WBMA Residential Construction Overview

November 13, 2019
We Collaborate With 200+ Diverse Subscriber Clients to Better Understand the Housing Market

**JBREC Research Membership Distribution (# of companies)**

- **Private Builder**: 16%
- **Public Builder**: 6%
- **Developer**: 15%
- **Investment Fund**: 11%
- **Private Equity**: 15%
- **Building Products**: 14%
- **Lender**: 5%
- **Single Family Rental**: Other 13%
- **Building Products**: 14%
- **Public Builder**: 6%
- **Private Builder**: 16%
- **Public Builder**: 6%
- **Developer**: 15%
- **Investment Fund**: 11%
- **Private Equity**: 15%
- **Building Products**: 14%
- **Lender**: 5%
- **Single Family Rental**: Other 13%

**Companies**:
- Blackstone
- OWENS CORNING®
- LP® BUILDING PRODUCTS
- HOME DEPOT®
- J.P. Morgan
- AMERICAN Homes
- STARWOOD CAPITAL GROUP
- Capital Group
- Fidelity Investments
- Newland Communities
- LSTAR VENTURES
- LENNAR
- Pulte Homes
- NVR
The Current Recovery Is Now the Longest in Recent US History; We Project Economic Growth through 2020

Historical Length of US Economic Recovery

Length of expansion cycle in years

Average recovery = 6.0 years

Sources: National Bureau of Economic Research; BEA, John Burns Real Estate Consulting, LLC (Pub: Oct-19)
Economic Recovery Long in Length but with Lackluster Growth

The current economic expansion has lasted 10.3 years, with cumulative GDP growth of just 26%. We forecast another 2 to 3 years of growth, making this recovery the longest on record. The shallow, low-growth trajectory of this expansion gives us confidence that this cycle has room to run.

Strength of Economic Expansions
Cumulative real GDP growth during US economic recovery

Note: We show Real GDP here as inflation varies greatly over the last 60+ years. The consensus forecast is the weighted average forecast of 71 individual company contributions. We are extrapolating the consensus forecast out to 4Q20 from 3Q19.

Sources: National Bureau of Economic Research; BEA, John Burns Real Estate Consulting, LLC (Data: 3Q19, Pub: Nov-19)
Slowing corporate profit growth and decreasing residential investment now contribute to a Very High Risk of recession in the 2- and 4-year outlook periods. Our 1-Year Outlook predicts low performance next year.

The Burns Economic Performance Index™ is designed to rank current economic conditions against previous economic cycles on a scale of 0-100, 0 being the lowest performing, and 100 being the highest performing economic conditions. The index includes 34 indicators grouped into 5 weighted categories: Employment, Housing, Economics, Stock Market, and Confidence, each with history back to 1981.

A forward-looking component of the index with data back to 1953 provides a lead on recession events as well as an early indication of coming growth cycles. We did a 64 year back test of this data which shows a normal risk of recession in any given year on average to be 27% 2 years out and 50% four years out.

Source: John Burns Real Estate Consulting, LLC (Pub: Oct-19)
Is housing going to cause the next downturn?
Is housing going to cause the next downturn?
In 1Q07, 15% of mortgage originations were to subprime borrowers with a credit score of <620. As of 1Q19, only 4% of mortgages went to borrowers with a credit score less than 620.

*Mortgage Originations by Credit Score*

Billions (USD)  Share in parentheses: 780+ (56%)  720–779 (18%)  660–719 (16%)  620–659 (6%)  <620 (4%)

*Credit Score is Equifax Riskscore 3.0.*

Source: FRBNY Consumer Credit Panel/Equifax (Data: 1Q19, updated quarterly†)

Pub: Oct-19
New Home Inventory

New home inventory increased 2% YOY. Inventory is above the historical average but remains only 58% of peak levels reached in mid-2006.

Source: Census Bureau (Data: Aug 19, Pub: Oct 19)
Housing Will Decline Modestly. A ‘Hiccup’ Rather than Major Downturn

US National Housing Starts

Millions

*Cur. mo. SA = Current month (seasonally adjusted annual rate)
Sources: U.S. Census Bureau; John Burns Real Estate Consulting, LLC forecasts (Data: Sep-19, Pub: Nov-19)
Housing Will Decline Modestly. A ‘Hiccup’ Rather than Major Downturn

US Residential Starts

Single-family
Multifamily

*Cur. mo. SA = Current month (seasonally adjusted annual rate)

Sources: U.S. Census Bureau; John Burns Real Estate Consulting, LLC forecasts (Data: Sep-19, Pub: Nov-19)
Our Roll-Up of Economic Indicators Reflects Average Economic Growth; Leading Indicators Worsened YOY

**Economic Snapshot**

<table>
<thead>
<tr>
<th>Category</th>
<th>One Year Ago</th>
<th>Poor</th>
<th>Average</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Growth</td>
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<td>Leading Economic Indicators</td>
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<td>Affordability</td>
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<td>Consumer Behavior</td>
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<tr>
<td>Existing Home Market</td>
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<tr>
<td>New Home Market</td>
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<tr>
<td>Housing Supply</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
</tbody>
</table>

Source: John Burns Real Estate Consulting, LLC (Pub: Nov-19)
Several Top Markets in Falling Phase of Their Long-Term Housing Cycle: Chicago, Bay Area, NY, and Orange County

Source: John Burns Real Estate Consulting, LLC (Pub: Sep-19)
In our rating system, Normal market conditions reflect builders selling at a market’s historically normal sales rate per community, typically 2–3 per month, with slightly rising net prices.

Current Outlook: 28% of Markets Slow / Very Slow; Up from 12% Last Year

Phoenix upgraded to Strong

Source: John Burns Real Estate Consulting, LLC (Pub: Oct-19)
In our rating process, Normal reflects builders selling 2–3/month per community with slightly rising net prices. The share of Slow/Very Slow markets remains elevated at 28%.

**Current Market Conditions**

50 top housing markets

Percentages may not add up to 100% due to rounding, as some months less than 50 markets are rated.

Source: John Burns Real Estate Consulting, LLC (Pub: Oct-19)
48% of Outstanding Mortgages Locked In at Rates Less Than 4%

48% of mortgage holders are locked in sub-4% rates. If rates move higher, many owners have less incentive to move. This is keeping existing home supply low while also suppressing sales.

Distribution of Outstanding Primary Residential Mortgages by Interest Rate

Sources: John Burns Real Estate Consulting, LLC; Census Bureau (Data: 2017, updated quarterly†)
48% of Outstanding Mortgages Locked In at Rates Less Than 4%

48% of mortgage holders are locked in sub-4% rates. If rates move higher, many owners have less incentive to move. This is keeping existing home supply low while also suppressing sales.

Distribution of Outstanding Primary Residential Mortgages by Interest Rate

Sources: John Burns Real Estate Consulting, LLC; Census Bureau (Data: 2017, updated quarterly†)
Average Sales Rate per Community Increases 19% YOY, per 222 Builders Who Responded Both This Year and Last

Year-over-Year Sales Rate Growth

*Note: The above chart shows YOY comparisons only for builders who participated in the survey one year prior. For the September survey, YOY comparisons include 222 responses.

Source: John Burns Real Estate Consulting, LLC, independent survey of ~15% of all US new home sales, NSA (Data: Sep-19, Pub: Oct-19)
September New Home Sales Up 21% YOY, Pairing a 19% Higher Sales Rate and 2% Community Count Growth**

**Note: The above chart shows YOY comparisons only for builders who participated in the survey one year prior. For the September survey, YOY comparisons include 222 responses.

**To determine national community county growth, we count the number of communities on every production builder's website in the top 34 markets. The community count growth of the 222 matched responses and the entire country may differ. Builder count growth was last updated in July 2019.

Source: John Burns Real Estate Consulting, LLC, independent survey of ~15% of all US new home sales, NSA (Data: Sep-19, Pub: Oct-19)
Oregon

We are projecting a total volume of 80.6K starts from 2019-2022.
We are projecting a total volume of 64.7K starts from 2019-2022.
We are projecting a total volume of 19.5K starts from 2019-2022.
We are projecting a total volume of 6.9K starts from 2019-2022.
September Building Materials Orders Up +3% YOY per Our Monthly Survey; Most Dealers Cite Modest Pickup in New Construction Activity as Primary Driver of Growth

Burns Building Materials Survey
Year-over-year order revenue growth (Sep-17 through Sep-19)

Source: John Burns Real Estate Consulting, LLC, Building Materials Survey of Building Material Dealers and Manufacturers, representing over $25 billion of annual building material sales. We weight survey responses by revenue. (Data: Sep-19, Pub: Oct-19)
+3% Growth in Building Product Orders in September per Our Survey Driven by 12% Growth in Decking and Railing; Partially Offset by Declines in Wallboard; Kitchen, Bath, and Cabinetry; and Lumber

Burns Building Materials Survey
YOY order revenue growth (Sep-19)

- Decking and railing: 12%
- Windows and doors: 11%
- Siding: 7%
- Other: 5%
- Total Building Materials: 3%
- Millwork: 1%
- Roofing: -3%
- Lumber / building materials: -4%
- Kitchen, bath, cabinetry: -4%
- Wallboard: -9%

Note: Roughly $25+ billion in annual building product revenue is represented in the survey. We weight survey responses by revenue. The Other category refers to channel participants’ business segments that may not roll up into any of the major categories but which they still track (e.g., Hardware or Fasteners). Each participant will classify revenue not in the above buckets as Other, but the specific categories differ from dealer to dealer.

Source: John Burns Real Estate Consulting, LLC, Building Materials Survey (Data: Sep-19, Pub: Oct-19)
Lower Structural Panel and Dimensional Lumber Pricing Relative to 2018 Remains a Headwind to Industry Growth

Framing Lumber and Structural Panel Prices

Monthly

- Random Lengths framing lumber composite price
- Framing lumber historical avg. = $345
- Random Lengths structural panel composite price
- Structural panel historical avg. = $347

Note: China accounts for ~20% of US lumber exports.

Sources: Random Lengths; John Burns Real Estate Consulting, LLC (Data: Jul-19, Pub: Oct-19)
80% of Building Material Dealers in Our Survey Report Negative Impact to Sales from Commodity Price Deflation YTD; About 50% of Dealers Say Sales Are Down More than 5% Due to Lower Lumber Prices

Burns Building Materials Survey

How much lower are your total company sales YTD because of price deflation in lumber?

% of dealers citing impact to sales

- My sales are not lower YTD because of lower lumber pricing
- 1-5% lower
- 5-10% lower
- 10-15% lower
- Down more than 15%

Weighted Average of all Dealers

7% Lower

Source: John Burns Real Estate Consulting, LLC, Building Materials Survey of Building Material Dealers and Manufacturers, representing over $25 billion of annual building material sales. We weight survey responses by revenue. (Data: Sep-19, Pub: Oct-19)
We forecast residential repair & remodeling spending to grow 2.4% in 2019 to $383.8B, including a -38% decline in disaster repair spending.

Burns Residential Repair and Remodel Spending™

- Small project discretionary
- Big project discretionary
- Disaster repairs

Note: Includes labor and materials.

Sources: John Burns Real Estate Consulting, LLC; U.S. Census, CTBUH (Data: Sep-19, updated quarterly†)
Labor Shortage
82% of builders report labor shortages versus 13% in 2011. Shortages drive up builder costs, lengthen building cycle times, and hamper construction activity.

### Percentage of Builders Reporting Labor Shortages

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>13%</td>
</tr>
<tr>
<td>2012</td>
<td>30%</td>
</tr>
<tr>
<td>2013</td>
<td>53%</td>
</tr>
<tr>
<td>2014</td>
<td>61%</td>
</tr>
<tr>
<td>2015</td>
<td>71%</td>
</tr>
<tr>
<td>2016</td>
<td>78%</td>
</tr>
<tr>
<td>2017</td>
<td>82%</td>
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<tr>
<td>2018</td>
<td>82%</td>
</tr>
<tr>
<td>2019</td>
<td>82%</td>
</tr>
</tbody>
</table>

Source: NAHB (Data: 2019, updated quarterly†)  *Expected labor shortages
U-Haul Pricing Data Shows Outmigration from Expensive Coastal Markets

$717

$109

$1,103

$87

$2,824

$994
U-Haul Rental Pricing Data Indicates Strong In-Migration Demand in Boise and Charleston; Out-Migration in Top California Markets

### Average Premium/Discount to Take a 20' Truck to a City Than to Return the Same Truck

<table>
<thead>
<tr>
<th>Market</th>
<th>Last Year</th>
<th>Current Premium</th>
<th>Oct-19 vs Oct-18</th>
</tr>
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<tbody>
<tr>
<td>Boise</td>
<td>$840</td>
<td>$787</td>
<td></td>
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<tr>
<td>Charleston</td>
<td>$787</td>
<td>$771</td>
<td></td>
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<tr>
<td>Myrtle Beach</td>
<td>$771</td>
<td>$752</td>
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<tr>
<td>Jacksonville</td>
<td>$752</td>
<td>$672</td>
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<tr>
<td>Atlanta</td>
<td>$743</td>
<td>$672</td>
<td></td>
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<tr>
<td>Charlotte</td>
<td>$672</td>
<td>$661</td>
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<tr>
<td>Fort Myers</td>
<td>$661</td>
<td>$393</td>
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<tr>
<td>Raleigh</td>
<td>$622</td>
<td>$597</td>
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<tr>
<td>Sarasota</td>
<td>$597</td>
<td>$592</td>
<td></td>
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<tr>
<td>Tampa</td>
<td>$592</td>
<td>$582</td>
<td></td>
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<tr>
<td>Austin</td>
<td>$582</td>
<td>$575</td>
<td></td>
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<tr>
<td>Orlando</td>
<td>$575</td>
<td>$571</td>
<td></td>
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<tr>
<td>Dallas</td>
<td>$571</td>
<td>$550</td>
<td></td>
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<tr>
<td>Fort Worth</td>
<td>$571</td>
<td>$537</td>
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<tr>
<td>Nashville</td>
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<tr>
<td>Phoenix</td>
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<td>$505</td>
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<tr>
<td>Houston</td>
<td>$505</td>
<td>$493</td>
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<td>San Antonio</td>
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<td>Portland</td>
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<td>Seattle</td>
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<td>$369</td>
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<td>Salt Lake City</td>
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<td>$103</td>
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<td>Minneapolis</td>
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<td>$66</td>
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<td>Denver</td>
<td>$66</td>
<td>$22</td>
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<tr>
<td>Las Vegas</td>
<td>$22</td>
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<tr>
<td>Indianapolis</td>
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<td>Boston</td>
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<td>Philadelphia</td>
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<tr>
<td>DC</td>
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<tr>
<td>Baltimore</td>
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<tr>
<td>Chicago</td>
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<tr>
<td>NYC</td>
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<tr>
<td>NYC</td>
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<tr>
<td>Riverside-San Bern.</td>
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<tr>
<td>San Diego</td>
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<tr>
<td>Orange County</td>
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<tr>
<td>San Diego</td>
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<td></td>
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<tr>
<td>Los Angeles</td>
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<tr>
<td>Sacramento</td>
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<td></td>
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<tr>
<td>East Bay Area</td>
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<tr>
<td>San Jose</td>
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<tr>
<td>San Francisco</td>
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</tbody>
</table>

Methodology: The statistics above measure the average cost of taking a 20' rental truck to a market from the other 26 markets, less the cost of returning the truck. A positive number implies net in-migration, and a negative number implies net out-migration. The dots compare the premiums to last year’s. For instance, Minneapolis’ premium is now less than last year, signaling migration may not be as strong this year. The JBREC quarterly U-Haul survey is conducted on the first business day of the month for a move occurring on the third Friday of that same month.

Disclaimer: We obtained pricing data from uhaul.com searches. U-Haul did not participate in our analysis. JBREC inferences are not associated with any U-Haul statements.

Source: John Burns Real Estate Consulting, LLC (Data: Oct-19, updated quarterly†)
U-Haul Rental Pricing Data Shows Outmigration in California, Midwest, and Northeast Markets; Sunbelt Experiencing In-Migration Demand

Average Premium/(Discount)

To take a truck to a city and return the same truck (Oct-19 vs. Oct-18)

Disclaimer: We obtained pricing data from uhaul.com searches. U-Haul did not participate in our analysis. JBREC inferences are not associated with any U-Haul statements.

Source: John Burns Real Estate Consulting, LLC (Data: Oct-19, updated quarterly†)
The Labor force participation rate recovery differs by Sex

**Women**: age 25-54

- 2000: 74%
- 2001: 73%
- 2002: 75%
- 2003: 76%
- 2004: 77%
- 2005: 78%
- 2006: 79%
- 2007: 80%
- 2008: 81%
- 2009: 82%
- 2010: 83%
- 2011: 84%
- 2012: 85%
- 2013: 86%
- 2014: 87%
- 2015: 88%
- 2016: 89%
- 2017: 90%
- 2018: 91%
- 2019: 92%

**Men**: age 25-54

- 2000: 89%
- 2001: 88%
- 2002: 87%
- 2003: 86%
- 2004: 85%
- 2005: 84%
- 2006: 83%
- 2007: 82%
- 2008: 81%
- 2009: 80%
- 2010: 79%
- 2011: 78%
- 2012: 77%
- 2013: 76%
- 2014: 75%
- 2015: 74%
- 2016: 73%
- 2017: 72%
- 2018: 71%
- 2019: 70%

**Labor Shortages - The Missing Men**

1.5 Million “Missing” Men

+1.2%
Labor Shortages: Participation rates have fallen most for young men

Labor force participation rate by age - men

- **20 to 24**: 74%
- **25 to 34**: 82%
- **35 to 44**: 89%
- **45 to 54**: 88%
- **20 to 24**: 74%
Where have they gone?

2.5 less hours of work per week

+2 more hours of video games
Unfilled construction jobs jumped 45% YOY to 323K, reaching a new high. A rising number of openings signals a shortage of labor. Shortages delay building and increase costs.

Construction Job Openings

Sources: BLS; John Burns Real Estate Consulting, LLC (Data: May-19, updated quarterly†)  
*Historical average: Jan-01 through current
Hourly wages for construction contractors increased 3% YOY, with notable dispersion between trades. Siding wages gained 13%, while plumbing and HVAC wages grew 3% YOY.

**Construction Contractor Hourly Wages**

<table>
<thead>
<tr>
<th>Trade</th>
<th>YOY % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siding</td>
<td>13%</td>
</tr>
<tr>
<td>Masonry</td>
<td>5%</td>
</tr>
<tr>
<td>Flooring</td>
<td>5%</td>
</tr>
<tr>
<td>Drywall and insulation</td>
<td>4%</td>
</tr>
<tr>
<td>Painting and wall covering</td>
<td>4%</td>
</tr>
<tr>
<td>Framing</td>
<td>4%</td>
</tr>
<tr>
<td>Electrical</td>
<td>3%</td>
</tr>
<tr>
<td>Residential building</td>
<td>3%</td>
</tr>
<tr>
<td>Plumbing and HVAC</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Source: BLS (Data: Jun-19, updated quarterly†)  *We take a 3-month average to remove unnecessary volatility.*
The Labor Shortage Isn’t Going Away

Annual Growth of 20–64-Year-Old Population

First baby boomers turn 20

First baby boomers turn 65

Sources: U.S. Census Bureau Intercensal Population Estimates; JBERC Adjustment of Census Dec. 2018 population projections; updated quarterly†

Pub: Aug-19
Labor Shortage

What does this mean for the WBMA?
What Does this mean for WBMA?

An analogy: WWII
Farming
Labor shortages

Ford began advertising a smaller tractor: The Ford Tractor with Ferguson Systems

100,000 tons of metal saved for armament by this tractor!
An analogy: WWII Farming Labor shortages

Ford claimed that the increased efficiency of the tractor would free up 600K workers for the war effort.
An analogy: WWII
Farming
Labor shortages

Other manufacturers got in on the marketing as well

The “V for Victory” sign is passed between a woman farmer and the boys who left the farm in this patriotic wartime painting for the John Deere company.
An analogy: Drywall
Originally seen as inferior, it is now the norm.

Plaster finishes were seen as being preferable because they weren’t so uniform and required a skilled laborer to install.
Labor Shortage

What does this mean for the WBMA?

• Make it easier to build/install (easier to train new labor)

• Make it faster to build/install

• Use technology to make every worker more valuable

• Norms change over time
What other trends are on the horizon for residential construction
Median Lot Size

Since 1999, lot sizes have declined 10%. As first-time buyers enter the market, builders are pivoting to denser projects to accommodate this rising demand.

Median Lot Size of New Homes Sold¹

Source: U.S. Census Bureau (Data: 2018, updated quarterly†) ¹Single-family detached
New single-family home sizes declined -5% since 2015 as builders pivot to the entry-level segment.

Source: FRED (Data: 1Q19, updated quarterly†)
Since 1999, new homes built with less than 1,800 sq. ft. declined from 37% to just 23% of the overall new home market. Higher land prices and rising construction costs have forced builders to focus on larger, higher-end product, where it is easier to pass along new expenses.

**Percentage of New Homes Built with Less than 1,800 Square Feet**

Source: U.S. Census Bureau (Data: 2018, updated quarterly†)

Pub: Oct-19
Builders Pivoting to Entry Level and First Time Buyer Homes…

Source: Builders’ most recent quarterly earnings calls
The new home price premium to resale declined to 21%, the lowest since 2009. High land, labor, and regulation costs have forced builders to charge more and have widened the gap this recovery. Builders have recently pivoted to offering more low-priced product, driving down the new home premium.

**New Home Price Premium vs. Resale**

3-month average  —  Historical average* = 17.0%

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**Sources:** NAR; U.S. Census Bureau; John Burns Real Estate Consulting, LLC (Data: Jun-19, updated quarterly†)  

*Historical average: Jan-68 through current  

**Pub:** Oct-19
First-Time Buyer Mortgage Share Index

AEI collects data for nearly all government-guaranteed home purchase loans. Per AEI data, first-time buyers were 57% of primary owner-occupied home purchase mortgages with a government guarantee.

First-Time Buyer Mortgage Share Index

Combined FBMSI** = 57%

*Includes agency (Fannie Mae, Freddie Mac, FHA, RHS, and VA) and private loans. AEI’s result is different from the one in NAR’s report because the NAR analysis includes total transactions (first-time, repeat, investors, and cash), while AEI considers only homes bought with a mortgage (excluding cash buyers).

Source: AEI International Center on Housing Risk (Data: Apr-19, updated quarterly†)  
Pub: Oct-19
Home size

- Smaller
- Denser
- More First Time/Starter
Design
How will changes in exterior design impact stucco use?

Source: John Burns Real Estate Consulting, LLC (Pub: Sep-19)
Transitional design between classic and modern architecture
“Surban” → Modular
Creative Attached
Design

- Modern architecture
- “Surban”
- Attached
MF/Build for Rent
Multifamily Starts as a Percentage of Total Starts

We forecast MF construction share to remain elevated

Median = 26%
Multifamily built-for-rent starts accounted for 28% of total starts in 1Q19, compared to 8% in 2006.

**Annual Housing Starts by Intent, % of Total Starts**

- **Single-family: built for sale (53%)**
- **Multifamily: built for rent (28%)**
- **Single-family: contractor built (10%)**
- **Single-family: owner built (4%)**
- **Multifamily: built for sale (2%)**
- **Single-family: built for rent (4%)**

Source: U.S. Census Bureau (Data: 1Q19, updated quarterly†)
The 16 million single-family rental homes now represent 13% of households, up significantly from 2006.

**Single-Family Rental Homes**
- Attached and detached homes
- Single-family rental as a % of households

JBREC estimates use 2010 Census figures and trending data from ACS/HVS.

Sources: U.S. Census Bureau ACS; John Burns Real Estate Consulting, LLC (Data: 2Q19, updated quarterly†)

Pub: Oct-19
Public Home Builder Interest in Build for Rent Growing; REITs Such as AMH Continue to Add Newly Constructed Homes to Their Portfolios

July 30, 2019
“From an economic perspective, we are building new homes at a lower investment cost than we could acquire a similar home. These new homes are built with our rental program in mind, which, combined with new appliances and systems, will result in future lower cost to maintain than the cost to maintain most existing homes.”

July 31, 2019
“We are pleased to announce a strategic partnership with Christopher Todd Communities, a leader in delivering build-to-rent single-family housing communities…In this arrangement, Taylor Morrison will complement our core business serving as the land acquirer, developer and builder with Christopher Todd Communities providing its successful build-to-rent playbook, including community planning, improvement plan lineup and property management oversight.

August 6, 2019
“In our wholesale business, we closed 82 homes this quarter, with three different investment groups, generating $18.4 million in revenues.”

Sources: Company earnings calls; John Burns Real Estate Consulting, LLC (Pub: Aug-19)
Builders Completed 46K New Single-Family Attached and Detached Homes for Rent over Past Year; Up 5% YOY

Single-Family Built for Rent Completions
Trailing 12-month total  
2Q19 = 46K (5% YOY)  
Historical avg = 31K

Note: This category includes all new residential homes placed on the rental market at completion. Data does not include wholesale and one-off transactions from new homebuilders to investors.

Sources: U.S. Census Bureau; John Burns Real Estate Consulting, LLC (Data: 2Q19, Pub: Aug-19)
Time to Completion/Delays
How does this compare to 2012?

Average Months from Permit to Completion
Single-family Homes Completed in 2018

Average Days from Permit to Start
Single-family Homes Completed in 2018

Homes not yet started represent 18% of all single-family inventory, the highest share since 2013.

**Single-Family Inventory**

Seasonally adjusted
- **Completed** = 81,000 (25% of total inventory)
- **Under construction** = 185,000 (57% of total inventory)
- **Not started** = 60,000 (18% of total inventory)

Source: U.S. Census Bureau (Data: Aug-19, Pub: Oct-19)
Multifamily Permits Authorized but not yet Started are near historic highs

Source: US Census Bureau

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JBREC BLM Survey

- 6 Questions a month
- Comes directly from our head of BP - Todd Tomalak
- In return you get a special report that includes aggregate anonymized responses + a ton of free content
Special Report: Executive Council on Construction Supply

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• Client Exclusive Events
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3. Labor shortage
4. Home size/Design/MF/BFR/Delays
5. Wrap Up
WBMA Residential Construction Overview

November 13, 2019

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