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Coronavirus-Led Migration Away
from Urban Cores:
Is it a Trend a Timberland
Investor Can Rely On?

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Executive Summary

More Americans are exploring ways to escape dense living environments, partly in response to the Covid-19 pandemic. This trend means more people are moving away from urban centers to more lightly populated regions, including the suburbs and exurbs (rural areas on the outskirts of suburbia). The out-migration from cities, however, is not being exclusively driven by the pandemic. It is part of a fundamental and longer-lasting trend. In short, the coronavirus certainly accelerated the pace of the migration, but the movement actually appears to pre-date the outbreak.

A number of structural changes in the market could explain why more people are seeking living arrangements in less densely populated areas. One key factor is likely demographics, specifically the evolving buying behaviors of the "Millennial Generation" (those born from 1980 to 1995), which is the largest generation in the U.S. since the "Baby Boomers" (those born from 1946 to 1964). Many Millennials have entered their early 30's during the last decade, and they are beginning to form new households. As a result, they are seeking more permanent living arrangements outside of cities and sprawling metropolitan areas. This is clearly among the reasons that the share of new home starts in the multi-family sector of the housing market has declined by five percent since 2017. Interestingly, this movement directly parallels how the housing market was impacted by the home-buying behaviors of "Baby Boomers" when they were at the same stages of their lives beginning in the late 1960s and continuing through the early 1990s.



While urban flight may have been occurring prior to the outbreak of the coronavirus, the pandemic appears to have accelerated the rate at which the movement is occurring. The pandemic caused a nationwide shift to "work from home" arrangements, and this may have altered housing preferences as people began to reconsider how and where they wanted to live.

From the perspective of timberland investors, these resurgent trends in the nation's housing markets point to favorable fundamentals for the foreseeable future. The evolving home-buying behaviors of Millennials coupled with the impacts of the pandemic are expected to persist. This will help drive demand for timber and raw land for years to come.

When building a timberland portfolio, investors can leverage these trends by (1) investing in wood markets that have large numbers of mills that produce building products and that are in close proximity to high-growth metropolitan areas and by (2) executing asset disposition programs that entail selling rural parcels on a retail basis to individual landowners and real estate developers.



Introduction: Housing Transition Since Onset of Covid-19 Pandemic

The coronavirus pandemic appears to have changed the attitudes of Americans about what they want from their homes. More and more people appear to be seeking opportunities to leave living arrangements in dense, urban areas in favor of suburban and rural locations that offer more space in which to work, to educate children, and to engage in leisure-time activities. Consequently, demand for roomier and more remote living arrangements in these areas has increased dramatically since the spring of 2020.

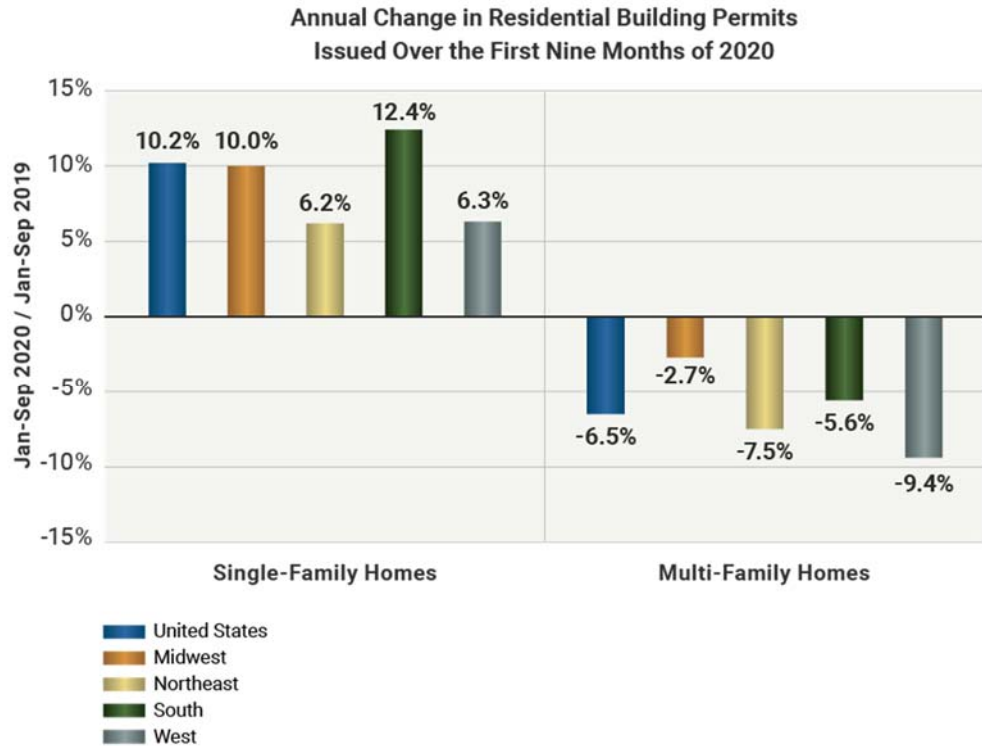
The influence of Covid-19 on migration from American cities is evident in the recent housing data. Redfin, a leading online home listing service, reported that website page views for homes in towns with fewer than 50,000 residents increased 87 percent in May of 2020 versus May of 2019. This was close to a four-fold increase as compared to the 22 percent increase in page views observed during the same period for home listings in cities that had more than one (1) million residents.

As people explore options for living farther from cities, home builders have responded by constructing more homes in lower-density areas. The National Association of Home Builders (NAHB) tracks where new homes are built with its *Home Building Geography Index*. Data from the second quarter of 2020 showed that during the height of the coronavirus lockdown, rates of new home construction in small metropolitan suburbs in the United States experienced the fastest growth. Rates of construction for dwellings in these areas increased 10.6 percent on a four-quarter moving average basis. In contrast, rates of home building in large metro core centers experienced the largest declines.

The type of housing that is being built also has been affected by these trends. Over the first nine months of 2020, building permits issued for single-family homes totaled 713,286 – a 10.2 percent increase from the same period in 2019 (Figure 1). The number of multi-family permits issued, however, dropped 6.5 percent over the same period. Multi-family housing units, like townhomes, apartments and condominiums, are more common in cities than they are in the suburbs and more rural areas, where detached single-family housing units are favored.



Figure 1. Source: National Association of Home Builders



These trends are relevant to timberland investors because single-family homes, on average, require three times (3x) as much lumber and three times (3x) as many wood panels as multi-family units. To support this growth, more timber would need to be harvested to supply the additional lumber and wood panels. For investors, the result may be stronger returns for their timberland holdings because of higher timber prices.

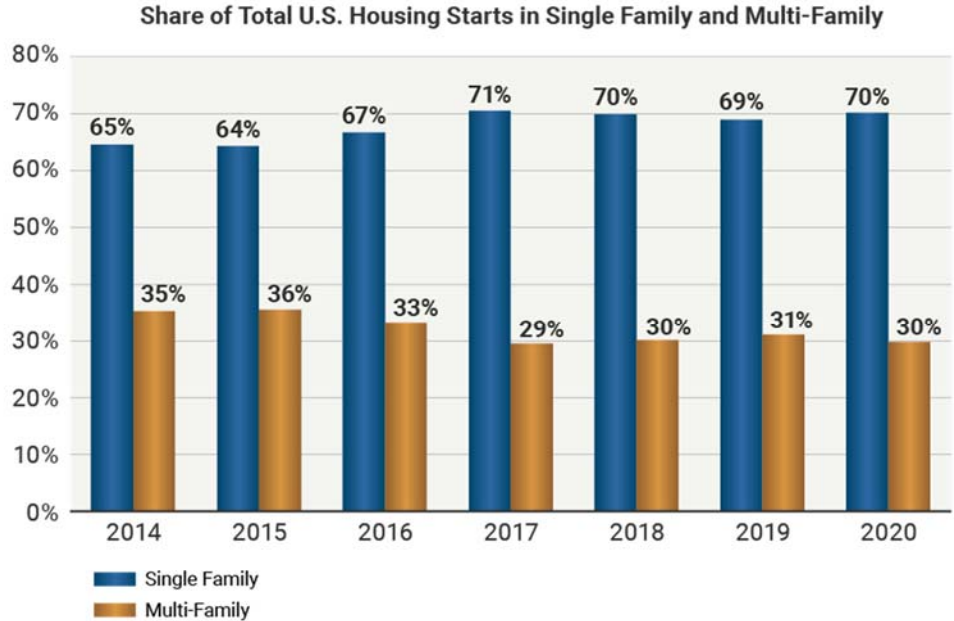
The Migration Out of Cities Pre-Dates the Coronavirus

The housing migration away from urban core centers and toward less populated areas pre-dated the outbreak. This trend can be observed in the data for both multi-family and single-family housing starts.

In 2014, 35 percent of all housing starts were in the multi-family category (Figure 2). By 2017, that number had fallen to 30 percent, where it has remained through 2020. This shift indicates that builders were adjusting to demographic and market trends and building more homes away from cities and urban areas three years before the onset of Covid-19.



Figure 2. Source: U.S. Census Bureau



A five percent shift from multi-family homes to single-family homes may not seem significant, but it roughly increases total lumber demand by 650 million board feet, which is roughly equivalent to the combined annual output of three or four large-scale sawmills.¹

Under Performance of High-Rise Apartment Investments

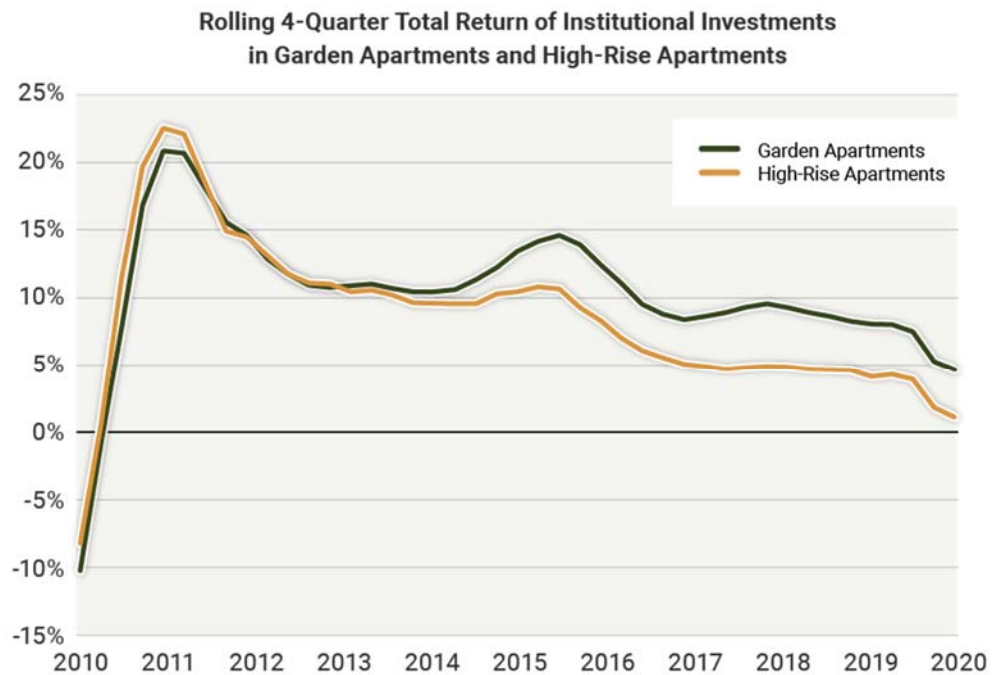
Further evidence of a pre-coronavirus structural shift is reflected in the performance of apartment investments. The National Council of Real Estate Investment Fiduciaries (NCREIF) – a non-profit organization that measures and analyzes institutional real estate investments – tracks the performance of segments of the market through the National Property Index (NPI). This subindex tracks the different types of apartments that comprise the segment, including garden apartments and high-rise apartments. Garden apartments are low-rise buildings surrounded by landscaped grounds. High-rise apartments are those with seven or more stories. Garden apartments are typically more prevalent away from the urban core while high-rise apartments are often concentrated within cities.

¹ The reasoning goes as follows: the average housing starts over the period in question was 1.3 million per year. A single-family home uses roughly 10,000 board more lumber than the average multi-family unit. Thus 1.3M starts x 5% x 10,000 board feet = 650 million board feet



A comparison of historic returns for garden and high-rise apartments indicates that the former category has outperformed the latter since 2015 (see Figure 3), often by a margin of more than 300 basis points. This suggests vacancy rates and rates of rent appreciation must have been higher during this period for garden apartments than they were for high-rise apartments. Prior to 2015, the two apartment categories performed in lockstep with each other.

Figure 3. Source: NCREIF



The superior performance of garden apartments as compared to high-rise apartments over the past five years is more indicative of a fundamental, long-term shift in market dynamics than it is evidence of a short-term phenomenon.

Demographics Playing a Key Role in Migration Away from Urban Core

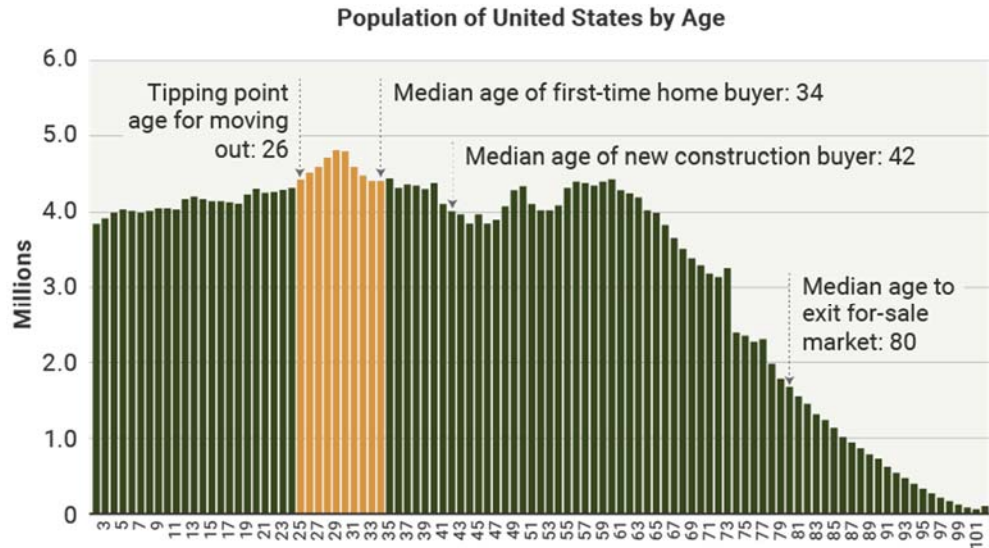
A number of underlying factors could explain why more people are seeking to live in less densely populated areas. Among them, we believe, is demographics – and specifically the evolving home-buying behaviors of "Millennials."

Millennials (born 1980-1995) are the largest generational cohort in the United States – comprising about 85 million individuals. As a group, many have entered a stage of life, their 30s, when many individuals leave apartment living and purchase their first



homes. Today, the Millennial generation represents a population bulge of people who are ready to establish families and move to larger residences where they can have more room and access to higher-quality schools (Figure 4 below). More often than not, this means moving to a single-family dwelling in the suburbs or ex-burbs (rural areas on the outskirts of suburbia).²

Figure 4. Sources: U.S. Census Bureau, Zillow Group: “The Housing Market Before & After the Coronavirus Crisis.” (2020)

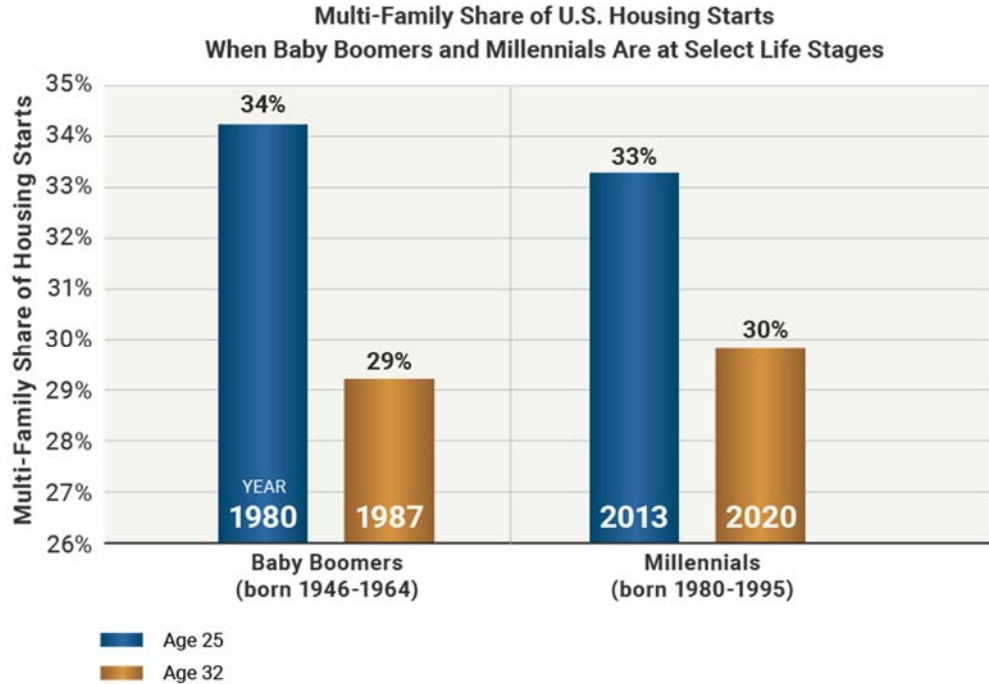


This assessment is consistent with the pattern that was observed two generations ago when the "Baby Boom Generation" (those born from 1946 to 1964) – formerly the largest generation in U.S. history before the Millennials – began buying homes in the late 1960s and early 1970s. As the chart below illustrates, when many Baby Boomers were in their mid-20s during the early 1980's, multi-family housing starts comprised 34 percent of total housing starts (Figure 5). However, when the Baby Boomers moved into the later stage of adulthood in 1987, multi-family starts fell below 30 percent. Conversely, at the same time single-family home starts increased to 71 percent.

² Exurbs commonly refers to areas outside the boundaries of a major metropolitan area, typically a prosperous area outside of the suburbs.



Figure 5. U.S. Multi-family housing starts as a share of total housing starts during the mid-points of the Baby Boomer and Millennial generations (ages 25 to 32). Note: the year 2020 reflects a year-to-date value through October.

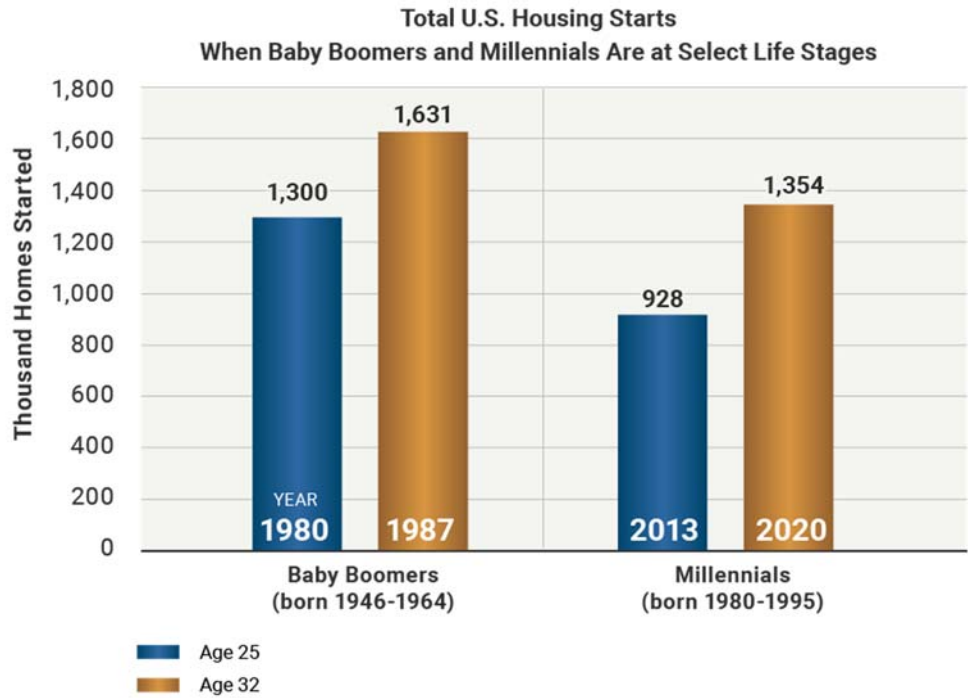


The same pattern has become evident with the Millennial generation. Multi-family home starts accounted for 33 percent of all home starts in 2013, at a time when the mid-point age range of the Millennial generation was 25. Moving ahead to 2020, a large percentage of Millennials has entered their early 30's, and many are beginning to form new households. Consequently, the share of multi-family home starts has declined to 30 percent.

While the housing market experienced a shift during these same periods, total rates of home construction, in general, increased as well. In both cases, each generation's transition from its 20's to 30's saw total housing starts (multi-family and single-family combined) increase by more than 300,000 homes – a growth rate of 25 percent or greater (Figure 6).



Figure 6. Total U.S. housing starts during the mid-points of the Baby Boomer and Millennial generations (ages 25 to 32). Note: the year 2020 reflects a seasonally adjusted annualized year-to-date value through October.

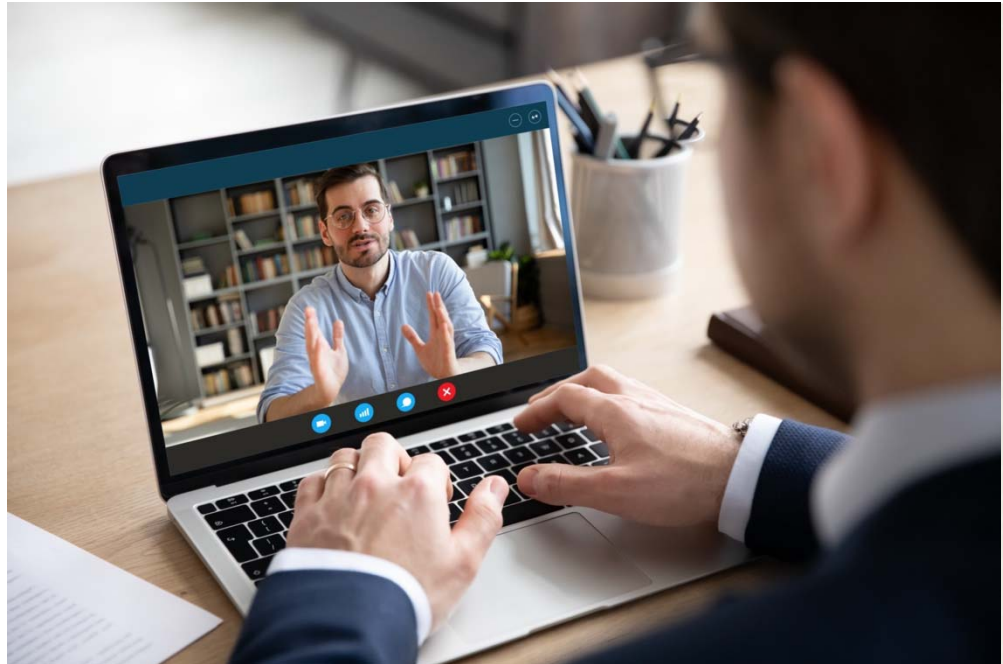


This data is not surprising given the results of surveys on the housing preferences of the U.S. population. For instance, a 2020 survey by Realtor.com (a major online real estate broker) and HarrisX (an opinion research company) indicated that members of the Millennial generation show greater interest in moving to the suburbs than do Baby Boomers and members of "Generation X" (those born from 1965 to 1979).



The Coronavirus Likely Added to Underlying Housing Trends

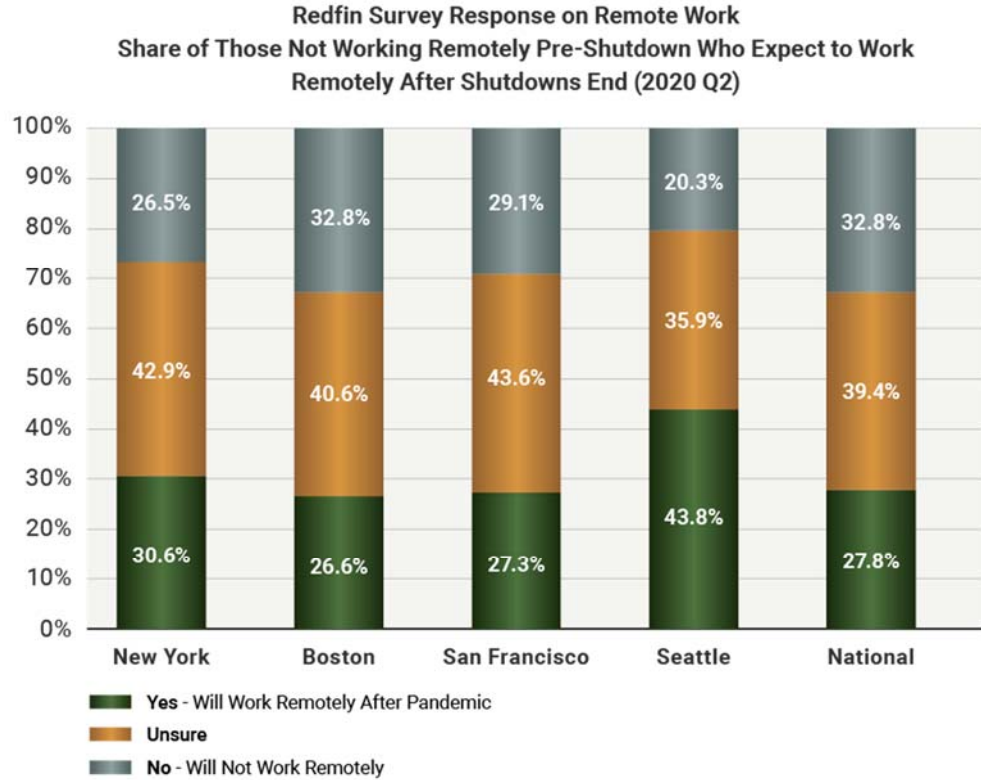
While urban flight existed before the coronavirus outbreak, the pandemic appears to have accelerated the process. As a result of lockdowns and restrictions, Covid-19 has pushed companies to adopt new technologies at a faster rate, which is enabling more people to work remotely than ever before. In fact, based on levels of work productivity that have been attained and sustained during the pandemic, a number of large, technology and service-oriented companies, including Facebook, Twitter, Square and Dropbox, are now giving employees the option to work remotely on a permanent basis. Other companies, such as Microsoft, Deutsche Bank, and Fifth Third Bancorp, are moving to “hybrid models” that will enable their employees to split work time between their homes and offices.



The work-from-home trend has allowed more people to move to relatively more affordable, less congested regions outside of large metro cores. Redfin conducted a national survey in 2020 that asked people who did not work remotely prior to the pandemic how they anticipate working in the future. More than a quarter of those who participated indicated that they expect to continue working from home once the pandemic has ended (Figure 7).



Figure 7. Source: Redfin, “Post-Pandemic Migration from Expensive Cities Likely as 1 in 4 Newly Remote Employees Expect Work-From-Home to Continue.” (October 7, 2020)



The pandemic-led shift to work-from-home arrangements may have altered housing preferences, as people reconsider how and where they want to live, including the Millennials. A joint survey by Realtor.com and HarrisX indicated that three-quarters of all Millennials were working remotely during the pandemic. Out of that group, 63 percent reported that they plan to purchase a home because of their ability to work remotely in the future.



How the Shift to the Suburbs Can Affect Wood Markets

As was referenced earlier, it is important for timberland investors to recognize and understand the trends in housing that are described in this white paper, and specifically the migration away from urban centers that is underway, because they can impact timber markets. On average, 5,000 board feet of lumber is used to construct a single, multi-family housing unit, such as an apartment. By comparison, a typical detached, single-family house uses about 15,000 board feet of lumber. If 2020 is used as a reference point, and we assume one percent of a year's housing starts transition away from multi-family units and to single-family units, this will add roughly 140 million board feet of additional lumber consumption. This increase would be roughly equivalent to the annual production of a moderately sized sawmill.

It also is important to note that the increase in construction is not limited to new home building. As more people purchase existing homes (pre-owned) in the suburbs and semi-rural areas, demand for lumber also will increase. This is because homeowners typically repair or remodel their homes before they put them on the market for sale. In addition, those who buy existing homes often undertake home remodeling and improvement projects shortly after their purchases. Consequently, it stands to reason that home repair, remodeling and improvement projects undertaken on single-family homes consume significantly more building materials than do those undertaken on multi-unit homes like apartments and condominiums.

Economists who track both the housing sector and building products markets are forecasting that demand for lumber will increase by 20 percent from 2020 to 2025 – climbing from 50 billion board feet to 60 billion board feet (Figure 8). This increased demand will correspondingly increase demand for large-sized logs (sawtimber), which is used to manufacture lumber. As a result, forest industry forecasting groups like Fastmarkets RISI and Forest Economic Advisors expect sawtimber prices to appreciate over the next several years (Table 1).



Figure 8. Source: Forest Economic Advisors

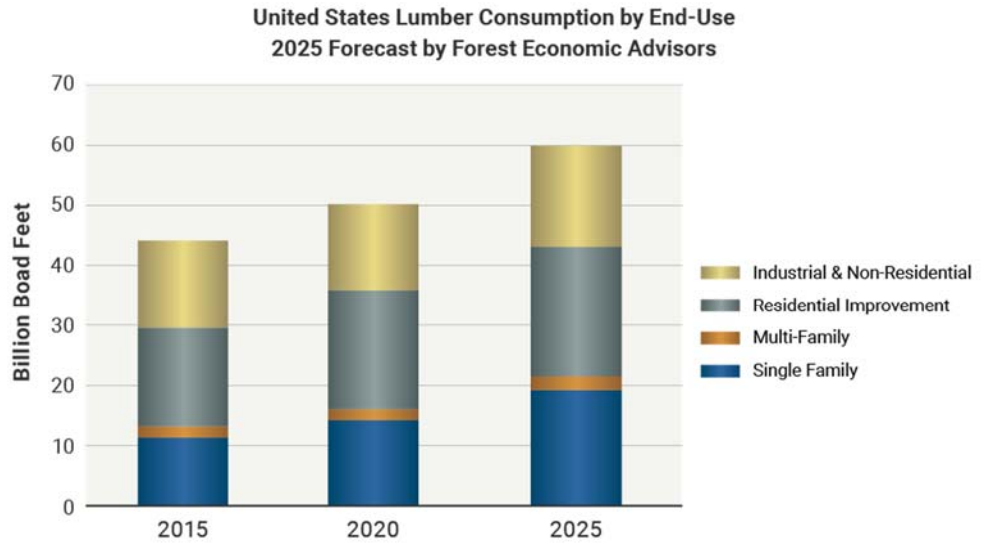


Table 1. Sources: Forecasts made by Fastmarkets RISI and Forest Economics Advisors (FEA) in late 2020.

Historic and Forecasted Change of Softwood Sawtimber Prices in the U.S.

U.S. Region and Specie	Annual Appreciation Rate in Prices	
	2015-2020	2020-2025
South – Southern Pine	-3.0%	5.0% RISI 4.6% FEA
Pacific Northwest – Douglas-Fir	0.4%	5.2% RISI 8.4% FEA



Conclusions: Implications for Timberland Investing

Despite the broader economic implications of the coronavirus pandemic, timberland investors should benefit from the resurgence in the housing market that is currently underway, which is a result of both shifting demographic trends and the extent to which Covid-19 is influencing how and where many Americans work. These trends will help drive demand for timber for years to come. In addition to the factors explored in this white paper, investors also should note that since 2007, rates of home construction in the United States have fallen well short of what is required to address the housing needs of the nation's growing population. Fannie Mae, a leading issuer of securitized home mortgages, estimates this housing shortfall could total 3.3 million homes.³



Investors can capitalize on these trends in the coming years by maintaining their exposure to the timberland asset class. Rising demand for building products – such as lumber, oriented strandboard (OSB), and plywood – will support timber markets, which, in turn, could have a positive influence on timberland returns. During the previous U.S. housing cycle, which saw housing starts average 1.83 million per year from 2001 through 2006, timberland produced an annualized return of 7.8 percent, as tracked by the NCREIF Timberland Property Index. TIR believes the asset class could

³ Fannie Mae: *The Housing Supply Shortage: State of the States*. (Feb. 2020)

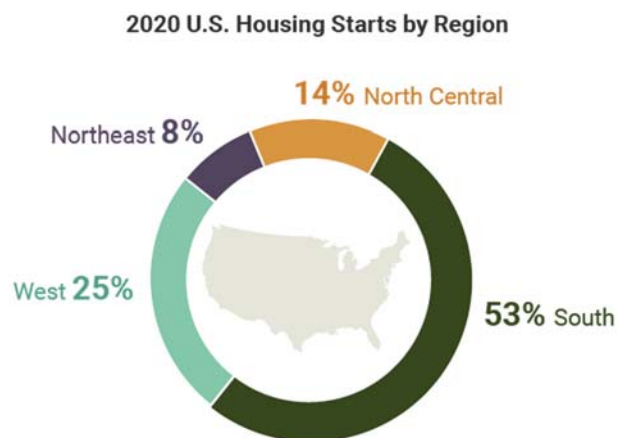


deliver similar performance in the post-pandemic era, in part, because of the trends explored in this white paper.

When building a timberland portfolio, investors can fine-tune their strategies by doing two things:

1. **Acquiring and Holding Assets Near Mills:** TIR advises investing in quality timberland assets in areas that have strong mill infrastructures – and especially significant exposure to the building products markets. This includes sawmills, OSB mills, and plywood mills. Ideally, such wood products facilities should be located in areas that offer easy access to growing housing markets. Certain parts of the U.S. South, in particular, offer an ideal combination of quality timberland, heavy concentrations of lumber and panel manufacturing facilities, and proximity to fast-growing metropolitan areas.

Figure 9. Source: U.S. Census Bureau



2. **Targeting Small Tract Sales:** The migration to rural and low-density areas also will increase demand for small tracts of forestland among individuals seeking places to live, recreate, and invest. Timberland investors can capitalize on this demand by acquiring working forests that are also capable of accommodating small-tract, retail sales activities. When executed and managed selectively and deliberately, such land sales programs offer the potential to provide investors with significant capital gains.



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