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Multifamily Deliveries Slow as Worker Scarcity Increases Construction Times

With nearly 600,000 units under construction, U.S. multifamily apartment deliveries were expected to reach a cycle peak of 360,000 in 2017. However, through three quarters new supply is running only slightly ahead of last year's 281,000 deliveries, and construction times from start to finish are taking much longer than historical norms.

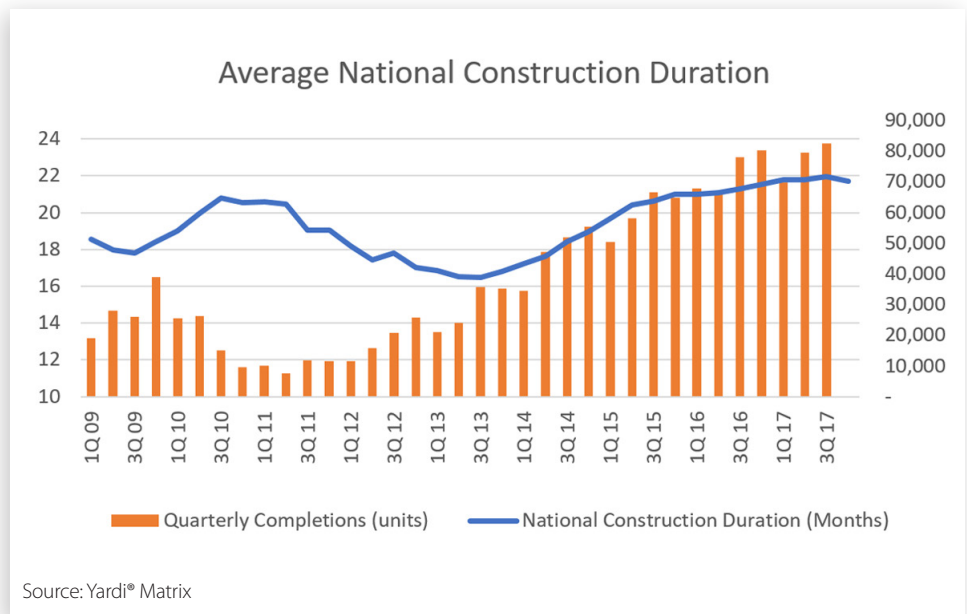
Although the reason for longer construction periods is hard to pin down with precision, the evidence points to the lack of available labor as the main culprit. Some analysts posit other reasons—for example, construction materials and structures are more complex today and therefore take longer to complete, or that local government approvals are taking longer than past years—but the labor shortage is almost certainly the primary driver. Multiple surveys done by trade groups associated with the construction industry have been beating the drums about the lack of skilled labor for a few years.

Longer construction periods for multifamily properties could have a substantial impact on the market. We now expect the cycle peak for deliveries to come in 2018 rather than 2017. Reduced deliveries could slow down the decline in occupancy rates as supply overshoots demand, and serve to either prevent overall rents from declining, or slow the rate of deceleration. Nationally, year-over-year rent growth has slowed to 2.5 percent through November 2017, but the rate of decline has stopped.

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Increasing Construction Times

Yardi data culled from construction of more than 1.5 million apartment units over the past decade shows that the average length of time to complete properties is not constant and has increased by about five-and-a-half months from its low point in the third quarter of 2013 to the third quarter of 2017. The data, which encompasses apartment buildings of 50 units or more in more than 100 markets in the U.S., shows that the average time to complete projects over the period of the study ranged between 16 months and 22 months. Because the underlying sample is not consistent—in other words, the properties completed from quarter to quarter are never the same—the numbers we use are a rolling four-quarter average.

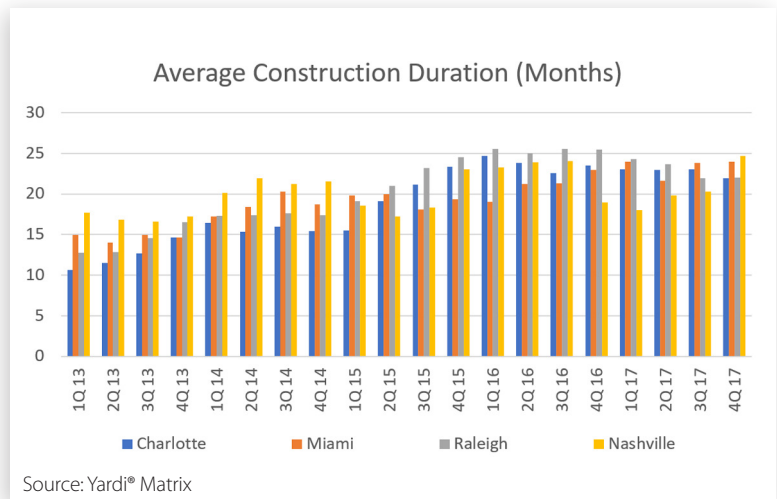
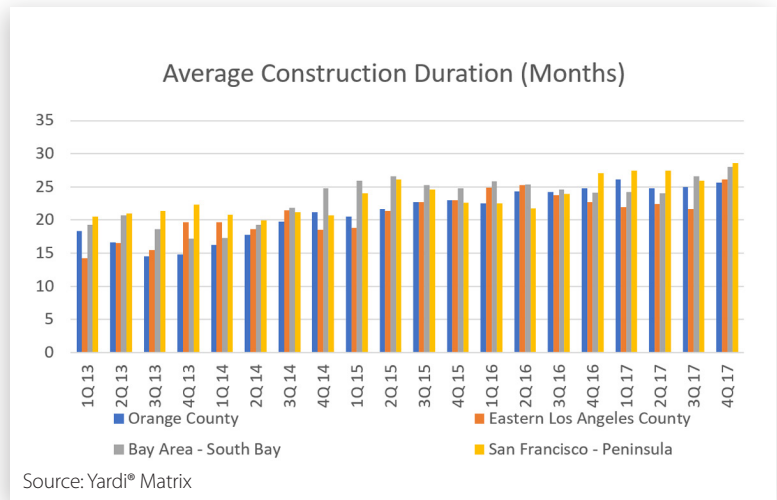
Coming out of the Great Recession, some projects stalled as developers ran into financial problems and laid off workers, causing the the average construction time to climb to 20 months in 2010 and 2011. During that time, apartment deliveries fell to modern historical lows of about 100,000 each year. As the economy improved and labor became more available, the average completion time started to dip, reaching a low point of 16.5 months in second and third quarters of 2013, a year in which 130,000 units were delivered.

As the economic recovery continued and demand surged, multifamily construction picked up rapidly. Deliveries totaled 181,000 in 2014, 201,000 in 2015 and 281,000 in 2016. The number of construction laborers did not grow at a corresponding rate, however, and the average completion time for multifamily projects has steadily risen to 22.0 months as of 3Q17.

To be sure, labor availability is not the only factor causing construction times to fluctuate. Other elements of the process such as permitting and approval times can vary, the number of units and type of construction can change over time, and individual projects can suffer delays for all sorts of reasons, including weather and financing issues. However,

there is compelling anecdotal and statistical evidence that demonstrates that the available pool of construction workers is not growing as fast as the increase in supply.

Although the quarterly data on a metro level is inconsistent because the sample sizes are small, the data shows that markets with the biggest increases in average construction time have some combination of tight labor markets, lack of affordable housing for blue-collar construction workers or large increases in supply that has created competition for workers. Between 3Q13 and 3Q17, the increase in completion times was highest in California metros: Orange County (11.2 month increase) had the most significant jump, followed by Eastern Los Angeles (10.6 months) and San Jose (9.5 months).



Longer construction times also were seen in metros with huge development pipelines such as: Charlotte (9.3 months), Miami (9.0 months), West Houston (8.6 months), Nashville (8.0 months), Phoenix (7.9 months) and Raleigh (7.5 months).

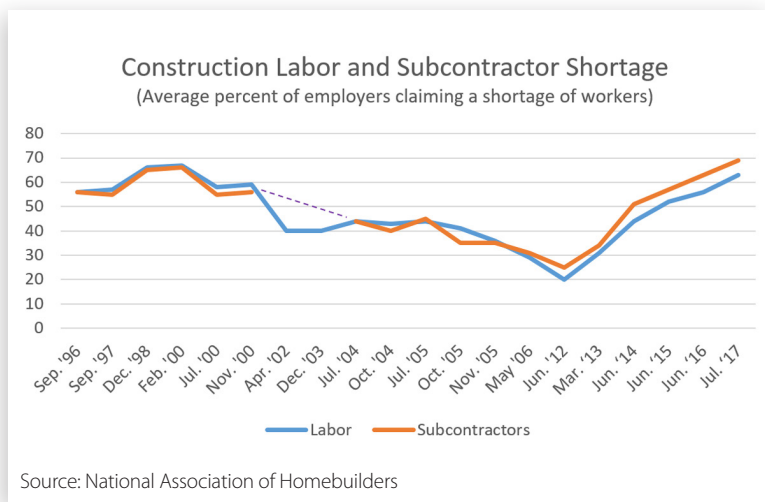
Labor Shortage

After peaking during the housing boom of the 2000s, construction industry employment has yet to fully recover. Fewer younger people are entering the industry as a profession, and employer surveys reveal that development firms are increasingly finding it difficult to hire a full complement of construction workers.

The number of workers employed in the construction industry peaked at 7.7 million in 2007, and dropped as low as 5.5 million in 2010 in the wake of the Great Recession, according to the Bureau of Labor Statistics, as development

20s. Meanwhile, banks burned by large numbers of defaults during the financial crisis became conservative in funding new development. Banks also faced new regulatory hurdles, including rules that require them to set aside more capital for construction loans. The result was a decline in development of all commercial properties, not just for housing but malls and office buildings and other projects.

As the job market and economy turned around in the early part of the 2010s, demand increased for housing and commercial space and debt financing became more available. Households have formed at a strong 1 million-plus per year over the last few years, and with the homeownership rate receding from its pre-crisis peak, housing demand has focused on rentals. Roughly 9 million new renter households were created in the decade leading up to 2016, while the number of owner-occupied households dropped by 2 million, according to the Census Bureau.



That has led multifamily construction to soar. As of September 2017, nearly 600,000 multifamily properties were under construction in the U.S., per Yardi Matrix's database of 125 markets nationwide. Given the average length of historical start-to-finish construction times, that should have produced about 360,000 units delivered in 2017. But only about 150,000 units were completed by mid-year and 220,000 through three quarters. We analyzed start-to-finish completion times for more than 1.5 million units built over the last decade, using Yardi Matrix's database and found that the average construction time has lengthened by 5.5 months since 2013, to 22 months as of 3Q17.

of all types (not just housing) ground to a halt. Housing was hit by a double-whammy of weak demand and unavailability of debt financing.

Demand for housing suffered during and after the recession as the large Millennial generation could not find suitable work and lacked the income to form households, with nearly one-third continuing to live with parents into their

The main factor in the longer construction periods appears to be the labor shortage. For one thing, construction employment is down. As of August, the industry employed 6.9 million workers, up by 1.2 million over the past five years but still 800,000 below its peak, per the Bureau of Labor Statistics (BLS). The proportion of construction workers as a total of all jobs peaked in 2005 at 8.6 percent, and has since declined to 6.2 percent in 2017.

Some economists argue that there is no labor shortage, pointing to total employment levels and the lack of wage growth among trades that they say should occur if a shortage exists. However, job data, anecdotal evidence and surveys of employers reveal that finding qualified construction workers is growing increasingly difficult. For example, in recent months the BLS's Job Opening and Labor Turnover Survey (JOLTS) survey has found an increasing number of unfilled construction jobs.

Surveys bear out the labor issues. One-third of construction firms reported that labor quality was their biggest problem, according to the August survey of the National Federation of Independent Businesses, a small-business trade group based in Washington, D.C. Some 88 percent of all survey respondents said they found it hard to fill some jobs. In July, some 72 percent of contractors surveyed by the National Association of Homebuilders (NAHB) said they were finding it difficult to finish projects on time, up from 46 percent who responded to the same question in March 2013. About three-quarters reported in another NAHB survey they were having trouble hiring framing crews and carpenters, with 30 percent saying the problem was "serious." The NAHB reports that employer response to surveys indicates that the labor shortage is as high as it has been since before the year 2000.

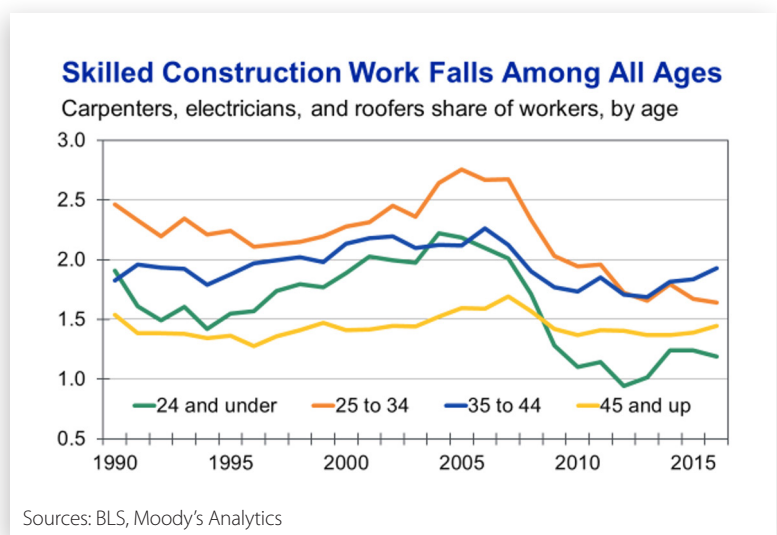
Reasons for the shortage include the dearth of young workers going into construction as a profession and the reduced number of immigrants. The increasing age disparity of construction workers is notable. The average age of construction workers is increasingly growing older as fewer younger workers are entering the field.

By age category, the differences were dramatic. The 35 and up age cohorts experienced only slight declines (the percentage of construction workers as a share of all workers dropped to 1.4 percent in 2017 from 1.6 percent in 2005, and the age 35-44 category dropped to 1.9 percent in 2017 from 2.1 percent in 2005). Decreases were much steeper for younger age cohorts. The 25-to-34 age category fell to 1.6 percent in 2017

from 2.8 percent in 2005, and the 25-and-under category fell to 1.2 percent in 2017 from 2.2 percent in 2005.

There are many theories for the decline in young construction workers, including the opioid crisis, the lack of interest in the profession and decreased immigration. A recent survey by the NAHB found that only 3 percent of young adults between the ages of 18 to 25 wanted to pursue a career in building trades.

While immigration is not as easy to track through data, fewer immigrants from Mexico and South and Central America are making their way into the U.S. to work in construction. The trend



started during the recession, when fewer jobs were available in America, but has continued as the economies south of the border have improved.

What's more, the birth rate in Mexico has declined sharply over the past few decades, leaving fewer residents heading to America for jobs. Also serving to reduce the inflow is the immigration policies of the Trump administration, including well-publicized deportations and proposals to limit the total number of immigrants allowed into the country.

Exacerbating the situation is the recent hurricane season. Hurricanes Harvey, Irma and Maria have created more than \$200 billion of damage in Texas, Florida and Puerto Rico. The

resulting rebuilding efforts are likely to siphon workers from other parts of the country.

Conclusion: Impact on the Industry

The labor shortage has downsides—including potentially increased construction costs and delayed openings—but the biggest impact is that supply is not overshooting demand as much as anticipated. The wave of anticipated supply is taking longer to be delivered, enabling occupancy levels to remain elevated longer than they would have otherwise. Nationally, occupancy levels have fallen roughly 50 basis points over the last year, but that drop would be steeper if 60,000 more units were delivered.

Units under construction will be completed eventually, even if it takes longer. But the added construction time gives apartment owners more time to absorb new supply. In metros with heavy construction pipelines, occupancy rates will likely level off or decline less than expected. That means that rent growth—which has been decelerating steadily for nearly two years and stands at 2.5 percent year-over-year as of November—should continue to grow moderately rather than turn negative. Looking at the longer term, the industry must identify where its future labor force will come from. Older workers will retire, and without a pool of younger workers to replace them, developers will continue to have problems finding skilled labor.

—Paul Fiorilla, *Associate Director of Research*

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