The Golden Age of Multifamily Investing

Prepared for Capital Square Realty Advisors LLC

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U.S. Multifamily Investment Sector Overview

In the modern era of commercial real estate (CRE) investing, the multifamily sector has generally outperformed the other major CRE sectors, with a notable increase in the sector's cumulative return premium since the Financial Crisis. At the foundation of multifamily sector performance is a stable and essential asset that benefits from younger generations renting longer and increasing numbers of empty nesters downsizing to rental housing. With short-term leases (to hedge inflation), diversified tenancy (versus a handful of anchor tenants), low tenant improvement and capex requirements, high NOI-to-cash flow margins relative to other CRE sectors, and a deep capital pool due to Freddie and Fannie, multifamily continues to be an attractive asset class.

Linneman Associates examined total return data back to 1993 and 1977, respectively, from the National Association of Real Estate Investment Trusts (NAREIT) and the National Council of Real Estate Investment Fiduciaries (NCREIF). On a nominal basis, an investor who put $100 in the multifamily REIT index in 1993 would have had $1,825 in 2019 (11.8% compounded annual growth rate, "CAGR"). In comparison, a $100 investment would have grown to $1,371 in the office REIT index (10.6% CAGR), $1,470 in industrial (10.9%), $1,142 in retail (9.8%), and just $364 in hotels (5.1%). Similarly investing $100 in the multifamily NCREIF index at the end of 1977 would have grown to $6,000 (10.1% CAGR) by the third quarter of 2020, while the same investment in NCREIF's office, industrial, and retail indices would have increased to $3,011 (8.3%), $5,782 (10%), and $4,029 (9%), respectively.

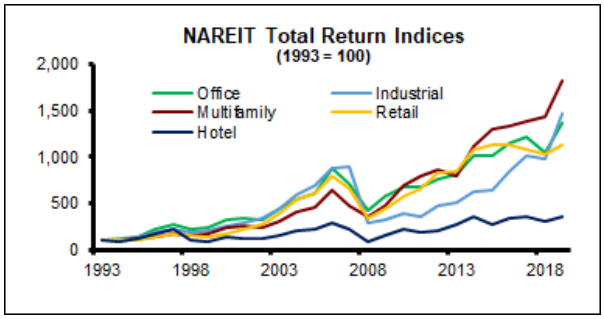


Figure 1

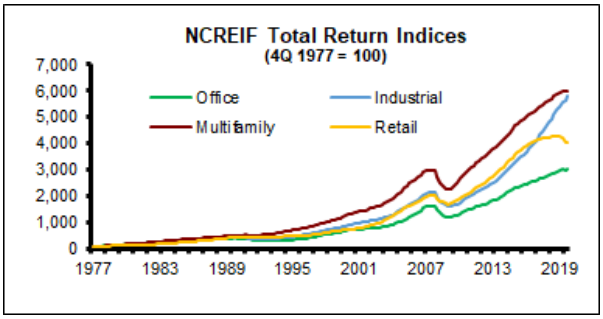


Figure 2

Linneman Associates used the same data to analyze ten- and three-year investment returns for each major property sector (figure 3). We found that if an investor bought the NCREIF total or sector portfolios at any time since 1978 and held for 10 years, he never would have lost money over the last 40+ years. Even if one invested at the top of the market, as long as the investor held for at least 10 years, he would at least get his capital back. Over the 131 10-year investment periods (using quarters) and the 159 3-year periods, the multifamily sector had the highest compounded annual investment returns and the lowest standard deviations. In the 3-year analysis, multifamily had the lowest incidence of negative returns. Similarly, of the five traditional CRE sectors (office, industrial, retail, multifamily, hotel), multifamily also performed best among the NAREIT indices, with the highest CAGR, lowest standard deviation, and lowest incidence of negative returns.

	10-Year Hold Period CAGRs (%)					3-Year Hold Period CAGRs (%)				
	Avg	SD	Min	Max	% Pds. of Neg. Return	Avg	SD	Min	Max	% Pds. of Neg. Return
NAREIT INDICES										
All REITS	10.9	3.9	4.7	23.4	0%	10.6	11.9	-22.4	34.2	17%
Equity	12.7	6.3	5.1	23.4	0%	12.4	10.5	-12.4	29.2	13%
Office	9.3	4.5	2.7	18.0	0%	10.9	11.8	-13.5	39.6	13%
Industrial	7.8	7.2	-0.7	17.5	12%	11.2	15.7	-28.4	27.9	13%
Retail	11.3	4.8	3.7	19.0	0%	11.2	14.7	-17.9	35.6	25%
Apartment	12.0	2.4	7.5	16.0	0%	12.2	9.7	-10.0	30.2	8%
Healthcare	13.4	3.4	8.2	19.9	0%	12.1	10.6	-10.4	34.7	13%
Lodging	5.0	3.4	-1.6	13.0	12%	6.4	15.9	-26.2	36.4	25%
Self-Storage	16.3	1.7	12.8	19.1	0%	15.9	11.4	-5.1	32.3	17%
Diversified	8.7	2.9	3.1	13.5	0%	8.7	11.2	-13.3	26.8	21%
NCREIF INDICES										
All	8.3	2.6	4.0	13.3	0%	9.0	5.7	-4.7	18.7	12%
Office	7.2	3.6	0.4	13.4	0%	8.2	7.4	-8.0	19.9	15%
Industrial	8.9	2.5	4.8	13.3	0%	9.9	6.4	-5.7	17.8	11%
Retail	9.3	2.5	5.2	13.8	0%	9.5	5.7	-1.9	20.4	6%
Apartment	9.4	2.1	6.1	14.6	0%	10.0	5.1	-5.9	16.5	6%

Source: NAREIT (1993-2019), NCREIF (1Q1978-3Q2020), Linneman Associates
CAGR = Compounded Annual Growth Rate; SD = Standard Deviation

Figure 3

Large cumulative shortages (versus historical norms) of both multifamily and single-family housing starts existed before the shutdown depression began. The cumulative 18-year multifamily shortfall held steady at 797,000 units through November 2020, driving up rents and pricing. According to the 2018 Census Rental Housing Finance Survey, 56% of all multifamily units (in structures with 5+ units) were built before 1980. Housing production in the second half of 2020 was amazingly resilient and far stronger than many anticipated. People are putting their involuntary savings into upgrading their housing, particularly in the suburbs, as many urban dwellers seek more space – through both ownership and rentals. Notably, height restrictions (i.e., no hi-rises) in the suburbs limit oversupply.

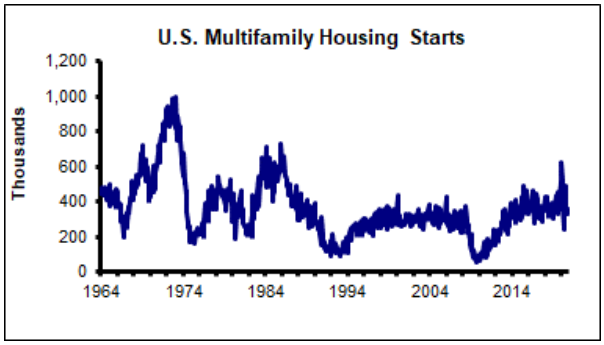
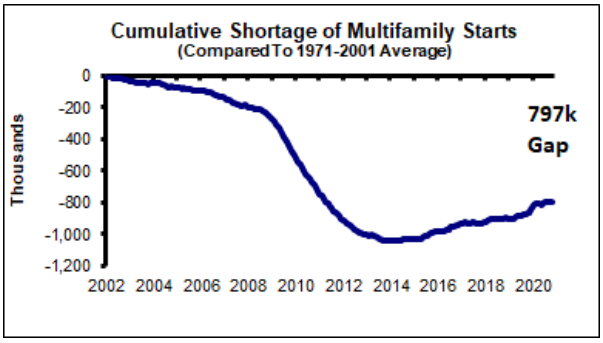


Figure 4



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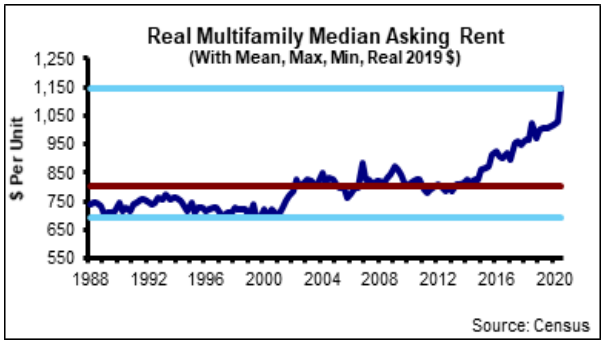
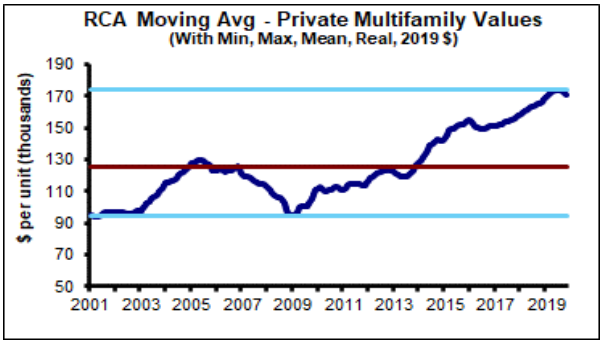


Figure 6



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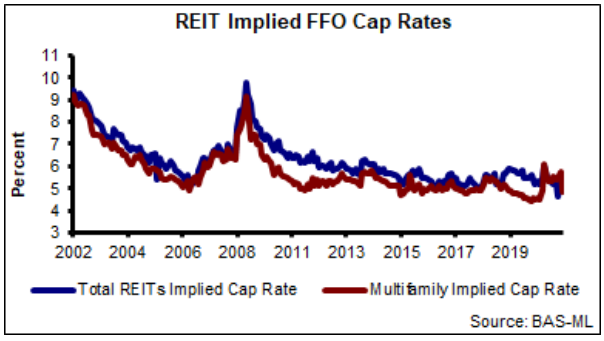


Figure 8

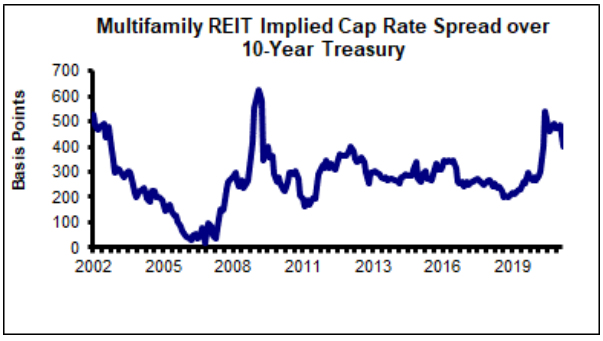


Figure 9

The Census Bureau's quarterly Housing Vacancy Survey indicates that the U.S. multifamily vacancy rate was 6.4% in the third quarter of 2020. This is 50 bps below the 1976-2001 long-term average of 6.9%. The series peaked at 11.1% in the fourth quarter of 2009 and is at the lowest point since 1985. In comparison, at 7.9% in the third quarter of 2020, NCREIF's institutional quality multifamily vacancy rate increased by 210 bps over the year and 50 bps during the quarter. However, this will revert as pandemic uncertainties dissipate, and the labor market strengthens.

Multifamily Rental Property Inventory by Vintage

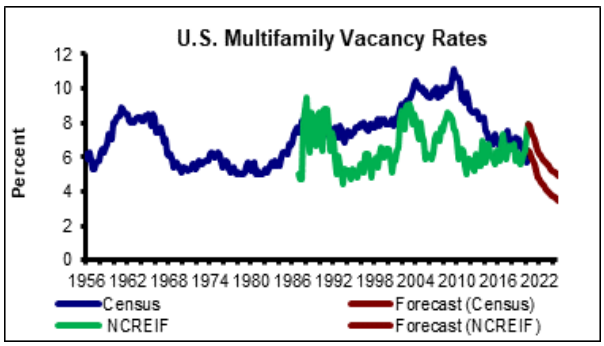
Units in 000s	Units in Properties with:					
	5-24 units	25-49 units	50+ units	Total 5+ units	% Share Per Vintage	Cumulative % Share Per Vintage
2016 to 2018	4	53	508	565	2.3	94.5
2013 to 2015	61	125	1,044	1,230	4.9	92.2
2010 to 2012	165	113	684	962	3.9	87.3
2005 to 2009	178	221	1,546	1,945	7.8	83.4
2000 to 2004	250	150	1,753	2,153	8.6	75.6
1990 to 1999	416	384	1,830	2,630	10.6	67.0
1980 to 1989	755	350	3,271	4,376	17.6	56.4
1970 to 1979	822	450	3,317	4,589	18.4	38.8
1960 to 1969	764	268	1,430	2,462	9.9	20.4
1959 or earlier	1,161	538	910	2,609	10.5	10.5
Not reported	170	148	1,052	1,370	5.5	
Total Units	4,746	2,801	17,344	24,891		
Median Year Built	1970	1983	1986			
Mean Year Built	1965	1974	1986			

Source: Census, 2018 Rental Finance Housing Survey (released Oct. 2020), Linneman Associates LLC
https://www.census.gov/data-tools/demo/rhfs/#/

Figure 10

Multifamily Outlook

Linneman Associates examined the historical relationship between employment growth and commercial property vacancy rates and determined that over the long term, for every 100-bp (1%) increase in U.S. employment, the U.S. multifamily vacancy rate declines by 26 bps. Given that Linneman Associates projects 17.4 million net new jobs in 2021-2025 (8 million of which in 2021), we anticipate that the U.S. multifamily vacancy rate will decline by 320 bps over that period, to 3.3% based on the Census series or 4.8% based on NCREIF data, respectively.



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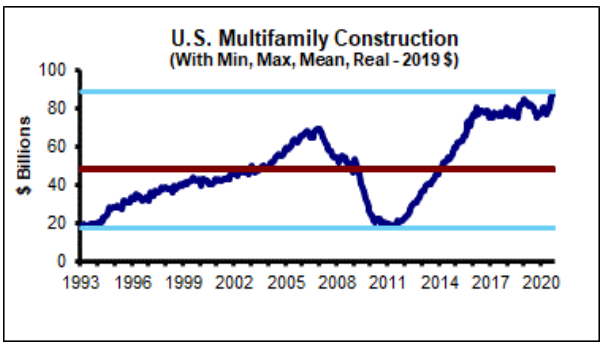


Figure 12

The Linneman Real Estate Index (LREI) monitors the supply of real estate capital, as proxied by the aggregate flow of commercial real estate debt (the numerator), with the fundamental demand for space, as measured by nominal GDP (the denominator). Linneman Associates research indicates this metric is the key determinant of cap rates, showing that a 100-bp increase in the LREI results in a 22-bp decline in multifamily cap rates. As the Fed intended with its "QE Infinity" monetary injections, there is significant liquidity in the capital markets. Linneman Associates anticipates that inflation over the next decade will be concentrated in investable assets (rather than consumer goods), as that is where banks will disproportionately direct their capital. As a result, Linneman Associates expects

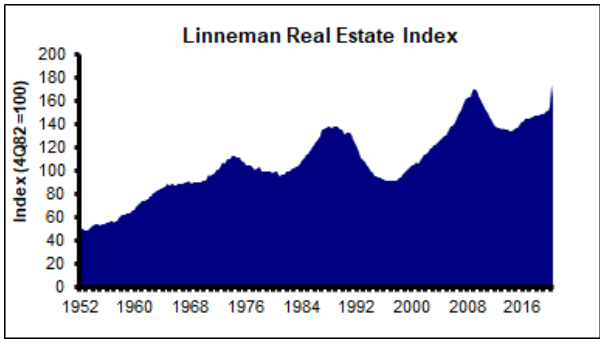
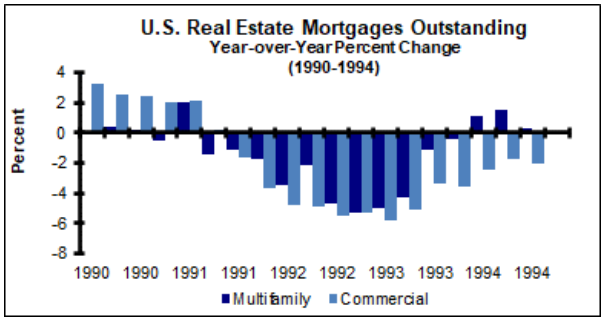


Figure 13

cap rates to fall over the next decade as the money injected during the Fed's "QE Infinity" chases assets.

The multifamily sector and housing in general further benefit from Freddie Mac and Fannie Mae's deep pools of capital, as well as from direct HUD loans. Since 1985, there have only been two periods of extended year-over-year declines in quarterly multifamily and commercial mortgages outstanding: 1991-1994 and 2009-2013. During both periods, outstanding commercial mortgages dramatically declined to a greater degree, and during the Financial Crisis, multifamily mortgages largely went flat.



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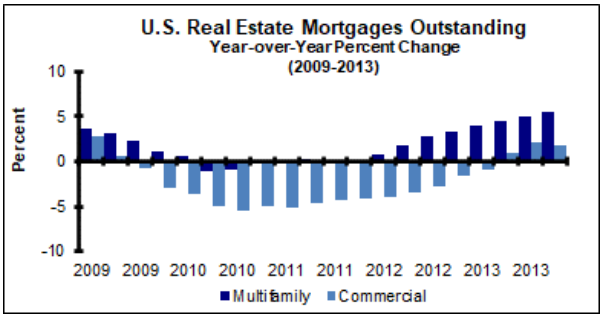

Figure 15

Southeast and Texas Multifamily Investment Opportunity

In 2006, we co-authored, with Albert Saiz, a study in which we forecasted U.S. population by county and MSA. We found that past recent growth, the presence of immigrants, the fractions of population older than 25 and younger than 65, low taxes, and good weather are all positively associated with population growth. At that time, our forecasts revealed that most growth and real estate development would occur in the West, the Southeast, and along the Southern I-85 route, which for the most part has played out. Linneman Associates expects that robust growth will continue in the Southeast and westward through Texas. Our statistical analysis revealed that high growth occurs where: people want to live and play; firms find it efficient to produce; necessary building approvals are relatively easy and can accommodate potential growth; and other "wild card" factors are in play. We found that the single most important factor in

determining future population growth is past growth, which accounted for 69% of the forces driving our forecasts at that time.

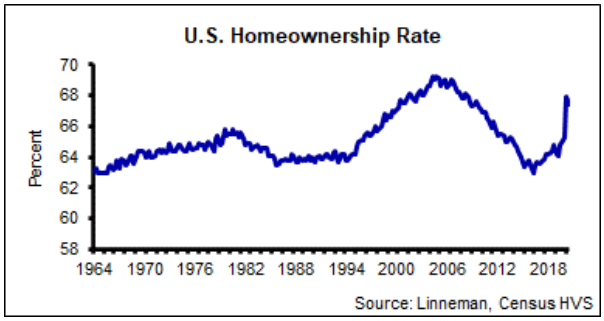

Figure 16

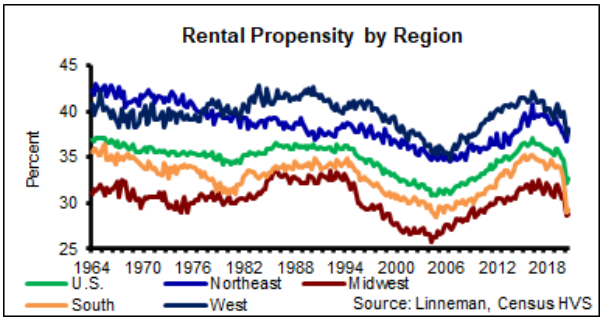

Figure 17

When the once-in-a-century pandemic shutdown occurred, savings rates soared because people were no longer able to spend their disposable income on vacations, concerts, dance classes, dining out, etc. As a result, people were able to quickly accumulate down payments and buy homes sooner than expected, driving the home ownership rate up (rental propensities down). However, this is a temporary shock to the system and home ownership will revert closer to the long-term average, as savings patterns normalize. That is, the pandemic simply sped up the process and caused a time shift in homebuying, so those who bought in 2020 will not also be buying in 2021.

Figures 19 and 20, respectively, detail the top 50 MSAs with the largest absolute and percentage growth in population between 2010 and 2019. On an absolute basis, the greatest population growth occurred in the Dallas (+1.20 million), Houston (+1.45 million), Phoenix (+755,000), Atlanta (+733,000), and D.C. (+630,000) MSAs, while the top percentage growth was seen in The Villages, FL (+3.95% compounded annual growth), Myrtle Beach (+3.12%), Austin (+2.94%), Midland (+2.86%), and St. George, UT (+2.83%). Thus, the Southeast and Texas are disproportionately represented among the top performers. It is notable that twenty-five of the MSAs appear on both Top 50 lists, of which sixteen markets are in the Southeast or Texas.

MSAS Achieving Both the Top 50 Highest Absolute and Percentage Growth in Population 2010-2019

1	Austin-Round Rock-Georgetown, TX Metro Area
2	Boise City, ID Metro Area
3	Cape Coral-Fort Myers, FL Metro Area
4	Charleston-North Charleston, SC Metro Area
5	Charlotte-Concord-Gastonia, NC-SC Metro Area
6	Colorado Springs, CO Metro Area
7	Dallas-Fort Worth-Arlington, TX Metro Area
8	Denver-Aurora-Lakewood, CO Metro Area
9	Des Moines-West Des Moines, IA Metro Area
10	Fayetteville-Springdale-Rogers, AR Metro Area
11	Houston-The Woodlands-Sugar Land, TX Metro Area
12	Jacksonville, FL Metro Area
13	Lakeland-Winter Haven, FL Metro Area
14	Las Vegas-Henderson-Paradise, NV Metro Area
15	Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area
16	Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area
17	North Port-Sarasota-Bradenton, FL Metro Area
18	Ogden-Clearfield, UT Metro Area
19	Orlando-Kissimmee-Sanford, FL Metro Area
20	Phoenix-Mesa-Chandler, AZ Metro Area
21	Provo-Orem, UT Metro Area
22	Raleigh-Cary, NC Metro Area
23	San Antonio-New Braunfels, TX Metro Area
24	Seattle-Tacoma-Bellevue, WA Metro Area
25	Tampa-St Petersburg-Clearwater, FL Metro Area

Source: Census; shading indicates Southeast or Texas MSAs

Figure 18

MSA Population Growth 2010-2019 - Sorted by Absolute Change

	Geographic Area	2019 Population	2010-2019 Population Change	2010-2019 Population Change (CAGR %)
	United States	**328,239,523**	**19,493,985**	**0.68**
	In Metropolitan Statistical Area	**282,828,515**	**19,731,846**	**0.81**
1	Dallas-Fort Worth-Arlington, TX Metro Area	7,573,136	1,206,594	1.95
2	Houston-The Woodlands-Sugar Land, TX Metro Area	7,066,141	1,145,725	1.99
3	Phoenix-Mesa-Chandler, AZ Metro Area	4,948,203	755,316	1.86
4	Atlanta-Sandy Springs-Alpharetta, GA Metro Area	6,020,364	733,636	1.45
5	Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	6,280,487	630,947	1.18
6	Miami-Fort Lauderdale-Pompano Beach, FL Metro Area	6,166,488	601,853	1.15
7	Seattle-Tacoma-Bellevue, WA Metro Area	3,979,845	540,036	1.63
8	Austin-Round Rock-Georgetown, TX Metro Area	2,227,083	510,794	2.94
9	Orlando-Kissimmee-Sanford, FL Metro Area	2,608,147	473,736	2.25
10	Riverside-San Bernardino-Ontario, CA Metro Area	4,650,631	425,780	1.07
11	Denver-Aurora-Lakewood, CO Metro Area	2,967,239	423,757	1.73
12	Tampa-St Petersburg-Clearwater, FL Metro Area	3,194,831	411,588	1.54
13	San Antonio-New Braunfels, TX Metro Area	2,550,960	408,452	1.96
14	San Francisco-Oakland-Berkeley, CA Metro Area	4,731,803	396,412	0.98
15	Charlotte-Concord-Gastonia, NC-SC Metro Area	2,636,883	392,923	1.81
16	Los Angeles-Long Beach-Anaheim, CA Metro Area	13,214,799	385,962	0.33
17	Boston-Cambridge-Newton, MA-NH Metro Area	4,873,019	320,617	0.76
18	New York-Newark-Jersey City, NY-NJ-PA Metro Area	19,216,182	319,073	0.19
19	Las Vegas-Henderson-Paradise, NV Metro Area	2,266,715	315,446	1.68
20	Minneapolis-St Paul-Bloomington, MN-WI Metro Area	3,640,043	306,410	0.98
21	Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	1,934,317	288,117	1.81
22	Portland-Vancouver-Hillsboro, OR-WA Metro Area	2,492,412	266,403	1.26
23	Raleigh-Cary, NC Metro Area	1,390,785	260,295	2.33
24	San Diego-Chula Vista-Carlsbad, CA Metro Area	3,338,330	243,017	0.84
25	Columbus, OH Metro Area	2,122,271	220,297	1.23
26	Sacramento-Roseville-Folsom, CA Metro Area	2,363,730	214,603	1.06
27	Jacksonville, FL Metro Area	1,559,514	213,918	1.65
28	Indianapolis-Carmel-Anderson, IN Metro Area	2,074,537	186,660	1.05
29	Oklahoma City, OK Metro Area	1,408,950	155,963	1.31
30	San Jose-Sunnyvale-Santa Clara, CA Metro Area	1,990,660	153,749	0.90
31	Cape Coral-Fort Myers, FL Metro Area	770,577	151,823	2.47
32	Kansas City, MO-KS Metro Area	2,157,990	148,648	0.80
33	Salt Lake City, UT Metro Area	1,232,696	144,823	1.40
34	Charleston-North Charleston, SC Metro Area	802,122	137,515	2.11
35	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area	6,102,434	137,091	0.25
36	North Port-Sarasota-Bradenton, FL Metro Area	836,995	134,714	1.97
37	Boise City, ID Metro Area	749,202	132,641	2.19
38	Lakeland-Winter Haven, FL Metro Area	724,777	122,682	2.08
39	Provo-Orem, UT Metro Area	648,252	121,442	2.33
40	Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	496,901	120,179	3.12
41	Richmond, VA Metro Area	1,291,900	105,399	0.95
42	Colorado Springs, CO Metro Area	745,791	100,178	1.62
43	Greenville-Anderson, SC Metro Area	920,477	96,365	1.24
44	Fayetteville-Springdale-Rogers, AR Metro Area	534,904	94,783	2.19
45	McAllen-Edinburg-Mission, TX Metro Area	868,707	93,938	1.28
46	Des Moines-West Des Moines, IA Metro Area	699,292	92,817	1.59
47	Baltimore-Columbia-Towson, MD Metro Area	2,800,053	89,564	0.36
48	Ogden-Clearfield, UT Metro Area	683,864	86,705	1.52
49	Omaha-Council Bluffs, NE-IA Metro Area	949,442	84,092	1.04
50	Grand Rapids-Kentwood, MI Metro Area	1,077,370	83,700	0.90

Figure 19

MSA Population Growth 2010-2019 - Sorted by Compounded Annual Growth

	Geographic Area	2019 Population	2010-2019 Population Change	2010-2019 Population Change (CAGR %)
	United States	**328,239,523**	**19,493,985**	**0.68**
	In Metropolitan Statistical Area	**282,828,515**	**19,731,846**	**0.81**
1	The Villages, FL Metro Area	132,420	39,000	3.95
2	Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	496,901	120,179	3.12
3	Austin-Round Rock-Georgetown, TX Metro Area	2,227,083	510,794	2.94
4	Midland, TX Metro Area	182,603	40,932	2.86
5	St George, UT Metro Area	177,556	39,441	2.83
6	Greeley, CO Metro Area	324,492	71,667	2.81
7	Bend, OR Metro Area	197,692	39,959	2.54
8	Cape Coral-Fort Myers, FL Metro Area	770,577	151,823	2.47
9	Provo-Orem, UT Metro Area	648,252	121,442	2.33
10	Raleigh-Cary, NC Metro Area	1,390,785	260,295	2.33
11	Daphne-Fairhope-Foley, AL Metro Area	223,234	40,969	2.28
12	Orlando-Kissimmee-Sanford, FL Metro Area	2,608,147	473,736	2.25
13	Fayetteville-Springdale-Rogers, AR Metro Area	534,904	94,783	2.19
14	Boise City, ID Metro Area	749,202	132,641	2.19
15	Odessa, TX Metro Area	166,223	29,093	2.16
16	Crestview-Fort Walton Beach-Destin, FL Metro Area	284,809	48,944	2.12
17	Charleston-North Charleston, SC Metro Area	802,122	137,515	2.11
18	Lakeland-Winter Haven, FL Metro Area	724,777	122,682	2.08
19	Naples-Marco Island, FL Metro Area	384,902	63,382	2.02
20	Coeur d'Alene, ID Metro Area	165,697	27,203	2.01
21	Houston-The Woodlands-Sugar Land, TX Metro Area	7,066,141	1,145,725	1.99
22	North Port-Sarasota-Bradenton, FL Metro Area	836,995	134,714	1.97
23	Fort Collins, CO Metro Area	356,899	57,269	1.96
24	San Antonio-New Braunfels, TX Metro Area	2,550,960	408,452	1.96
25	Dallas-Fort Worth-Arlington, TX Metro Area	7,573,136	1,206,594	1.95
26	Hilton Head Island-Bluffton, SC Metro Area	222,195	35,185	1.93
27	Kennewick-Richland, WA Metro Area	299,612	46,272	1.88
28	Punta Gorda, FL Metro Area	188,910	28,932	1.86
29	Phoenix-Mesa-Chandler, AZ Metro Area	4,948,203	755,316	1.86
30	Fargo, ND-MN Metro Area	246,145	37,368	1.85
31	Sioux Falls, SD Metro Area	268,232	39,971	1.81
32	Charlotte-Concord-Gastonia, NC-SC Metro Area	2,636,883	392,923	1.81
33	Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	1,934,317	288,117	1.81
34	Auburn-Opelika, AL Metro Area	164,542	24,295	1.79
35	Wilmington, NC Metro Area	297,533	42,649	1.73
36	Denver-Aurora-Lakewood, CO Metro Area	2,967,239	423,757	1.73
37	Bismarck, ND Metro Area	128,949	18,324	1.72
38	Las Vegas-Henderson-Paradise, NV Metro Area	2,266,715	315,446	1.68
39	Jacksonville, FL Metro Area	1,559,514	213,918	1.65
40	Sebastian-Vero Beach, FL Metro Area	159,923	21,895	1.65
41	College Station-Bryan, TX Metro Area	264,728	36,068	1.64
42	Seattle-Tacoma-Bellevue, WA Metro Area	3,979,845	540,036	1.63
43	Colorado Springs, CO Metro Area	745,791	100,178	1.62
44	Port St Lucie, FL Metro Area	489,297	65,190	1.60
45	Des Moines-West Des Moines, IA Metro Area	699,292	92,817	1.59
46	Olympia-Lacey-Tumwater, WA Metro Area	290,536	38,272	1.58
47	Tampa-St Petersburg-Clearwater, FL Metro Area	3,194,831	411,588	1.54
48	Ogden-Clearfield, UT Metro Area	683,864	86,705	1.52
49	Durham-Chapel Hill, NC Metro Area	644,367	80,094	1.49
50	Bellingham, WA Metro Area	229,247	28,107	1.46

Figure 20

Cumulative Estimates of the Components of Population Change
April 1, 2010 to July 1, 2019

Top 25 MSAs - Population Growth 2010-2019	Total Population Change	Natural Increase	Net Migration		
			Total Migration	International	Domestic
United States	19,481,418	11,621,558	7,859,860	7,859,860	0
In Metropolitan Statistical Area	19,721,343	11,376,625	8,345,841	7,556,506	789,335
Dallas-Fort Worth-Arlington, TX Metro Area	1,206,599	517,590	686,884	237,927	448,957
Houston-The Woodlands-Sugar Land, TX Metro Area	1,145,654	540,027	602,610	333,553	269,057
Phoenix-Mesa-Chandler, AZ Metro Area	755,074	247,209	505,500	106,785	398,715
Atlanta-Sandy Springs-Alpharetta, GA Metro Area	733,646	343,765	389,077	144,048	245,029
Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	630,799	428,108	200,650	326,958	-126,308
Miami-Fort Lauderdale-Pompano Beach, FL Metro Area	600,214	178,095	422,703	615,283	-192,580
Seattle-Tacoma-Bellevue, WA Metro Area	540,037	201,727	338,123	198,637	139,486
Austin-Round Rock-Georgetown, TX Metro Area	510,760	149,806	355,902	62,740	293,162
Orlando-Kissimmee-Sanford, FL Metro Area	473,748	103,875	368,588	181,996	186,592
Riverside-San Bernardino-Ontario, CA Metro Area	425,683	289,072	138,230	26,965	111,265
Denver-Aurora-Lakewood, CO Metro Area	423,631	162,267	257,992	61,997	195,995
Tampa-St. Petersburg-Clearwater, FL Metro Area	411,346	12,252	397,215	104,814	292,401
San Antonio-New Braunfels, TX Metro Area	408,440	146,693	259,857	45,348	214,509
San Francisco-Oakland-Berkeley, CA Metro Area	396,210	202,172	194,735	231,599	-36,864
Charlotte-Concord-Gastonia, NC-SC Metro Area	392,920	110,931	280,220	49,640	230,580
Los Angeles-Long Beach-Anaheim, CA Metro Area	385,842	753,642	-362,998	377,442	-740,440
Boston-Cambridge-Newton, MA-NH Metro Area	320,424	141,612	182,147	285,199	-103,052
New York-Newark-Jersey City, NY-NJ-PA Metro Area	319,905	932,102	-611,662	837,005	-1,448,667
Las Vegas-Henderson-Paradise, NV Metro Area	315,447	105,372	208,889	23,319	185,570
Minneapolis-St. Paul-Bloomington, MN-WI Metro Area	306,415	209,124	99,485	87,847	11,638
Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	288,134	88,741	197,758	39,422	158,336
Portland-Vancouver-Hillsboro, OR-WA Metro Area	266,409	96,518	169,456	47,983	121,473
Raleigh-Cary, NC Metro Area	260,292	78,009	180,756	34,019	146,737
San Diego-Chula Vista-Carlsbad, CA Metro Area	242,981	204,933	40,821	107,098	-66,277
Columbus, OH Metro Area	220,263	108,626	112,154	58,853	53,301

Source: Census, Linneman Associates, LLC

Figure 21

Similarly, five of the top 10 states with net state-to-state migration in 2019 are in the Southeast or Texas, with Florida gaining 144,000 residents from other states.

2019 State-to-State Migration

State	Moved to Another State	Moved from Another State	Net State-to-State Change
Florida	457,301	601,611	144,310
Texas	453,015	559,661	106,646
Arizona	173,631	253,295	79,664
North Carolina	255,346	315,215	59,869
South Carolina	129,227	176,008	46,781
Colorado	198,416	240,600	42,184
Tennessee	156,558	196,765	40,207
Washington	199,758	231,956	32,198
Georgia	253,565	284,541	30,976
Nevada	105,357	132,950	27,593

Figure 22

Linneman Associates expects population and economic growth in the Southeast and Texas to continue, driving demand for high quality multifamily housing. The region' s warm and sunny weather, low taxes, and limited NIMBYism (which keeps living costs low) fuels growth. The low cost of living and of doing business will continue to be the key drivers of growth in the Southeast and Texas. Notably, the region's net positive growth stems from both domestic and international movers.

Residents move for the low cost of living and high quality of life, while businesses move to where there are low input costs, ample labor, and efficient transportation networks. The region is experiencing a rise in agglomeration economies, which occur as firms cluster in a location and share a large pool of input resources (including skilled labor), resulting in increased efficiency, greater innovation, and declining costs. This in turn attracts related firms, workers, and customers to accommodate further growth. BMW, Michelin, The Home Depot, The Coca-Cola Company, and Lowes are just a few of the corporate headquarters in the Southeast. Tellingly, within the last decade, Hertz and Mercedes Benz moved their headquarters from New Jersey to Florida and Georgia, respectively, saving on labor and input costs, as well as taxes. In addition, CoStar, a national real estate data company, opted to open its second headquarters in Richmond, Virginia, instead of expanding in Bethesda due to cost savings, lower density, and ample access to an educated workforce. Amazon and Facebook also recently opened substantial facilities in the Richmond MSA. Thus, with assets in Gateway cities priced to perfection, commercial real estate investors should look to the Southeast for growth opportunities, particularly in secondary and tertiary markets.

Many such markets are undergoing localized renaissances, neighborhood by neighborhood, transforming from obsolete industrial to trendy mixed-use. These neighborhoods provide a full range of work, residential, and entertainment space in an easily accessible urban setting, and are attracting companies, young professionals, and entrepreneurs. Scott's Addition, Richmond's fastest growing neighborhood, is an illustration of a formerly industrial area that has become urbanized and is now a popular and hip place to live, work and play. The economic benefits are being felt in in-fill urban locations as well as ex-urban and suburban communities throughout the Southeast. The southward population migration in combination with the fundamental stability of regional economies and the ongoing redevelopment of neighborhoods will drive long-term demand for high-end apartments sought by educated and affluent young professionals.

Communities that embrace growth are communities with both high levels of latent demand and a willingness to approve growth. These areas also possess the social networks that tend to attract immigrants. Our research reveals that diverse local economies experience greater growth, as diversity increases the chance that an area is able to "ride the right horse." It is also true that the more diversified the economy, the less likely it is that an area becomes calcified by the social and political control of a single industry constituency. This is exemplified by Houston, which has boomed as it transformed from a pure play oil city to a more diversified economy, while New Orleans remained tied to the oil industry and stagnated. Atlanta, Austin, Charlotte, Raleigh-Durham, and Richmond are also examples of metro areas that have and continue to undergo economic rebirths.

Multifamily Demand Projections using Population Growth

We use the 16 MSAs in the Southeast and Texas that achieve a top-50 standing for both absolute and relative net growth in population since 2010 as case studies to project the 5-year demand for multifamily units. Specifically, we apply the respective 2010-2019 compounded annual growth rates to 2019 populations and then use the MSA-specific average household size and homeownership rates to arrive at expected multifamily households. Based on this analysis, Houston, Texas, Austin, Orlando, and Nashville top the list of absolute population growth among those markets.

5-Year Multifamily Demand Projections

MSA	2019 Population	2010-2019 CAGR (%)	Proj. 5-Year Pop Growth	Avg. HH Size	Proj. New HHs	HO Rate (%)	Proj. Rental HHs
Austin-Round Rock-Georgetown, TX Metro Area	2,227,083	2.9	346,838	2.67	129,902	57.6	55,078
Cape Coral-Fort Myers, FL Metro Area	770,577	2.5	99,904	2.65	37,700	75.5	9,236
Charleston-North Charleston, SC Metro Area	802,122	2.1	88,341	2.58	34,241	67.5	11,128
Charlotte-Concord-Gastonia, NC-SC Metro Area	2,636,883	1.8	247,293	2.65	93,318	65.4	32,288
Dallas-Fort Worth-Arlington, TX Metro Area	7,573,136	1.9	766,540	2.84	269,908	59.5	109,313
Fayetteville-Springdale-Rogers, AR Metro Area	534,904	2.2	61,216	2.67	22,927	61.3	8,873
Houston-The Woodlands-Sugar Land, TX Metro Area	7,066,141	2.0	729,748	2.87	254,268	60.1	101,453
Jacksonville, FL Metro Area	1,559,514	1.7	133,210	2.61	51,038	66.0	17,353
Lakeland-Winter Haven, FL Metro Area	724,777	2.1	78,654	2.98	26,394	69.3	8,103
Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	496,901	3.1	82,628	2.48	33,318	75.8	8,063
Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	1,934,317	1.8	181,322	2.59	70,008	65.8	23,943
North Port-Sarasota-Bradenton, FL Metro Area	836,995	2.0	85,710	2.49	34,422	76.6	8,055
Orlando-Kissimmee-Sanford, FL Metro Area	2,608,147	2.3	307,235	2.89	106,310	61.9	40,504
Raleigh-Cary, NC Metro Area	1,390,785	2.3	169,688	2.63	64,520	65.6	22,195
San Antonio-New Braunfels, TX Metro Area	2,550,960	2.0	259,674	3.03	85,701	62.7	31,966
Tampa-St Petersburg-Clearwater, FL Metro Area	3,194,831	1.5	254,413	2.56	99,380	66.7	33,094

Source: Linneman Associates LLC, Census, 2019 American Community Survey

Figure 23

Multifamily Demand Projections Using Employment Growth

- *Houston Case Study*

Linneman Associates forecasts MSA employment using two methods: a statistical analysis and an alpha-beta analysis. The alpha-beta analysis examines how employment in a given MSA is expected to perform based on U.S. employment trends. We calculated a statistical equation, which summarizes how a 100-basis point change in the national variable affects the local indicator. The equation consists of a constant ("alpha") and a "beta", which is a multiplier applied to the national percent change in employment. The alpha indicates MSA growth that is independent of national growth. Our statistical regression forecast is net of construction jobs due to the volatility and short-term nature of that sector. Using currently "out of favor" Houston as a case study, Linneman Associates' statistical analysis forecasts that the MSA will add about 429,000 non-construction jobs through 2025. Linneman Associates' "beta" or covariance analysis examines how various economic indicators behave in individual metropolitan areas based on national economic changes.

Beta Analysis Employment Projection

	(Jobs in thousands)
U.S.	
4Q20 Employment	142,624
Proj. 4Q25 Employment	159,999
Proj. New Jobs Thru 2025	17,375
Proj. Job Growth (%) Thru 2025	12.2%
Houston MSA	
Employment Alpha	1.10
Employment Beta	0.81
Proj. Job Growth (%) Thru 2020	15.8%
Est. Non-Construction Jobs as of 4Q20	2,800
Proj. New Non-Construction Jobs (beta)	444
Est. Payroll Jobs as of 4Q20	3,037
Proj. New Total Payroll Jobs (beta)	481

Source: BLS, Linneman Associates
Estim. MSA and Actual U.S. payroll data through December 2020

Houston Metro Area Multifamily Demand-Supply Analysis

	Forecast Methodology		
	Beta	**Statistical**	**Average**
New Non-Construction Job Forecast Thru 2024 (000s)	444	429	437
Multifamily Market			
Historical Occupied MF Units/Worker	0.223	0.223	0.223
Projected MF Demand (Units)	99,145	95,946	97,546
Pipeline as of 4Q20*	42,716	42,716	42,716
Supply (Shortage)/Overage	*-56,429*	*-53,230*	*-54,830*
MF Inventory	659,188	659,188	659,188
MF Demand as % of Inventory	15.0%	14.6%	14.8%
MF Pipeline as % of Inventory	6.5%	6.5%	6.5%
Supply Excess/(Shortage) as a % of Inventory (bps)	-860	-810	-830

Source: BLS, Linneman Associates
**Pipeline: 16,069 units U/C + 26,647 planned*

Figure 24

Based on Linneman Associates' estimate that U.S. employment will grow by 17.4 million jobs, or 12.2% of the national employment base, through 2025, Houston's non-construction job base is expected to grow by a corresponding 444,000 (15.8%) over the same period. Thus, the statistical (429,000 new jobs) and the beta (444,000) methods project similar 5-year job growth in Houston, with an average of 437,000 new non-construction jobs by year-end 2025. With projected employment, we apply the historical ratio of occupied multifamily units per worker for Houston (a ratio that changes very little over time) to arrive at about 98,000 projected multifamily units through 2025. Note that this is in line with the 101,000-units projected based on the population forecast method. Comparing these demand projections to the broker-reported 43,000-unit construction pipeline in Houston reveals a 51,000-unit supply shortfall, or 7.8% of inventory, through 2025.

- *Richmond Case Study*

We ran a similar analysis for Richmond, VA using only the beta forecasting methodology. As the capital of Virginia, Richmond benefits from continued growth of D.C. and Northern Virginia. The metro also has a low cost of doing business, including a 6% corporate tax rate and electric rates that are 30% below the national average. It is also home to numerous universities. Linneman Associates' Richmond analysis similarly reveals an expected supply shortfall of nearly

3,300 units (0.5% of inventory) over the next five years. This assumes that 100% of the units under construction, 50% of the planned units, and 25% of the proposed units are completed.

Beta Analysis Employment Projection

	(Jobs in thousands)
U.S.	
4Q20 Employment	142,624
Proj. 4Q25 Employment	159,999
Proj. New Jobs Thru 2025	17,375
Proj. Job Growth (%) Thru 2025	12.2%
Richmond MSA	
Employment Alpha	0.12
Employment Beta	0.97
Proj. Job Growth (%) Thru 2020	12.5%
Est. Non-Construction Jobs as of 4Q20	622
Proj. New Non-Construction Jobs (beta)	78
Est. Payroll Jobs as of 4Q20	662
Proj. New Total Payroll Jobs (beta)	82

Source: BLS, Linneman Associates
Estim. MSA and Actual U.S. payroll data through December 2020

Richmond Metro Area Multifamily Demand-Supply Analysis

	Beta Forecast
New Non-Construction Job Forecast Thru 2024 (000s)	78
Multifamily Market	
Historical Occupied MF Units/Worker	0.142
Projected MF Demand (Units)	11,030
Pipeline as of 4Q20*	7,754
Supply (Shortage)/Overage	*-3,276*
MF Inventory	659,188
MF Demand as % of Inventory	1.7%
MF Pipeline as % of Inventory	1.2%
Supply Excess/(Shortage) as a % of Inventory (bps)	-50

Source: BLS, Linneman Associates
**Pipeline: 2,125 units U/C + 50% of 3,585 planned + 25% of 8,179 prospective*

Figure 25

Richmond payroll employment stood at 662,000 at year-end 2020, reflecting the recovery of 42,000 jobs since the shutdown low seen in April. The current level is just 5% below pre-pandemic employment in the MSA. Since 1990, the Richmond MSA unemployment rate has been, on average, 150 bps lower than the national rate. The MSA and U.S. unemployment rates were 2.8% and 3.5%, respectively, prior to the pandemic shutdown. They rose to 11.7% and 14.8%, respectively, and stood at 5.2% and 6.7% at the end of 2020.

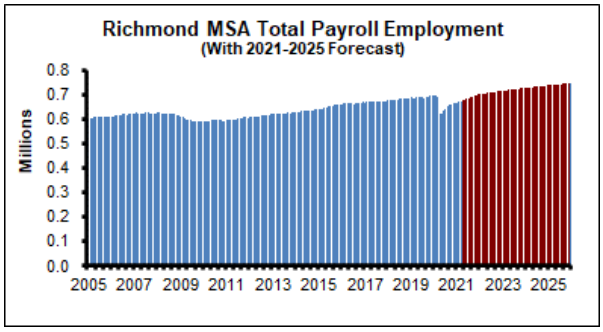

Figure 26

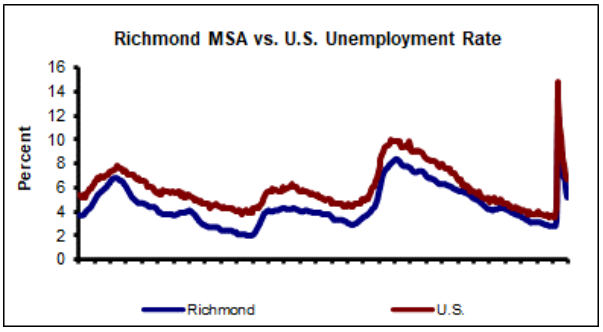

Figure 27

Based on our alpha-beta model, Linneman Associates projects that the MSA will add 82,000 jobs over the next 5 years, fueling significant economic growth, including demand for

multifamily housing. With an employment beta of 0.97, Richmond's employment base generally increases or decreases in line with national growth on a percentage basis. This correlation was clearly illustrated during the Financial Crisis recovery and is expected to continue. The MSA has an alpha of 0.12 and a break-even point of -0.13. The alpha indicates that even when national employment growth is zero, Richmond area employment grows by 0.12% per year. The break-even point indicates that U.S. employment can decrease by as much as 0.13%, and Richmond employment growth would still be positive.

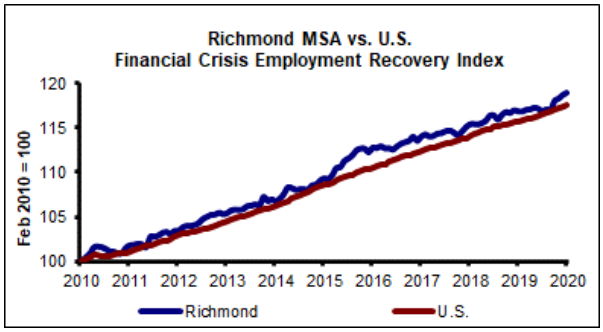

Figure 28

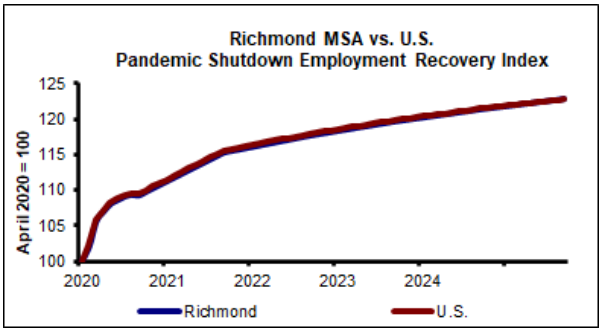

Figure 29

As a pipeline benchmark, the Richmond MSA has averaged 1,127 multifamily unit (in structures with 5+ units) permits annually since 1995. The 25-year low of 75 was seen 2000, while the region reached a high of 3,489 units permitted in 2019. In 2020, 2,128 multifamily permits were issued, which is 89% above the long-term average.

It is instructive to examine HUD's historical time series of the 40th percentile market rents in the Richmond MSA. Real rents (in 2020 dollars) paid by the 40th percentile renter in the MSA are at $1,115 per unit in 2021. This is in comparison to the 1993 low of $796 per unit and the 2019 high of $1,219. The 1985-2020 average is $996 per unit. Multifamily rents in the MSA are on a long-term upward trend, despite modest dips occurring during recessionary periods.

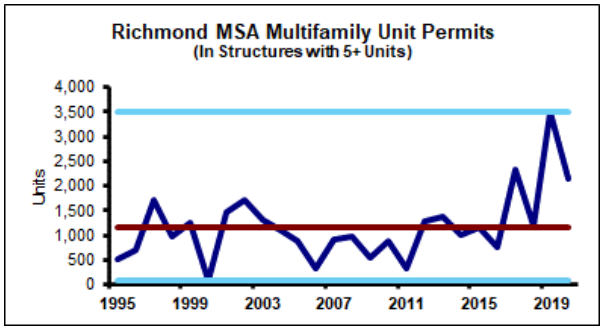

Figure 30

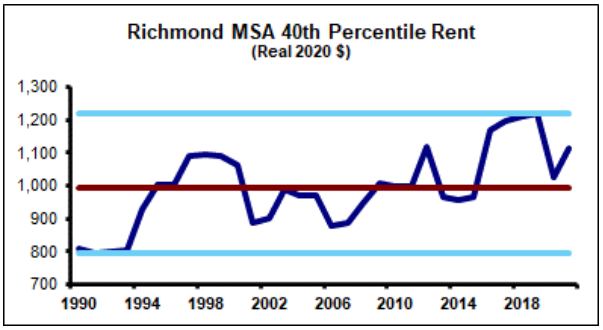

Figure 31

While sales transaction data is limited for the Richmond multifamily investment market, Real Capital Analytics reports that the average price per unit (real 2020 dollars) was $154,000 in the fourth quarter of 2020. This is in comparison to $220,000 and $240,000 per unit in the prior year and quarter, respectively. Four-quarter rolling sales volume peaked in 2019 and stood at the long-term average in 2020.

With its educated labor pool, low cost of living and doing business, strong ties to the federal government, and moderate climate, Virginia is an attractive place to live and conduct business. Linneman Associates has a long-term positive outlook for Richmond's multifamily investment market.

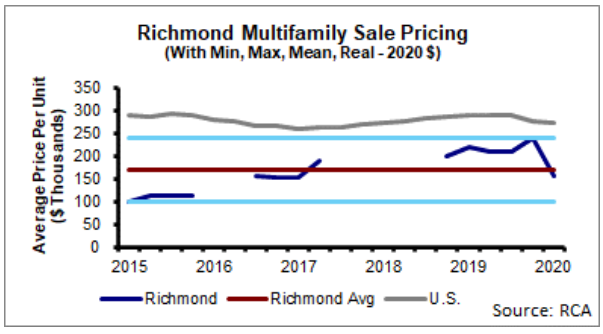

Figure 32

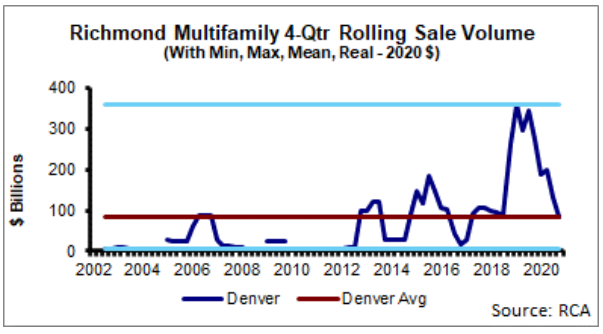

Figure 33

Demographic Trends Fuel Rental Demand

When discussing multifamily demand, it is impossible to avoid the 62 million strong Millennial generation (born 1981-1996 according to Pew Research), who are 24 to 39 years old and appeared to be in no rush to experience homeownership until involuntary savings suddenly materialized. Figure 27 illustrates the birth years and corresponding ages of each generation. The rental propensity rate for heads of household below 35 years old steadily increased from 2004-2016, to 65.5%. This was partially out of necessity, as younger generations are increasingly saddled with student debt and, prior to COVID-19, have been unable to assemble the requisite down payment due to prolonged low interest rates. While the below-35-year-old cohort rental propensity has dropped since 2016, the latest level (63.3%) is still 230 bps above the long-term average.

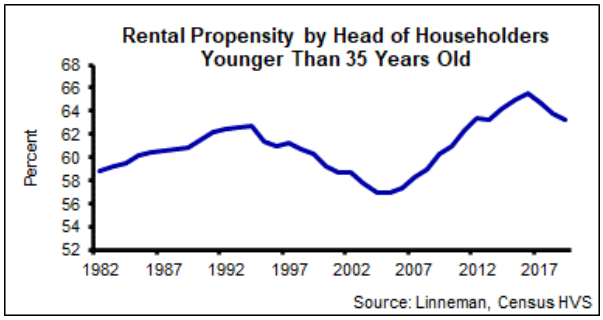

Figure 34

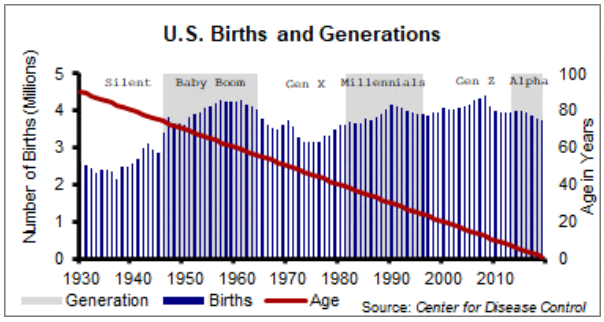

Figure 35

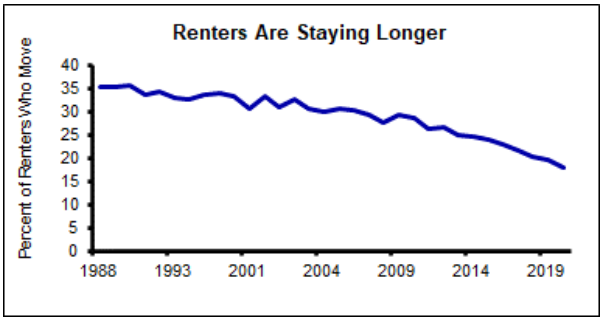

Figure 36

Further exacerbating their housing choices, home prices are at all-time highs, while wage growth has been muted. As a result, renters are staying put for a longer period of time than previous generations. According to the U.S. Census Current Population Survey, 35.2% of renters who had been in their homes for at least a year in 1987 moved somewhere else in 1988. In contrast, this rate was cut nearly in half, to 17.8%, between 2019 and 2020. Thus, it makes sense

that rental propensity rates for the 35-45-year-old cohort registered the greatest increases over the last 15 years, stabilizing just below 40% or 540 bps above the long-term average.

While much is made of the Millennials, they are not the only ones driving multifamily demand. Notably, their successors in Gen Z (born 1997-2012) numbered 65.3 million births, with the leading edge of 23-year-olds now well within the traditional prime renting age. In fact, the average number of births per year for the Millennials was 3.8 million, while Gen Z averaged nearly 4.1 million per year.

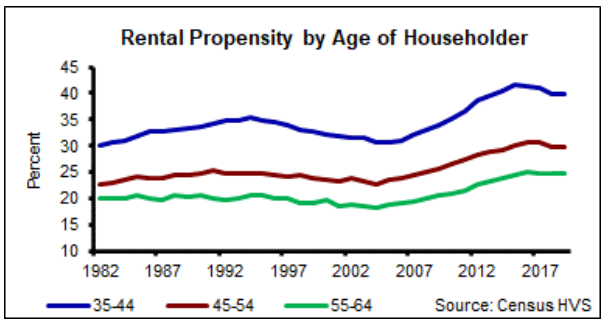

Figure 37

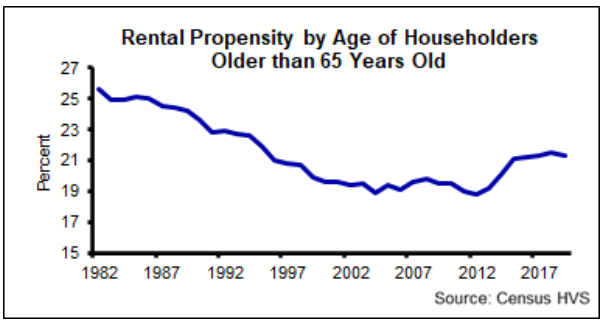

Figure 38

Since 2012, rental propensity rates for heads of households older than 65 also increased sharply and have stabilized at 21.4%, or just 10 bps below the long-term average. Retiring Boomers (born 1946-1964) seek to locate where it is warm and close to their grandchildren, which bodes well for the Southeast and Texas, particularly the drier parts. In addition, Boomers will age with greater wealth and income than any previous generation. Thus, they will desire easy-to-navigate, warm, safe communities that provide all of their preferred creature comforts. But as Boomers age, they will also seek access to the best medical facilities in the world. The emergence of high-quality medical facilities throughout the Southeast and Texas, such as in Richmond, Virginia and the Research Triangle in North Carolina, will be a key box to check off for the retiree population.

Conclusion

Prior to the pandemic, the U.S. economy was fundamentally strong, with no housing or auto supply excesses that often signal typical cyclical downturns. The trajectory of the recovery will have almost nothing to do with cyclical adjustments but rather will depend both on when governments allow us to do things and when we decide it is safe to do things. Linneman Associates projects that the U.S. economy will grow modestly in the first half of 2021, but as widespread vaccinations take place, growth will notably pick up speed late in the year. This unprecedented trajectory will look like the flight of a butterfly flying uphill, slowly forward but with fits, stops, detours, and starts. There are a number of encouraging signs of recovery in early 2021, from the emergence of an orchestrated roll-out of vaccines by the Biden administration to a sharp decline in the economic uncertainty index to modest increases in consumer and business confidence. Numerous metrics, including but not limited to real GDP, retail sales, corporate profits, housing starts, home prices, household net worth, and auto production are at or near pre-pandemic levels. In addition, mobility is on the rise at airports as well as on public transportation.

Linneman Associates examined the historical relationship between employment growth and commercial property vacancy rates and determined that over the long term, for every 100-bp (1%) increase in U.S. employment, the U.S. multifamily vacancy rate declines by 26 bps. Linneman Associates projects that the U.S. will add 17.5 million net new jobs in 2021-2025, resulting in an anticipated decline of 320 bps in the U.S. retail vacancy over that period. Because the single most important factor in determining future population growth is past growth, the Southeast and Texas are particularly attractive multifamily investment markets. In addition, these regions benefit from low taxes, good weather, low barriers to entry, and an openness to growth.

As the Fed intended with its “QE Infinity” monetary injections, there is significant liquidity in the capital markets. Linneman Associates anticipates that inflation over the next decade will

be concentrated in investable assets (rather than consumer goods), as that is where banks will disproportionately direct their capital. As a result, Linneman Associates expects commercial real estate cap rates to fall over the next decade as the money injected during the Fed's "QE Infinity" chases assets.

About Linneman Associates, LLC

Founded in 1979, Linneman Associates, LLC is a premier consulting and research firm, specializing in commercial real estate investment strategy. Our clients represent a wide range of industries and countries, but primarily include institutional investors, REITs, developers, and opportunistic private equity firms seeking to implement thoughtful and disciplined investment strategies. Our clients value our market insights and analyses as well as our ability to assess and simplify the ever-changing macroeconomic, political, and capital market environments, particularly as they relate to commercial real estate investing.

Over his more than four-decade career, Dr. Peter Linneman has been a critical influence in the professionalization of real estate capital markets and the commercial real estate industry. Thousands of global and regional real estate investment professionals look to Linneman Associates, LLC's insights each quarter through subscriptions to *The Linneman Letter* and his webinars.

Dr. Linneman's highly regarded textbook, *Real Estate Finance and Investments: Risks and Opportunities* is widely adopted by universities and corporate training programs. Now in edition 5.1, the textbook includes a robust online companion with supplemental materials for teachers and students. This book, an encapsulation of his long-time popular Wharton course, includes and analysis of corporate real estate decisions.

Disclaimer

This report evaluates the historical and forward-looking performance of the multifamily investment market in the U.S., with a focus on the Southwest and Texas. This report was commissioned by Capital Square Realty Advisors LLC (the "Client"), but the content (including analyses, forecasts, and opinions) presented herein, reflects the independent opinions of Linneman Associates, LLC ("Linneman Associates").