# MDUs Are Back! What Does That Mean for Broadband?

Construction of multiple-dwelling-unit (MDU) housing is booming, but owners and broadband providers need to read the fine print.

By Steven S. Ross / *Broadband Communities*

New apartment buildings have always been the sweet spot for broadband network deployments. That sweetness has grown. In the United States, more than 300,000 new privately developed dwelling units have been started each year since 2014 – a rate that exceeds the prerecession peak – even though construction of single-family homes has not recovered. All but about 12,000 units a year are in buildings with five or more units.

Vendors have taken note and introduced a wide array of products to make MDU fiber deployments ever-cheaper to implement. Fiber cables are thinner and more flexible. Connections rarely require fusion splicing, so deployments are faster and require less skilled labor. Outdoor fiber can be pulled inside with no splice at all – workers can simply strip off weather shielding.

Hubs have been made smaller with a dizzying array of tricks, including standardized trays and simple but effective gaskets that allow easier maintenance.

Older buildings can benefit from new techniques that combine existing copper with wireless, G.fast, DOCSIS 3.1 and all-fiber passive optical networks that extend at least to the property line or basement, if not to the unit.

However, most new MDUs are still outfitted with copper broadband infrastructure rather than far more robust (and often less expensive) fiber-based systems. As gigabit internet service becomes the norm, it behooves builders to look beyond their lists of "old, reliable" low-voltage wiring contractors and search for contractors that can supply the latest technologies.

What's more, even experienced property developers and broadband suppliers may fall into the new economy's financial traps when justifying broadband builds.

## THE RENTAL TRAP

One glaring example: New MDU construction overwhelmingly consists of rental units. The proportion of households that own their dwelling units has fallen from its peak – nearly 70 percent – to less than 64 percent today. Young, first-time buyers and those who lost their homes to foreclosure or short sales in the recession have great difficulty finding mortgage lenders. Rental costs are rising relative to income, driven by the resulting demand for rental units, so more unmarried renters must now share apartments and houses with friends and roommates.

Deployers are attuned to credit issues. The weak credit history of many renters accounts for much of the gradual increase in the number of households offered bulk services – broadband and video services whose costs are included in the rent rather than billed separately by providers. Bulk service saves residents money, cuts deployer per-unit operating and marketing costs, and puts building owners on the hook for the fees. That helps deployers obtain financing. However, it also reduces residents' broadband choices and induces many to take only the bulk video package with no extras. Residents then look for content online,

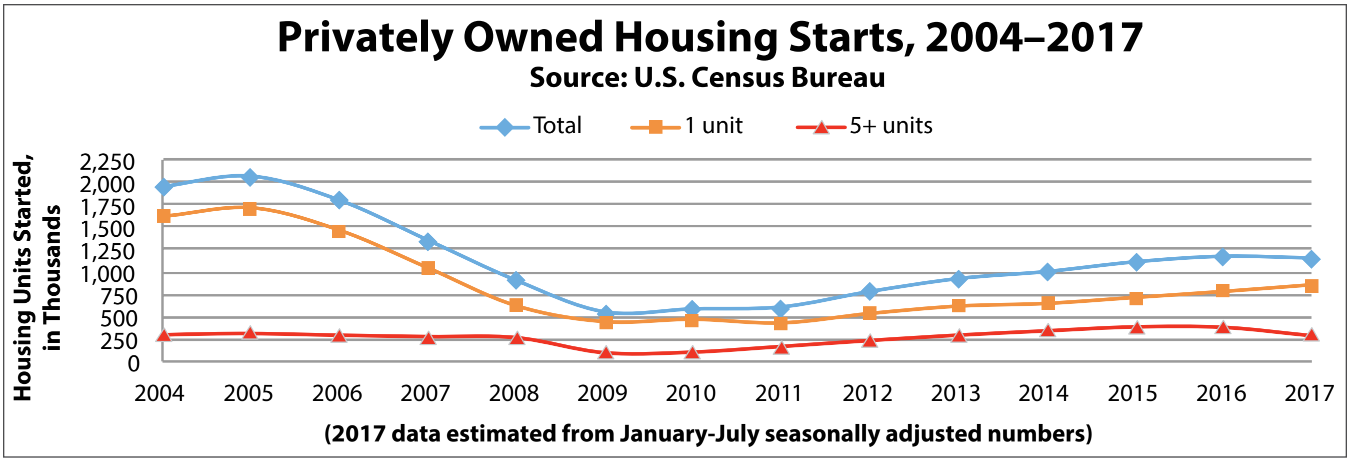


Chart 1: Construction of multiple-dwelling-unit buildings with five or more residences has recovered; the overwhelming number of new units is actually in buildings of 20 or more units. In this chart, the roughly 12,000 annual construction for MDUs of two, three or four units is omitted.

which, in turn, requires building owners to invest in good wireless infrastructure.

In non-bulk buildings, resident churn creates a hidden cost for deployers. A group of unrelated renters tends to be unstable even when each individual has a good income. As residents move in and out of apartments and swap roommates, the actual monthly broadband revenue deployers earn tends to stay close to the promotional price. No longer can deployers depend on higher revenues from residents who have completed promotional terms. What's the penalty? Between 12 and 30 percent of "full price" revenue – and the 12 percent is for short promo periods of three to six months. Even a 12 percent hit can destroy all profit potential. (Broadband Communities offers free monthly cash flow models to help providers do their own calculations. Look for Calculating Your Revenues

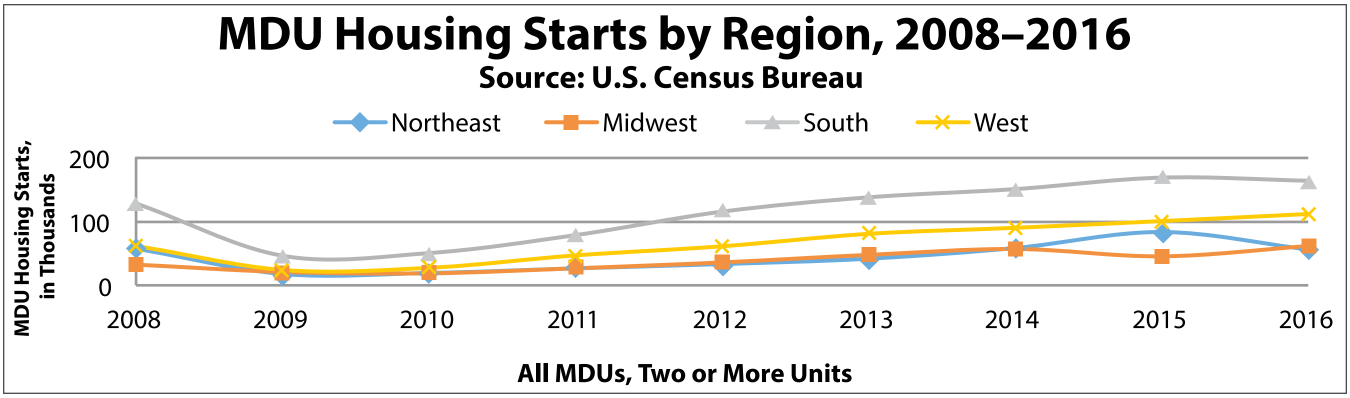


Chart 2: Regional variations in annual MDU construction. In this chart, MDUs of all sizes are aggregated; the Census Bureau does not fully report MDU data by size in this data series. Note that most MDU growth has been in the South and West since the recession started in 2008.

and Margins and FTTx Monthly Cash Flow Model at FTTHAnalyzers.com to download models and instructions for using or modifying them.) Churn is a minor issue for bulk buildings; a few offer a free month's rent for new tenants, for instance.

## TIGHTENING MONEY SUPPLY

Expect the bias toward rentals to continue for several more years. The Federal Reserve Bank has started to reduce the money supply by reducing its balance sheet. When the recession started in 2008, the FRB had about $800 billion in assets. Its holdings grew fivefold to around $4 trillion as the FRB bought up lower-quality assets (mainly bonds) – a process called "quantitative easing." The money it spent went into circulation, but other banks could also borrow against the assets it carried on its books.

Essentially, this process creates money. Although the supply of money went up, money tended to move around less until the economy recovered. If that had not happened, the extra money in the system would have caused a great deal of inflation. Instead, borrowing became easier, at least for businesses. Money has been available to home builders and network deployers at interest rates in the range of 3 to 6 percent.

Today, the FRB is more worried about inflation. But as it has begun to reduce its balance sheet, and thus the money supply, it has kept interest rates low for the large commercial banks that borrow from it. That, in turn, puts smaller local banks in a quandary. If they can't raise their own interest rates, they will tend to avoid making long-term loans either to individuals or to capital-intensive businesses. And no businesses are more dependent on 15- to 20-year financing than network deployers.

That entices MDU developers – who typically finance their projects with interest-only loans that are rolled over every five years – to finance network builds themselves.

| Month | Total | Single Unit | 5+ Units |
|---|---|---|---|
| January | 1,079 | 802 | 277 |
| February | 1,145 | 763 | 382 |
| March | 1,178 | 810 | 368 |
| April | 1,075 | 774 | 301 |
| May | 1,168 | 799 | 369 |
| June | 1,243 | 827 | 416 |
| July | 1,168 | 814 | 354 |
| **Average** | **1,151** | **798** | **352** |

Table 1: Housing completions in 2017: Seasonally adjusted annual totals
*(Source: U.S. Census Bureau)*

## DATA LIMITATIONS

The aggregate number of U.S. housing starts – usually the only number reported in the non-business media – is about 1.2 million per year. Single-family homes account for most housing construction, and much new construction replaces old housing that has fallen into disrepair. But the overall proportion of MDUs in new housing has risen far beyond historical norms.

However, local markets do not always follow national trends. Not all the 40,000 communities in the United States require construction permits. In many states, large developments are built in unincorporated areas outside city or town borders and then folded into those communities once construction is finished. Thus, the number of dwelling units completed in a particular city is sometimes larger than the number started. That has not been the case for the past few years, however.

In addition, monthly data are usually reported as seasonally adjusted annual totals.

Table 1 shows the most recent annualized monthly data for housing completions, excluding approximately 12,000 units in buildings that have two, three or four apartments. Notice that the annual completion rate of MDUs with five or more units ranges from 277,000 to 416,000. Exceptional weather – good or bad – accounts for much of this variation. The average annual rate of completions so far this year – 352,000 – is more than 5 percent higher than the average annual rate of housing starts but lower than the number of starts for the past few years.

There are regional variations in the rates of starts and completions, which are reported about a year late by the Census Bureau. The bureau does not break out the number of units in very small MDUs – those with fewer than five units – in the regional data as first reported. Chart 2 shows how much of the MDU market is driven by housing patterns in the South and West, where the rise in MDU construction has been greatest. In Chart 2, also note the odd bump in 2015 MDU starts in the Northeast. Much of that was due to builders' racing to get started before the expiration of a property-tax break in New York City.

MDUs, as one might expect, tend to contain fewer units in rural areas, but in rural population centers with fewer than 50,000 people, garden apartments and above-store apartments are not uncommon. These are easy to provision with broadband as long as the town is well connected to the outside world. However, rural areas in the aggregate have been losing population since 2010. The loss – more than 1 percent of the 42 million people who lived in rural counties that year – produced a surplus of more than 200,000 dwelling units in those counties.

It is little wonder small regional and local broadband carriers are moving quickly to take advantage of opportunities new residential construction presents. Local carriers do not usually need the Census Bureau to tell them what is going on in their own communities. National property owners and managers that want to get a handle on trends in specific regions should strengthen their connections to local carriers.

I have obtained county-by-county data in some detail and will report on that in future issues.

## THE FUTURE: SLOW-GROWTH SCENARIO?

At this time, immigration policy is in flux, and net immigration appears to be falling – there are more deportations, and fewer immigrants are entering the United States. Prior to the policy change, the Census Bureau estimated that all net population growth in the United States after 2020 would result from immigration.

Changing the immigration outlook would, of course, have major implications for housing construction of all kinds. For example, there would be fewer construction jobs, fewer opportunities for broadband deployers, and a smaller economy overall. But the impact would probably be felt most in residential MDU construction, as permanent-resident immigrants tend to follow similar residential patterns as non-immigrants. ❖

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