What Now? A review of Economic and Demographic Dynamics in a post-COVID market

Week 1 sessions- January 12, 2021
Session Information

• To ensure good sound quality, all attendees will be muted during the webinar.

• To ask a question: type your question in to the Question Box on your control panel. NMHC staff will review and respond to as many questions as possible.

• Today’s session is being recorded and will be made available to NMHC members on NMHC.org.
Session Moderator

David Schwartz
Marcus & Millichap
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Session Speakers

Hessam Nadji
Marcus & Millichap

Mark Zandi
Moody’s Analytics
Pandemic Economy

Mark Zandi, Chief Economist

January 2021
Tough Start to 2021, But Robust Growth By Mid-Year…

U.S. nonfarm employment, Millions

Recession  Recovery  Pandemic Outlook  Post Pandemic Outlook

Sources: BLS, Moody’s Analytics
...and Full Employment By Year-End 2022

Unemployment rate, %

Sources: BLS, Moody’s Analytics
Pandemic Ignites a Shift in Tenure Choice

Rent growth, % change year ago

Sources: CoreLogic, Moody’s Analytics
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Current State **Mixed**: Record Cases, Choppy Recovery, Vaccine Rollout

Stimulus Unprecedented (Delay Damaging, Liquidity a Major Positive Force)

Eventual Release of **Pent-Up Demand** Should Not be Underestimated

**Housing: Disruption vs. Long-Term Trends**
- The Big Picture: Supply-Demand Not the Problem
- The **COVID Surge**: Single-Family and Suburbs Win
- Key Issues: Affordability, Design

**Apartment Investment Thesis More than Intact** – Strengthened but with a **New Investment Playbook**
- Sudden Shift in Long-Standing View of Markets – Different than Any “Recession/Recovery”
- Leveraging Segments with the Most Strength – When to Really Go “Contrarian”
- Distress Gap – Too Much Capital with High Expectations; Not Enough True Distress
OVERALL HOUSING CONSTRUCTION REMAINS SHORT OF DEMAND

2000-2007 Oversupply: 2.5M
2008-2020 Undersupply: 1.0M

Completions/Household Growth (Mil.)

Single-Family Completions
Multifamily Completions
Household Growth

* Preliminary estimate
Sources: Marcus & Millichap Research Services, U.S. Census Bureau, RealPage, Inc.
HOME SALES SURGED, DRIVING PRICES TO RECORD LEVELS

**Median Home Price**
- Single-Family
- Condo

Y-O-Y Change
- +15.1%
- +9.6%

**Existing Home Sales**

Y-O-Y Change
- +25.8%

* Through November
Sources: Marcus & Millichap Research Services, National Association of Realtors
COMMERCIAL MORTGAGE DELINQUENCY ARE PRIMARILY CONCENTRATED IN HOSPITALITY AND RETAIL SECTORS

Peak of financial crisis from 2011 to 2012
For CMBS loans 60+ days delinquent
Sources: Marcus & Millichap Research Services, Trepp
FEDERAL RESERVE MONEY SUPPLY BOOST EXPONENTIALLY LARGER AND FASTER THAN FINANCIAL CRISIS

As of November 2020

Real M2 includes inflation-adjusted cash, checking deposits, savings deposits, money market securities, mutual funds and other time deposits

Sources: Marcus & Millichap Research Services, Federal Reserve
U.S. APARTMENT AVG. CAP RATE VS. 10-YEAR TREASURY; YIELD SPREAD NEAR WIDEST LEVEL ON RECORD

0.0% 2.5% 5.0% 7.5% 10.0%

Average Rate

90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20*

* Through December
Includes sales $1 million and greater
Sources: Marcus & Millichap Research Services, CoStar Group, Inc., Real Capital Analytics, Federal Reserve
SUBURBS OUTPERFORMING ACROSS ALL MARKET TYPES

Primary Markets

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Downtown</th>
<th>Suburbs</th>
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</thead>
<tbody>
<tr>
<td>3Q 2012</td>
<td>3%</td>
<td>4%</td>
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<tr>
<td>3Q 2013</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>3Q 2014</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>3Q 2015</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>3Q 2016</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>3Q 2017</td>
<td>8%</td>
<td>9%</td>
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<tr>
<td>3Q 2018</td>
<td>9%</td>
<td>10%</td>
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<tr>
<td>3Q 2019</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>3Q 2020</td>
<td>11%</td>
<td>12%</td>
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</tbody>
</table>

Secondary/Tertiary Markets

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Downtown</th>
<th>Suburbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Q 2012</td>
<td>3%</td>
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<tr>
<td>3Q 2019</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>3Q 2020</td>
<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Sources: Marcus & Millichap Research Services, RealPage, Inc., CoStar Group, Inc.
DEMOGRAPHICS DRIVE SUBURBAN REVIVAL AS MILLENNIAL GENERATION ENTERS TYPICAL AGE OF FAMILY FORMATION

72.1 Million

Marriage*

First Home Purchase*

Population (Millions)

2021 Age

Share of Household Growth

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<tr>
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<tr>
<td>Rural</td>
<td>14%</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Urban</td>
<td>79%</td>
<td>71%</td>
<td>79%</td>
</tr>
<tr>
<td>Suburbs</td>
<td></td>
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</table>

* As of 2019
** Forecast
Sources: Marcus & Millichap Research Services, U.S. Census Bureau, John Burns Real Estate Consulting
CONSTRUCTION AT RECORD HIGH; DEMAND TAPERING
U.S. APARTMENT COMPLETIONS VS. NET ABSORPTION TRENDS

Completions/Net Absorption (000s)

- Completions
- Net Absorption

CONSTRUCTION AT RECORD HIGH; DEMAND TAPERING
U.S. APARTMENT COMPLETIONS VS. NET ABSORPTION TRENDS

* Preliminary estimate
Sources: Marcus & Millichap Research Services, RealPage, Inc., CoStar Group, Inc.
APARTMENT INVESTORS MOVE TO SECONDARY & TERTIARY MARKETS – 60% OF CAPITAL TARGETING SMALLER METROS

*Through 3Q
**Trailing 12-month average
Includes sales $1 million and greater
Sources: Marcus & Millichap Research Services, Real Capital Analytics, CoStar Group, Inc.
CLASS ‘A’ PROPERTIES IMPACTED MOST BY ECONOMIC SHOCK AND RECENT SUPPLY ADDITIONS

Marcus & Millichap Research Services, RealPage, Inc.

* Preliminary estimate

Sources: Marcus & Millichap Research Services, RealPage, Inc.
CAPITAL ON SIDELINES INDICATES SIGNIFICANT WAVE OF PENT-UP DEMAND

U.S. Money Market Mutual Funds

March 2020

$+850B
Since Feb. 2020

Deposits (Trillions)

+$2.6T
Since 3/11

Savings Deposits

* Through November; Savings Deposits through week-ending December 30
Includes investment in prime, government and tax-exempt funds for retail and institutional accounts
Sources: Marcus & Millichap Research Services, Office of Financial Research, Board of Governors of the Federal Reserve System
Note: Unmarried college students living in dormitories are counted as living in their parents’ home.

Sources: Marcus & Millichap Research Services, U.S. Census Bureau
APARTMENTS OFFER COMPETITIVE YIELDS COMPARED TO ALTERNATIVES

As of January 08, 2020
Treasury rates for 10-year treasuries
Yield (cap rate) includes sales $1 million and greater
Sources: Marcus & Millichap Research Services, CoStar Group, Inc., Real Capital Analytics, Standard & Poor's, Federal Reserve
Fireside Chat with David Schwartz

David Schwartz
Waterton
Session Moderator

Caitlin Sugrue Walter
National Multifamily Housing Council
Session Speakers

Kim Betancourt
Fannie Mae

Aimee Baumiller
PNC Real Estate Market Research

Nicholas Buss
Invesco, Ltd.
Market Trends

Supply
Investment performance

Nicholas Buss
Senior Director, Invesco Real Estate
Multifamily construction

5+ unit construction trends (T12M total, units, ths)

Source: Invesco Real Estate using data from US Census Bureau and Moody’s Analytics as of December 2020
Apartment units under construction

Construction pipeline as of 3Q-2020 (units, ths)

Source: Invesco Real Estate using data from CBRE-EA as of December 2020
Apartment construction vs. job loss

Source: Invesco Real Estate using data from CBRE-EA and Moody's Analytics as of December 2020

Bubbles sized based on total units under construction

Employment: November 2020 vs. February 2020 (%)

Units under construction (% stock)

Source: Invesco Real Estate using data from CBRE-EA and Moody’s Analytics as of December 2020
Change in focus of apartment construction by decade
Zip codes

100 most active construction zip codes by decade

- **2010-19:**
  - 20002 Wash DC: Northeast DC
  - 98109 Seattle: 5 Lake Union/Queen Anne
  - 75034 Dallas: Frisco
  - 07302 New York: Jersey City
  - 37203 Nashville: Central Nashville

- **2000-09:**
  - 75056 Dallas: The Colony/Carrollton
  - 7262 Charlotte: UNC Charlotte
  - 30325 Atlanta: Northeast Atlanta
  - 75024 Dallas: West Plano
  - 75039 Dallas: Las Colinas/Coppell

- **1990-99:**
  - 75287 Dallas: Far North Dallas
  - 30096 Atlanta: Duluth
  - 89117 Las Vegas: Summerlin/The Lakes
  - 75093 Dallas: West Plano
  - 97124 Portland: Hillsboro

Top 5 supply zips by decade

- **2010-19:**
  - 20002 Wash DC: Northeast DC
  - 98109 Seattle: 5 Lake Union/Queen Anne
  - 75034 Dallas: Frisco
  - 07302 New York: Jersey City
  - 37203 Nashville: Central Nashville

- **2000-09:**
  - 75056 Dallas: The Colony/Carrollton
  - 7262 Charlotte: UNC Charlotte
  - 30325 Atlanta: Northeast Atlanta
  - 75024 Dallas: West Plano
  - 75039 Dallas: Las Colinas/Coppell

- **1990-99:**
  - 75287 Dallas: Far North Dallas
  - 30096 Atlanta: Duluth
  - 89117 Las Vegas: Summerlin/The Lakes
  - 75093 Dallas: West Plano
  - 97124 Portland: Hillsboro

Top 100 each decade:

- 75204 Dallas: Intown
- 75201 Dallas: Intown
- 75039 Dallas: Las Colinas/Coppell
- 95134 San Jose: North San Jose
- 75024 Dallas: West Plano
- 28262 Charlotte: UNC Charlotte
- 77077 Houston: Greater Heights

Analysis based on data for 145 markets, 1,001 submarkets, 6,203 zip codes.

Source: Invesco Real Estate using data from RealPage/Axiometrics as of December 2020
Change in focus of apartment construction by decade
Urban-Suburban

100 most active construction zip codes by decade

![Chart showing the number of urban and suburban zip codes active in construction by decade.](chart1)

- **2010-19**: 52 urban, 48 suburban
- **2000-09**: 89 urban, 11 suburban
- **1990-99**: 95 urban, 5 suburban

Urban-Suburban deliveries (units, ths)

![Graph showing deliveries by urban and suburban zip codes over time.](graph1)

Analysis based on data for 145 markets, 1,001 submarkets, 6,203 zip codes.

Source: Invesco Real Estate using data from RealPage/Axiometrics as of December 2020
Change in focus of apartment construction by decade

Building height/density

# of projects delivered by building height

Deliveries by building height (units, ths)

Analysis based on data for 145 markets, 1,001 submarkets, 6,203 zip codes.

Source: Invesco Real Estate using data from RealPage/Axiometrics as of December 2020
Relationship between supply and rent growth
Submarket data: Q1-2017 to Q3-2020

Inventory growth vs. rent growth

Based on an analysis of 35 markets comprised of 567 submarkets: 335 submarkets with average annual inventory growth of less than 2% since Q1-2017, 232 submarkets with average annual inventory growth of 2% or higher since Q1-2017.

Source: Invesco Real Estate using data from CBRE-EA as of December 2020
Investment performance by property sector
Total return performance

Annualized unlevered total returns (income + appreciation, %)

Source: Invesco Real Estate using data from NCREIF as of December 2020

NCREIF Property Index (NPI) is a quarterly, unleveraged composite total return index for private commercial real estate held for investment purposes only on behalf of tax-exempt institutional investors and held in a fiduciary environment. The NPI is currently comprised of 9,191 properties with a market value of $702 billion (as of 3Q-2020)

Source: Invesco Real Estate using data from NCREIF as of December 2020
Apartment performance by market
Total return performance

Annualized unlevered total returns (income + appreciation, %)

NCREIF Property Index (NPI) is a quarterly, unleveraged composite total return index for private commercial real estate held for investment purposes only on behalf of tax-exempt institutional investors and held in a fiduciary environment. The apartment component of the NPI is currently comprised of 1,941 properties with a market value of $179 billion (as of 3Q-2020).

Source: Invesco Real Estate using data from NCREIF as of December 2020.
Apartment yields and returns by market
Income return performance

Annualized unlevered income returns and total returns (%)

Bubbles sized on 3Q-2020 NPI market value

NCREIF Property Index (NPI) is a quarterly, unleveraged composite total return index for private commercial real estate held for investment purposes only on behalf of tax-exempt institutional investors and held in a fiduciary environment. The apartment component of the NPI is currently comprised of 1,941 properties with a market value of $179 billion (as of 3Q-2020)

Source: Invesco Real Estate using data from NCREIF as of December 2020
Apartment performance by building height
Total return performance

Apartment properties by height (#)
- 1-3 flrs
- 4-6 flrs
- 7+ flrs

Annual unlevered total return (%)
- 1-3 flrs
- 4-6 flrs
- 7+ flrs

Annualized unlevered total returns (%)
- 1-3 flrs
- 4-6 flrs
- 7+ flrs
- NPI

NCREIF Property Index (NPI) is a quarterly, unleveraged composite total return index for private commercial real estate held for investment purposes only on behalf of tax-exempt institutional investors and held in a fiduciary environment. The apartment component of the NPI is currently comprised of 1,941 properties with a market value of $179 billion (as of 3Q-2020).

Source: Invesco Real Estate using data from NCREIF as of December 2020
Multifamily Market Outlook – A Brighter Outlook Ahead

Kim Betancourt, CRE
Senior Director, Economics and Multifamily Research
January 2021
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Multifamily Market Fundamentals

U.S. Population: Age 20-34 Cohort

Source: U.S. Census, Fannie Mae
Multifamily Market Fundamentals

U.S. Renter-Occupied Stock by Structure

Source: U.S. Department of Commerce, Bureau of the Census, per Moody’s Analytics
Multifamily Market Fundamentals

Single-Family and Multifamily Occupied Dwellings

<table>
<thead>
<tr>
<th></th>
<th>Age 25-34</th>
<th>Age 35-44</th>
<th>Age 45-54</th>
<th>Age 55+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>25%</td>
<td>14%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>2017</td>
<td>30%</td>
<td>16%</td>
<td>12%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates.

Note: Single-family includes housing units in structures with 1-4 units. Multifamily includes units located in 5+ unit structures. Excludes manufactured/mobile homes and other less common types of housing units (e.g., boat or RV).
Multifamily Market Fundamentals

Estimated Multifamily Market Rent and Vacancy Trends

Source: Fannie Mae Multifamily ESR
Multifamily Market Fundamentals

Census Bureau COVID-19 Pulse Survey: 2020 Weekly Results April 23 – November 23

On-Time Housing Payments for the Prior Month

Source: Census Bureau COVID-19 Pulse Survey
Multifamily Market Fundamentals

NMHC weekly rent payment tracker: As of December 6, 2020

% of Rent Payments Made by Day of Month

- April 2019: 97.7%
- April 2020: 95.1%
- May 2019: 96.6%
- May 2020: 95.9%
- June 2019: 96.0%
- June 2020: 96.6%
- July 2019: 95.7%
- July 2020: 95.8%
- Aug 2019: 94.5%
- Aug 2020: 95.3%
- Sept 2019: 94.6%
- Sept 2020: 96.6%
- Oct 2019: 94.8%
- Oct 2020: 95.2%
- Nov 2019: 93.6%
- Nov 2020: 83.2%
- Dec 2019: 95.2%
- Dec 2020: 75.4%

Source: National Multifamily Housing Council
Multifamily Market Fundamentals

For the week ending November 23, 6.3 million renters reported having no confidence in their ability to pay December’s rent. Another 440,000 renters indicated that their rental payment will be deferred. These are renters who may eventually face eviction.

**Renter Confidence to Pay Next Month’s Rent (millions)**

- No confidence: 6.3 million (12%)
- Slight confidence: 0.4 million (1%)
- Moderate confidence: 10 million (18%)
- High confidence: 13.2 million (25%)
- Payment is/will be deferred: 0.3 million (0%)
- Did not report: 0.0 million (0%)

**Renters Who Have No Confidence by Household Income**

Source: U.S. Census Bureau Household Pulse Survey, Week 19.
Multifamily Market Fundamentals

28-Day Rent Change – By Property Class

Source: CoStar Portfolio Strategy
Multifamily Market Fundamentals

National concession rate by class

Source: RealPage, Inc.
Multifamily Market Fundamentals

Quarterly Change In Occupied Units - 20Q3

Source: CoStar Advisory Services
Note: Top 54 national markets
As of 20Q3
Multifamily Market Fundamentals

Rent Growth Varies by Metro

Change in Average Rent by Submarket Type, Q4 2019 vs. Q3 2020

Source: CoStar Portfolio Strategy
Multifamily Market Fundamentals

National Apartment Sales Volume and Cap Rates

Source: Real Capital Analytics
Multifamily Market Fundamentals

National Multifamily Cap Rates and 10-Year Treasury

Source: Federal Reserve, Real Capital Analytics
Contact Information

Kim Betancourt
(o) 202-752-4656
kim_betancourt@fanniemae.com
Twitter: @Kim_Betancourt

“My God… those meetings really could all have been e-mails.”

Source: The New Yorker
Multifamily Markets Panel

Aimee L. Baumiller
PNC Real Estate Market Analytics
January 12, 2021
# Markets Ranked by Occupancy

<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>Occupancy</th>
<th>Rank</th>
<th>City</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Norfolk</td>
<td>97.5%</td>
<td>1</td>
<td>San Francisco</td>
<td>92.8%</td>
</tr>
<tr>
<td>2</td>
<td>Inland Empire</td>
<td>97.5%</td>
<td>2</td>
<td>Houston</td>
<td>93.3%</td>
</tr>
<tr>
<td>3</td>
<td>Providence</td>
<td>97.3%</td>
<td>3</td>
<td>San Antonio</td>
<td>94.0%</td>
</tr>
<tr>
<td>4</td>
<td>Detroit</td>
<td>97.3%</td>
<td>4</td>
<td>Austin</td>
<td>94.3%</td>
</tr>
<tr>
<td>5</td>
<td>Sacramento</td>
<td>97.3%</td>
<td>5</td>
<td>San Jose</td>
<td>94.4%</td>
</tr>
<tr>
<td>6</td>
<td>Milwaukee</td>
<td>96.8%</td>
<td>6</td>
<td>Dallas</td>
<td>94.5%</td>
</tr>
<tr>
<td>7</td>
<td>Philadelphia</td>
<td>96.7%</td>
<td>7</td>
<td>Chicago</td>
<td>94.7%</td>
</tr>
<tr>
<td>8</td>
<td>New York</td>
<td>96.6%</td>
<td>8</td>
<td>West Palm Beach</td>
<td>94.8%</td>
</tr>
<tr>
<td>9</td>
<td>Cincinnati</td>
<td>96.6%</td>
<td>9</td>
<td>Seattle</td>
<td>94.9%</td>
</tr>
<tr>
<td>10</td>
<td>Cleveland</td>
<td>96.5%</td>
<td>10</td>
<td>Nashville</td>
<td>94.9%</td>
</tr>
</tbody>
</table>

**National Average**: 95.7%  

*Source: Real Page; PNC Real Estate Market Analytics*
## Markets Ranked by Annual Effective Rent Growth

<table>
<thead>
<tr>
<th><strong>BEST</strong></th>
<th><strong>WORST</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Inland Empire</td>
<td>1 San Francisco</td>
</tr>
<tr>
<td>2 Sacramento</td>
<td>2 San Jose</td>
</tr>
<tr>
<td>3 Norfolk</td>
<td>3 New York</td>
</tr>
<tr>
<td>4 Memphis</td>
<td>4 Boston</td>
</tr>
<tr>
<td>5 Phoenix</td>
<td>5 Los Angeles</td>
</tr>
<tr>
<td>6 Greensboro</td>
<td>6 Oakland</td>
</tr>
<tr>
<td>7 Richmond</td>
<td>7 Austin</td>
</tr>
<tr>
<td>8 Cincinnati</td>
<td>8 Chicago</td>
</tr>
<tr>
<td>9 Columbus</td>
<td>9 Orlando</td>
</tr>
<tr>
<td>10 Detroit</td>
<td>10 Washington, D.C.</td>
</tr>
</tbody>
</table>

**National Average**  **3Q2019-3Q2020**

-1.3%

*Source: Real Page; PNC Real Estate Market Analytics*
U.S. Apartment Occupancy by Unit Type, as of 3Q2020

Source: Real Page; PNC Real Estate Market Analytics
U.S. Apartment Annual Effective Rent Growth by Unit Type, as of 3Q2020

- 3BR: +1.1%
- 2BR: -0.1%
- 1BR: -1.3%
- Studio: -4.5%

Source: Real Page; PNC Real Estate Market Analytics
U.S. Apartment Occupancy by Building Type, as of 3Q2020

Source: Real Page; PNC Real Estate Market Analytics

Low-Rise: 96.2%
Mid-Rise: 94.5%
High-Rise: 92.9%
U.S. Apartment Annual Effective Rent Growth by Building Type, as of 3Q2020

Low-Rise: +1.2%
Mid-Rise: -3.8%
High-Rise: -5.0%

Source: Real Page; PNC Real Estate Market Analytics
Migration Trends

National Picture of Mail Movement: Large Coastal Cities Seeing Outflows, and People Move to Smaller Markets: Raleigh, Charlotte, Jacksonville, Las Vegas, Boise, etc.

Green = Move In > Move Out; Red = Move Out > Move In

Source: USPS, Carto, Jeffreyco
Closing Comments

Doug Bibby
National Multifamily Housing Council
NMHC Research

- High-Frequency COVID Economic Impact Data
- Apartment Industry Quick Facts
- Industry Benchmarks
Upcoming NMHC Member Events

Apartment Strategies Outlook Conference Webinar Series:
- Week 2, January 19 – Market Signals: Multifamily Outlook
- Week 3, January 26 – The Market Cycle Endures: Multifamily Development After the COVID-19 Pandemic

NMHC PAC Awards, February 2
Racial Equity Event, February 25
Member Virtual Networking
- Emerging Leaders, January 26
- Women in Multifamily, February 10; March 17; July 14
NMHC Webinars

Government Affairs Post-election Webinar, January 29

Monthly Rent Payment Tracker

• February 9: Ricardo Rivas, Allied Orion Group
• March 9: Joanna Zabriskie, BH Management
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