The U.S. Housing Outlook: 
Higher Rates for Longer

Joint HBA Housing Economic Forum 
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David S. Logan
Senior Economist and Director of Tax and Trade Policy Analysis
National Association of Home Builders
GDP – Moderate Growth in 2023
A mild, rolling recession for 2022/2023?

Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.
Surged to 9.6 million in August as unemployment remains low.
Local Unemployment

Athens and Hall Counties have had the highest/lowest unemployment, respectively.

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

Labor force participation must be repaired as part of job market recovery

Labor Force Participation Rate -- Men

Labor Force Participation Rate -- Women

Inflation—Housing’s Weight Matters
Broad-based rise in all prices; shelter effects will continue

12-month percentage change for CPI component items
August 2023, NSA

- All items: 3.7%
- Food: 4.3%
- Energy: 4.3%
- All items less food and energy: 7.3%
- Shelter: -3.6%

CPI Weights

- Owner-equiv. rent: 25%
- Rent: 8%
- Transportation: 17%
- Medical care: 8%
- Education and communication: 6%
- Recreation: 5%
- Other goods and services: 3%
- Apparel: 3%
- Food and beverages: 14%

Source: U.S. Bureau of Labor Statistics (BLS)
Monetary Policy Tightening in Response to Inflation

The Fed should pause now...

Federal Funds Rate Hikes:

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul</td>
<td>75 bps</td>
<td>25 bps</td>
</tr>
<tr>
<td>Sept</td>
<td>75 bps</td>
<td>25 bps</td>
</tr>
<tr>
<td>Nov</td>
<td>75 bps</td>
<td>25 bps</td>
</tr>
<tr>
<td>Dec</td>
<td>50 bps</td>
<td>25 bps</td>
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<tr>
<td>Feb</td>
<td>25 bps</td>
<td></td>
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<tr>
<td>Mar</td>
<td>25 bps</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>25 bps</td>
<td></td>
</tr>
<tr>
<td>Jul</td>
<td>25 bps</td>
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</tbody>
</table>

10-Year Treasury

Federal Funds – Top Rate

Source: U.S. Board of Governors of the Federal Reserve System (FRB).
Mortgage Rates Near Cycle Peak

Housing affordability at more than decade low

Source: Federal Reserve and Freddie Mac data and NAHB forecast.
U.S. fertility rate hit an all-time low in 2020

Demand-Side
Economic Factors
Home price growth reaccelerated recently

Source: NAHB forecast and S&P Dow Jones Indices LLC; CoreLogic, Inc.
2021-2022 Population Changes
Idaho, Florida and Texas lead population gains

Population growth strongest in West and South
Smaller metro areas growing faster than larger
Some of the 2020 trends slowed in 2021
Top 20 Markets for Home Price Growth

YOO Growth Rate in FHFA Home Prices (4Q 2022 vs 4Q 2021)

Sherman-Denison, TX
Ocala, FL
Sebastian-Vero Beach, FL
North Port-Sarasota-Bradenton, FL
Homosassa Springs, FL
Burlington, NC
Miami-Fort Lauderdale-West Palm Beach, FL
Rocky Mount, NC
Gainesville, GA
Cape Coral-Fort Myers, FL
Punta Gorda, FL
Lakeland-Winter Haven, FL
Hot Springs, AR
Tampa-St. Petersburg-Clearwater, FL
Palm Bay-Melbourne-Titusville, FL
Savannah, GA
Rome, GA
Orlando-Kissimmee-Sanford, FL
Valdosta, GA
Missoula, MT

Growth Rate by Quintile
- Less than or equal to 8.5%
- 8.6% to 10.7%
- 10.8% to 12.7%
- 12.8% to 15.7%
- 15.8% to 19.5%
- Top 20 Markets (19.54% to 24.92%)

Source: U.S. Census Bureau (BOC)
Housing Affordability Declines NAHB/Wells Fargo HOI Lower

NAHB/Wells Fargo Housing Opportunity Index claws back gains

Source: NAHB/Wells Fargo Housing Opportunity Index (HOI).
Supply-Side Factors
Supply Chains
Global Supply Chain Pressure Index

Source: Federal Reserve Bank of New York
Effective Lockdown Index by Region

North America
Western Europe
Asia Pacific (ex China)
Building Materials Prices
Overall inflation has exceeded building materials price growth 11 of the last 12 months

Source: U.S. Bureau of Labor Statistics
Year-over-year price growth has rapidly decelerated.
Building Materials Prices: Lumber

Prices have traded within a relatively narrow band in 2023
Building Materials Prices: Structural Panels

OSB down ~20% since mid-August, but plywood has inched higher

Source: Random Lengths
Building Materials Prices: Steel Mill Products

Down nearly 30% since its 2021 peak and should continue to head lower

PPI, Steel Mill Products
(1982=100, NSA)
Building Materials Prices - Gypsum

Gypsum YOY growth rate have slowed from 20% to 1% over the past 11 months

Source: NAHB Analysis; U.S. Bureau of Labor Statistics (BLS)
Building Materials Prices: Ready-mix concrete

Normalization could be underway

Source: U.S. Bureau of Labor Statistics
Building Materials Prices: Ready-mix concrete

Year-over-year price growth is decelerating

Ready-Mix Concrete Prices

12-month change

Producer Price Index: Ready-mix concrete

(1982=100, SA)
Freight Costs

Shipping logistics services prices have fallen 30% as bottlenecks have eased.

Change in Freight Transportation Prices

Deep Sea Transportation of Freight: -7.4%
Rail Transportation of Freight: -2.1%, -0.8%
Truck Transportation of Freight: -5.9%, -9.7%

Year-to-Date Year-Over-Year
The Three Ls
Labor – Construction Job Openings Peaked for Cycle?

Skilled labor shortage persists; 331,400 net gain for residential construction since Jan 2020

The number of open construction positions = 363,000 in July 2023

Credit for builders tightens as rates climb

Source: NAHB survey; Federal Reserve’s Senior Loan Officer Opinion Survey (SLOOS)
Lot Shortages Reported by Single-family Builders

Shortage of lots reached a new record in 2021

Source: Census Bureau and NAHB/Wells Fargo HMI survey
Regulatory Costs $93,870 Per New Home (11% Gain 2016 to 2021)

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

Cost of applying for zoning approval $6,473

Hard costs of compliance (fees, required studies, etc.), $11,791

Land dedicated to the govt. or otherwise left unbuilt, $10,854

Standards (setbacks, etc.) that go beyond the ordinary, $8,992

Fees paid by the builder after purchasing the lot, $12,184

Changes to building codes over the past 10 years, $24,144

Architectural design standards beyond the ordinary, $10,794

OSHA/other labor requirements during construction, $4,477

During Development: $41,330

During Construction: $52,540

23.8% of price

Source: NAHB/Wells Fargo Housing Market Index (HMI)
Construction Outlook
NAHB/Wells Fargo Housing Market Index (HMI)

Builder confidence fell on rising mortgage rates

Index

Thousands, SAAR

Source: Census Bureau and NAHB/Wells Fargo HMI survey
<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Jul'22</td>
<td>43%</td>
</tr>
<tr>
<td>Sep'22</td>
<td>53%</td>
</tr>
<tr>
<td>Nov'22</td>
<td>59%</td>
</tr>
<tr>
<td>Dec'22</td>
<td>62%</td>
</tr>
<tr>
<td>Feb'23</td>
<td>57%</td>
</tr>
<tr>
<td>Mar'23</td>
<td>58%</td>
</tr>
<tr>
<td>Apr'23</td>
<td>59%</td>
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<tr>
<td>May'23</td>
<td>54%</td>
</tr>
<tr>
<td>Jun'23</td>
<td>56%</td>
</tr>
<tr>
<td>Jul'23</td>
<td>52%</td>
</tr>
<tr>
<td>Aug'23</td>
<td>55%</td>
</tr>
<tr>
<td>Sep'23</td>
<td>59%</td>
</tr>
</tbody>
</table>

Source: NAHB/Wells Fargo HMI survey
Use of Top 5 Incentives Waned

(\% of Builders Offering)

- Pay closing costs or fees
- Offer options or upgrades at no or reduced cost
- Reduce home prices
- Mortgage rate "Buy downs"
- Absorb financing points for buyer

Source: NAHB/Wells Fargo HMI survey
Share of Prospective Buyers Interested in New Construction

Source: NAHB, Housing Trends Report.

- Gen Z: Q222 23%, Q223 19%
- Millennials: Q222 24%, Q223 26%
- Gen X: Q222 17%, Q223 20%
- Boomers: Q222 12%, Q223 15%
Insufficient resale inventory is supporting demand for new construction.

Since 2000, 10%-20% of SF homes for sale had been new construction. The share has increased to 1/3 since 2020.

Source: U.S. Census Bureau (BOC) and National Association of Realtors (NAR)
Residential Remodeling

Minor soft patch for home improvement demand

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>7%</td>
</tr>
<tr>
<td>2023f</td>
<td>-1%</td>
</tr>
<tr>
<td>2024f</td>
<td>1%</td>
</tr>
<tr>
<td>2025f</td>
<td>2%</td>
</tr>
</tbody>
</table>

Note: In the analysis, 1-year moving average is used for adjusted data to smooth the trend.
Remodeling Gaining Market Share for Residential Construction

Improvement spending share increased from 31% in 2002 to 43% in 2Q 2023

Source: Bureau of Economic Analysis
Single-Family Starts

Early 2023 growth has waned in recent months
Growth in Single-Family Permits by County

Activity has cooled across the state

Percentage Change in SF Permits, Year-to-Date (August)
Single-Family Starts
Construction to trend higher in the quarters ahead

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>1,003,000</td>
<td>13%</td>
</tr>
<tr>
<td>2021</td>
<td>1,132,000</td>
<td>13%</td>
</tr>
<tr>
<td>2022</td>
<td>1,004,000</td>
<td>-11%</td>
</tr>
<tr>
<td>2023f</td>
<td>904,000</td>
<td>-10%</td>
</tr>
<tr>
<td>2024f</td>
<td>946,000</td>
<td>5%</td>
</tr>
<tr>
<td>2025f</td>
<td>1,027,000</td>
<td>8%</td>
</tr>
</tbody>
</table>

Thousands of units, SAAR

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

80% fall from 4Q20 to 1Q23
32% fall from 1Q23 to 2Q23
Multifamily Construction Slowing

There are currently over 1 million apartments under construction

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>394,000</td>
<td>-2%</td>
</tr>
<tr>
<td>2021</td>
<td>474,000</td>
<td>20%</td>
</tr>
<tr>
<td>2022</td>
<td>547,000</td>
<td>15%</td>
</tr>
<tr>
<td>2023f</td>
<td>498,000</td>
<td>-9%</td>
</tr>
<tr>
<td>2024f</td>
<td>409,000</td>
<td>-18%</td>
</tr>
<tr>
<td>2025f</td>
<td>423,000</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC) and NAHB forecast
Housing Units under Construction

*Highest count of apartments under construction since late 1973*

Mar 2013
- SF: 295,000 units
- MF: 301,000 units

Jul 2021
- SF: 693,000 units
- MF: 691,000 units

Source: U.S. Census Bureau (BOC)
## Top 10 Largest Multifamily Markets by Permits

<table>
<thead>
<tr>
<th>Top 10 Largest MF Markets</th>
<th>Jul 2023 (# of units YTD, NSA)</th>
<th>YTD % Change (compared to Jul 2022)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York-Newark-Jersey City, NY-NJ-PA</td>
<td>17,802</td>
<td>-43%</td>
</tr>
<tr>
<td>Dallas-Fort Worth-Arlington, TX</td>
<td>15,567</td>
<td>-23%</td>
</tr>
<tr>
<td>Houston-The Woodlands-Sugar Land, TX</td>
<td>11,897</td>
<td>-22%</td>
</tr>
<tr>
<td>Phoenix-Mesa-Scottsdale, AZ</td>
<td>11,608</td>
<td>7%</td>
</tr>
<tr>
<td>Los Angeles-Long Beach-Anaheim, CA</td>
<td>10,925</td>
<td>-5%</td>
</tr>
<tr>
<td>Austin-Round Rock, TX</td>
<td>10,895</td>
<td>-32%</td>
</tr>
<tr>
<td>Miami-Fort Lauderdale-West Palm Beach, FL</td>
<td>10,266</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Atlanta-Sandy Springs-Roswell, GA</strong></td>
<td><strong>10,000</strong></td>
<td><strong>0%</strong></td>
</tr>
<tr>
<td>Washington-Arlington-Alexandria, DC-VA-MD-WV</td>
<td>7,347</td>
<td>-27%</td>
</tr>
<tr>
<td>Denver-Aurora-Lakewood, CO</td>
<td>7,148</td>
<td>-16%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau (BOC).
Medium-Term Outlook for Residential Construction

• 2024
  • Fed will ease, interest rates will normalize
  • Single-family home building will lead a recovery
  • Demand will return, but supply-side issues will increase
    • Lack of lots
    • AD&C availability
    • Building material constraints

• 2025 through 2030
  • Demographics yield a good runway for home building growth
  • Structural housing deficit will be reduced
  • Single-family home building volumes near or above 1.1 million per year

• 2030 and after
  • Declining demographics weaken multifamily and single-family demand
Thank you

Questions?
DLogan@nahb.org
@Loganomix