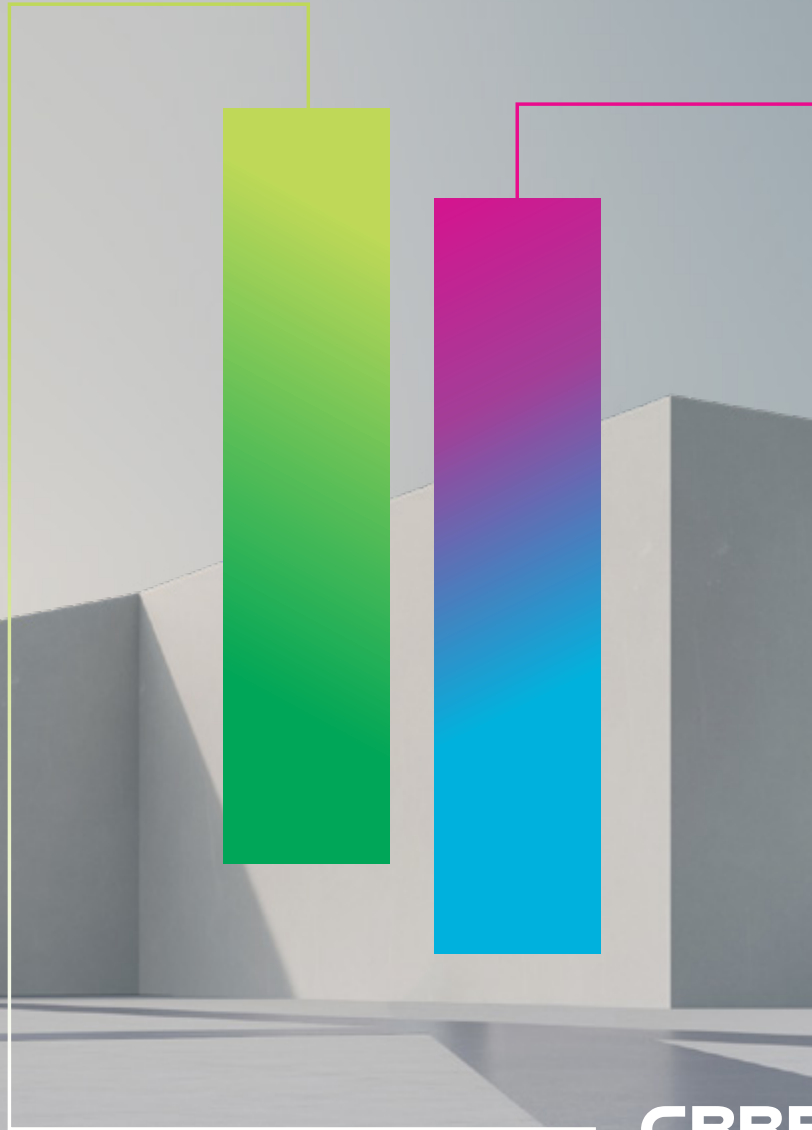


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U.S. REAL ESTATE
MARKET
OUTLOOK

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CBRE

OLD OR NEW NORMAL?

2020 will be remembered in commercial real estate for many things, but perhaps none more so than an acceleration of certain trends that benefited some sectors but punished others.

Industrial & logistics, along with certain alternative sectors like life sciences, cold storage and data centers, have thrived in the COVID era, while others like office, retail and hotels have suffered. With expectations that the COVID crisis may end sometime in 2021, the question will be which of these sectors will be permanently changed and which will return to “old normal” pre-COVID conditions.

Real estate conditions will start 2021 in a state of flux. Certain sectors will grow strongly, but a full recovery of occupier and investor demand will be held back by the continued influence of COVID-19. Spring and summer will see rebirth and renewal of real estate as a vaccine is widely deployed and further government stimulus drives the economy forward.

Industrial & logistics enters 2021 with the strongest fundamentals and investor interest. We anticipate the absorption of another 300 million sq. ft. of industrial space on the back of e-commerce growth. With fast-recovering employment levels, the multifamily sector will shrug off the impact of the crisis in the first half of the year.

It will take until the second half of 2021 for the office sector to begin returning to normal or begin to undergo a permanent change. Only when workers can safely return to the office will the long-term extent of remote working levels become clear. Nevertheless, the powerful forces of teamwork, easy collaboration and face-to-face business interaction should not be underestimated. Investor demand for office assets might surprise on the upside, not least because an expected period of dollar weakness will make U.S. assets very attractive to foreign investors.

Although the retail footprint will continue to contract in 2021, what remains will be stronger, more interesting, more convenient and more experiential. Increased leisure travel will help the hotel sector in 2021, as it has in 2020, but a full recovery is not expected to start until group and business travel resumes in 2022.

Once the COVID-19 crisis is resolved, our attention will again be drawn to the long-term changes to real estate from the digital economy and demographics. It is these and other mega-trends as much if not more than traditional supply-and-demand metrics that will determine how far commercial real estate moves from the old to the new normal. CBRE’s research team looks forward to working with you as you develop and execute your real estate strategies in 2021.

RICHARD BARKHAM

Global Chief Economist & Head of Americas Research

SPENCER LEVY

Chairman Americas Research & Senior Economic Advisor

4 ECONOMY & POLITICS

GDP is expected to end 2020 down by only 4.0%, followed by a 4.5% rebound in 2021.

11 CAPITAL MARKETS

Long-term technological and demographic trends, such as digitalization, will change investor preferences and push the industry to evolve, but capital will continue to target opportunities in real estate.

19 RETAIL

After record growth in 2020, e-commerce sales will slow in 2021 as brick-and-mortar sales rebound. CBRE Research forecasts a decline in the rate of e-commerce sales growth next year for the first time since 2008.

26 MULTIFAMILY

U.S. multifamily investment is expected to increase by 33% in 2021 to \$148 billion.

36 DATA CENTERS

With 373.6 megawatts of development under construction across primary U.S. data center markets, total data center inventory is forecast to grow by 13.8% in 2021.

8 ELECTION IMPACT

President-elect Biden's ability to fully implement his agenda will depend on control of the Senate.

15 OFFICE/OCCUPIER

Demand for office space will remain muted as most occupiers plan for a gradual reentry to the office throughout 2021.

22 INDUSTRIAL & LOGISTICS

Nearly 250 million sq. ft. of industrial net absorption is expected in 2021, more than the previous five-year annual average of 211 million sq. ft.

30 HOTELS

Hotel occupancy should return to pre-COVID levels by 2023.

39 ALTERNATIVES

Investors are attracted to alternatives by their relatively high yields, stable income and diversification opportunities.



ECONOMY & POLITICS

KEY STAT

GDP is expected to contract by 4.0% this year, which should be followed by a 4.5% rebound in 2021.

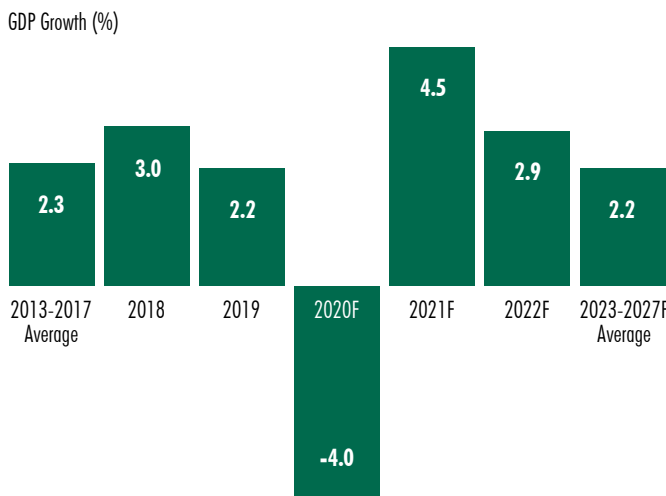
SUMMARY

CBRE forecasts that the strongest growth of 2021 will occur in Q2 and Q3—5.5% and 5.6%, respectively, on an annualized basis—bringing U.S. GDP back to pre-COVID levels in Q3. The real estate recovery is expected to lag that of the broader economy, particularly for the office, retail and hotel sectors.

REAL ESTATE RECOVERY WILL LAG THAT OF BROADER ECONOMY

The U.S. economy entered a deep recession due to the COVID-19 pandemic, with GDP plunging by an unprecedented 31.4% in Q2 on an annualized basis. As the economic lockdown was loosened, employment growth resumed in May and GDP grew by 33.1% in Q3. Full-year GDP is expected to be down by only 4.0%, followed by a 4.5% rebound in 2021. CBRE forecasts that the strongest growth of next year will occur in Q2 and Q3—5.5% and 5.6%, respectively on an annualized basis—bringing U.S. GDP back to pre-COVID levels in Q3 2021. CBRE expects the real estate recovery to lag that of the broader economy, particularly for the office, retail and hotel sectors.

FIGURE 1: U.S. ECONOMIC OUTLOOK – CBRE HOUSE VIEW (PERCENTAGE CHANGES)



Source: CBRE Research, September 2020.

FULL RECOVERY DEPENDS ON MEDICAL SOLUTION

A full economic recovery depends on a medical solution to the COVID-19 pandemic. To that end, there are five vaccines in large-scale U.S. phase three trials. Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, has indicated that a vaccine could be available for all Americans by April 2021. Pfizer

announced on Nov. 9 that its COVID-19 vaccine was found to be 90% effective and that it will seek emergency authorization from the U.S. Food & Drug Administration. Furthermore, several powerful therapeutics are advancing and will be increasingly available next year. CBRE’s view is that a medical resolution will occur in the first half of 2021, allowing further loosening of economic restrictions in the second half.

ADDITIONAL GOVERNMENT SUPPORT NEEDED

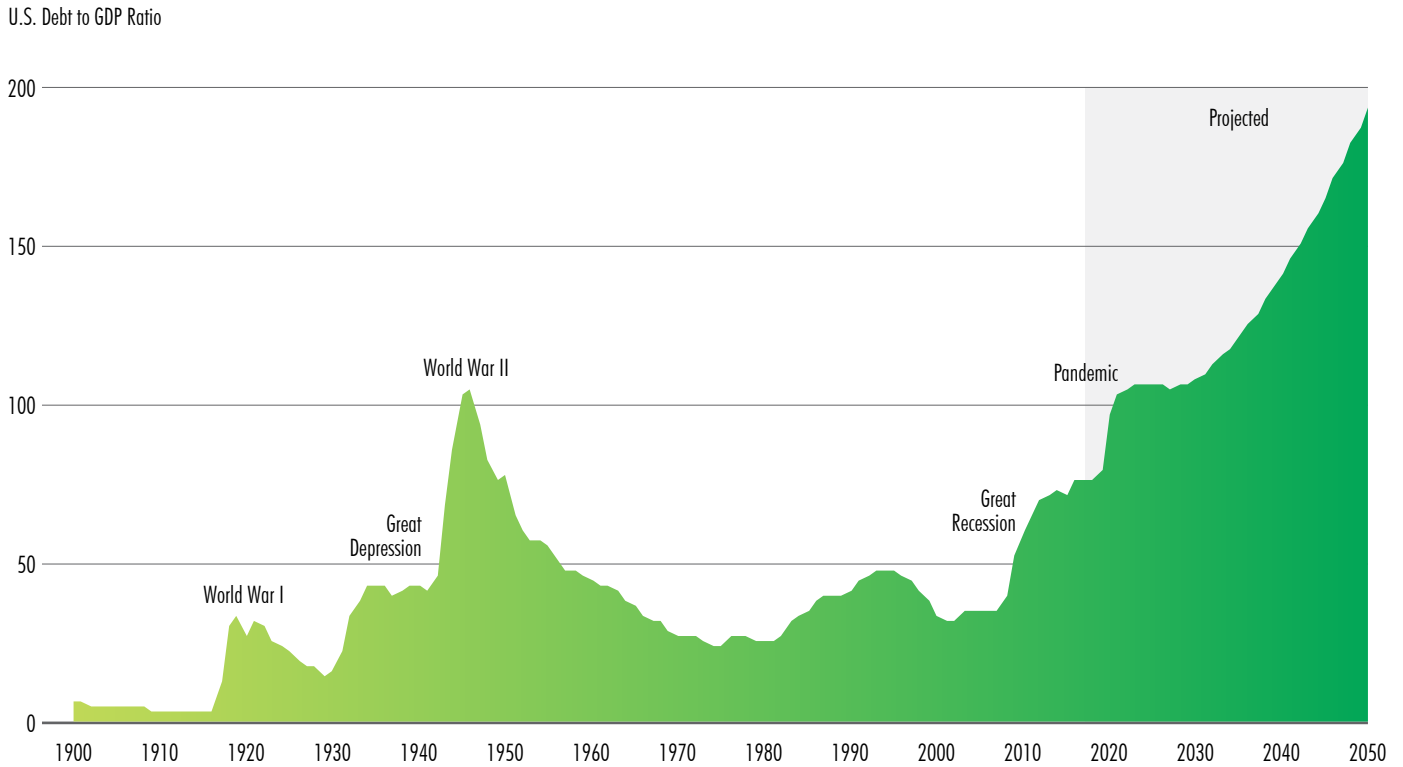
The \$2.2 trillion economic stimulus package delivered by Congress in late March was extremely effective in stabilizing the U.S. economy amid the depths of the COVID-19 crisis. Although there is bipartisan consensus that additional stimulus is needed, Congress so far has been unable to agree on the level of funding. Consequently, the pace of the economic recovery slowed in Q3. Our forecasts assume that additional government aid is forthcoming at some point. This will be particularly important over the near-term for the multifamily (rent payments) and retail (consumer spending) sectors. A strong fiscal response also will lay the foundation for a more rapid recovery across all other property types, including office and hotels.

PAYING FOR GOVERNMENT SPENDING

Government debt levels sharply increased in 2020 as emergency aid flowed into the economy. Concerning as this may be, there is no immediate danger that large developed economies such as the U.S. will not be able to fund their debt because of the surplus of global savings that flows into low-risk sovereign debt. Although rising debt is unsustainable over the longer-term, the federal government has various means to address this, including structural reform to entitlement programs.

Additionally, central banks have been purchasing government debt to keep long-term interest rates down and the economy stimulated. They also can tighten monetary policy through interest rate increases and balance sheet reductions when economic conditions allow. Still, governments cannot rely on quantitative easing (asset purchases) alone. Renewed economic growth will generate revenue to service debts. Combined with fiscal policy adjustments (increased

FIGURE 2: FEDERAL DEBT HELD BY THE PUBLIC, 1900 TO 2050 (% OF GDP)



Source: U.S. Congressional Budget Office.

taxes and spending cuts), this will reduce overall debt-to-GDP ratios. Over the long term, there is a risk that governments could allow inflation to rise significantly to reduce their debt loads.

FED POLICY CHANGE AND ‘LOWER-FOR-LONGER’

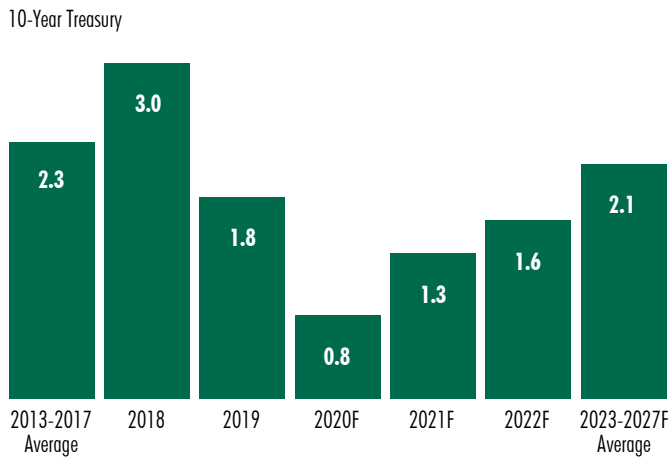
The Federal Reserve recently announced that it would allow inflation to move above the 2% target for several quarters after periods of low inflation. Consequently, the Fed likely will take a much more patient approach to rate hikes, essentially ensuring a “lower-for-longer” rate environment as the economy recovers. For commercial

real estate, this likely will translate into greater downward pressure on long-term cap rates.

Though low interest rates are generally good for commercial real estate, there could be other impacts not widely considered. For example, amid extended periods of extraordinarily accommodative monetary policy, central bankers have become more vigilant about preventing asset bubbles from developing, which could destabilize the financial system. This could include requiring banks to set aside more reserves and tighten underwriting standards. Such actions likely would impact loan-to-value (LTV) ratios for real estate.

Another secondary impact of this policy relates to foreign exchange rates. A lower-for-longer environment is conducive to a weaker U.S. dollar. This could make U.S. commercial real estate assets more attractive to foreign investors—particularly in gateway markets—and put additional downward pressure on cap rates in those markets.

FIGURE 3: 10-YEAR TREASURY FORECAST



Source: CBRE Research, September 2020.

BOTTOM LINE

GDP is expected to contract by 4.0% this year, followed by a 4.5% rebound in 2021. This will be facilitated by a medical resolution of the COVID-19 pandemic by the second half of 2021 and additional fiscal support for the economy. In addition, we expect that interest rates will remain lower for longer with the timeline for initial rate increases pushed back by several quarters. This will put downward pressure on cap rates, but underwriting standards and LTVs could be affected by efforts to maintain financial stability amid low interest rates.

CBRE expects the recovery in property markets to lag the broader economy, due to the unique impact that the pandemic has exacted on the economy and how space is used. As such, with a medical resolution in sight and continued economic growth, CBRE expects that all commercial real estate sectors will have started to recover by the end of 2021.



ELECTION IMPACT

BIDEN PRESIDENCY / LIKELY SPLIT CONGRESS

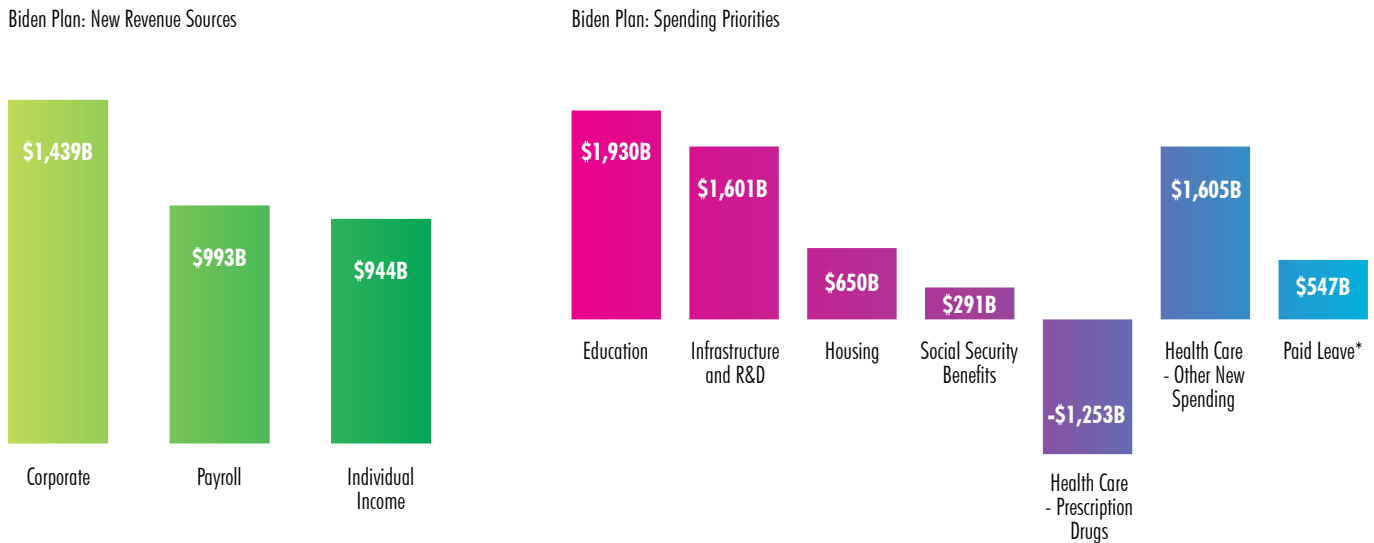
President-elect Biden’s ability to fully implement his agenda depends on which party controls the Senate, which may not be determined until a runoff election is conducted in January for two Senate seats from Georgia. Control of the Senate will greatly influence future government policy and impact short-term growth forecasts. President-elect Biden’s agenda includes both increased revenues (taxes) and spending.

Biden’s platform calls for \$5.4 trillion in additional spending over 10 years. If enacted, expanded health insurance coverage likely will drive demand for medical space closer to the consumer and spur the conversion of some retail space. In addition, \$1.6 trillion for infrastructure and R&D should benefit office and

industrial real estate demand. Housing policy initiatives, such as tying federal funding to zoning changes to spur affordable housing development in suburban locales—as well as increased affordable housing subsidies—could present unique opportunities for residential real estate.

Biden has called for nearly \$3.4 trillion in additional revenue over 10 years. This would be primarily achieved by partially repealing the 2017 tax cuts and further increasing income taxes on those earning more than \$400,000 per year, taxing capital gains as ordinary income for households with incomes over \$1 million, additional payroll taxes and higher taxes on corporations. If implemented, the tax law changes could lower spending in the luxury retail segment and some areas of the housing market. The increase in corporate

FIGURE 4: OVERALL REVENUE AND SPENDING EFFECTS OF THE BIDEN PLATFORM, 2021-2030



*This estimate for Paid Leave comes from the CBO’s 2020 score of H.R. 1185, the FAMILY Act, which Biden’s paid leave plan is based on. https://www.cbo.gov/system/files/2020-02/hr1185_2.pdf

Source: Penn Wharton Budget Model, University of Pennsylvania, September 2020.

Notes: For PWBM’s long-term macroeconomic modeling, all of Biden’s provisions for new spending on Education, Social Security Benefits and Health Care (Spending and Drugs) are assumed to continue past 2031. Some Housing Assistance provisions and all Infrastructure and R&D provisions end in 2031. Paid Leave is not incorporated into PWBM’s macroeconomic modeling.

taxes may impact capital expenditures by businesses and wage and job growth, but this could be offset by a more stable global trade environment. If pursued vigorously, Biden's environment agenda would have implications for commercial building operating costs to meet higher energy efficiency standards.

The presidency and a Democratic Senate would enable Biden to enact large portions of his agenda. Most immediately, a larger federal stimulus package to support the economy would boost real estate demand in the near term. This provides some upside potential to CBRE's 4.5% GDP growth forecast for 2021. More aid to state and local governments could reduce pressure to raise taxes on real estate. However, the popular 1031 tax-free exchange program would be threatened and luxury retail, energy, finance, defense contractors and tech could face headwinds from tax and spending policy changes and increased regulation.

If Republicans retain the Senate, the Biden agenda will be checked and have a more subdued effect on the broader economy and commercial real estate. A more limited fiscal stimulus package would be enacted, with less state aid and the prospect, at some point, of higher state and local real estate taxes. On the other hand, the 2017 personal and corporate tax cuts would remain in place. Like any president, Biden will also have power to influence spending priorities and the regulatory environment, and to enact trade policy. The potential for less trade friction, especially with U.S. allies, may be helpful as the economy pulls out of the pandemic-induced recession. Overall, markets seem to view "split government" favorably and this scenario largely supports CBRE's forecast of 4.5% growth in 2021.

The background features a low-angle shot of a modern building's facade, characterized by a complex, repeating geometric pattern of light-colored panels. Two vertical bars with color gradients are positioned to the right of the text: the left bar transitions from yellow to green, and the right bar transitions from purple to blue. A white rectangular box is centered horizontally, containing the text.

CAPITAL MARKETS

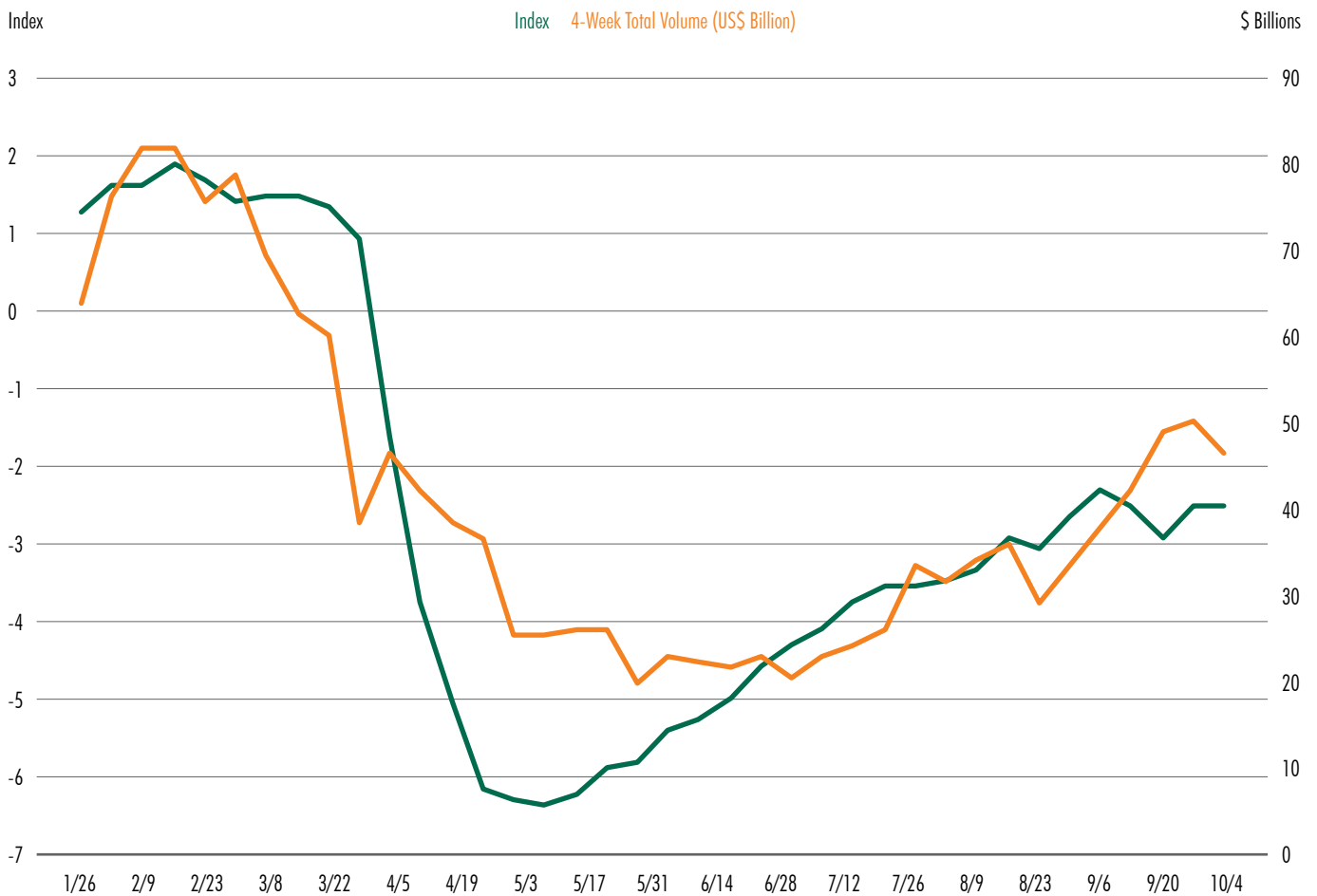


CAPITAL MARKETS CONTINUE BUMPY RECOVERY

The COVID-19 crisis has weighed heavily on commercial real estate investment activity. Investment volume in the first three quarters of 2020 fell by 44% from the same period last year. Nevertheless, activity is increasing as the year goes on. Investment volume increased to \$61 billion in Q3 from a 10-year quarterly low of \$46 billion in Q2.

Investor sentiment also has recovered significantly. CBRE’s Capital Markets Recovery Index—a composite tracker of economic conditions, real estate listings and investor interest—shows a 60% rebound from the April/May bottom. The index is strongly correlated with investment volume.

FIGURE 5: CAPITAL MARKETS RECOVERY INDEX WITH TRANSACTION VOLUME

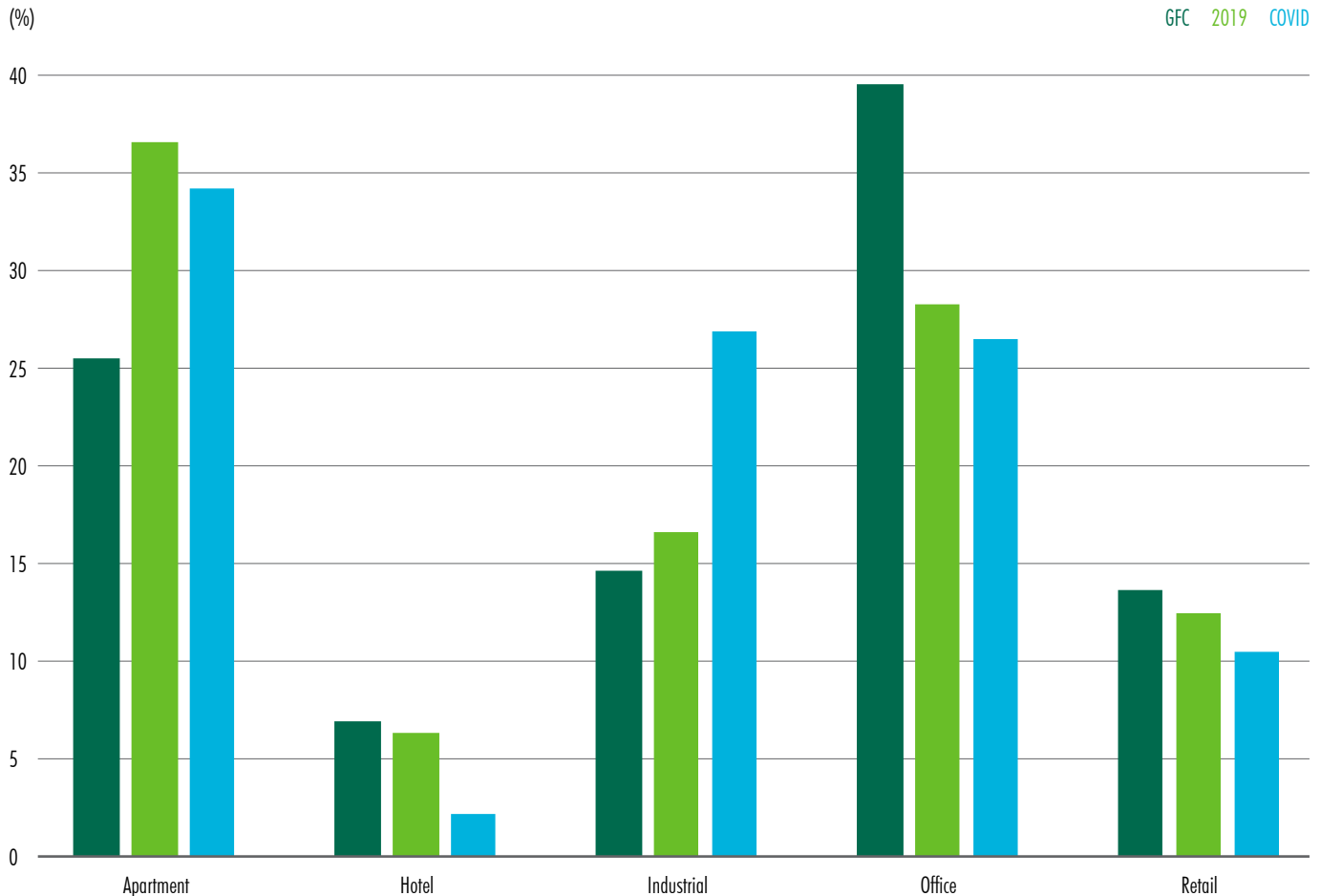


Source: CBRE Research, Real Capital Analytics, Q3 2020.

However, the capital markets remain soft relative to the pre-COVID normal, moving to a stage of price discovery and risk aversion. A disconnect on pricing has occurred between buyers and sellers. Based on CBRE's latest [Cap Rate Survey](#), 61% of buyers are seeking discounts while only 9% of sellers are willing to offer them. Lending activity has also been sluggish due to uncertainty over near-term rental income.

Such indicators suggest a bumpy road over the next six months. But not all real estate assets are equal. During this downturn, investor preferences have shifted strongly toward industrial & logistics assets. Apartment buildings, especially in certain markets like Dallas and Phoenix, have been resilient. Office, retail and hotel assets are called into question, but distressed sales have been very limited.

FIGURE 6: INVESTOR PREFERENCES HAVE SHIFTED



Note: Proportion of investment by property type during Global Financial Crisis (GFC), 2019 and COVID-19 era.
 Source: CBRE Research, Real Capital Analytics, Q3 2020.

WHAT LIES AHEAD?

If a vaccine for COVID-19 is available by mid- to late-2021, the commercial real estate market will normalize based on abundant liquidity, low cost of capital and attractive returns.

Available capital for real estate investment remains more than \$300 billion globally, the majority of which is targeting North America. This wall of capital is a major contributor to the constrained expansion of cap rates. Industrial cap rates are at historic lows.

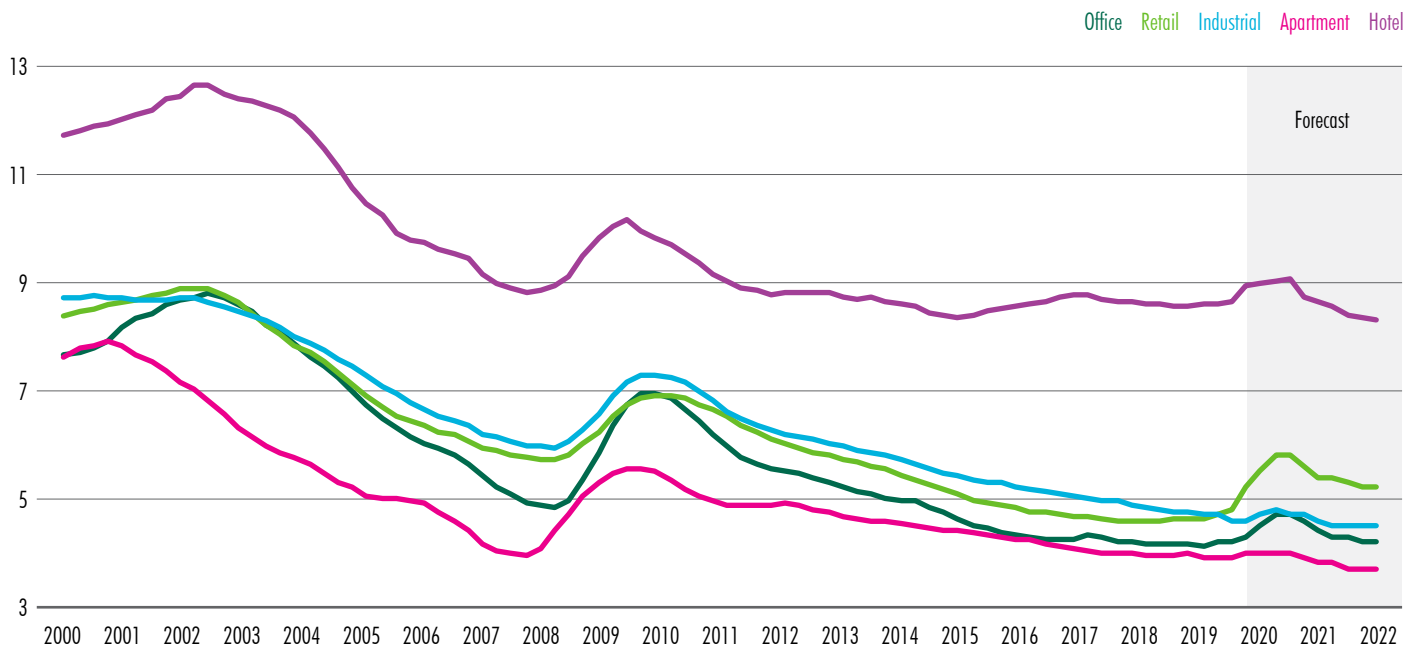
Meanwhile, the Fed plans to keep interest rates near zero until 2023. Both inflation and risk-free yield from 10-year Treasuries declined sharply of late. At the same time, real estate cap rates have remained relatively stable. This rewards investors with a wider yield spread and additional gains from asset value appreciation.

As underwriting and financing normalize, the ultra-low cost of borrowing will help offset potentially slow growth of rental income. To date, the pandemic’s impact on rent levels has been small, thanks to strong fiscal and other policy support that effectively reduced financial distress. However, these conditions could change if the government reduces its balance sheet with tax increases.

Lastly, hedging cost against dollar depreciation has remained low for foreign investors, providing additional cash-on-cash returns when they invest in the U.S. If this continues for the next two years, the U.S. will benefit from increased foreign capital inflows.

As the economy continues to recover, so does the overall demand for real estate. Long-term technological and demographic trends, such as digitalization, will change investor preferences and push the industry to evolve, but investment opportunities and capital for real estate will remain.

FIGURE 7: CAP RATES FOR MAJOR PROPERTY TYPES IN THE U.S.



Source: CBRE Econometric Advisors, Q3 2020.



OFFICE/OCCUPIER

KEY STAT

Demand for office space will remain muted as most occupiers plan for a gradual reentry to the office throughout 2021.

SUMMARY

Office fundamentals should stabilize in 2021, although rents will continue to fall and vacancies will continue to rise at least through the first half of the year. The very gradual reentry of employees to the traditional workplace will constrain transaction activity in 2021 as occupiers reassess their office space requirements. Class A space likely will rebound quicker as more progressive portfolio strategies are employed to support new workstyles brought on by the pandemic. In the interim, this uncertainty is muting investment volume as buildings occupied by long-term creditworthy tenants are favored.

OFFICE DOWNTURN TO STABILIZE

Deteriorating office market fundamentals amid the sharpest downturn since the Global Financial Crisis (GFC) should stabilize next year. Continued economic recovery and an accelerated pace of hiring will counter occupancy declines and negative demand expected to start the year. The nation’s largest, most dense office markets have been disproportionately impacted by logistical constraints in tenant occupancy posed by COVID-19 and likely will struggle the most to emerge from the recession in 2021.

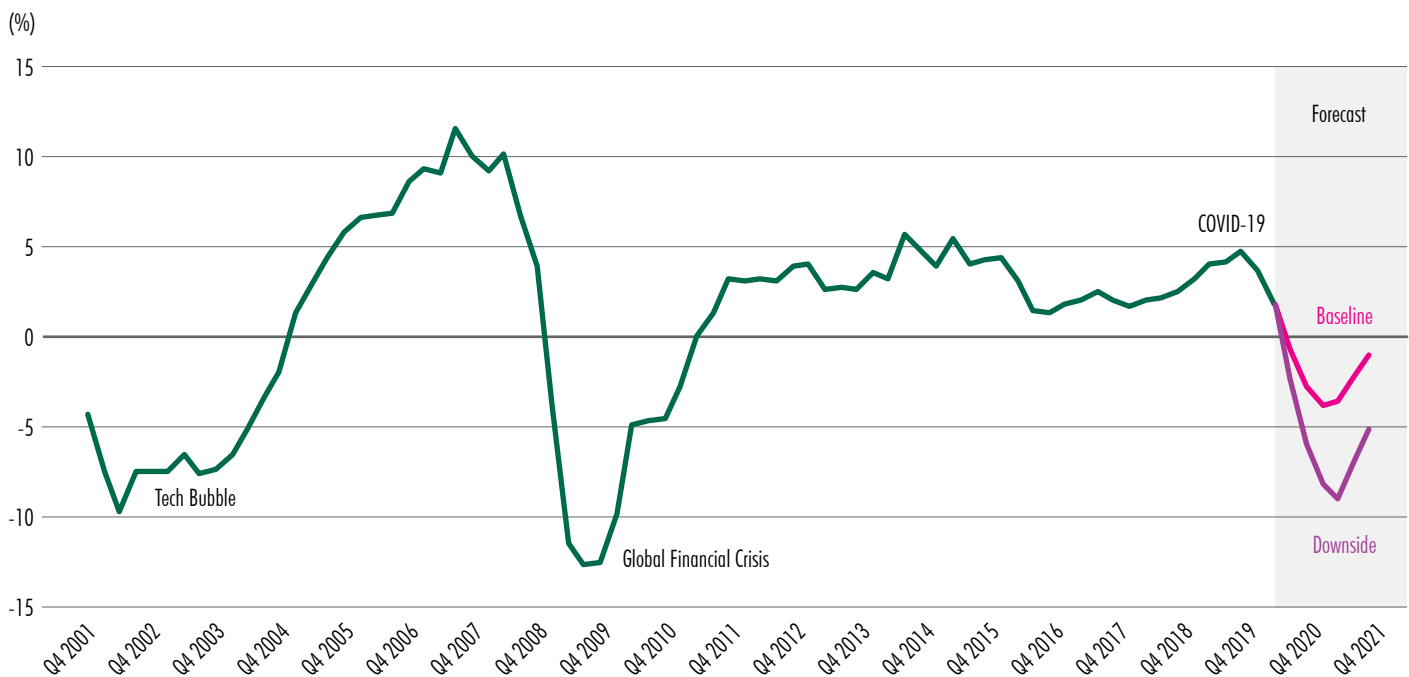
Office vacancy will persist at a stubbornly high rate and rent increases will be difficult to achieve as market conditions remain decidedly in favor of tenants. An overhang of sublease space brought to the market in H2 2020, as well as an elevated level of new office completions, will contribute to persistently high vacancy in 2021. However, the office cycle will bottom out in 2021 as positive net absorption resumes.

URBAN VS SUBURBAN

Suburban office markets are expected to recover faster than their CBD counterparts next year. While suburban office demand lagged that of CBDs after the GFC, the downturn in CBD office markets has been considerably more severe in this recession with disruptions to mass transit. Logistical barriers posed by COVID-19 to higher downtown occupancy will constrain CBDs’ recovery. In addition, a considerable amount of available downtown office supply will cause high vacancy to persist through 2021 at a rate only 80 basis points (bps) below its peak after the GFC.

While suburban office markets also will see increased vacancy, the rate will remain some 3.7 percentage points below its peak after the GFC. Several megatrends such as shifting demographics support a brighter future for suburban offices, but there has yet to be any significant increase in leasing transactions that indicate a major shift by tenants to the suburbs is underway.

FIGURE 8: U.S. OFFICE MARKET RENT FORECAST (Y-O-Y CHANGE)



Source: CBRE Econometric Advisors, Q3 2020.

FLIGHT-TO-QUALITY MAY ACCELERATE

Early evidence suggests that the COVID-induced recession has had a more severe impact on Class A office occupancy than on Class B. In times of recession, Class A properties have historically experienced more volatility and rapidly deteriorating market fundamentals. Once the recovery accelerates in 2021, we expect Class A properties to experience much faster improvement in demand, vacancy and rents, as they have done in past recovery periods.

Occupiers are increasingly demanding flexible space options, shared meeting space, indoor air quality, connected building apps and touchless technology when considering new leases. Buildings that provide these desired amenities may find more favor by enterprise tenants as leasing volume resumes. Occupiers may reduce their amount of leased space in the future, but the quality of that space will become more important.

IMPACT OF REMOTE WORKING ON SPACE DEMAND

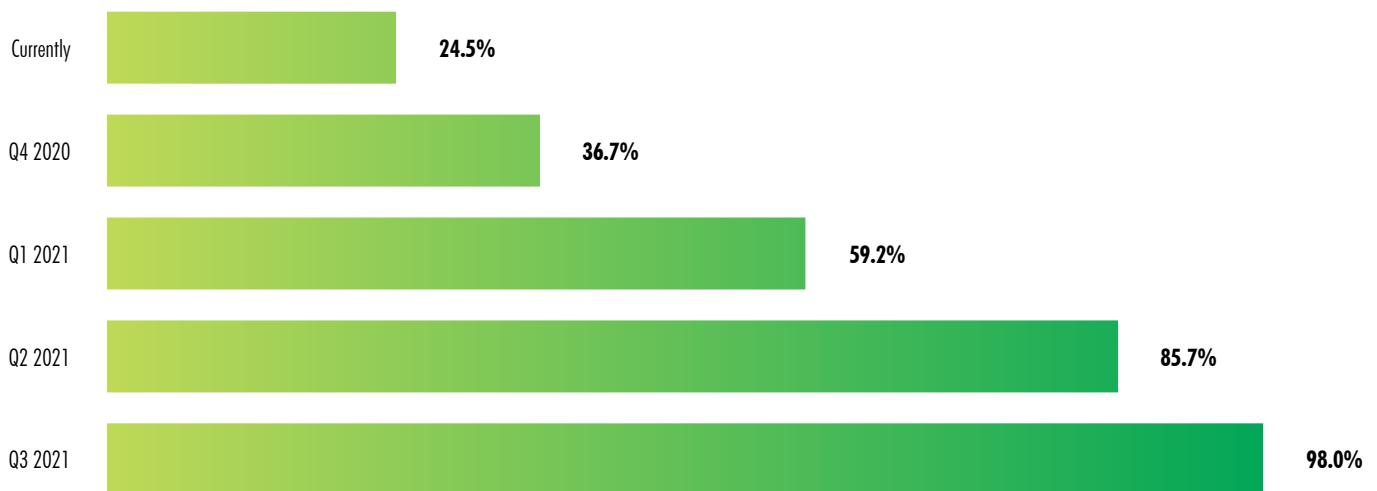
The largest impact of COVID-19 on the office sector is undoubtedly the mass shift to remote working for

previously office-based employees. A [recent CBRE analysis](#) suggests that remote working could cut the overall need for office space by 15%. But office-using employment will continue to grow after the recession and there may be some reversal of recent trends toward diversification. In short, it is too soon to know what the impact of remote working will be on the overall demand for office space, but it may not be anywhere near as much as some analysts suggest.

Despite the easing of certain occupancy restrictions, most companies have not yet returned to the office. Many are planning to gradually allow access to the office next year in hopes that a vaccine is delivered or at the very least there are more effective therapies to control the virus.

When they do return to the office, companies may favor a hybrid work style that combines remote working with office use. Until then, companies are deferring leasing decisions and are reducing their space usage in line with lower economic growth expectations. Negative net absorption, which characterized the second half of 2020, will persist in the first half of 2021.

FIGURE 9: OFFICE RE-ENTRY PLANS BY % OF RESPONDENTS – LIKELIHOOD OF RETURNING TO THE OFFICE IN THE NEAR TERM



Note: Respondents who said they'd return to the office. Excludes responses of "unsure".
 Source: CBRE Occupier Sentiment Survey, September 2020.

Despite a challenging 2020, there were fewer-than-expected flexible office space closures. The industry is expected to rebound in 2021 as occupiers shift their strategies away from long-term capital-intensive commitments. Many say they will strategically incorporate more flexible space options in their portfolios to satisfy temporary space needs, support a more mobile workforce and enter new markets to source talent. Flex space usage is expected to increase in 2021.

UNCERTAIN SPACE DEMAND WILL CAUSE LESS INVESTMENT

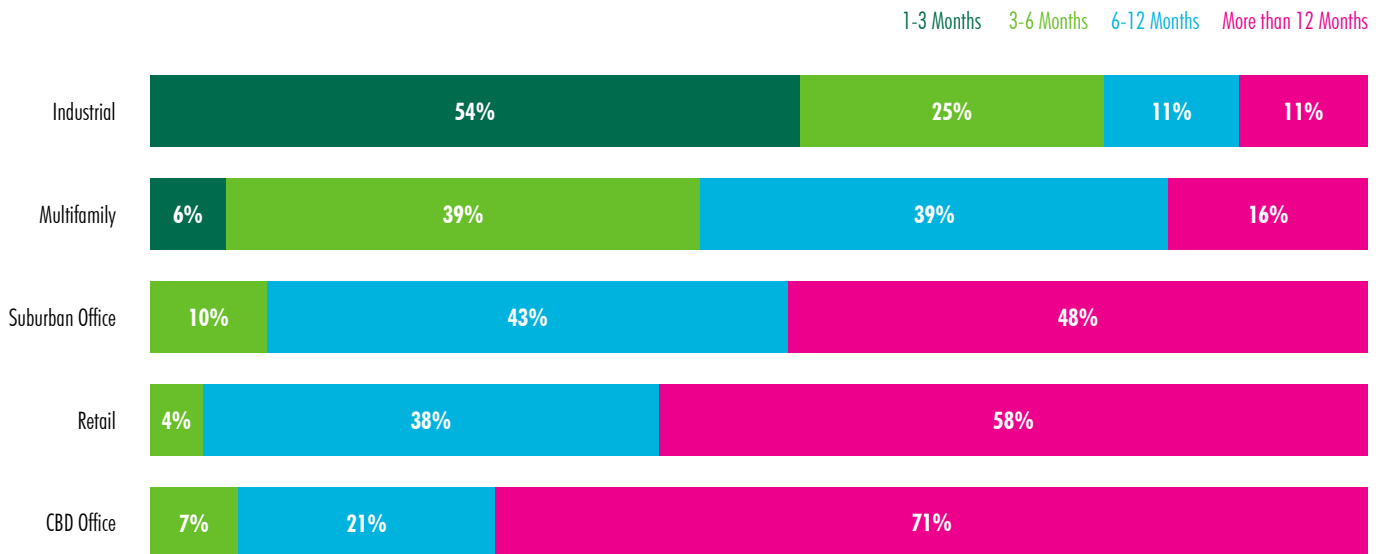
The office sector is expected to have among the slowest recoveries to pre-pandemic investment volumes. This sentiment is likely driven by the uncertainty around office space demand and which markets will benefit most from evolving trends, especially remote working. Investment volume is down significantly in 2020 and likely will remain well below pre-pandemic levels through 2021.

Tenant credit quality, length of remaining lease term and building occupancy levels have become particularly important criteria for office investors.

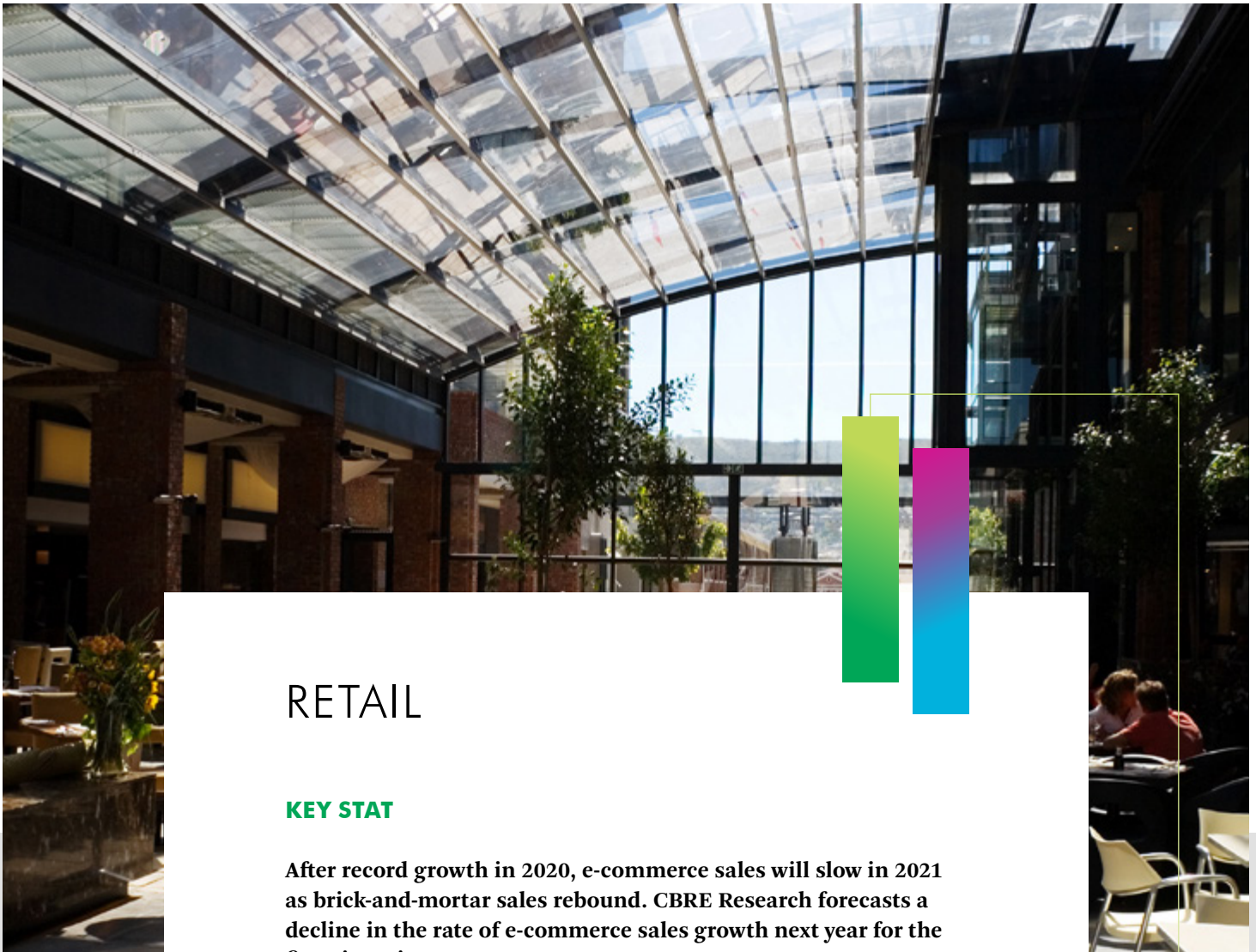
MARKETS TO WATCH

Secondary markets, particularly in the business-friendly Southeast, will perform more favorably in 2021. Raleigh-Durham, Nashville, Tampa and Charlotte will benefit from relatively resilient demand, lower costs and persistent demographic and employment growth. Some larger markets, such as Phoenix and Dallas-Fort Worth, will also benefit from these same demand drivers to a lesser degree. Markets with a high concentration of tech companies like San Jose, Austin and Seattle may stage an unexpectedly strong rebound in demand next year but will still have to absorb a significant amount of new office supply. At the other end of the spectrum, markets with high densities and a dependence on mass transit like San Francisco and New York City will have a slower recovery.

FIGURE 10: SURVEY QUESTION: HOW LONG DO YOU THINK IT WILL BE BEFORE INVESTMENT ACTIVITY RETURNS TO PRE-PANDEMIC LEVELS?



Note: Cap Rate Survey Special Report Q3 2020 conducted during August 2020.
 Source: CBRE Research, September 2020.



RETAIL

KEY STAT

After record growth in 2020, e-commerce sales will slow in 2021 as brick-and-mortar sales rebound. CBRE Research forecasts a decline in the rate of e-commerce sales growth next year for the first time since 2008.

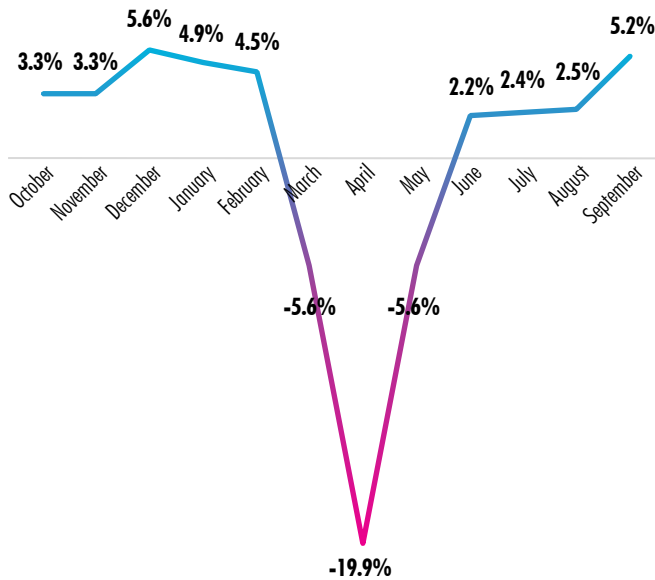
SUMMARY

Brick-and-mortar retail sales are expected to grow in 2021 as e-commerce sales decline after the 2020 COVID-fueled surge. New opportunistic and emerging retailers will capitalize on market conditions to absorb some of the vacancies from bankrupt retailers and store closures. Adaptive reuse and conversion will drive the repositioning of Class B and C malls, which have been hardest hit by COVID restrictions. Private capital will lead investment activity as institutional investors largely retreat from non-core assets and urban markets that face a significantly longer recovery.

REVERSAL OF RECORD E-COMMERCE GROWTH

After falling in February, total retail sales growth resumed in June with the surge in e-commerce sales and the reopening of brick-and-mortar stores. Although e-commerce growth accelerated dramatically this year, the growth rate is unsustainable over the long term largely due to the operational and profitability limitations around shipping and logistics. Brick-and-mortar stores will be valuable in delivering the physical experience and deeper engagement that consumers want, as well as increased profit margins from the fulfillment of digital sales through buy-online/pick-up-in-store or curbside pick-up programs.

FIGURE 11: 2020 TOTAL RETAIL SALES GROWTH (Y-o-Y)



Source: CBRE Research, U.S. Census Bureau, September 2020.

The tremendous pandemic-fueled growth in e-commerce sales this year has begun to stabilize. CBRE Research predicts the rate of e-commerce sales growth will decline in 2021 for the first time since 2008, according to the U.S. Census Bureau. Growth will resume in 2022 at a more moderate pace.

BANKRUPTCIES & STORE CLOSURES WILL CONTINUE NEXT YEAR

Retail bankruptcies in the first eight months of 2020 nearly exceeded the 48 in all of 2010 following the Global Financial Crisis. CBRE Research forecasts that retail store closures in 2020 and 2021 each will exceed the 2019 record of 9,800 reported by the International Council of Shopping Centers (ICSC). Many of the bankruptcies and store closures will result from COVID-related failures of structurally declining categories such as department stores and apparel, along with an unexpected cyclical reversal in restaurants, gyms and entertainment.

New retail concepts will absorb some of the vacancies left by failed retailers. Digitally native brands, medical uses, health and wellness, automotive showrooms and service centers, pet services, franchisee-driven operations and salon suites will capitalize on opportunistic market conditions. Grocers, convenience stores and quick-service restaurants will also grow aggressively. Greater availability of prime second-generation space, declining rental rates and motivated landlords offering concessions and pandemic-related protections will drive lease transactions in 2021. Additionally, private equity and venture capital funds are actively seeking to finance new retail ventures provided they offer justifiable risk-return rewards.

ADAPTIVE REUSE/CONVERSION OF CLASS B & C MALLS

CBRE Research predicts up to a 20% reduction in total U.S. retail real estate inventory by 2025 from the current level of 56 square feet per capita, according to ICSC. This will be triggered by large-scale adaptive reuse and conversion beginning next year, particularly among Class B and C malls that have been the most impacted by failing department stores and apparel retailers causing co-tenancy exposure. Further consolidation among mall REITs is expected in 2021, along with increasing sales of non-core assets as pricing resets under the duress and rising risk of receivership and insolvency.

While mall owners have made bold moves with signature tenants to preserve occupancy and differentiate their properties through merchandising, the current problems

facing malls can no longer be solved solely through leasing. Malls will require a strategic evaluation of the highest and best use of the underlying land and demand drivers for adaptive reuse and conversion. While the fastest-growing conversion category is retail to industrial, adaptive reuse with multifamily, office and hotel components will still be viable on a market and asset-specific basis. Alternative uses also include medical, education, cultural centers and open space. Off-mall big-box retailers will increasingly consider acquisition of mall sites for redevelopment given favorable pricing for prime locations.

Successful adaptive reuse and conversion require overcoming complex regulatory issues, as well as greater flexibility in municipal zoning and department store cooperation granting consent and modifications to reciprocal easement agreements permitting redevelopment. To avoid the further loss of retail uses and sales tax revenue, some local and state jurisdictions may provide more public financing and subsidies for these redevelopments.

CLEAR INVESTMENT BIFURCATION ACROSS PROPERTY TYPES & MARKETS

Lack of clarity around rent rolls and net operating income make it difficult to assess the value of retail properties, furthering a pricing disconnect between buyers and sellers that kept investment activity stagnant in 2020. Investors will approach retail cautiously and selectively in 2021 while there is ongoing rent roll instability due to collection issues and vacancies and until there is greater income and pricing transparency. COVID-related rent negotiations and lease restructuring will continue in 2021 as some retailers will be unable to make balloon payments of deferred rent and will require additional deferral or abatement to stay open. Distressed assets are expected to rise in the first half of 2021, especially for those with debt coming due.

There will be a clear bifurcation between property types and markets. Single-tenant net-leased properties and suburban neighborhood and grocery-anchored centers will continue to be the most resilient. Demand and

greater debt availability in these sectors may lead to cap rate compression next year in certain high-growth markets with low supply.

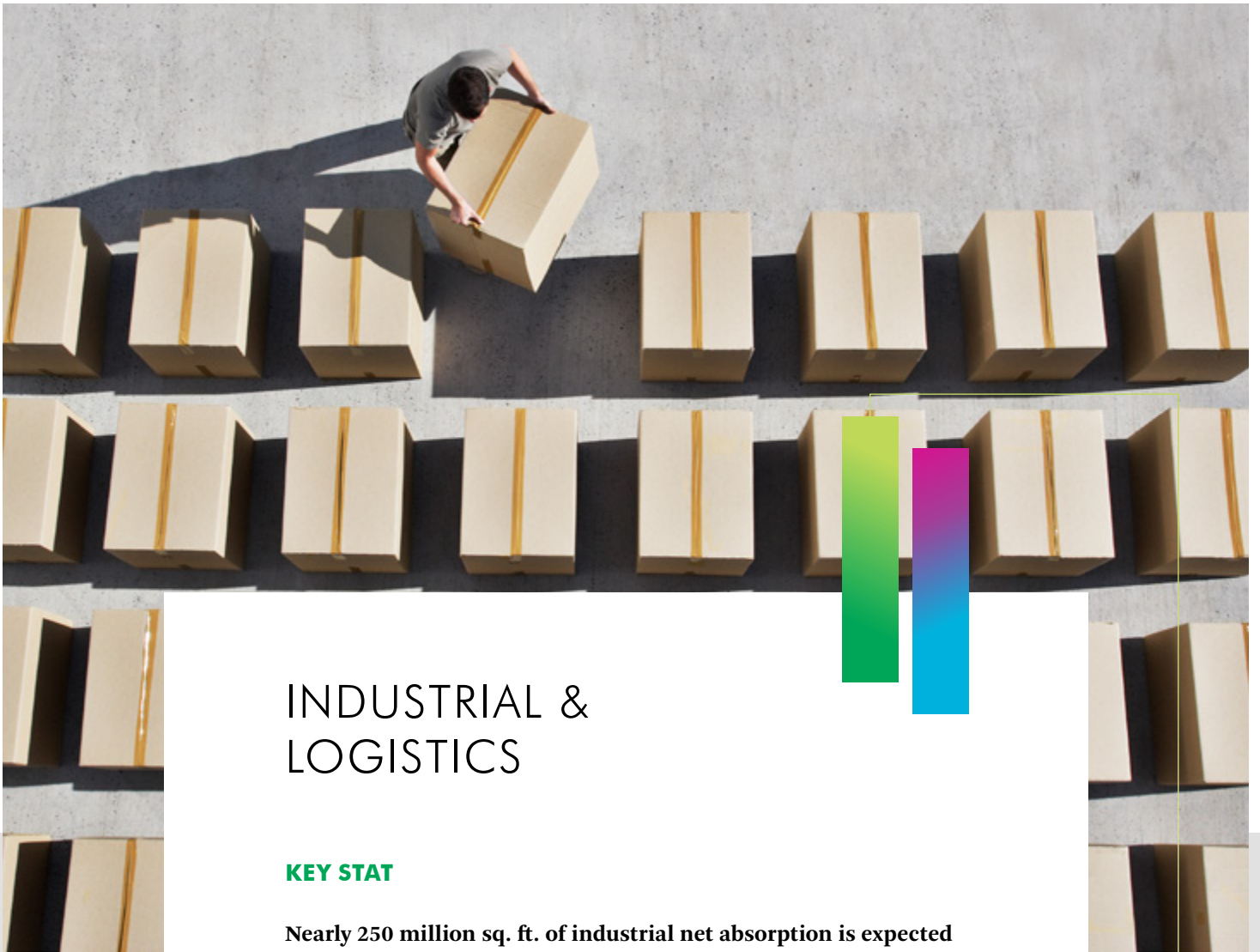
Malls and urban-core retail are facing the steepest declines in occupancy, term length, rent and subsequent valuation. Investors will be reluctant to make any short-term urban retail commitments until office workers and tourists return to cities and there is a determination of whether suburban migration patterns during the pandemic will be longer lasting.

Institutional investors will continue their retreat from retail except for quality core assets like grocery-anchored centers. Private capital will remain active and pave the way for the emergence of a new class of opportunistic investors and private equity firms seeking attractively priced distressed retail assets for stabilization, redevelopment or conversion.

MARKETS TO WATCH

There has been a clear bifurcation in consumer spending, retailer performance and market resilience between suburban and urban-core markets. Recovery is uneven and will take much longer in urban markets like New York City and San Francisco, where demand drivers are still severely handicapped. The suburbs will lead the recovery.

Sun Belt and secondary cities like Phoenix, Austin, Denver, Sacramento and Charlotte will benefit from faster office re-occupancy, increased inward migration, less impact to mobility and a greater prevalence of open-air shopping centers and outdoor space to enhance capacities. These markets will see less rent decline and likely will bottom out sooner than other markets. While availability will increase due to rising bankruptcies and store closures, there is better potential for absorption and adaptive reuse/conversion based on market strength. New “Zoom towns” are also emerging during the pandemic. Cities like Bend, Oregon and St. Louis with a smaller population base are benefitting from a rapid influx of residents relocating from larger cities for a lower cost of living as their jobs become more remote-friendly.



INDUSTRIAL & LOGISTICS

KEY STAT

Nearly 250 million sq. ft. of industrial net absorption is expected in 2021, more than the previous five-year annual average of 211 million sq. ft.

SUMMARY

The U.S. industrial market will continue to flourish next year with low vacancy rates, record-high rental rates, robust development and a return to pre-COVID levels of absorption gains. Demand will be driven by an increase in online sales. Occupiers will expand both by location and size of facilities to accommodate supply sourcing, inventory control and customer reach. While economic and trade volatility remain potential headwinds, the volume and source of consumption will continue to dictate demand.

E-COMMERCE WILL DRIVE DEMAND NEXT YEAR

Industrial has been one of the most resilient real estate sectors amid the COVID-19 crisis, buoyed by rising e-commerce demand. Year-over-year e-commerce growth surged to 44.5% in Q2 from 14.8% in Q1. This has put pressure on retailers, wholesalers and third-party logistics companies (3PLs) to reach consumers while lowering transportation costs.

Demand for space in the near term will be driven by e-commerce. CBRE Research has found that \$1 billion in incremental e-commerce sales generates 1.25 million sq. ft. of warehouse space demand. Therefore, net absorption is projected to reach nearly 250 million sq. ft. in 2021, more than the previous five-year annual average of 211 million sq. ft. This will spur new construction, which is already near-record levels, and strong preleasing of speculative projects.

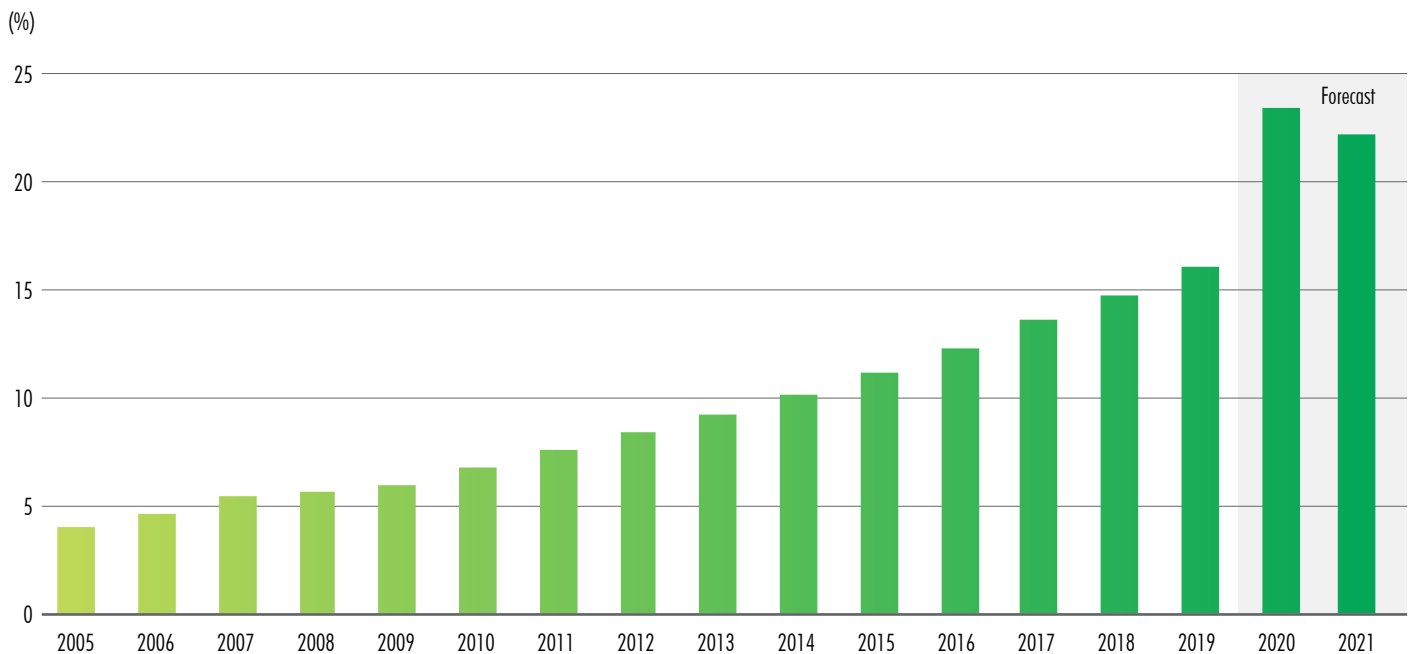
MORE RETAIL-TO-INDUSTRIAL CONVERSIONS NEXT YEAR

Given the increase in online shopping, retail-to-industrial conversion projects likely will accelerate in 2021 but should not lead to any oversupply given the challenges with such conversions in residential areas.¹ There is strong demand for infill warehouse space in urban cores, but land constraints and high costs have limited new development. Adaptive reuse of retail buildings for industrial occupiers is expected to accelerate in 2021.

Overall, new industrial completions are forecast to jump by 29% next year, according to CBRE Econometric

1. For more information on retail-to-industrial conversions, see CBRE Research MarketFlash [here](#).

FIGURE 12: E-COMMERCE SALES PENETRATION (% OF TOTAL RETAIL SALES)



Source: CBRE Research, U.S. Census Bureau, October 2020.

Advisors. Given strong preleasing of speculative projects (38% as of Q3), demand is expected to keep pace with new supply, especially as occupiers flock to modern warehouse space.

INVENTORY CONTROL A TOP CONCERN

Inventory control will be a prime focus of industrial occupiers next year, as they increase their footprints to store “safety stock” in case of any supply chain disruptions. Many suppliers will increase inventories from 15 days to as high as 60 days. Wholesalers and outsourced 3PLs will be expected to significantly increase inventories onshore to avoid the disruptions from trade conflicts of the past year.

Many companies are utilizing a “China-plus-one” strategy to diversify product sourcing and limit any supply chain disruptions related to COVID-19. Source countries west of Singapore, including Europe, will generally use U.S. East Coast ports, while those east of Singapore will use West Coast ports and Central and South American countries will use Gulf and Southeast ports.²

Onshoring of product to the U.S. or Mexico is plausible but will present real estate, logistics and labor challenges. Diversifying or completely changing supply sources away from Asia is a long and arduous task with uncertainty over how much industrial real estate demand will be affected.

MARKETS TO WATCH

The Southwest and Southeast U.S. will have the highest rates of population growth over the next five years. In the Southwest, the Inland Empire will remain the dominant big-box industrial market. Phoenix, Las Vegas, Denver, Salt Lake City and Reno also are posting robust industrial fundamentals and development because of their proximity to burgeoning populations.

Texas will provide the most opportunities for investors and occupiers with forecast population growth of 9% over the next five years, largely benefiting the Dallas-Fort Worth, Houston and San Antonio industrial markets.

2. For more information on global trade, see CBRE Research MarketFlash [here](#).

Meanwhile, El Paso will benefit from its border location with Mexico and the recently enacted United States-Mexico-Canada Agreement (USMCA), which should increase its manufacturing and distribution base. Industrial asking rents in El Paso are forecast to increase by 28.5% over the next five years, according to CBRE Econometric Advisors.

The Southeast’s primary driver of demand will be pro-business state governments offering low taxes, location incentives and training programs for distribution employees. Robust investments to modernize logistics hubs will help occupiers reach a larger number of consumers surrounding the seaport markets of Charleston, Savannah and Virginia, as well as the inland port markets of Greenville, S.C., Atlanta and Central Florida.

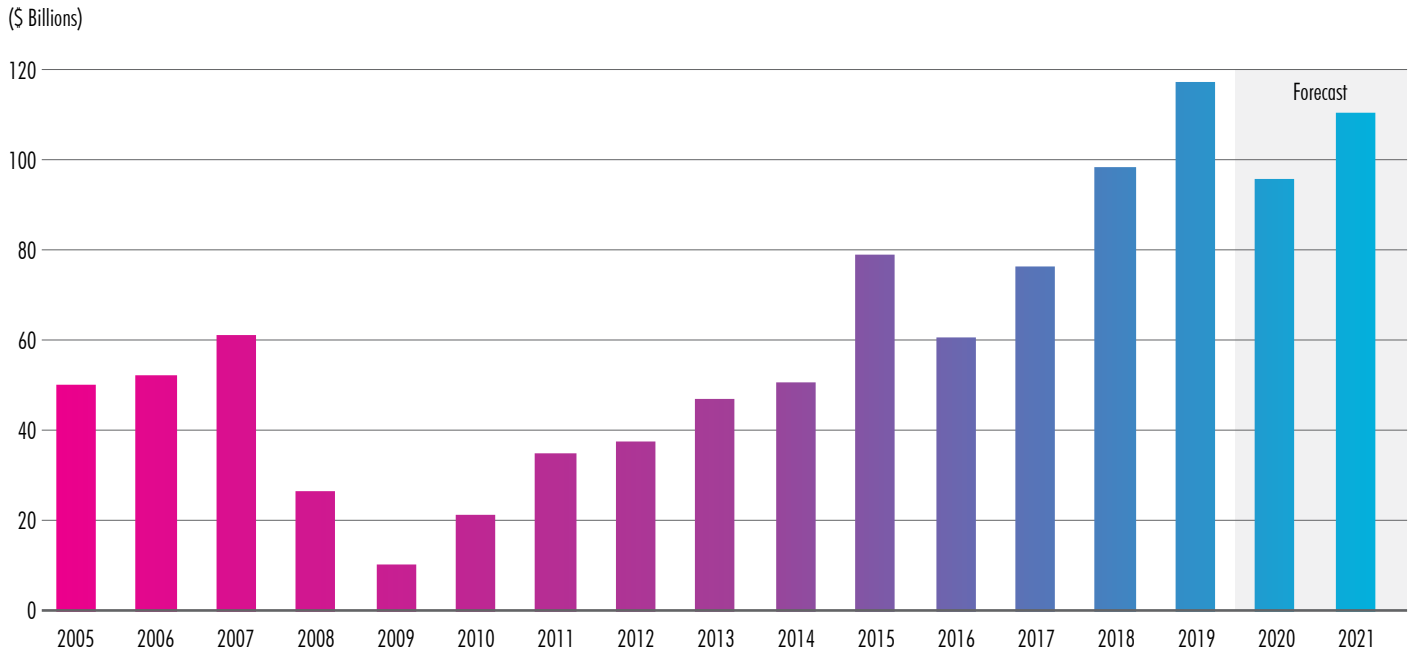
INVESTORS WILL SEEK NEW OPPORTUNITIES

Overall industrial investment sales volume increased by 17% in the first half of 2020; however, it declined by 39% year-over-year in Q2. Despite the Q2 decline due to COVID-19, sale prices were largely unchanged and cap rates were either stable or slightly lower. Despite record-low cap rates, capital is expected to continue flowing into the industrial market from both domestic and foreign investors. Most expect rental rate growth over their holding period, which will offset a low going-in cap rate. Industrial real estate will be a haven for investors compared with other commercial property types negatively impacted by the pandemic.

Many core industrial portfolios are institutionally owned, so it is difficult for other types of investors to expand into this segment of the national inventory. They will look for opportunities in two other segments:

1. Modern Class A buildings in emerging markets near logistics hubs and growing population centers, including Salt Lake City, Greenville-Spartanburg, Phoenix, Las Vegas, El Paso and Florida’s I-4 Corridor.
2. Class B and C light-industrial buildings in urban markets with below-average vacancy rates, including Northern and Southern California, Chicago, the New York Tri-State Area and Miami.

FIGURE 13: TOTAL U.S. INDUSTRIAL SALES VOLUME FORECAST



Source: Real Capital Analytics, CBRE Research, Q3 2020.

Strong fundamentals will continue to put upward pressure on rents, fueling investor demand. Overall industrial rents grew by 6.3% year-over-year in Q2 and this level of growth is expected to continue in 2021. In some cases, rent growth will be higher by market and size segment. Nearly 80% of U.S. industrial markets will see positive rent growth over the next 12 months and most will exceed their historical average over the next several years, according to CBRE Econometric Advisors.

DEMAND FOR NEW DESIGN FEATURES

Rising e-commerce fulfillment will require new design features for warehouse and distribution buildings, including ceiling heights upwards of 40 feet, multiple mezzanine floors and 3 million total square feet or more. In the short term, many of these buildings will be build-to-suits and significantly boost net absorption totals.

In addition to heightened awareness of safety and health measures due to COVID-19, there will be an increased

need for technology and sustainability leading to bigger power requirements for machinery, robotics and other picking-and-sorting technology. More warehouses will have HVAC systems for employee comfort and to keep machinery at optimal operating temperatures. Taller, more environmentally conscious and tech-centric buildings will be the norm. Occupiers will demand more skylights and renewable energy sources. Other sustainable features will provide water savings, recycling capabilities and eventually charging units for electric trucks.

While product sourcing, inventory control and new building features will be top of mind for occupiers, the sources and volume of consumption will dictate where occupiers locate and their total space demand. As retail sales remain strong and the share of those sales from e-commerce increases, industrial demand from both occupiers and investors will remain robust for the foreseeable future.

A photograph of a modern building with a white and grey facade and a blue sky. A colorful bar chart with two bars is overlaid on the right side of the image. The first bar is a gradient from yellow to green, and the second bar is a gradient from purple to blue. The chart is enclosed in a thin yellow border.

MULTIFAMILY

KEY STAT

U.S. multifamily investment is expected to increase by 33% in 2021 to \$148 billion.

SUMMARY

The multifamily sector will have a steady recovery in market fundamentals and investment activity next year. Suburban submarkets and the Midwest and Southeast regions will continue to outperform and provide good investment opportunities. Urban submarkets, particularly in gateway cities, have been hardest hit by the pandemic but will provide longer-term upside potential.

PATH TO FULL RECOVERY IN 2021

Multifamily weathered the 2020 recession better than most property sectors—only industrial held up better—and market deterioration was far less than in previous recessions. Still, it was a tough year for multifamily as many owners lost rental income plus ancillary income from waived fees, deferred rents and delinquencies.

CBRE forecasts a return to pre-COVID vacancy levels and a 6% increase in net effective rents next year, with a full market recovery occurring in early 2022. The economic rebound will lead to rising multifamily demand, largely from “unbundling”—certain renters moving out of their parents’ homes or those of friends as job opportunities provide more financial flexibility to live independently. Demand levels in 2021 likely will fall short of pre-COVID peaks in 2018 and 2019 but should rise significantly from 2020.

Vacancy rates for affordable multifamily housing will remain relatively low in 2021. Unlike in previous recessions, more affordable housing inventory (Class B and C) maintained low vacancy rates and modest

rent growth in 2020. Class C properties had higher delinquencies.

Class A assets were impacted the most by COVID-19 this year due to higher turnover from young adults moving back home, steady delivery of new supply and renters seeking less expensive housing. Class B assets should continue to outperform in 2021 with low vacancy and steady rent growth. Class A assets may not begin recovering until midyear.

Development will remain robust next year. Most of 2021’s scheduled deliveries were started long before COVID-19 and likely will reach 280,000 units on top of the estimated 300,000-unit total this year. This level of new supply will temper improvement in Class A vacancies and rents in many markets.

AN URBAN TO SUBURBAN SHIFT

The COVID-induced recession impacted urban submarkets much more than suburban ones in 2020. As a result, suburban submarkets will lead the multifamily sector’s recovery in 2021 while urban submarkets will lag.

FIGURE 14: MULTIFAMILY URBAN SUBMARKETS – CHALLENGES AND CONSIDERATIONS FOR RECOVERY

	FACTOR	CHALLENGES	RECOVERY PATH & CONSIDERATIONS IN 2021
Economy	Income	Loss of job, reduced income, loss of confidence in future income and employment opportunity.	Most industries recovering steadily (though not all, such as entertainment, tourism, hospitality, retail).
	WFH/WFA	With work-from-home/work-from-anywhere practices common for office workers, living near the workplace is far less relevant.	Most office workers back at office by Q1, but "new norm" more likely 30% to 60% at office translating to less emphasis on living in close proximity to work.
COVID-19 Related	Urban Amenities	Limited availability of entertainment, restaurants/bars, cultural amenities, sports, etc.	Urban amenities continue to return through 2021 (pace partly dependent on vaccine diffusion process); 80-90% back by end of 2021.
	Public Transit	Many renters uncomfortable taking public transit; private transportation options limited, too expensive or impractical in many cities.	Once a vaccine is widely available and widely distributed, fear factor should subside fairly quickly.
	Living Space	More living space desired as renters spend more time at home.	This should diminish as people go back to school and work; however, hybrid nature of both will likely be a feature of the "new normal."
	Outdoor Space	Many renters desire greater access to outdoor options as an outlet for long hours in apartments.	Continued opening up of public outdoor amenities will mitigate this factor; still, some renters will continue to move to less dense areas.
Secular Trends	High Rents	Cost-benefit calculus: with less benefits from urban living, justification of high cost of urban living comes into question.	As urban living conditions improve, high rent becomes less of factor; reductions in urban rents will entice some new residents; however, some renters who became accustomed to more affordable suburban rents may not return due to costs.
	Lifestyle	Millennials moving into life stages where urban living is often traded in for less-dense housing options in other submarkets and/or markets.	Likely to continue to put downward pressure on urban multifamily demand; urban living seems to be appealing to Gen Z, but it's a smaller cohort (smaller number in each age group).

Source: CBRE Research, Q4 2020.

Five major COVID-19-related factors diminished the appeal of urban submarkets in 2020: remote working requirements, the closing of a portion of urban amenities, the reluctance to use public transit, a desire for more living space and a desire for greater access to the outdoors. Non-COVID-related factors exacerbated the situation, including the high cost of urban apartments and shifting demographics. Millennials are reaching life stages where urban living is often traded in for larger housing options in less-dense submarkets.

There are no indications that 2020's decline in urban multifamily demand is permanent or there is an impending return to the hollowed-out cities of the 1970s and 1980s. Yet urban submarkets will lag in the multifamily sector's overall recovery. Lower-density and less-expensive suburban submarkets held up remarkably well in 2020 and are positioned to lead overall market performance in 2021.

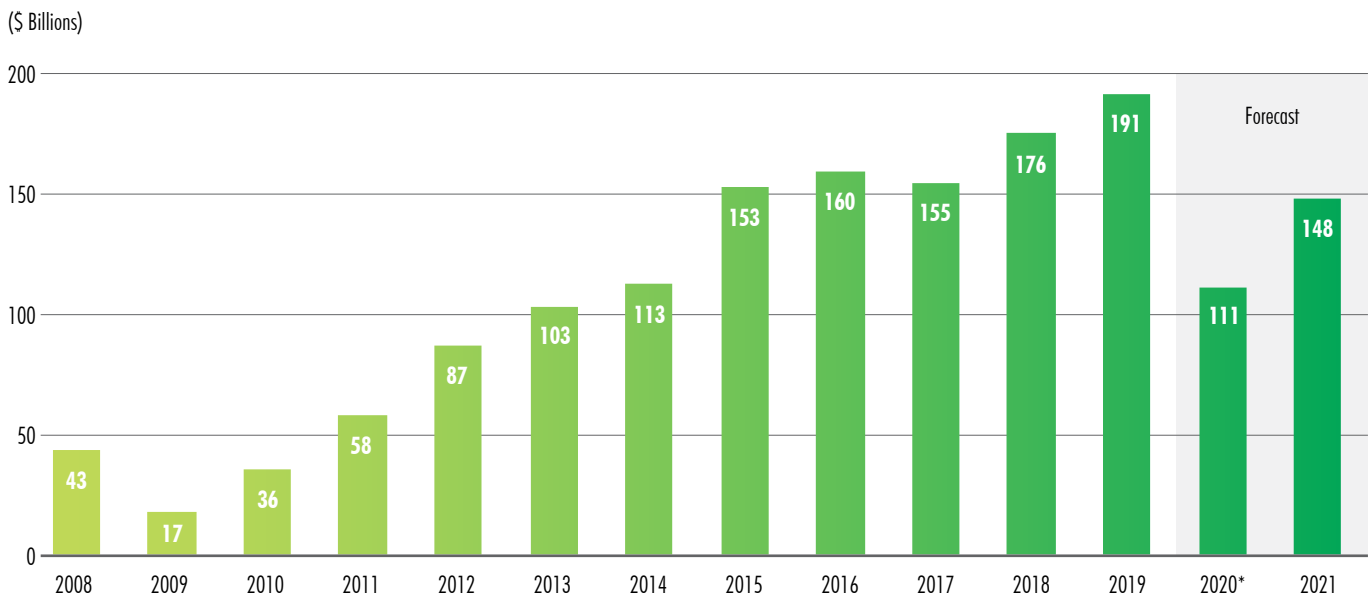
INCREASED MULTIFAMILY INVESTMENT IN 2021

With steadily improving market conditions, multifamily investment volume is expected to increase in 2021. CBRE Research predicts U.S. multifamily investment volume will reach about \$148 billion next year, lower than 2019's record level of \$191 billion but a 33% gain over the 2020 estimate of \$111 billion.

Investor demand for multifamily assets this year was more than previous recessions would have indicated. Pricing held up quite well. Still, many investors moved to the sidelines as the COVID-19 pandemic spread. With greater clarity on future revenue streams, institutional buyers and value-add investors should become much more active next year. Offshore buyers likely will increase their activity, especially if travel restrictions are eased.

CBRE forecasts a continuation of low interest rates next year. Favorable mortgage rates will provide further incentive for increased investment. The two key multifamily lenders—Fannie Mae and Freddie Mac—should have sizeable capital availability to support increased buying activity.

FIGURE 15: MULTIFAMILY INVESTMENT TO REBOUND WITH 33% GROWTH IN 2021



*2020 forecast is based on actual numbers through September.
 Source: CBRE Research, Real Capital Analytics (historical), Q4 2020.

INVESTMENT STRATEGIES FOR 2021

Suburban assets in the Midwest and Southeast regions will provide the best opportunities for solid market performance and achieving expected revenues next year. In the Midwest, Indianapolis was the best-performing market in 2020. Memphis, Detroit, Columbus, Cleveland, Cincinnati, Kansas City, Louisville and St. Louis also were among the best in the country.

Most Southeast metros weathered the 2020 recession relatively well. The leaders were Greensboro, Jacksonville, Richmond and Virginia Beach. Atlanta, Charlotte, Raleigh and Tampa also performed relatively well and are positioned for solid performance in 2021.

Multifamily segments that had greater market deterioration in 2020—such as Class A assets in urban submarkets, particularly in gateway cities—may not stabilize until well

into 2021 and present more investment risk. Buyers may seek pricing discounts for such assets, but significantly discounted pricing will remain difficult to find.

The most impacted metros in 2020 were San Francisco, San Jose and New York. Other underperformers included Los Angeles, Boston, Seattle, Oakland, Austin, Miami, Chicago, Washington, D.C. and Orlando. Among these, investors may favor high-tech markets for their potential quicker economic recovery, but tech firms' remote working policies may not restore multifamily demand as quickly.

While the large, diversified high-growth metros of Phoenix, Dallas/Ft. Worth and Denver performed at about the national average in 2020, their demand dynamics are so compelling that they will definitely be on investors' radar in 2021.



HOTELS

KEY STAT

Hotel occupancy should return to pre-COVID levels by 2023.

SUMMARY

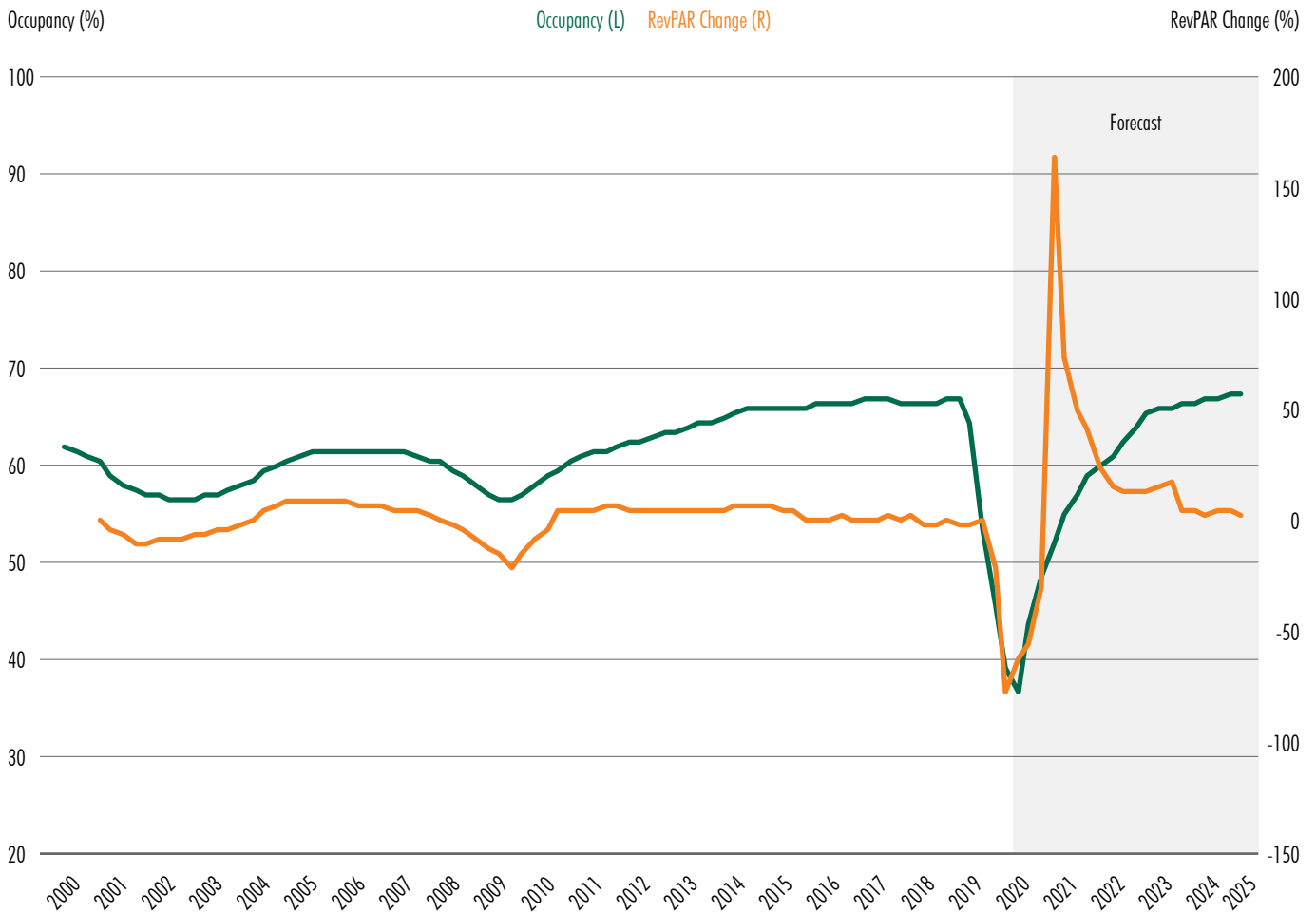
COVID-19 continues to affect the hotel industry. Fear, social distancing and economic turmoil have lowered hotel demand to unprecedented depths. Beyond the crisis, the outlook for travel is strong and resilient. There have been recent improvements in leisure travel and overall economic recovery is predicted to be relatively swift.

BUMPY ROAD AHEAD

Since the outbreak of COVID-19 in Q1, hotels have seen a dramatic downturn in demand. Fear of infection, mandated closures and reduced business travel caused a dramatic drop in the lodging business. Figure 16 illustrates the precipitous drops in occupancy and RevPAR this year, and forecasts the path to recovery through 2025.

Effects of the pandemic on the hotel industry were felt most strongly in Q2, as lockdown mandates peaked in April and May and caused drops in occupancy and RevPAR not seen since the Great Depression of the 1930s. Occupancy is not expected to return to pre-COVID-19 levels until 2023, followed by RevPAR in 2024.

FIGURE 16: NATIONAL HOTEL OCCUPANCY (Q4-CENTERED AVERAGE) AND REVPAR CHANGE



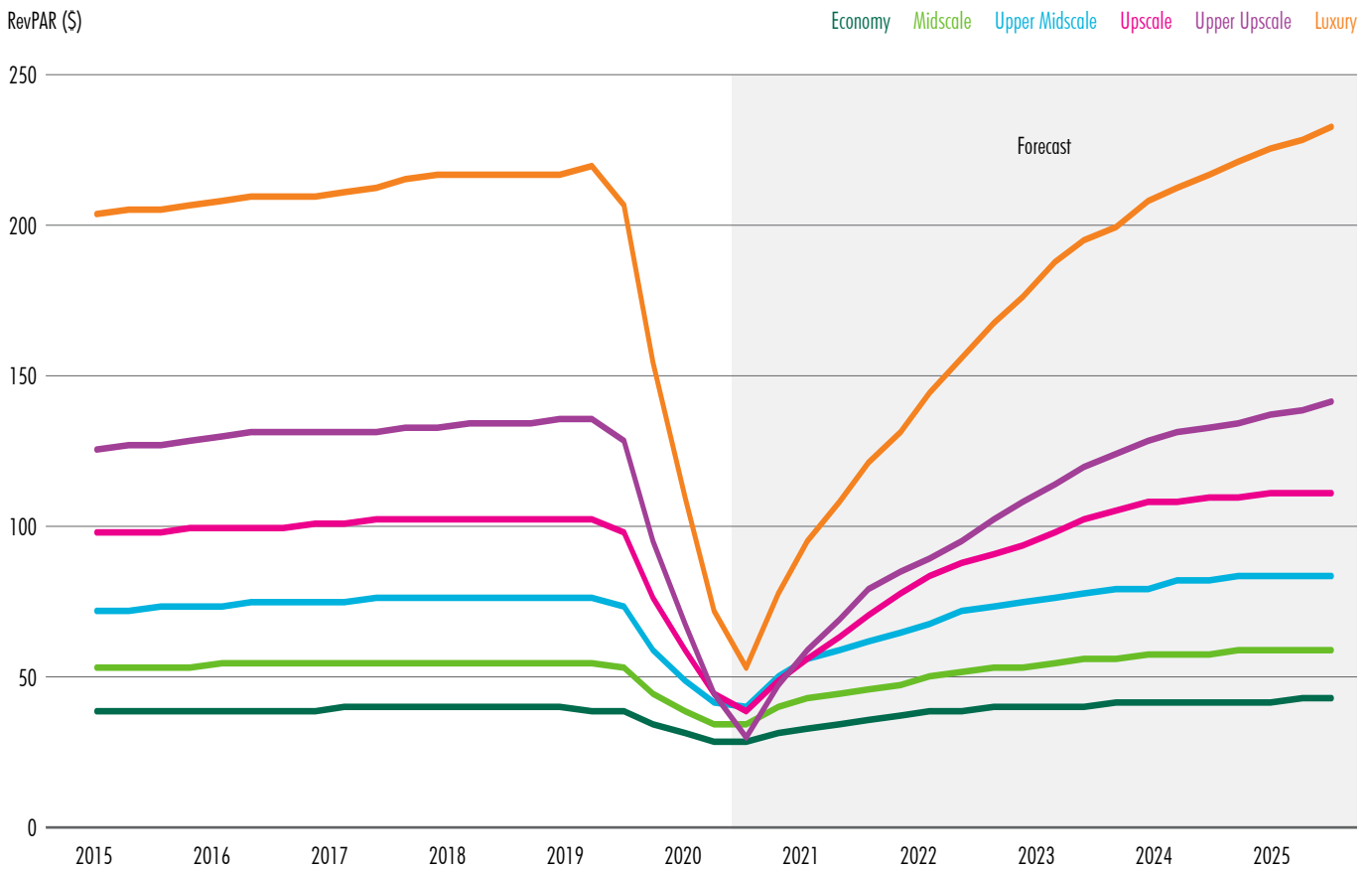
Sources: CBRE Hotels, Kalibri Labs, Q2 2020.

CHAIN SCALE RECOVERY

Higher chain scales have suffered the largest percentage and absolute drops in RevPAR this year. Upper upscale chains were particularly hard hit, with RevPAR briefly dropping below all other chain scales except for economy. Higher chain scales will take the longest to recover to pre-COVID levels. While economy and midscale chains are poised to regain pre-COVID RevPAR levels by late 2022, upper midscale and upscale chains will take until 2023 or 2024 to recover. Upper upscale and luxury chains will take the longest to regain pre-COVID RevPAR levels by late 2024 or 2025.

A distinguishing feature of the upper chain scales from the middle and lower scales is a dependence on business and group travel. Large groups and weekday business travelers traditionally are a source of steady and reliable room revenues, as well as opportunities for hoteliers to increase food & beverage and other ancillary revenues. CBRE forecasts that the resumption of group travel will take some time, involving a ramp-up period to restart, and thus will drive down occupancies and slow ADR growth for the higher-priced chain scales and property types that depend more heavily on food & beverage revenue.

FIGURE 17: NATIONAL NOMINAL REVPAR BY CHAIN SCALE (Q4-CENTERED AVERAGE)



Source: CBRE Hotels, Kalibri Labs, Q2 2020.

DRIVE-TO DESTINATIONS WILL RECOVER FIRST

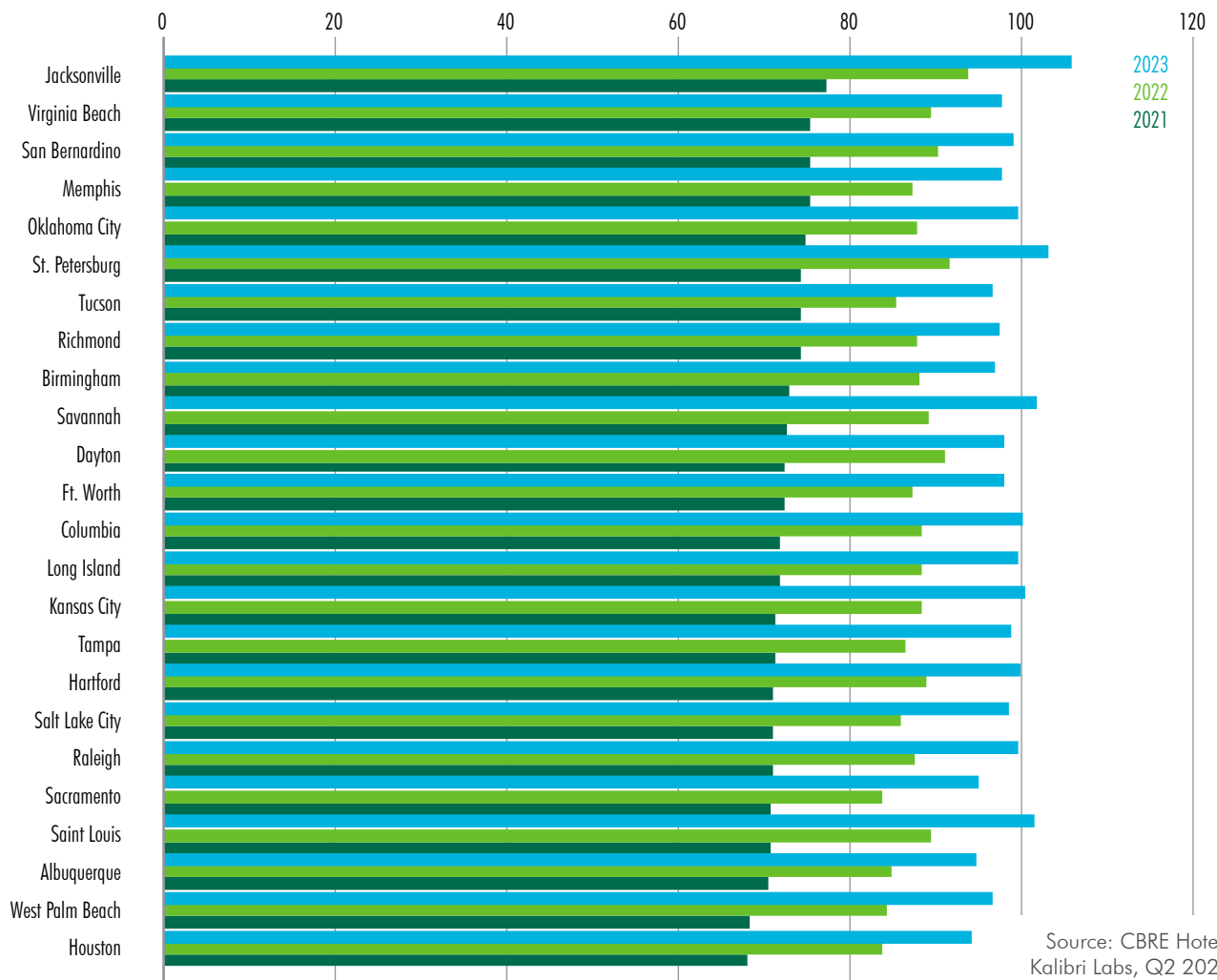
Figure 18 forecasts RevPAR recovery over the next three years for the 65 markets tracked by CBRE relative to their pre-COVID performance in 2019. Although most markets should regain the bulk of lost RevPAR by 2023, some that were especially hard hit in the initial stages of the outbreak and continue to have significant closures and restrictions will lag. Boston, Chicago, New York and San Francisco have significant dependence on group and business travel and thus will suffer lagging performance until a successful vaccine is found.

Markets forecast to have the swiftest recovery in 2021—Jacksonville, Virginia Beach and Inland Empire—have

significant drive-to destination appeal and natural social-distancing leisure appeal as beach locations. More generally, secondary markets with less urban density and more drive-to availability will recover faster in 2021 than larger metropolitan areas.

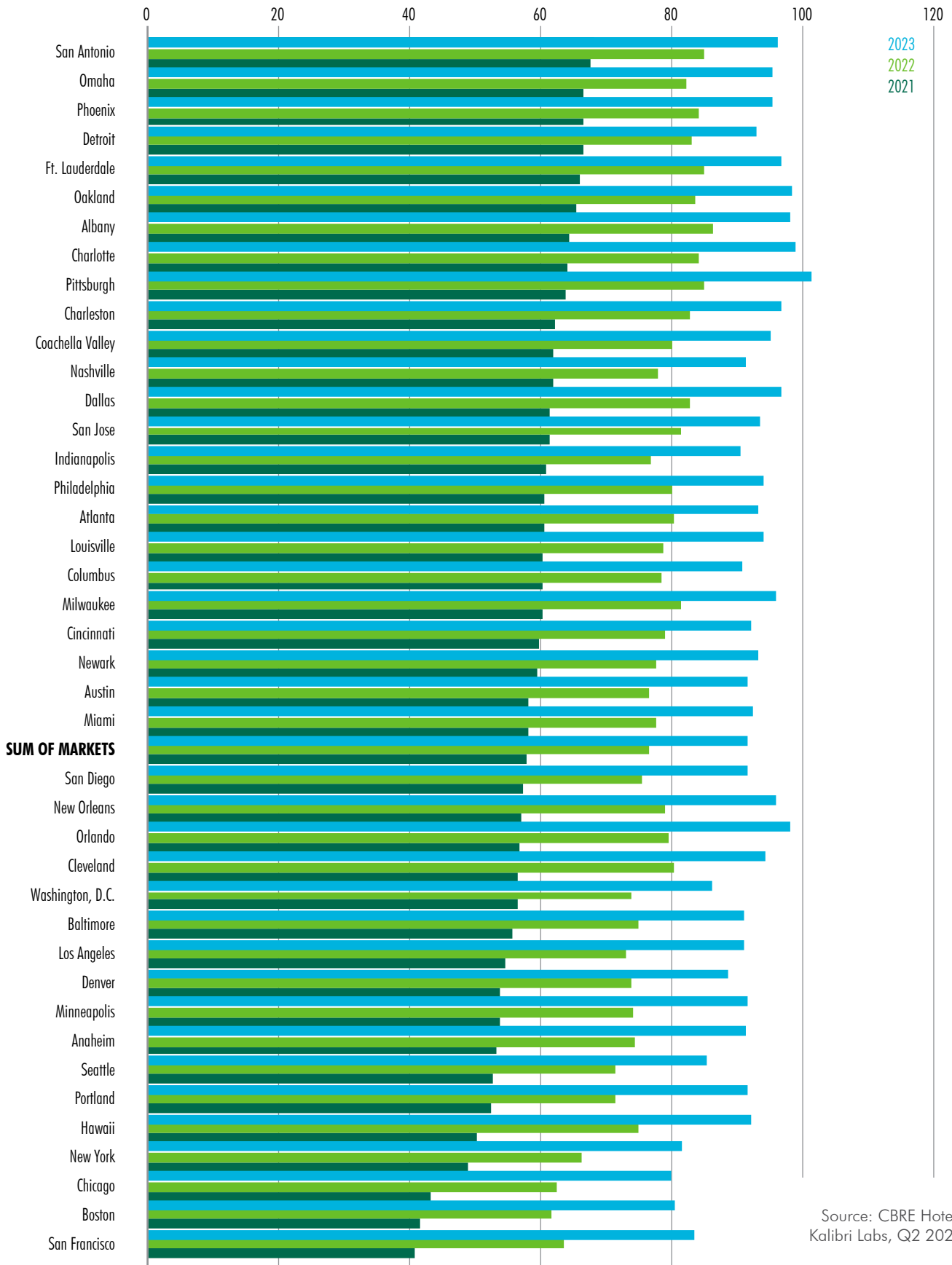
By 2022 and 2023, RevPAR recovery will be more even among markets and more in line with long-term trends. By 2023, only the most severely affected markets will have less than 90% of 2019 RevPAR levels. In addition, some smaller markets such as Jacksonville, St. Petersburg and Savannah may gain additional demand as alternative destinations.

FIGURE 18: REVPAR PERFORMANCE AS A % OF 2019 NOMINAL REVPAR



Source: CBRE Hotels, Kalibri Labs, Q2 2020.

FIGURE 18: REVPAR PERFORMANCE AS A % OF 2019 NOMINAL REVPAR (CONTINUED)



Source: CBRE Hotels, Kalibri Labs, Q2 2020.

POPULATION DENSITY A KEY FACTOR FOR RECOVERY

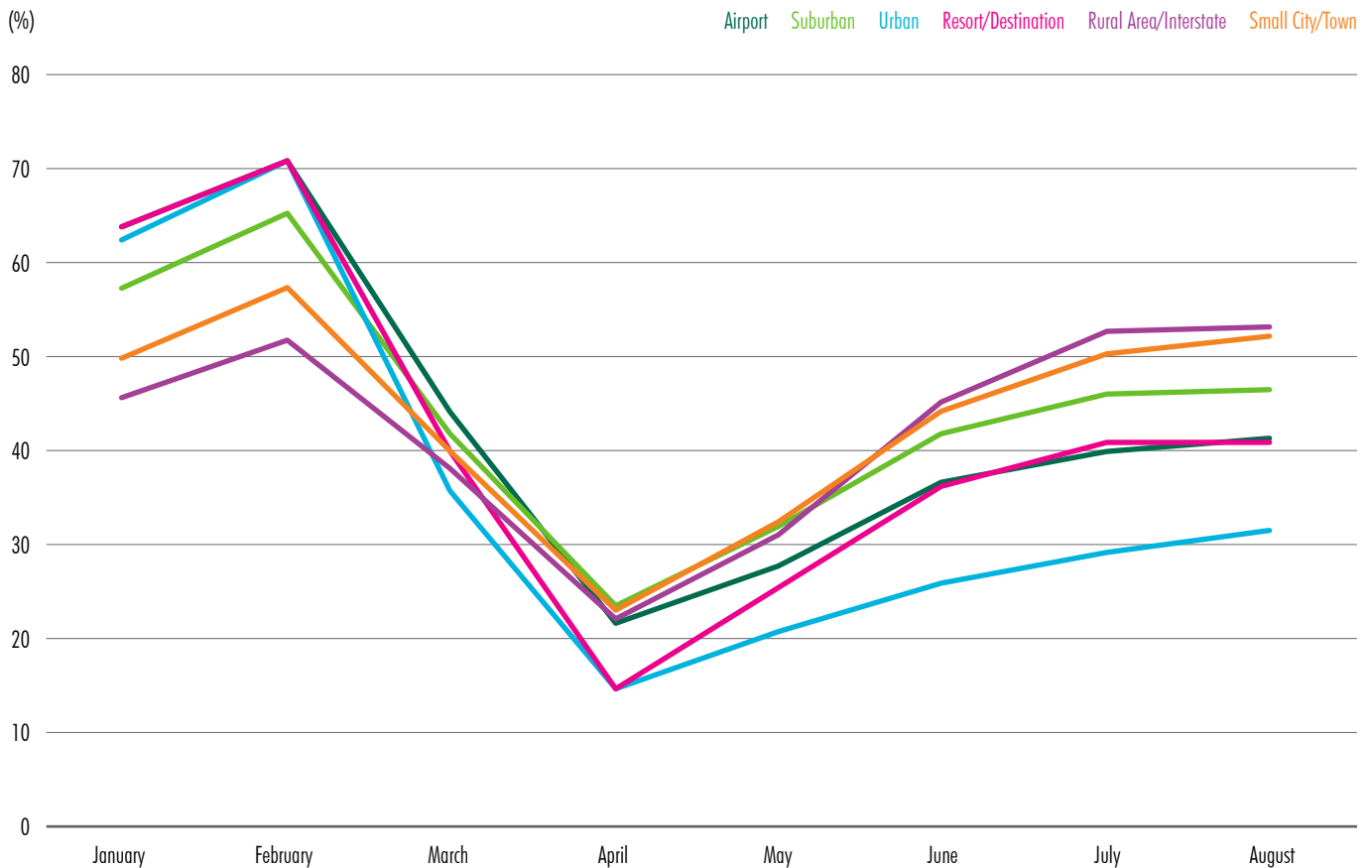
Rural and interstate hotels have outperformed other location types this year. These hotels are often located in low-population-density areas that recorded modest gains in occupancy and ADR after the public’s fear of COVID-19 had peaked in April. Recovery to pre-COVID performance should occur sooner in these locations. High-density and urban locations will take longer to recover until the public feels safe to travel to these populous locations.

CONTINUED LEISURE TRAVEL NEEDED

While leisure travelers have helped prop up the hotel industry during the COVID crisis, a full recovery will not occur until group and business travel resumes. Small metros and rural areas are recovering faster, especially those that are drive-to destinations.

After the summer season, the gap between weekday and weekend occupancy widened. This is a reversal of historical patterns, in which summer leisure travel gives way to business and group travel that peaks in the fall. This reversal portends a difficult Q4 for the hotel industry if leisure travel does not keep pace.

FIGURE 19: 2020 OCCUPANCY BY LOCATION



Source: CBRE Hotels, Kalibri Labs, Q2 2020.



DATA CENTERS

KEY STAT

With 373.6 megawatts (MW) of development under construction across primary U.S. data center markets, total data center inventory is forecast to grow by 13.8% in 2021.

SUMMARY

The U.S. wholesale data center market continues to benefit from the critical role that data centers play in supporting business operations. Continued adoption of hybrid information technology (IT) and cloud services, the growth of artificial intelligence (AI) technologies and an ability to support a dispersed workforce will drive industry growth over the next several years. Primary U.S. data center markets continue to benefit from their proximity to major metros, existing facility infrastructure and established network connectivity. Smaller, secondary markets that couple clean low-cost energy, advantageous tax incentives, affordable land prices and network connectivity are poised to see the most growth.

CONTINUED GROWTH IN 2021

Absorption among primary U.S. data center markets (Atlanta, Chicago, Dallas/Ft. Worth, New York Tri-State, Northern Virginia, Phoenix and Silicon Valley) totaled 134.9 MW in H1 2020. Hyperscale companies, large cloud service providers and content providers leased space in wholesale colocation facilities to meet a spike in demand from their customers during the COVID-19 pandemic.

Hyperscale activity likely will level out in 2021 as demand drivers that spiked in 2020 begin to plateau, including enterprise clients leveraging hybrid IT solutions to accommodate remote working mandates. This trend likely will continue, albeit at a slower pace than in 2020. With more than 373 MW of wholesale colocation currently under construction across the seven primary markets, data center supply is expected to grow next year.

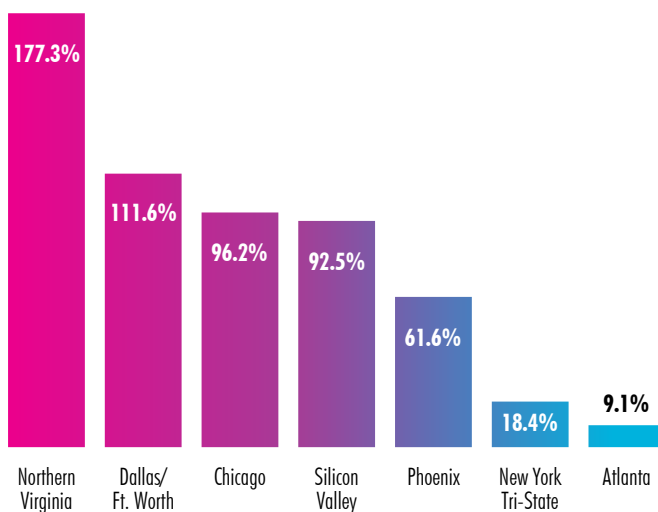
Enterprise users continue to renew colocation leases, often for shorter terms, while they consider long-term options. Cloud adoption among enterprise users has

also reinforced the notion that not all assets are created equal. The facilities with potential for scalability, high connectivity and proximity to cloud on-ramps are better positioned in the market than older, smaller assets with less ability to support the evolution of data center technology. As new technologies like 5G and Edge computing emerge, high-quality and highly connected assets in secondary markets likely will see more activity. The ability to customize delivered services to meet specific client requirements will be imperative.

INVESTOR INTEREST ACCELERATES

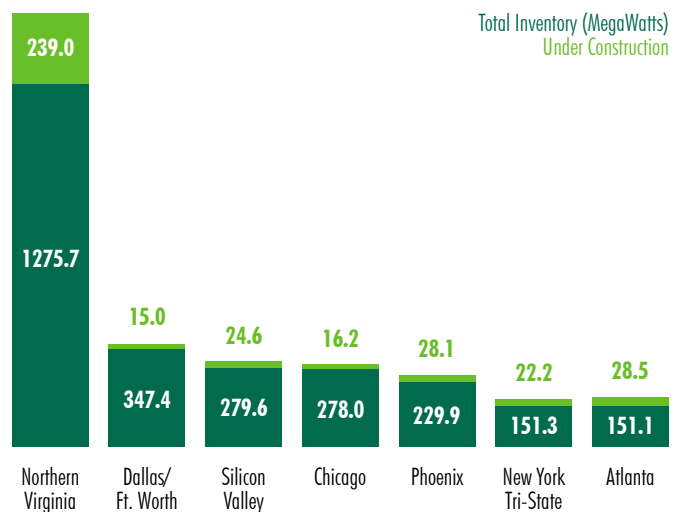
Investor interest in the data center sector has increased based on the success of the five core data center REITs, which have recorded more than 28% revenue growth year-to-date. Most investors are looking for high-quality assets from providers with strong credit ratings that offer facilities with high client retention and low churn rates. Many enterprise users continue to leverage partial-sale leasebacks as they reevaluate their IT spend next year.

FIGURE 20: INVENTORY GROWTH OF PRIMARY DATA CENTER MARKETS SINCE 2015



Source: CBRE Research, CBRE Data Center Solutions, H1 2020.

FIGURE 21: TOTAL INVENTORY AND UNDER CONSTRUCTION, PRIMARY MARKETS



Source: CBRE Research, H1 2020.

AFFORDABLE CLEAN ENERGY TOP OF MIND

As data center technology evolves and allows for more power-dense facilities, many providers are looking to expand in markets that offer affordable clean energy. Montreal and Hillsboro (Portland), OR provide hydroelectric power at rates well below those in other markets. Data centers also stand to benefit from increased efficiencies with regards to power and energy storage.

WHAT TO WATCH

1. **Hyperscale Cloud Providers:** Will hyperscale companies continue to take space in wholesale colocation facilities or move back to more traditional hyperscale facilities, or will they continue to leverage both?
2. **Pricing Trends:** Will asking rates remain stable or will there be increased bifurcation of pricing trends between large hyperscale users and smaller enterprise clients?
3. **Cloud Migration:** How will increased cloud services affect the leasing numbers for enterprise users who have decided to migrate to a hybrid IT approach?
4. **COVID-19:** What lasting effects will the pandemic and the economic recession have on new investment? How will enterprise users' IT spend change in 2021?



ALTERNATIVES

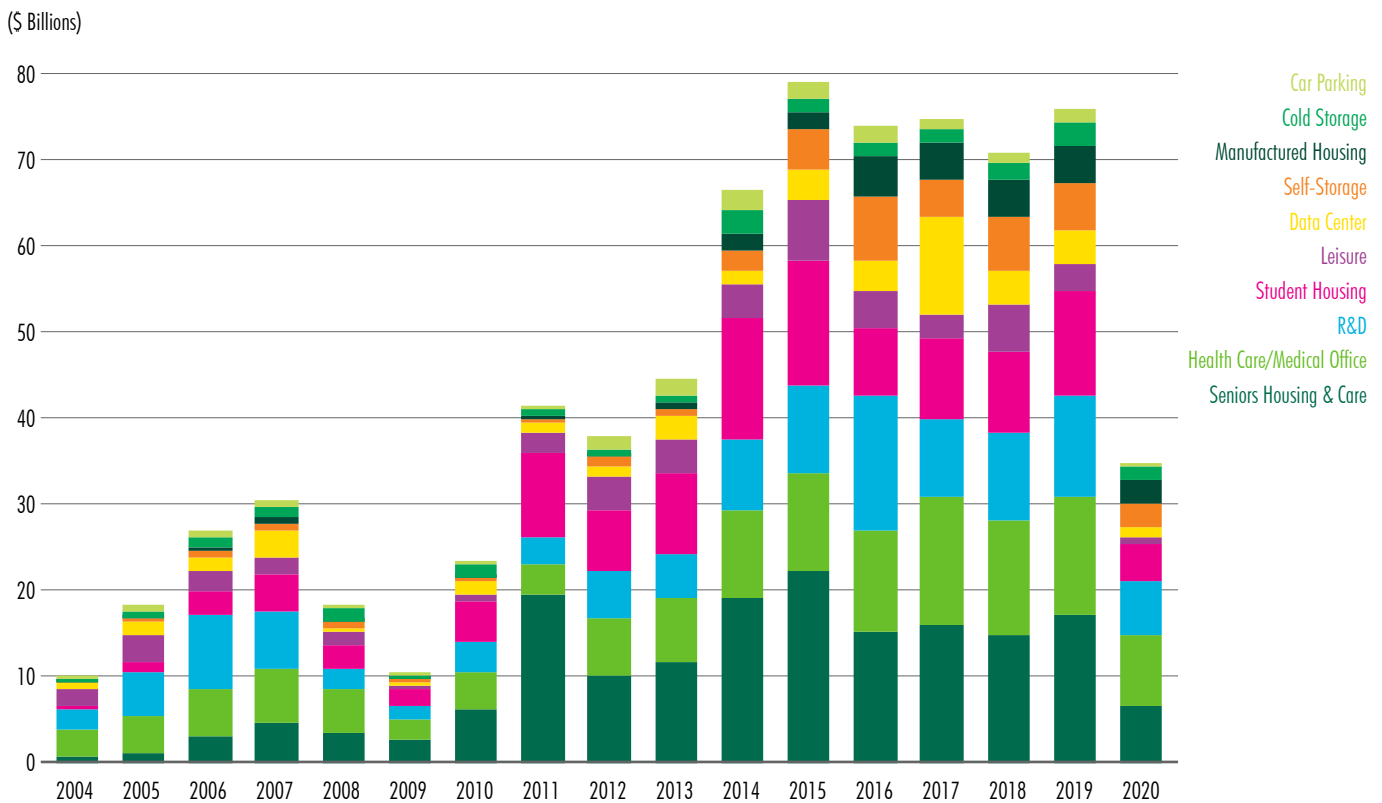
Alternatives are specialty operational real estate with relatively low inventory, less turnover and higher yield. Globally, alternatives investment has averaged about \$90 billion annually over the past five years, more than double the peak in the previous cycle. Recent CBRE investor surveys found that 60% of respondents are actively pursuing one or more alternative sectors, led by data centers and health-care facilities.

Investors are attracted to alternatives by their relatively high yields, stable income and diversification. Some

alternative sectors, such as life sciences and student housing, historically offer downturn protection.

Long-term demographic, technological and social changes present generational opportunities for specialty players to grow the market as well as their market shares. Growth of the elderly population is driving demand for seniors housing and nursing care. And the recent explosive growth of online grocery and pharmaceuticals has fueled the cold-storage industry, while the ever-growing digital economy and widespread adoption of cloud-based services supports the growth of data centers.

FIGURE 22: INVESTMENT TO U.S. ALTERNATIVES



Source: CBRE Research, Real Capital Analytics, 2020.

LIFE SCIENCES

Technological changes and medical discoveries have caused the life sciences sector to cluster near the nation's premier research universities and health-care centers. COVID-19 has accelerated growth of the life sciences industry.

COVID-19 has led to new requirements for lab/R&D and biomanufacturing space, increased production and manufacturing domestically and more support from policymakers. New lab/R&D and biomanufacturing space is being completed in markets with previously limited supply, as well as in leading life sciences clusters such as Boston-Cambridge and the San Francisco Bay Area. Lab conversions from other property types have also accelerated, especially in CBD markets. The strong supply growth of R&D space over the past several years has produced a growing need for more biomanufacturing space to produce many of the solutions and innovations devised in the lab.

The strong correlation between venture capital funding and employment growth in the life sciences industry means there should be more hiring and demand for life sciences commercial real estate next year. Nevertheless, there are always risks for a burgeoning industry fueled by early growth stage and venture capital-funded companies. There is also the risk of a pullback in demand once greater progress emerges toward a viable vaccine or therapeutics to address COVID-19.

COLD STORAGE

One of the most sought-after asset classes by opportunistic and institutional investors, this niche industrial subsector is poised for growth from e-commerce expansion into the grocery business. However, investors remain primarily focused on facilities with creditworthy tenants and long-term leases in core industrial markets.

Interest in cold storage assets has heightened during the pandemic. While developers are exploring speculative opportunities, most projects are still done on a build-to-suit (BTS) basis given specific user requirements.

Growth in online food sales, particularly for perishables and refrigerated/frozen foods, have piqued investor interest, leading to yield compression. Opportunities include sale/leasebacks, joint ventures with cold-chain operators and BTS development near major population clusters. Conversions from dry to cold warehousing may also present opportunities for experienced investors and developers. Despite higher CAPEX and OPEX, cold storage commands higher rent premiums than do dry warehouses.

Without specialized knowledge or strong partnership with an experienced cold storage operator, investors may find it difficult to capitalize on opportunities. Since these facilities require highly specialized amenities, capital expenditures are significant. Refrigerated warehouses have one of the highest electric consumption rates in the commercial building sector. The sector has a variety of highly unique, expensive facility buildouts, each with their own nuances.

SINGLE-FAMILY RENTALS

The build-to-rent single-family housing sector (BTR) is a rapidly growing alternative for both multifamily and single-family renters. It was one of the better-performing alternative sectors in 2020 with mostly positive demand drivers. The 2021 outlook is highly favorable.

BTR housing communities are meeting a growing housing demand niche: multifamily renters who want more space due to growing families, increased remote work and other lifestyle-related factors. BTR housing also appeals to single-family renters and some owners who desire new housing plus community amenities and services. The product appeals to all who want low-density housing but cannot afford to buy a house. BTR is becoming more readily available, thereby increasing market awareness and investment opportunities.

The single-family rental (SFR) sector had stronger rent growth and lower vacancy than multifamily this year, although the recession did moderate rent gains. Next year will begin with less robust conditions than before the COVID-19 period. The BTR sector is still very small and

offers only limited investment opportunities, which could lead to some missteps and market imbalances down the road. Competition is also growing from homebuilders constructing new SFR housing to sell to institutional owners of stand-alone (non-community based) rentals.

SENIORS HOUSING

COVID-19 impacted this sector more than most with little new leasing activity for much of 2020. Deteriorating property fundamentals in Q2 and Q3 reduced investment activity significantly in 2020, but the 2021 outlook for both market performance and investment is brighter.

Demand for seniors housing began to pick up in Q4 and should improve in 2021. Baby boomers have reached the active adult segment's target age range, increasing investor interest in this asset type along with assisted living. Pricing discounts may be found for some seniors housing assets in 2021 but not for the best ones.

The seniors housing market should slowly improve in 2021 but a full recovery won't occur before 2022. New supply has moderated from recent years, but there are some markets with more supply than can be readily absorbed. Real or perceived added COVID-19 risk could keep investment activity lighter than usual and financing harder than usual to obtain.

STUDENT HOUSING

The student housing market weathered 2020 better than expected though uncertainty greatly reduced investment. Enrollment, which fell about 3.0% in fall 2020, should rebound in 2021. The new academic year will bring gains in occupancy and leasing, thereby attracting investors.

Despite higher education transitioning to online and hybrid (online, on-campus) structures, enrollment held up quite well in fall 2020, dropping by only 3.0% overall and only 1.4% at the public four-year universities where a large portion of student housing is located. Enrollment could rise in January as more international students return. Enrollment in fall 2021 should rise further, capturing more international students and 2020 high school graduates who took a gap year. With only moderate supply growth, renewed demand could put student housing back to pre-COVID performance levels by fall 2021. With stronger leasing and more clarity on students returning to campus, both investment and financing activity will rise notably.

American Community Campus, the only student housing REIT and an industry barometer, reported 91.0% of its units leased in September, down from 97.4% a year ago. Some smaller and second-tier colleges that were struggling to maintain enrollments and finances prior to COVID-19 remain at risk, though have only a small portion of the country's total student housing inventory. Longer-term trends point to a modest decline in the number of 18-year-olds in the U.S.

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