000 |
| Tampa-St. Petersburg-Clearwater, FL | 1,166,703 | \$49,000 | 24.8\% | 432,878 | \$36,000 |
| Tucson, AZ | 395,993 | \$47,000 | 26.0\% | 154,833 | \$30,300 |
| Virginia Beach-Norfolk-Newport News, VA-NC | 639,982 | \$57,440 | 24.4\% | 252,823 | \$37,002 |
| Washington-Arlington-Alexandria, DC-VA-MD-WV | 2,170,125 | \$90,000 | 24.6\% | 819,520 | \$58,600 |

Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

Rental housing market trends in America's largest metros

Appendix 2A: Median Rent of 0-1 Bedroom Units in 2015 by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

Appendix 2B: Median Rent of 2 Bedroom Units in 2015 by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

Appendix 2C: Median Rent of 3+ Bedroom Units in 2015 by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

Appendix 2D. Median Rent for Recently Available 0-1 Bedroom Units in 2015 by Metro


Appendix 2E: Median Rent of Recently Available 3+ Bedroom Units in 2015 by Metro


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center Note: The metros are sorted by the rent of recently available units.

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Rental Housing Landscape

Appendix 3A: Median Share of Household Income Spent on Rent by Metro



Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The figure shows the fraction of renter households in each of the 53 metros that spent 30 percent or more of their household income on rent. Each data point represents a metro.


Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The figure shows the fraction of renter households in each of the 53 metros that spent 30 percent or more of their household income on rent. Each data point represents a metro.

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Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
Note: The figure shows the fraction of renter households in each of the 53 metros that spent 30 percent or more of their household income on rent. Each data point represents a metro.

The NYU Furman Center advances research and debate on housing, neighborhoods, and urban policy. Established in 1995, it is a joint center of the New York University School of Law and the Robert F. Wagner Graduate School of Public Service.

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Provide objective academic and empirical research on legal and public policy issues involving land use, real estate, housing, and urban affairs in the United States;

Promote frank and productive discussions among elected and appointed officials, leaders of the real estate industry, leaders of non-profit housing and community development organizations, scholars, and students about critical issues in land use, real estate, and urban policy;

Present essential data and analysis about the state of New York City's housing and neighborhoods to those involved in land use, real estate development, community economic development, housing, urban economics, and urban policy; and

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[^0]:    4 The correlation coefficient between median rent in 2012 and real median rent growth between 2012 and 2015 was +0.57.

    5 Because gross rents include utilities and utility costs were generally decreasing during this period in real terms, these rent growth numbers understate the increase in actual contract rent.

[^1]:    Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center
    Note: The numbers indicate the percentage point change between 2012 and 2015.

[^2]:    Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

[^3]:    Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center Note: Each data point represents a metro.

[^4]:    Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center Note: Each data point represents a metro.

[^5]:    Sources: American Community Survey, IPUMS-USA, University of Minnesota, NYU Furman Center

