Appendix: Summary of Available Rent Measures

To help practitioners and researchers navigate the complex landscape of rent data sources, we summarize the differences between three measures of rent—HUD Fair Market Rents, Apartment List Rent Estimates, and Zillow Observed Rent Index. We provide the differences in geographical coverage, frequency of updates, and extent to which data are accessible for users in addition to a detailed comparison of methodologies.[1]

	HUD Fair Market Rents (FMR)	Apartment List Rent Estimates	Zillow Observed Rent Index
Link to data and methodology	**Data:** https://www.huduser.gov/portal/datasets/fmr.html **Methodology:** https://www.huduser.gov/portal/publications/Proposals-To-Update-the-Fair-Market-Rent-Formula.html	**Data:** https://www.apartmentlist.com/research/category/data-rent-estimates **Methodology:** https://www.apartmentlist.com/research/rent-estimate-methodology	**Data:** https://www.zillow.com/research/data/ **Methodology:** https://www.zillow.com/research/methodology-zori-repeat-rent-27092/
Availability of historical data	Historical annual data are available and begin in 2000.	Historical monthly data are available and begin in 2017.	Historical monthly data are available and begin in 2015.
Geographical coverage	HUD FMR data are available for 640 metropolitan areas and 1,976 nonmetropolitan counties across the 50 states, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the US Virgin Islands. Data are also available at the state level (50 states and the District of Columbia), and for the United States as a whole.	Apartment List Rent Estimates data covers 548 cities, 324 counties, and 181 metropolitan areas across 49 states (state-level is not available for Vermont) and the District of Columbia, and the United States as a whole.	Zillow Observed Rent Index data covers 494 metropolitan areas, 898 counties, 2,619 cities, 5,624 ZIP codes, and the United States as a whole.

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[1] The 2022 HUD FMR, December 2022 Apartment List, and December 2022 Zillow Observed Rent Index datasets are presented and compared in this analysis.

Definition of rent	The 40th percentile gross rent (rent plus utilities) of all units that recent movers occupy. Recent movers are defined as renter households that moved to their present residences within the past two years.	Median rents are captured from actual transaction prices paid for new leases. They are adjusted using the ratio of recent movers to all renters in a given area, then adjusted again using the growth rate in the same area.	The mean of listed rents within the 40th and 60th percentiles within a given region, weighted based on the availability of the rental housing stock in the given area.
Methodology	FMR is calculated by estimating the gross rent component and then applying the inflation update factor and the trend factor. **Gross Rent Component** • Five-year ACS data • 40th percentile gross rents paid for standard-quality housing units occupied by recent movers. • Recent movers are defined as renter households that moved to their present residences within the past two years. **The Trend Factor** • HUD calculates FMRs in advance of each fiscal year. Thus, FMRs are "trended" so "rentals are current for the year to which they apply."[2] • The current trend factor is derived using time series models based on national inputs, local inputs, and historical values of the predicted series.	Apartment List Rent Estimates are calculated by using rents paid by recent movers and applying a growth rate from real-time rental transactions. **Rent Growth Index:** Repeat rent prices collected from Apartment List listings for the same unit are captured and used to estimate a rent index for each geographic area in a given month. **Recent Mover Adjustment (RMA):** Annual ACS median rents capture rents paid by longtime residents. The RMA is a ratio of recent mover rents and rents paid by all renters. Recent movers are those who moved into their residence in the past two years; their rents are extracted from Census table B25113. **Rent Estimation:** Adjusted ACS median rents are then projected forward using the growth rate calculated from repeat rental transactions.	Zillow Observed Rent Index is calculated by applying market weights and a rental index to recent observations in a given geography. **Weights:** To reflect the entire rental market, weights are used to measure the prevalence of units that are being rented and were built in a particular decade, of a structure type, and are rented in a particular year. The weight is the share of units from the ACS with these characteristics over the share of Zillow listings with the same characteristics. Unit types that are rented relatively more frequently in Zillow's database of rental properties hold smaller weight. **Index Calculation:** A rental index to capture changes in rents paid is constructed by using repeat transactions from Zillow's database of rental properties.

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[2] Low-Income Housing Assistance, 42 U.S.C. § 1437f (c)(1)(A) effective on January 3, 2012.

	The Inflation Update Factor • Private-sector informed rent measure: based on a weighted average of (40 percent) BLS CPI (Rent of Primary Residence and Housing Fuels) and (60 percent) real-time measure of rent from six private data sources: RealPage average effective rent per unit, Moody's Analytics REIS average market rent, CoStar Group average effective rent, CoreLogic Inc. single-family combined three-bedroom median rent, Apartment List Rent Estimates, and Zillow Observed Rent Index. • Finally, HUD averages the result of this step with the year-to-year change in the Consumer Price Index housing fuels and utilities index for the area to make the resulting inflation measure reflective of gross rent.		**Rent Estimation:** To calculate the final rental estimates, the market weights and index are applied to the middle 30% (the 35-to-65 percentile) of asking rents for the observations in the most recent month for the given geography.
Frequency of updates	FMRs are updated annually and generally published on HUD's website on or around September 1.	Apartment List data are updated monthly.	Zillow data are updated monthly.
Data availability	HUD FMR data are available online at no cost. FMR components—gross rent component, the trend factor, and the inflation update factors—are not publicly available.	Data is available online at no cost. Custom data requests are available, but pricing is not made public.	Zillow rental data are available online at no cost.

Usability	FMR data are published in Excel format. The format is consistent from year-to-year.	Apartment List data are published in Excel format that is consistent from month-to-month.	Zillow data are published in Excel format that is consistent from month-to-month.
Apartment Size	FMRs are provided for studio and one- to four-bedroom apartments.	Apartment List provides data for one- and two-bedroom apartments.	Zillow provides the rental market rate for the given area. Data for specific apartment sizes are not available, as Zillow does not distinguish rentals by number of bedrooms.
Missing Data	Over time, geographies may be subject to name changes.	Observations in the data must meet sample size requirements and other criteria to be included in the published data. As such, the number of locations in the data varies month-to-month.	Multiple geographies exhibit missing data across many months or years. Zillow does not provide the criteria the data must meet to be included in the published data.

In addition to the rent data sources discussed above, additional private market measures used by HUD are available for purchase: CoreLogic Inc.; CoStar Group Average Effective Rent; Moody's Analytics REIS average market rent; RealPage average effective rent per unit. While HUD used these data sources to improve their 2023 FMRs measures, the data and methodology are not publicly available and are not reflected in this chart.