APARTMENT DEMAND FOR THE NEXT 15 YEARS
Can We Meet the Need?

#LiveAtUrban
U.S. Apartment Demand – A Forward Look

Prepared by: Hoyt Advisory Services, Dinn Focused Marketing Inc., Whitegate Real Estate Advisors, LLC

July 2017
APARTMENT DEMAND* FOR U.S., STATES & 50 METROS

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*Defined for this study as rental apartment buildings that include 5 or more units.
KEY FACTORS AND ASSUMPTIONS

- Study focuses on Properties with 5+ Units
- Population, households, size & headship rates (at US, State & MSA level)
  - Renter vs Owner
  - By age, race & nationality
- Components of change: natural increase, migration & immigration
- Tenure: The Rent vs Own Decision (Forecast at US, State and MSA level)
  - Public Policies
  - Inflation
  - Age, race & nationality
  - Household balance sheets
  - Housing prices & costs
  - Other economic & capital market factors
KEY FACTORS AND ASSUMPTIONS, contd.

- Homelessness
- Natural vacancy
- Obsolescence
- Characteristics of Renters and Rental Housing
- What is the size of the current stock?
  - Which data source is more complete?
  - Size & quality variances
  - Consistency among geographies and between real estate to demographic data
- Given the mature nature of the economic cycle, we assume two recessions occur by 2030
Rental Buildings With 5 or More Units Account for 16% of Total U.S. Housing Inventory
US Population is Aging

Households by Age of Householder

Source: U.S. Census Bureau
65% of the rental population is 35 years or older.
Younger Householders continue to delay marriage and ...
Younger Householders continue to delay childbirth

Mean Age by Birth Order 2010-2014

Source: CDC/NCHS, Natl Vital Statistics System
MULTIFAMILY DEMAND CONCENTRATED IN HOUSEHOLDS OVER 35 YEARS

Change in Rental Households by Age Cohort

Source: U.S. Census Bureau
DEMOGRAPHIC FUNDAMENTALS: SLOWING GROWTH, MORE DEPENDENT ON IMMIGRATION

US Natural Internal Population Increase vs Immigration (000's)

Source: U.S. Census Bureau, Moody’s, U.S. Dept. of Homeland Security, Hoyt Advisory Services
INTL IMMIGRATION CREATES MORE OF THE GROWTH IN SLOW-GROWTH STATES
INTERNATIONAL IMMIGRANTS MORE LIKELY TO BE RENTAL HOUSEHOLDS

Renter Rates in 2015 by Select States

Source: U.S. Census Bureau
HOMEOWNERSHIP RATES ARE LOWER FOR NON-WHITE HOUSEHOLDS

Homeownership Rate 2016 Avg

Source: U.S. Census Bureau
Hispanic households will account for 55% of all population growth through 2030.

Source: U.S. Census Bureau
While households are smaller from delayed families and aging …

Households by Size

% of Total Households

Number of People in Household

Source: U.S. Census Bureau
AVERAGE HOUSEHOLD SIZE IS LARGER FOR NON-WHITE AND HISPANIC SECTORS

Although household size is declining even in the Hispanic sector

Source: U.S. Census Bureau
THE OWN VS. RENT DECISION: POLICY CHANGES DRIVE 70% OF VARIANCE IN HOMEOWNERSHIP

U.S. Homeownership Rate

Lines indicate a change in national legislation that impacted lending and/or housing markets factored into the homeownership estimation model.

- 30 yr Mortgage Rate
- GDP Growth
- Home Ownership Rate

Homeownership Rate %

7/13/2017
Hangover from 2008 Recession: Slow recovery for first-time homebuyers

- Highest unemployment rates in under 35 age cohorts
- 15-24 and 45-54 age cohorts had the slowest recovery in median household income from 2005 to 2010
- Student loans as % of GDP doubled from 2006 to 2012

Long-term factors slowing homeownership rates:

- Household Income growth since 1970 is only occurring in households in the 80th percentile and higher of incomes
- Age at first marriage up from 25 in 1980 to 29 in 2016 for men
- Women’s age of first childbirth has increased to over 26
- International immigrants are much more likely to rent
Steep downturn in home ownership since 2005 for younger households

HAS notes cyclical pressures are easing with unemployment rate relatively low and more stabilized homeownership rates for younger householders.

Source: U.S. Census Bureau
HOMEOWNERSHIP RATES WILL CONTINUE TO DECLINE SLIGHTLY

Upward Pressure:
- Aging population
- Low jobless rate
- Rising inflation?

Downward Pressure:
- Pop growth from immigration
- Higher rental rates for non-white households
- Delayed family formations
- Lower inflation rate
- Inevitable rise in interest rates
- Low housing affordability in many sectors

Uncertainties:
- Public policy on lending and immigration
4.6 MILLION MULTIFAMILY UNITS NEEDED BY 2030

Apt 5+ Units Needed
> 1 Million Units Needed in Top 5 Markets

- New York
- Dallas-Ft. Worth
- Houston
- Miami-Ft. Lauderdale
- Atlanta
- Los Angeles
- Phoenix
- Orlando
- Washington, DC
- Austin
- Seattle
- Las Vegas
- Raleigh
- Tampa
- San Diego
- San Francisco
- Charlotte
- Minneapolis
- Boston
- Denver
- San Antonio
- Chicago
- Portland
- Riverside
- Philadelphia

# Units Needed 2016-2030
New Units Needed Through 2030
New Units Needed Through 2030 % Growth

% pa
- 0-0.5
- 0.6-1.0
- 1.1-1.5
- 1.5-2.0
- 2.1+
Top Line Numbers Hide Important Needs: Boomer Markets: Growth Dominated by 65+ Age Group
Growth Dominated by 65+ Age Group

- Generally low growth markets - but will be need for 65+ renter housing
- Growth in 65+ group is nearly the same or larger than growth in all other age segments
- Outmigration of young workers (15-34)
- Often heavily dependent on international in-migration for growth
- Often high homeownership rates
- Generally high proportion of renters have incomes < $25,000
- Often older housing stock

Source: Moody’s Analytics, U.S. Census
GEN - Z MARKETS
**Gen-Z Markets**

- >30% of renter HH growth will come from 15-34 age group
- High growth markets
- Generally 65+ group is small part of renter household growth
- Generally newer rental stock in place / lower STAR % markets
- Land available for new development
- Less dependence on international immigration as markets have strong domestic migration and natural growth
- More affordable markets (as measured by % of income paid for rent)

Source: Moody’s Analytics, U.S. Census
Coastal Markets More Likely to Have Supply Policy Restrictions
Rental Properties Less Affordable in Markets with Supply Restrictions
Supply Restricted Markets Tend to Have Less Inventory Growth
Renters in some areas spend significant share of income on rent.
Affordability Issues Vary
San Francisco Renter Households by Income

- 43% of San Francisco renter household incomes are > $75,000
- At 35% of gross income = $2,187 monthly rent for a household earning $75,000
- 31% earn < $35,000 = $1,021 monthly rent for a household earning $35,000
New Construction Unaffordable to Most Households

- No listings in San Francisco SOMA market for <$2,000 per month.
- 2 listings less than $2,200
### Average Rents Require High Incomes

<table>
<thead>
<tr>
<th>Submarket</th>
<th>Rent per Unit $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central San Mateo</td>
<td>3,025.48</td>
</tr>
<tr>
<td>Civic Center/Downtown</td>
<td>3,110.60</td>
</tr>
<tr>
<td>Haight Ashbury/Western Addition</td>
<td>4,060.86</td>
</tr>
<tr>
<td>North Marin</td>
<td>2,753.09</td>
</tr>
<tr>
<td>North San Mateo</td>
<td>2,608.75</td>
</tr>
<tr>
<td>Russian Hill/Embarcadero</td>
<td>3,402.46</td>
</tr>
<tr>
<td>South Marin</td>
<td>3,274.63</td>
</tr>
<tr>
<td>South of Market</td>
<td>3,848.47</td>
</tr>
<tr>
<td>South San Mateo</td>
<td>3,567.09</td>
</tr>
<tr>
<td>West San Francisco</td>
<td>3,458.93</td>
</tr>
</tbody>
</table>

Total: San Francisco 3,279.57

Average San Francisco rent requires a household income of $112,000 = < 30% of households

Source: CBRE Econometrics
SERVICE PROVIDERS CANNOT AFFORD HOUSING IN LOW AFFORDABILITY AREAS

- A Redfin study found that only 17% of California homes for sale were affordable to an average teacher in 2016, down from 30% in 2012.

- Affordability is worse in major metro areas

  Teacher Salary % of Income Needed for Average Rent
  - San Francisco 48%
  - Alameda 67%
  - Contra Costa 69%

- With average incomes of just over $71,000 in the San Francisco Bay Area, teachers can afford rents that are 48% of average rents in San Francisco and about 67% of average rents in the East Bay*

Sources: Redfin, CBRE Econometrics, HAS.

*Assumes paying 35% of after-tax income on rents in Walnut Creek, San Ramon and East Alameda Co.
WHEN OWNED AND RENTAL HOUSING IS UNAFFORDABLE, STATES RISK OUT-MIGRATION

Los Angeles

<table>
<thead>
<tr>
<th>Avg Annual Population Change (000's)</th>
<th>2000-2010</th>
<th>2010-2016</th>
<th>2016-2030</th>
</tr>
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<tbody>
<tr>
<td>Natural Increase</td>
<td></td>
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<td>Net Migration</td>
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New York

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</table>
31% OF RENTERS EARN LESS THAN $20,000
RENOWATION NEEDS: 11.7 MIL UNITS BUILT BEFORE 1980

Housing Stock Composition by Age and Type of Property

O: owned, then by unit count
R: rented, then by unit count

Source: U.S. Census Bureau
OLDER RENTAL STOCK CONCENTRATED IN THE NORTHEAST
1-4 UNIT BUILDINGS NOT PART OF INSTITUTIONAL STOCK = 24% OF RENTAL MARKET, ALMOST AS LARGE AS SINGLE-FAMILY RENTALS

2015 National Distribution of Occupied Rental Housing Stock by Type

- Mobile Home or Other: 5%
- 50 or more Units: 12%
- 20-49 Rental Units: 8%
- 10-29 Rental Units: 11%
- 5-9 Rental Units: 12%
- 3-4 Rental Units: 10%
- Single-family Attached: 6%
- 2 Rental Units: 8%

Source: U. S. Census Bureau, 2015 American Community Survey 5-year Estimate
Better rental data reveals a large share of smaller rental housing found in older neighborhoods. Design and age often obscure this stock from survey, yet it remains an affordable choice for less affluent renters. Estimates of up to 44% of all existing national rental stock are STAR units, led by California, New York, Michigan and Ohio.

Second Tier Affordable Rentals: **STAR**

Source: U.S. Census Bureau, CoStar
STAR Units > Half of Market in Some CA Markets
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Affordable Apartment Demand: A Practioner’s Perspective

Priya Jayachandran
Senior Vice President, Housing Development
Volunteers of America
July 13, 2017
Agenda

- Introduction
- Context
- Subsidized Housing Experience
- Workforce Housing Experience
- Ideas for Future
Context: Affordable rental units are disappearing

<table>
<thead>
<tr>
<th></th>
<th>Housing Units (Thousands)</th>
<th>% of Housing Stock</th>
<th>% of Rental Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-market, extremely low rent, and very low rent</td>
<td>21,597</td>
<td>19,218</td>
<td>-198.25</td>
</tr>
<tr>
<td>Extremely low rent and very low rent</td>
<td>13,264</td>
<td>11,680</td>
<td>-132</td>
</tr>
<tr>
<td>All rental units</td>
<td>37,392</td>
<td>44,564</td>
<td>597.67</td>
</tr>
<tr>
<td>Housing Stock</td>
<td>118,196</td>
<td>132,832</td>
<td>1,219.67</td>
</tr>
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Subsidized Housing (Section 8, 202, LIHTC, etc)

- All federal rental assistance programs (but for a small 811 program) have been repealed or unfunded
- Current funding supports renewals of existing contracts which serve only 1 in 4 families who need assistance
- LIHTC is the single largest driver of new affordable housing production but has not kept pace with growth in demand
- Increasingly competitive landscape for new construction and preservation

Challenges:
- Outcomes
- Scarcity
- Perception
Workforce Housing

• aka Naturally Occuring Affordable Housing (NOAHs)
• Typically defined within range of 60% to 120% AMI
• Predominantly Class C properties
• Hyper competitive landscape for acquisitions
• Challenges
  • Quality
  • Permanent Affordability
  • Competition
  • Outcomes
Ideas

• Branding
• Innovation
• Questioning status quo
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Multifamily Market Response

July 2017
Take-aways

1. The Great Recession led to twin shocks (demand and supply) that stretched and tightened multifamily rental markets.

2. The market has responded -- new construction is slowing rent growth and slowing property value increases.

3. Today’s low yield environment (particularly in multifamily) is helping the situation — spurring development at lower rent levels than would otherwise be the case.

4. Over time, housing costs rise faster than inflation and incomes. Given history we should expect and plan for that.

5. The market reaction only reaches a portion (and likely shrinking portion) of overall demand.
The Great Recession led to twin shocks (demand and supply) that stretched and tightened multifamily rental markets.
Number of Owner and Renter Households, by Income and Level of Housing Cost Burden, Selected Years (millions)

Source: MBA and Harvard’s Joint Center for Housing Studies
The market has responded -- new construction is slowing rent growth and slowing property value increases.
Multifamily Market Fundamentals
(generally professionally managed properties)

Vacancy Rates (Percent)

Year-over-year Asking Rent Growth

Year-over-year NOI Growth Among NCREIF Properties

Property Prices (Index: 2007Q3 = 100)

Source: REIS, NCREIF, Moody’s/Real Capital Analytics
Today’s low yield environment (particularly in multifamily) is helping the situation — spurring development at lower rent levels than would otherwise be the case.
“Some see a building, my boy. I see a cap rate.”
Capitalization Rates for Apartment Properties
(4 quarter moving average, current value cap rates)

\[ \text{Cap Rate} = \frac{\text{Net Operating Income}}{\text{Property Value}} \]
Capitalization Rates in Selected Markets, H2 2016

Class A CBD Office (blue) and Class A Multifamily Infill (red)

Source: CBRE
Over time, housing costs rise faster than inflation and incomes. Given history we should expect and plan for that.
Annualized One and Ten Year Change in Shelter Costs

Source: BLS
Ten Year Change Shelter Costs and All Items Less Shelter

- Population growth
- Urbanization & land costs
- Quality improvements
- more

Source: BLS
Ten Year Change in Shelter Costs and All Items Less Shelter – And Median Household Income

Source: BLS
The market reaction only reaches a portion (and likely shrinking portion) of overall demand.
Number of Owner and Renter Households, by Income and Level of Housing Cost Burden, Selected Years (millions)

Source: MBA and Harvard’s Joint Center for Housing Studies
Contact Information

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