Housing Outlook

Nebraska Investment Finance Authority
March 19, 2019

Danushka Nanayakkara,
NAHB AVP, Forecasting and Analysis
Economic and Housing Outlook

- Macroeconomic update
- Housing demand and affordability
- Supply-side factors update
- Forecasts
GDP Growth
Economic slowdown approaching

Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.

Annual Growth
- LT avg ('58-'07) 3.4%
- 2016 1.6%
- 2017 2.2%
- 2018 2.9%
- 2019 2.5%
- 2020 1.3%

Q/Q Percent Change, SAAR

Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.
State GDP
Regional variation in growth

Percent Change In Real GDP, SAAR (2012 Chained Dollars): 2018:Q2-Q3

Source: U.S. Bureau of Economic Analysis (BEA).
Expansion is Aging

Current expansion is 117 months old – second longest

Trough to Peak, Months

Payroll Employment Growth and Unemployment Rate

Average Monthly Change in Payroll Employment

Unemployment Rate

Recovery in Employment Since 2008

Employment Recovery: Industry

Leisure and hospitality
Transportation and warehousing
Professional and business services
Other services
Retail trade
Financial activities
Total nonfarm
Government
Construction
Information
Mining and logging
Manufacturing

Average Hourly Wages

Wages growing slowly

Some increases ahead but nearing peak rates for the cycle

Source: Federal Reserve and Freddie Mac data and NAHB forecast.
NAHB FedCast

- Increase fed funds rate to 2.75% in the first half of the year
- “Powell pause” during much of 2019
- Possibility of final rate hike during 4th quarter 2019
- Slowing of sales of Treasury bond holdings, ongoing drawdown of MBS
Housing Demand and Affordability
Consumer Confidence Continues Positive Run

Near two-decade high but stock market declines took a toll at end of year

Index 1985=100, SA

Source: The Conference Board.
Household Balance Sheets

A shift in debt away from mortgages

% of Disposable Inc., SA

Source: U.S. Board of Governors of the Federal Reserve System (FRB).
Consumer Debt

Rise in student and auto loans

Source: Federal Reserve Bank of New York.
Total Student Loan Balances

Higher Mortgage Rates Are Raising Housing Costs
Reducing purchase demand for single-family homes

Given $300K mortgage

4% 3Q 2017
• $1,432 monthly payment
• $17,184 a year

4.7% 3Q 2018
• $1,556 monthly payment
• $18,672 a year
• $1,500 increase per year

Projected 5.25% 2020
• $1,657 monthly payment
• $19,884 a year
• $1,200 increase from 4.7%
• $2,700 increase from 4%
Rising Population Entering Housing Demand Years: 2017

- **Gen Z**: Born After 1997
- **Millennials**: Born 1981-1997
- **Gen X**: Born 1965-1980
- **Baby Boomers**: Born 1946-1964
- **Silent Generation**: Born 1928-1945
- **Greatest Generation**: Born Before 1928

Headship rates increase from 15% to 45%

Avg=4.3

Millions
Share of Young Adults Living with Parents

Almost doubled

Demand for home ownership strengthening
Homeownership Rate

Nine quarters of growth

Homeownership Rate

Percentage, Quarterly, SA

Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership.
Geography of Homeownership

Homeownership Rates in the U.S. by County

Alaska

Hawaii
Determinants of Homeownership

Modeling Results

Increase average age in county by 5 years
• Adds 3 percentage points to rate

Increase share of married households by 10%
• Added 5.1 percentage points to rate

Increase local incomes by $10,000
• Adds 0.6 percentage points to rate

Decrease housing costs by $75,000
• Adds 4.1 percentage points to rate
S&P/Case-Shiller National US Home Price Index

Price growth slowing

Source: S&P Dow Jones Indices LLC; CoreLogic, Inc. and NAHB forecast.
Source: NAHB/Wells Fargo Housing Opportunity Index.
Coastal markets least affordable

Source: NAHB/Wells Fargo Housing Opportunity Index (HOI).
Existing Single-Family Home Sales

Source: National Association of Realtors (NAR) and NAHB forecast.
Supply-Side Factors
Top 10 Significant Problems Faced in 2018 and Expect to Face in 2019

1. Building material prices - 87%
2. Cost/availability of labor - 82%
3. Cost/availability of developed lots - 63%
4. Impact/hook-up/inspection or other fees - 61%
5. Negative media reports making buyers cautious - 62%
6. Gridlock/uncertainty in Washington making buyers cautious - 53%
7. Local/state environmental regulations and policies - 47%
8. Difficulty obtaining zoning/permit approval - 45%
9. Development standards (parking, setbacks, etc.) - 44%
10. Inaccurate appraisals - 37%
11. Immigration policies - 46%
Since January 2017, lumber prices decreased 1%; 63% at peak

Source: NAHB Analysis; Random Lengths Composite Index.
Labor shortage continued through 2018

Construction Sector Productivity

Lagging overall economy

Index, 1993 = 1

- Construction Worker Productivity
- Overall Worker Productivity

Lots

Housing Starts (Area) and Low/Very Low Lot Supply (bars)

Source: Census Bureau and NAHB/Wells Fargo HMI survey.
Median Lot Value and Size
Lot size declining --- lot value increasing

Source: 2017 Survey of Construction (SOC) and NAHB Economics Estimates.
Regulatory Costs Rising – Up 29% Over 2011-2016

Total effect of building codes, land use, environmental and other rules

Regulatory Costs as a Share of Home Price

- **Lower Quartile**
  - During Construction: 4.0%
  - During Development: 7.9%
  - Total: 14.0%

- **Average**
  - During Construction: 9.7%
  - During Development: 14.6%
  - Total: 24.3%

- **Upper Quartile**
  - During Construction: 12.7%
  - During Development: 18.8%
  - Total: 30.3%

*For quartiles, construction and development costs do not sum to the total.
Source: NAHB/Wells Fargo HMI survey, assumptions described in the Appendix.*
Regulations - 32% of Multifamily Development Costs

New NAHB-NMHC research

Government Regulations as a Share of Multifamily Development Costs

<table>
<thead>
<tr>
<th>Lower Quartile</th>
<th>Average</th>
<th>Upper Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2%</td>
<td>21.7%*</td>
<td>42.6%*</td>
</tr>
</tbody>
</table>

- **Cost increases from changes to building codes over the past 10 years**
- **Development requirements that go beyond the ordinary**
- **Fees charged when building construction is authorized**
- **Cost of applying for zoning approval**
- **Other (non-refundable) fees charged when site work begins**
- **Cost of complying with OSHA requirements**
- **Others**

Note: * For quartiles, all types of costs do not sum to the total.
Source: NAHB/Wells Fargo HMI survey.
Construction Outlook
Lower interest rates stabilize builder confidence

Source: Census Bureau and NAHB/Wells Fargo HMI survey.
Single-Family Starts
Limited growth as economy slows

Thousands of units, SAAR

Year | Units  | % Change |
---   | ---    | ---       |
2015  | 713,000 |           |
2016  | 785,000 | 10%       |
2017  | 852,000 | 9%        |
2018  | 868,000 | 2%        |
2019  | 894,000 | 3%        |
2020  | 928,000 | 4%        |

Source: U.S. Census Bureau (BOC) and NAHB forecast.

80% fall
Trough to Current:
Mar 09 = 353,000
Dec 18 = 758,000
+115%

National Association of Home Builders
Growth in Single-Family Permits

December 2018 YTD vs. December 2017 YTD

Rank
- No Changes
- Decline
- Growth rate < U.S.
- Growth rate ≥ U.S. (4.3%)

Source: U.S. Census Bureau (BOC).
New NAHB *Home Building Geography Index*

**New economic geography measure of building conditions**
- First index metric is metro areas – third quarter data

**Smaller metro areas – core counties (29% of single-family permits)**
- Smaller towns like Xenia, Ohio and Darlington, South Carolina
  - 9.8% annual growth rate, 7.4% year-over-year

**Large metro areas – suburban counties (26% share)**
- Fairfax, Virginia
  - 4.1% annual growth rate, 3.2% year-over-year

**Large metro areas – core counties (18% share)**
- Columbus, Ohio and Orange County, California
  - 6.5% annual growth rate, 6.8% year-over-year

**Smaller metro, outlying areas (8% market share)**
- Rural areas near small towns
  - 2.7% growth rate, -2.4% year-over-year

Source: NAHB Analysis of Census data (Building Permits and ACS)
Townhouse Market Expanding

14% higher than 2017

Thousands, NSA

Source: U.S. Census Bureau (BOC).
Custom Home Building Market

Flat market conditions

Thousands, NSA

Source: U.S. Census Bureau (BOC).
Single-Family Built-for-Rent a Niche Market

Share of Single-Family Built for Rent

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of Single-Family Built for Rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>3.67%</td>
</tr>
<tr>
<td>2016</td>
<td>4.32%</td>
</tr>
<tr>
<td>2017</td>
<td>4.36%</td>
</tr>
<tr>
<td>2018</td>
<td>4.89%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC).
Modular Construction

Modular Share of All Single-family Homes Started in 2017

- Middle Atlantic: 7.4%
- New England: 4.8%
- East North Central: 3.0%
- South Atlantic: 1.7%
- West North Central: 1.3%
- East South Central: 1.1%
- Mountain: 0.8%
- West South Central: 0.3%
- Pacific: 0.1%

U.S. Overall: $\frac{13,254}{847,830} = 1.6\%$

Panelized/Precut Share of All Single-family Homes Started in 2017

<table>
<thead>
<tr>
<th>Region</th>
<th>Panelized/Precut Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Overall</td>
<td>1.9%</td>
</tr>
<tr>
<td>East South Central</td>
<td>5.4%</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>2.9%</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>2.7%</td>
</tr>
<tr>
<td>West North Central</td>
<td>1.8%</td>
</tr>
<tr>
<td>Pacific</td>
<td>1.7%</td>
</tr>
<tr>
<td>East North Central</td>
<td>1.0%</td>
</tr>
<tr>
<td>West South Central</td>
<td>1.0%</td>
</tr>
<tr>
<td>New England</td>
<td>0.7%</td>
</tr>
<tr>
<td>Mountain</td>
<td>0.4%</td>
</tr>
</tbody>
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NAHB Multifamily Production Index

Showing continued strength

Source: U.S. Census Bureau (BOC) and NHAB Multifamily Market Survey (MMS).
**Multifamily Housing Starts**

*Leveling off*

Source: U.S. Census Bureau (BOC) and NAHB forecast.

### Trough to Current:

- 4th Q 09 = 82,000
- 4th Q 18 = 356,000
  
  +334%

### Units, SAAR

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>394,000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>393,000</td>
<td>0%</td>
</tr>
<tr>
<td>2017</td>
<td>356,000</td>
<td>-9%</td>
</tr>
<tr>
<td>2018</td>
<td>376,000</td>
<td>6%</td>
</tr>
<tr>
<td>2019</td>
<td>379,000</td>
<td>1%</td>
</tr>
<tr>
<td>2020</td>
<td>384,000</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC) and NAHB forecast.
Multifamily Construction

Rental production dominates

Multifamily Housing Starts

Built-for-Rent Share

Thousands, NSA

Source: U.S. Census Bureau (BOC).
### Multifamily Buildings Completed By Units

**Largest buildings recovered**

<table>
<thead>
<tr>
<th>Year</th>
<th>2 to 4</th>
<th>5 to 9</th>
<th>10 to 49</th>
<th>50+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>335</td>
<td>332</td>
<td>315</td>
<td>323</td>
<td>1,305</td>
</tr>
<tr>
<td>2000</td>
<td>323</td>
<td>36</td>
<td>332</td>
<td>46</td>
<td>1,108</td>
</tr>
<tr>
<td>2001</td>
<td>309</td>
<td>66</td>
<td>292</td>
<td>43</td>
<td>1,010</td>
</tr>
<tr>
<td>2002</td>
<td>309</td>
<td>75</td>
<td>292</td>
<td>32</td>
<td>1,000</td>
</tr>
<tr>
<td>2003</td>
<td>309</td>
<td>70</td>
<td>295</td>
<td>23</td>
<td>1,000</td>
</tr>
<tr>
<td>2004</td>
<td>324</td>
<td>97</td>
<td>284</td>
<td>14</td>
<td>1,140</td>
</tr>
<tr>
<td>2005</td>
<td>324</td>
<td>95</td>
<td>284</td>
<td>10</td>
<td>1,119</td>
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</tr>
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**Source:** U.S. Census Bureau (BOC).
NAHB 55+ Multifamily Rental Production Expected

Senior market slowing?

Source: NAHB 55+ Housing Market Index Survey.
Age-Restricted Housing Starts

Source: NAHB tabulation of data from the Survey of Construction, U.S. Census Bureau and HUD.
Residential Remodeling

Growth ahead but softening

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<th>Year</th>
<th>Percent Change</th>
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<tr>
<td>2016</td>
<td>10%</td>
</tr>
<tr>
<td>2017</td>
<td>19%</td>
</tr>
<tr>
<td>2018f</td>
<td>10%</td>
</tr>
<tr>
<td>2019f</td>
<td>4%</td>
</tr>
<tr>
<td>2020f</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC) and NAHB Forecast.
The Age of the Housing Stock

Typical home is almost 40 years old

- 37% of homes are 48 years old or more in 2017.
- 30% of homes are 48 years old or more in 2007.
- 16% of homes are 38-47 years old in 2017.
- 14% of homes are 38-47 years old in 2007.
- 13% of homes are 28-37 years old in 2017.
- 15% of homes are 28-37 years old in 2007.
- 16% of homes are 18-27 years old in 2017.
- 14% of homes are 18-27 years old in 2007.
- 16% of homes are 8-17 years old in 2017.
- 16% of homes are 8-17 years old in 2007.
- 13% of homes are 7 years old or less in 2017.
- 5% of homes are 7 years old or less in 2007.
Thank you

Questions?

dnanayakkara@nahb.org