Housing Rebound of 2019

HBA of Greater Cincinnati
HBA of Dayton
November 26th, 2019

Robert Dietz, Ph.D.
NAHB Chief Economist
Housing Markets Showing Gradual Improvement

- Regional and local population, job and home price grow
- GDP, labor markets, and monetary policy/interest rates
- Housing demand, homeownership trends, and affordability
- Supply-side factors (labor shortage, lots, AD&C loans, reg burdens)
- Housing rebound of 2019
- Single-family forecast and trends
- Multifamily and remodeling outlook
# Population Growth

*Population growth slowing in all regions*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.6%</td>
<td>0.6%</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>1.1%</td>
<td>0.9%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>1.1%</td>
<td>0.9%</td>
<td>0.9%</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Northeast</td>
<td>0.4%</td>
<td>0.4%</td>
<td>0.3%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>South</td>
<td>1.2%</td>
<td>1.0%</td>
<td>1.1%</td>
<td>1.0%</td>
<td>1.1%</td>
<td>1.2%</td>
<td>1.1%</td>
<td>1.0%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Population growth slowing in all regions

Source: U.S. Census Bureau (BOC)
# Population Growth

**Cincinnati and Dayton MSA population growing slower than national rates**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.6%</td>
<td>0.6%</td>
<td></td>
</tr>
<tr>
<td>Cincinnati MSA</td>
<td>0.5%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.4%</td>
<td>0.5%</td>
<td>0.4%</td>
<td>0.5%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Dayton MSA</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>-0.1%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC)
Payroll Employment

Cincinnati MSA above the pre-recession peak; Dayton MSA reach the pre-recession level

Source: U.S. Bureau of Labor Statistics (BLS)
Existing House Price Index

Cincinnati and Dayton MSA above the pre-recession peak

Relative to Pre-recession Peak

<table>
<thead>
<tr>
<th></th>
<th>Cincinnati</th>
<th>Dayton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recession-era Low</td>
<td>89%</td>
<td>87%</td>
</tr>
<tr>
<td>Current</td>
<td>117%</td>
<td>111%</td>
</tr>
</tbody>
</table>

Source: U.S. Federal Housing Finance Agency (FHFA)
Real GDP Growth in Ohio

Y/Y Percent Change

Source: U.S. Bureau of Economic Analysis (BEA)
GDP Growth

Economy is slowing after strong 1Q19

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

Q/Q Percent Change, SAAR

Annual Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>LT avg ('58-'07)</th>
<th>2017</th>
<th>2018</th>
<th>2019f</th>
<th>2020f</th>
<th>2021f</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.4%</td>
<td>2.4%</td>
<td>2.9%</td>
<td>2.3%</td>
<td>2.1%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

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

Lack of labor represents a macro risk

Source: U.S. Bureau of Labor Statistics (BLS) and NAHB forecast

---

Unemployment Rate

Job Openings Rate

Source: U.S. Bureau of Labor Statistics (BLS) and NAHB forecast
Cumulative Change in Employment by Age Group

Source: U.S. Bureau of Labor Statistics (BLS)

Mind the Gen-X gap
Occupational Group Employment Share by Year

Construction share has remained stable since the Civil War

Fed Funds Rate

Source: U.S. Board of Governors of the Federal Reserve System (FRB)
Interest rate declines amidst trade concerns and economic slowing

Source: Federal Reserve and Freddie Mac data and NAHB forecast
10-Year Treasury Yield by Country

Source: www.investing.com; 10-year treasury rate on November 19, 2019
Housing Demand and Affordability
Consumer Confidence Leveling Off

Near two-decade high but economic uncertainty 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

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
Share of Young Adults Living with Parents

Almost doubled

Household Formation

Y/Y Change in Household Count, Thousands, NSA

Avg: 1.3 million (12% renters)

Avg: 0.6 million (131% renters)

Avg: 1.1 million (77% renters)

Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership Rates
Household Formation

Strong demand for home ownership in Q3 2019

Y/Y Change in Household Count, Thousands, NSA

Owner-Occupied

Renter-Occupied

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

Bounced back after two declines

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

Homeownership rate for Cincinnati MSA is 66.1% and Dayton MSA is 63.4%.

Source: 2013-2017 American Community Survey 5-Year Estimates
Housing Affordability – NAHB/Wells Fargo HOI

Declining trends

Source: NAHB/Wells Fargo Housing Opportunity Index (HOI)
Wide variation

Source: NAHB/Wells Fargo Housing Opportunity Index (HOI)
Supply-Side Factors
Building Materials – Lumber Prices

Lumber prices rose 63% to a peak from January 2017; dropped 14% since January 2018

Source: NAHB Analysis; Random Lengths Composite Index
The number of open construction positions = 338,000 in September 2019

Source: U.S. Bureau of Labor Statistics (BLS)
Construction Sector Productivity
Lagging overall economy

Index, 1993 = 1

- Construction Worker Productivity
- Overall Worker Productivity

Source: U.S. Bureau of Labor Statistics (BLS)
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
AD&C Lending Conditions Have Moved to Neutral

*Ends long period of easing*

Source: NAHB quarterly survey
Lending – AD&C Loan Conditions Tightening

Decline in lending stock for 4Q18 and 2Q19

Source: Federal Deposit Insurance Corporation (FDIC).

[Graph showing year-over-year growth rates for 1-4 unit residential construction loans from 2007 to 2019.]

Source: Federal Deposit Insurance Corporation (FDIC).
AD&C Interest Rates Remain Elevated

Does not match recent rate history for mortgages

Source: NAHB quarterly survey.
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**: 14.0% (4.0% + 7.9%)
- **Average**: 24.3% (9.7% + 14.6%)
- **Upper Quartile**: 30.3% (12.7% + 18.8%)

* *During Construction* and *During Development*

*For quartiles, construction and development costs do not sum to the total.
Source: NAHB/Wells Fargo HMI survey, assumptions described in the Appendix.*
Construction Outlook

2019 Rebound and Forecasts
Interest Rates

Mortgage rates increased during 2018 due to hawkish Fed

Peak Mortgage Rate: November 2018, 4.87%

Source: Federal Reserve and Freddie Mac data
Interest Rates

Rates have declined, led by 50 basis point cut by the Fed and slower growth expectations

Source: Federal Reserve and Freddie Mac data
NAHB/Wells Fargo Housing Market Index (HMI)

The HMI was the leading indicator of the late 2018 slowdown

Source: NAHB/Wells Fargo HMI survey

Declines from 68 in October to 56 in December
NAHB/Wells Fargo Housing Market Index (HMI)

Rebound in the HMI during 2019

Current HMI Score: November 2019, 70

Declines from 68 in October to 56 in December

Source: NAHB/Wells Fargo HMI survey
Existing Single-Family Home Sales (EHS)

Resales of single-family homes declining since 2018

Source: National Association of Realtors (NAR)
Existing Single-Family Home Sales (EHS)

During 2019, the pace of existing sales has rebounded

Million Units, SAAR

Current EHS:
October 2019, 4.9 million

January 2019, 4.4 million

Source: National Association of Realtors (NAR)
New Single-Family Home Sales

Pace of new home sales declined during 2018

Source: U.S. Census Bureau (BOC)
New Single-Family Home Sales

Significant rebound in 2019, sales 7.2% higher YTD 2019

Current New Home Sales:
- September 2019, 701,000 SAAR

October 2018, 557,000 SAAR

Source: U.S. Census Bureau (BOC)
New Home Inventory

Slowdown in sales, raised inventory above benchmark 6 months’ supply level

Source: U.S. Census Bureau (BOC)
New Home Inventory

Increase in sales rate has lowered sales-adjusted inventory levels

Source: U.S. Census Bureau (BOC)
Single-Family Housing Starts

As inventory levels increased, permits and starts declined

Source: U.S. Census Bureau (BOC)
Single-Family Housing Starts

Step-up in sales has modestly pace of permits and starts

Million Units, SAAR

December 2018, 814,000 SAAR

Current SF Starts:
October 2019, 936,000 SAAR

Source: U.S. Census Bureau (BOC)
Multifamily Housing Starts

Apartment construction has leveled off since 2015

Source: U.S. Census Bureau (BOC)
Multifamily Housing Starts

Apartment construction increased slightly due to single-family slowdown

Current MF Starts:
October 2019, 378,000 SAAR

December 2018, 328,000 SAAR

Source: U.S. Census Bureau (BOC)
<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>785,000</td>
<td>10%</td>
</tr>
<tr>
<td>2017</td>
<td>852,000</td>
<td>9%</td>
</tr>
<tr>
<td>2018</td>
<td>873,000</td>
<td>2%</td>
</tr>
<tr>
<td>2019</td>
<td>854,000</td>
<td>-2%</td>
</tr>
<tr>
<td>2020</td>
<td>873,000</td>
<td>2%</td>
</tr>
<tr>
<td>2021</td>
<td>893,000</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Single-Family Starts**

Limited growth as economy slows

Trough to Current: Mar 09 = 353,000
Oct 19 = 936,000  
+165%

80% fall

Source: U.S. Census Bureau (BOC) and NAHB forecast
Single-Family Building Permits – Ohio and Cincinnati MSA

Number of Units

Source: U.S. Census Bureau (BOC)
Note: * 2019 permits are projected based on YTD data.
Single-Family Building Permits – Ohio and Dayton MSA

Number of Units

Source: U.S. Census Bureau (BOC)
Note: * 2019 permits are projected based on YTD data.
Home Prices of New and Existing Homes

Gap narrowing due to price incentives, more entry-level homes

Median Sales Price

Difference

1990-2008 Avg: $20,000

New Homes

Existing Homes

Source: U.S. Census Bureau (BOC) and National Association of Realtors (NAR)
Typical New Home Size

Decline after market shift

Square Feet

Source: U.S. Census Bureau (BOC)
Townhouse Market Expanding

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

Flat market conditions

Owner/Contractor Built Units
Owner/Contractor Built Share: 1-year Moving Average

Thousands, NSA

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

Thousands, NSA

<table>
<thead>
<tr>
<th>Year</th>
<th>Built for Rent Share 1-Year Moving Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>3.78%</td>
</tr>
<tr>
<td>2016</td>
<td>4.35%</td>
</tr>
<tr>
<td>2017</td>
<td>4.36%</td>
</tr>
<tr>
<td>2018</td>
<td>4.91%</td>
</tr>
</tbody>
</table>

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

8.7% of single-family construction takes place in **Large Metro – Outlying County**

**Q2 2019**

4-quarter MA of YOY growth rate: 0.3%

YOY growth rate: -8.3%

Source: NAHB Analysis of Census data (Building Permits and ACS)
New NAHB Home Building Geography Index

28.6% of single-family construction takes place in Smaller Metro – Core County

Q2 2019
4-quarter MA of YOY growth rate: -0.8%
YOY growth rate: -3.1%

Source: NAHB Analysis of Census data (Building Permits and ACS)
New NAHB Home Building Geography Index

18.0% of single-family construction takes place in Large Metro – Core County

Q2 2019
4-Quarter MA of YOY growth rate: -1.8%
YOY growth rate: -3.9%

Source: NAHB Analysis of Census data (Building Permits and ACS)
New NAHB Home Building Geography Index

26.7% of single-family construction takes place in Large Metro – Suburban County

Source: NAHB Analysis of Census data (Building Permits and ACS)
10% of single-family construction takes place in Manufacturing Counties

Q2 2019
4-quarter MA of YOY growth rate: -3.8%
YOY growth rate: -1.4%

Source: NAHB Analysis of Census data (Building Permits and ACS)
# New NAHB Home Building Geography Index (HBGI)

## Multifamily Market Share and YOY Growth Rate

<table>
<thead>
<tr>
<th>Location</th>
<th>Market Share (4-Quarter MA)</th>
<th>YOY Growth Rate (Q2 2019)</th>
<th>YOY Growth Rate (4-Quarter MA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Metro - Core County</td>
<td>41%</td>
<td>-0.9%</td>
<td>-0.9%</td>
</tr>
<tr>
<td>Large Metro - Suburban County</td>
<td>26%</td>
<td>-12.6%</td>
<td>-6.8%</td>
</tr>
<tr>
<td>Large Metro - Outlying County</td>
<td>4%</td>
<td>-17.4%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Smaller Metro - Core County</td>
<td>22%</td>
<td>28.3%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Smaller Metro - Outlying County</td>
<td>3%</td>
<td>20.1%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Micro County</td>
<td>3%</td>
<td>30.1%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Non Metro/Micro County</td>
<td>1%</td>
<td>62.7%</td>
<td>39.1%</td>
</tr>
</tbody>
</table>

*Source: NAHB Analysis of Census Data (Building Permits and ACS)*
Multifamily Housing Starts
Leveling off

Thousands of units, SAAR

Avg=344,000

Trough to Current:
4th Q 09 = 82,000
3rd Q 19 = 381,000
+364%

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>392,000</td>
<td>-1%</td>
</tr>
<tr>
<td>2017</td>
<td>357,000</td>
<td>-9%</td>
</tr>
<tr>
<td>2018</td>
<td>377,000</td>
<td>6%</td>
</tr>
<tr>
<td>2019</td>
<td>381,000</td>
<td>1%</td>
</tr>
<tr>
<td>2020</td>
<td>385,000</td>
<td>1%</td>
</tr>
<tr>
<td>2021</td>
<td>399,000</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC) and NAHB forecast
Multifamily Building Permits – Ohio and Cincinnati MSA

Source: U.S. Census Bureau (BOC)
Note: * 2019 permits are projected based on YTD data.
Multifamily Building Permits – Ohio and Dayton MSA

Source: U.S. Census Bureau (BOC)
Note: * 2019 permits are projected based on YTD data.
Residential Remodeling

Remodeling market slowing

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>15%</td>
</tr>
<tr>
<td>2018</td>
<td>12%</td>
</tr>
<tr>
<td>2019f</td>
<td>-2%</td>
</tr>
<tr>
<td>2020f</td>
<td>1%</td>
</tr>
<tr>
<td>2021f</td>
<td>3%</td>
</tr>
</tbody>
</table>

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

Note: In the analysis, 2-year moving average is used for adjusted data to smooth the trend.
Rising Population Entering Housing Demand Years: 2018

Only 40% of young adults ages 25 to 34 head their own household in 2017.

Gen Z: Born After 1997


Gen X: Born 1965-1980

Baby Boomers: Born 1946-1964

Silent Generation: Born 1928-1945

Greatest Generation: Born Before 1928

Avg = 4.3

Source: U.S. Census Bureau (BOC).
Thank you

Questions?
rdietz@nahb.org
@dietz_econ

eyeonhousing.org
housingeconomics.com