AEW RESEARCH

U.S. Economic & Property Market Perspective

Q4 2021

AEW

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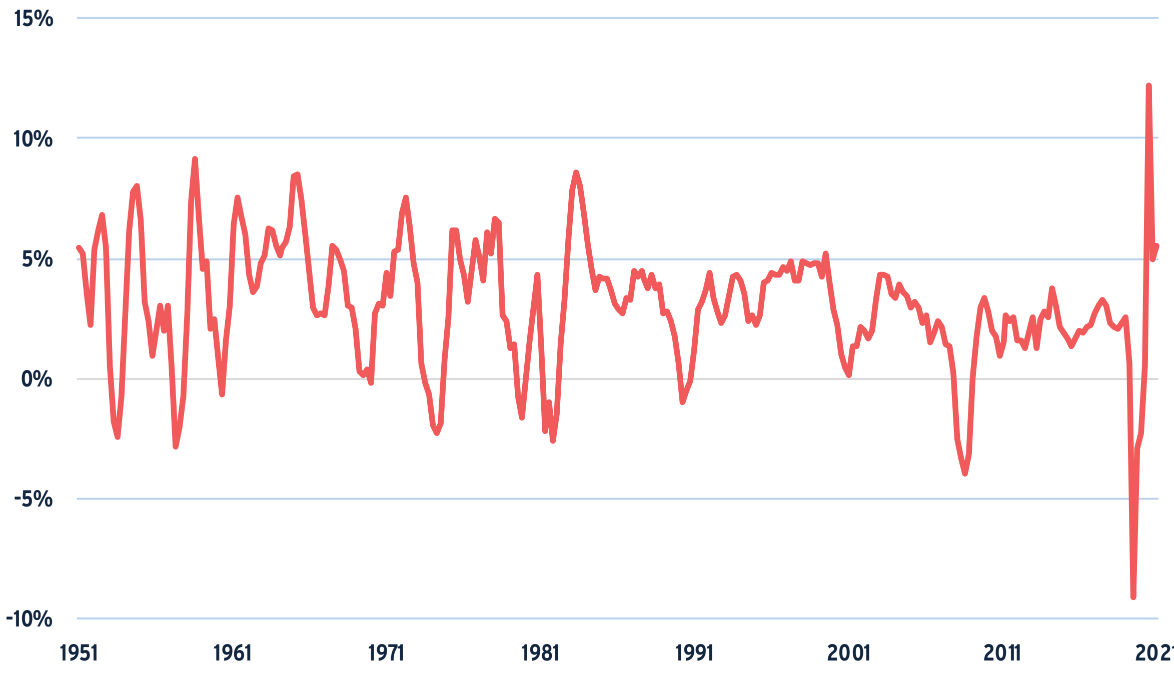
2022 Significant Transition Year Ahead?

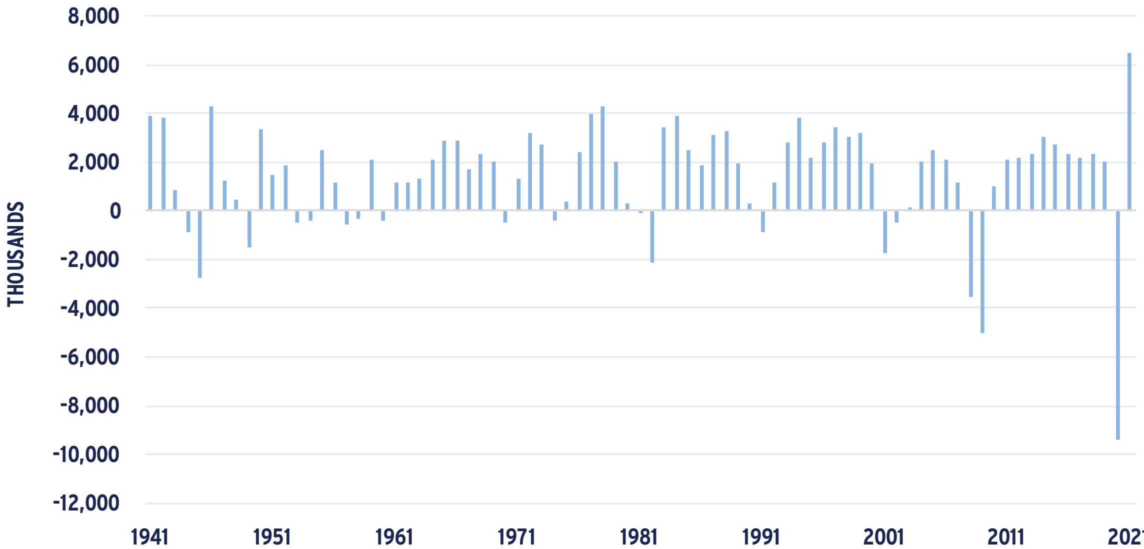
Following the staggering economic contraction of 2020, the sharpest since the 1930s, the U.S. economy roared back during 2021, recording the fastest year-over-year growth in real GDP since 1950 and the largest single-year job increase ever. For the year, real GDP grew 5.5% (Q4/Q4), the fastest growth rate since 1984 and total employment increased/recovered by 6.7 million jobs. Growth is expected to remain somewhat elevated during 2022, albeit not at the same pace as 2021, and transition towards a pre-pandemic trend during 2023.

FIGURE 1
YEAR-OVER-YEAR GROWTH IN REAL GDP



Source: Bureau of Economic Analysis

FIGURE 2
ANNUAL INCREASE IN TOTAL EMPLOYMENT

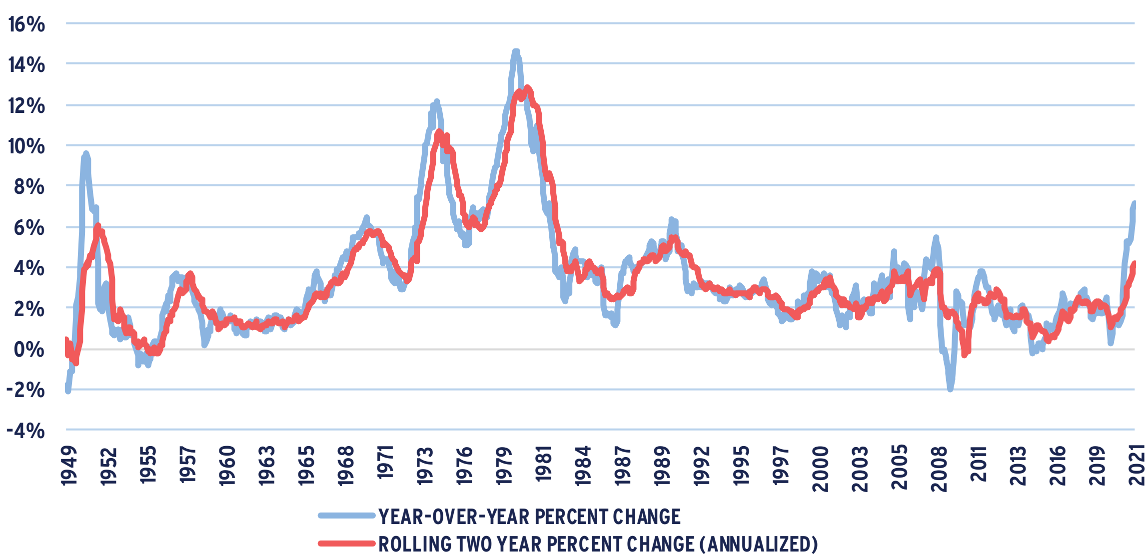


Source: Bureau of Labor Statistics

Inflation

In part reflecting the rapid restart of the economy, U.S. consumer price inflation reached 7% on a year-over-year basis in December 2021, the highest level since 1982. When viewed as a two-year moving average to account for the very low inflation during the 2020 COVID lockdowns, inflation is still elevated but at a more benign level, roughly comparable to the experience of 2006 and 2007 prior to the financial crisis. So far, resurgent inflation has not been uniform across the myriad goods and services that compose the consumer price index but notable price increases for the trailing twelve-month period include gasoline (+48.9%), used cars & trucks (+37.3%), new vehicles (+11.8%) and food (+6.3%).

FIGURE 3
CONSUMER PRICE INFLATION



Source: Bureau of Labor Statistics

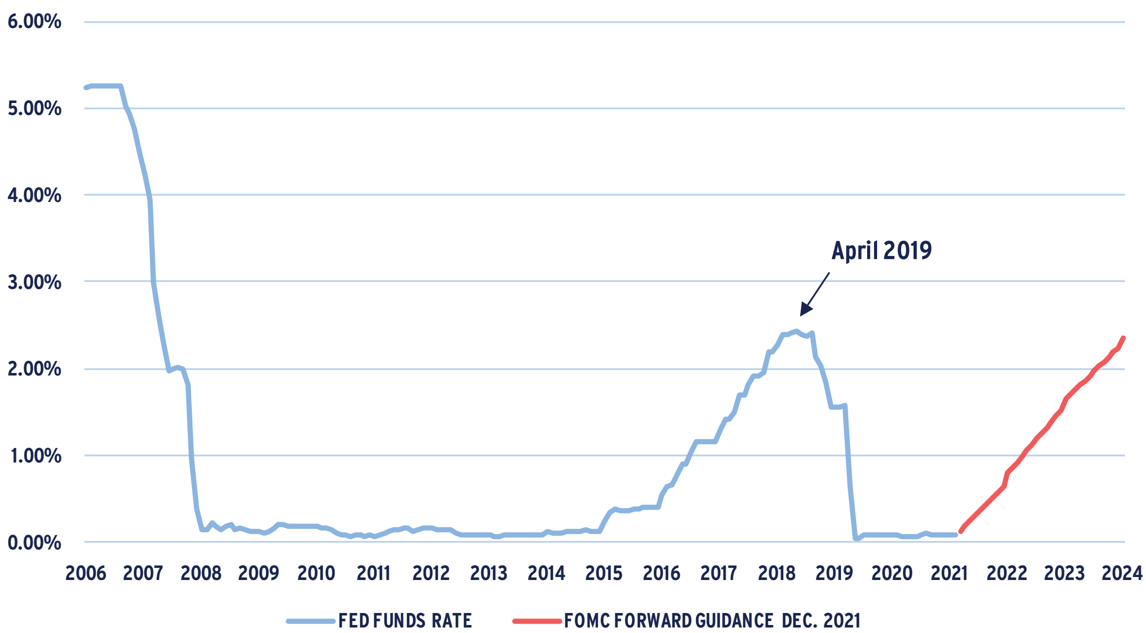
Interest Rates

The degree to which elevated inflation will persist is one of the most important questions vexing investors today, real estate investors included. Presumably, elevated inflation arising from various well-documented supply chain disruptions and labor market dislocations will resolve themselves in time as demand normalizes and COVID concerns fade. Elevated inflation arising from government policy has historically tended to be more pernicious and long lasting. Monetary and fiscal policy during the COVID-19 period have both been highly accommodating and seemingly inflationary. For its part, the Federal Reserve engaged in unprecedented levels of quantitative easing, nearly doubling the size of its balance sheet over the past two years and increasing the total money supply (M2) by more than 40% since the beginning of the pandemic. On the fiscal side, federal spending totaled slightly more than $4.5 trillion during the 2019 calendar year, but increased in 2020 and again in 2021 to roughly $6.8 trillion, an increase of more than 50% from pre-pandemic spending levels.

More recently, the Federal Reserve has made clear its plan to move towards normalization of monetary policy during 2022 and beyond. As during the last period of policy normalization that began in 2016 and continued through 2019 until the onset of COVID-19 during the first quarter of 2020, this normalization will take the form of slowing balance sheet expansion (i.e. bond purchases), raising short-term interest rates and, ultimately, shrinking the size of their balance sheet (quantitative tightening or QT) through bond maturity roll off or outright sales.

After its most recent policy meetings, the Federal Open Market Committee (FOMC) released their assessment of what the path of future short-term interest rates might look like and it is distinctly reminiscent of the 2016-2019 period. The Fed's current so-called "Dot Plot," the path of future rate increases shows the Fed's overnight borrowing rate (Fed Funds), retracing the tightening pace of the earlier period, reaching a terminal value near 2.5% by the end of 2024.

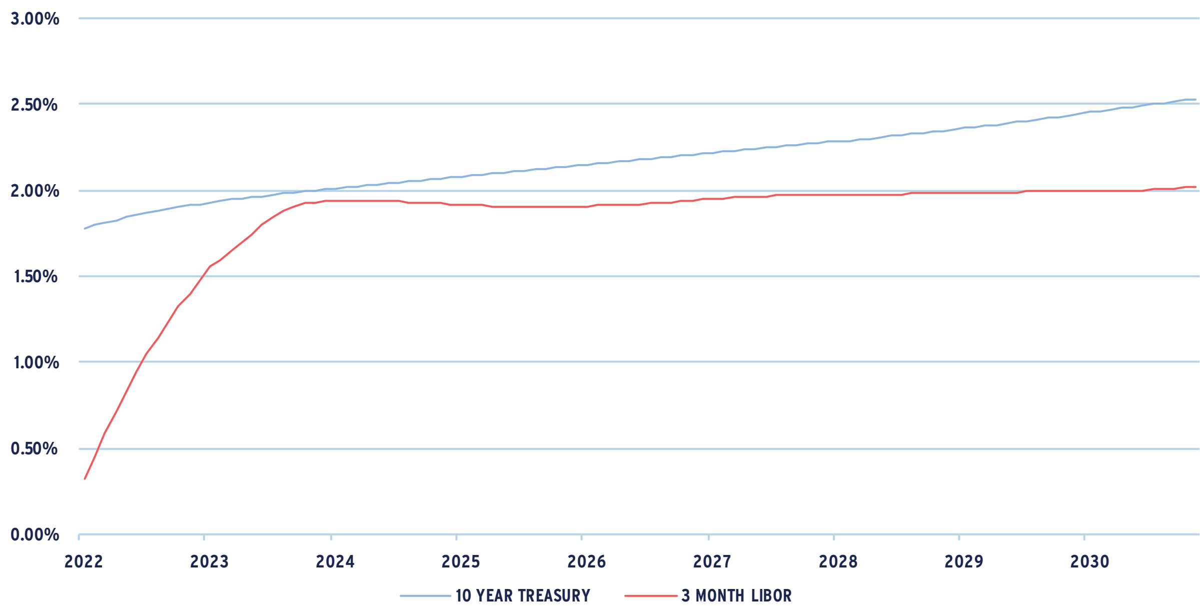
FIGURE 4
FEDERAL RESERVE SHORT-TERM INTEREST RATE GUIDANCE



Source: Federal Reserve

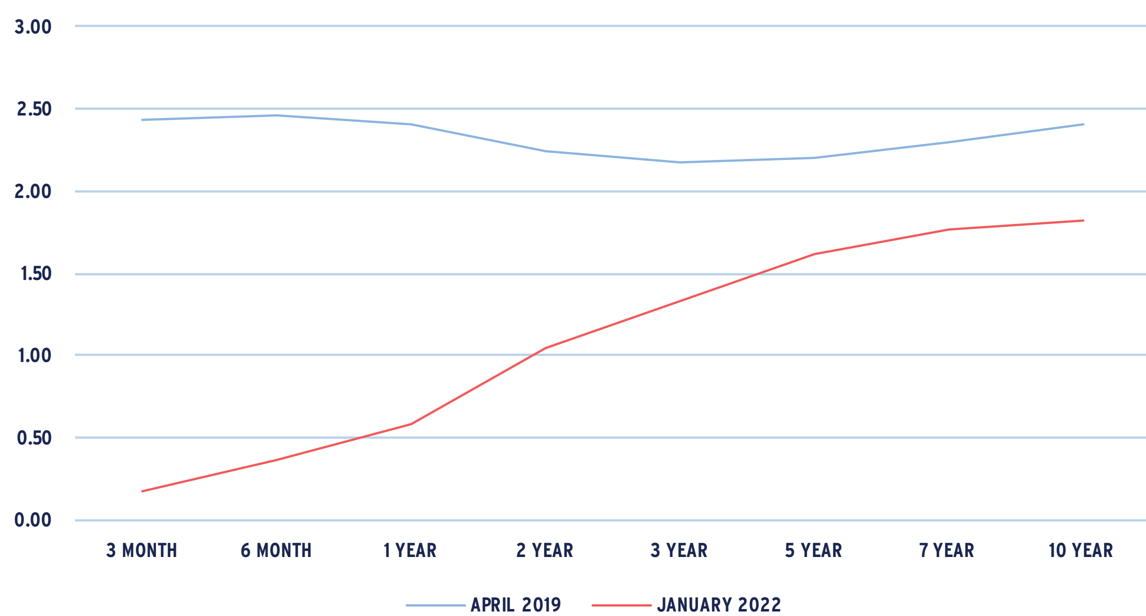
Collectively, the bond market appears to be taking the FOMC at its word with the forward curve for the benchmark 10-year Treasury bond rising steadily to approximately 2.5% over the remainder of this decade with the short-end of the yield curve rising sharply. In other words, a steadily flattening yield curve that would be consistent with the return to slower, pre-pandemic economic growth path and a corresponding normalization of expected inflation, similar conditions to the last time the FOMC brought short rates to this level in April 2019. At that time, the Treasury yield curve was largely flat near 2.5% for all maturities, suggesting that most of the change in the near-term yield environment is likely to occur at the shorter maturity end of the curve.

FIGURE 5
EXPECTED FUTURE INTEREST RATES



Source: Chatham Financial

FIGURE 6
YIELD CURVE TODAY AND IN APRIL 2019 (%)

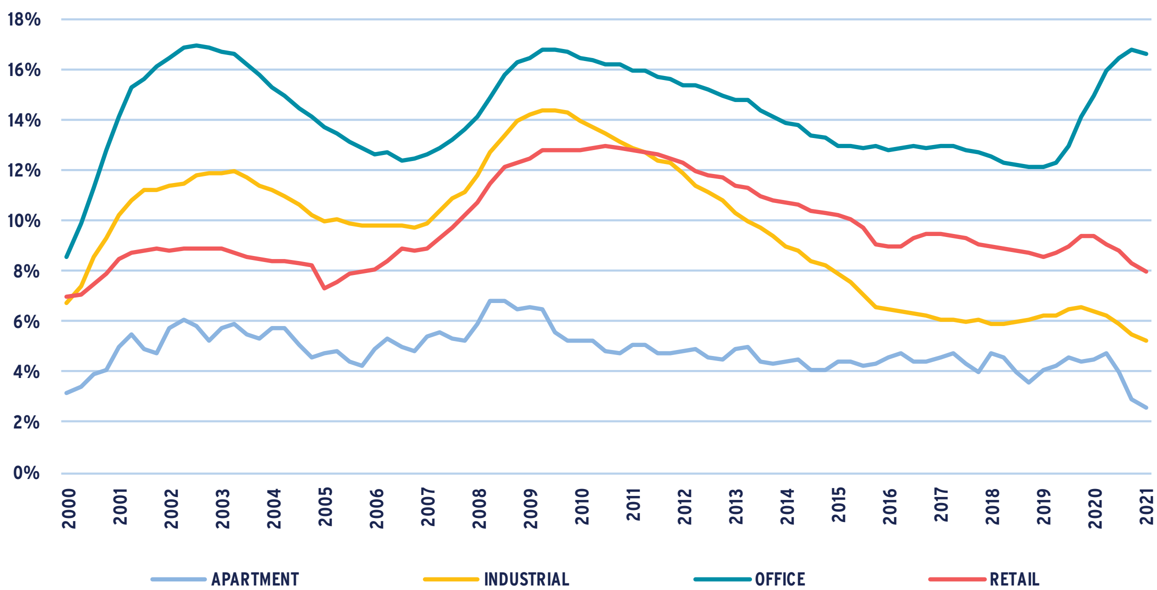


Source: Federal Reserve

U.S. Commercial Property

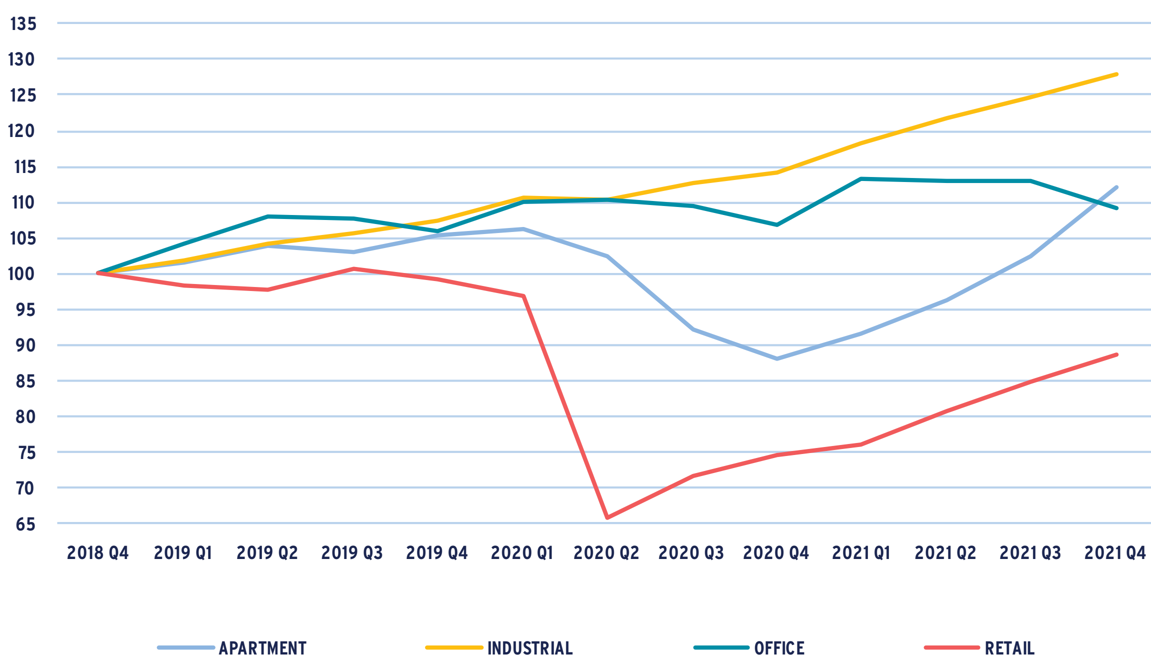
Outside of offices, U.S. major property sector supply and demand fundamentals continued to strengthen during the fourth quarter of 2021 with vacancy/availability rates reaching all-time lows for apartments and industrial spaces and near-all-time lows for retail centers. Reflecting this, net operating income (NOI) performance showed similar improvement with apartment properties posting the sharpest turnaround from the pandemic related earnings disruption in 2020.

FIGURE 7
VACANCY/AVAILABILITY RATE



Source: CBRE-EA, 2021 Q4

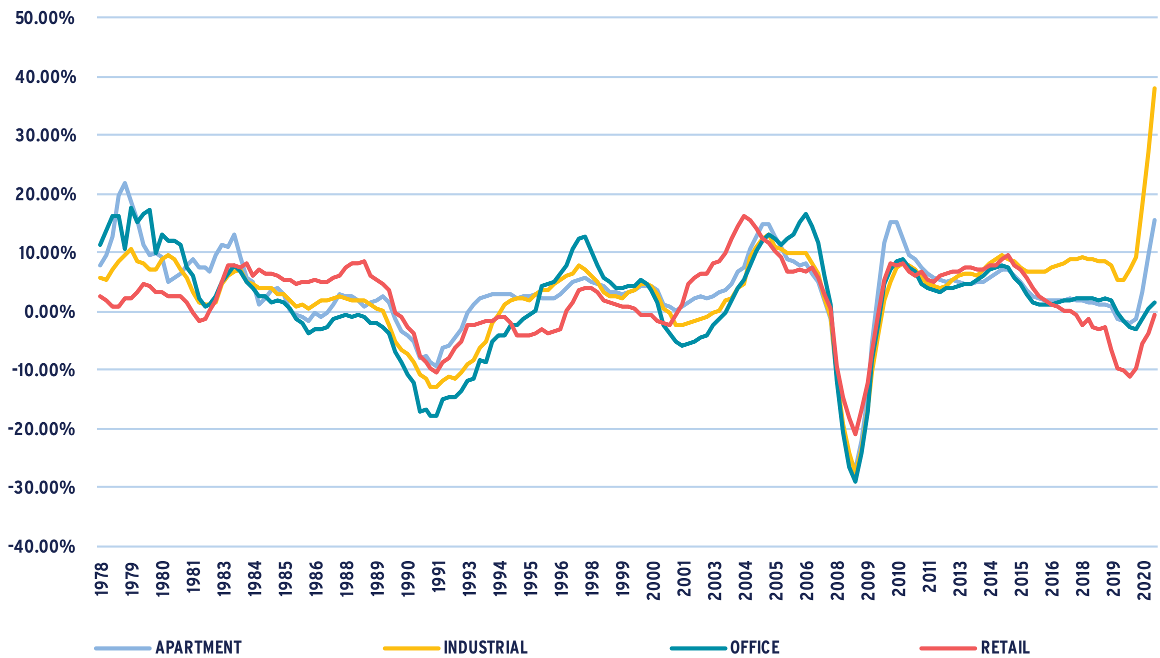
FIGURE 8
NET OPERATING INCOME (NOI), 2018 Q4 = 100



Source: NCREIF

Broadly speaking, U.S. property investors were well served during 2021 with the NCREIF Property Index (NPI) posting a one-year total return of 17.7%, the largest one-year total return since 2005. In large part, 2021 NPI performance was driven by unprecedented outsized gains in industrial property values. Average industrial property values in the NCREIF index increased by more than 38% for the year and this represents the largest four-quarter increase in valuations of any property sector since the inception of the NCREIF Property Index in 1978. Indeed, leaving aside apartment appreciation in 1979 at a time when the NPI contained fewer than ten apartment properties, industrial property appreciation over the past four quarters is more than twice as large as property appreciation in any four-quarter period since 1978 in any property sector. For its part, apartment property appreciation finished the year at nearly 16%, nearly matching the best performance of any property sector prior to 2021.

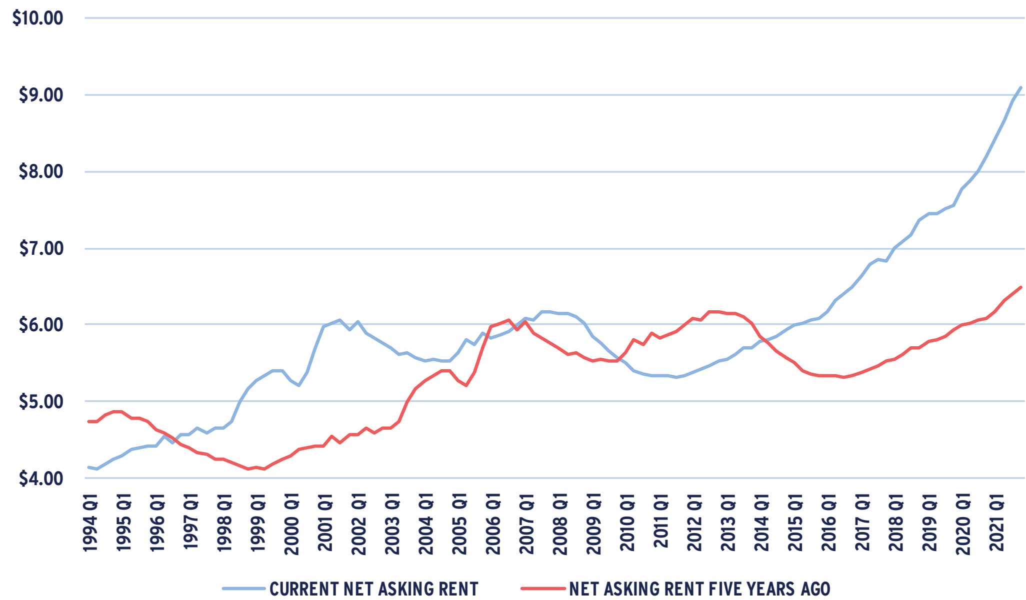
FIGURE 9
YEAR-OVER-YEAR CAPITAL APPRECIATION BY PROPERTY TYPE



Source: NCREIF, 2021 Q4

Given this outsized investment performance, the obvious question for investors today is the degree to which industrial, and to a lesser extent apartment, success is likely to wane going forward. In the near-term, it seems likely that industrial and apartment rent growth and, by extension, net operating income growth will continue to exceed other major property sectors. In the industrial sector, the so-called "loss to lease" rent differential comparing today's in-place rents to market rents is extreme. Figure 10 illustrates this by comparing today's average industrial net asking rent to the same measure five years prior. Today's loss to lease, the widest ever recorded, is roughly 40%. Absent a significant demand dislocation, this gap seems unlikely to close any time soon.

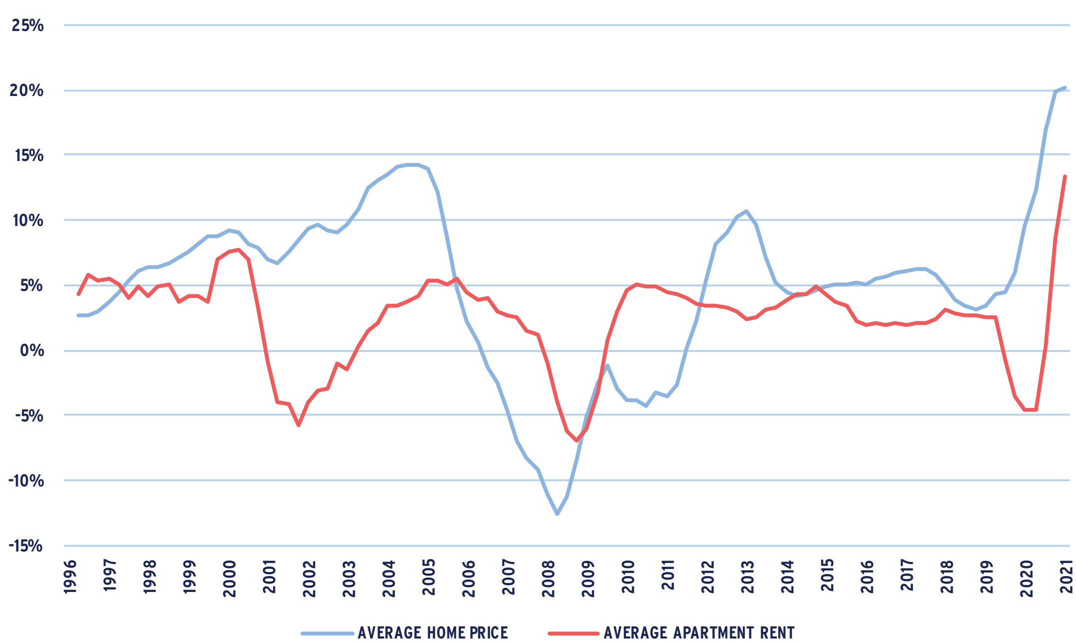
FIGURE 10
INDUSTRIAL PROPERTY LOSS TO LEASE – CURRENT ASKING RENT COMPARED TO FIVE YEARS PRIOR



Source: CBRE-EA, 2021 Q4

As with the industrial property sector, apartment property NOI appears to have significant near-term tailwinds as well. Historically, average apartment rents have shown a tendency to move in partial step, albeit typically with a lag, with home prices – particularly during periods of extreme movement in home prices. Rapidly rising home prices have at least two direct impacts on apartment markets. First, much higher home prices prevent some portion of potential home buyers from being able to afford to purchase and thereby remain or become renters. Second, higher monthly home ownership costs create some "head room" for monthly apartment rent costs to rise, particularly within the higher rent level segments of the rental stock. Given the extreme positive movement in U.S. home prices during the COVID-19 period, it seems likely that average apartment rental rates have more near-term room to rise as well.

FIGURE 11
HOUSING PRICE APPRECIATION AND APARTMENT RENT GROWTH

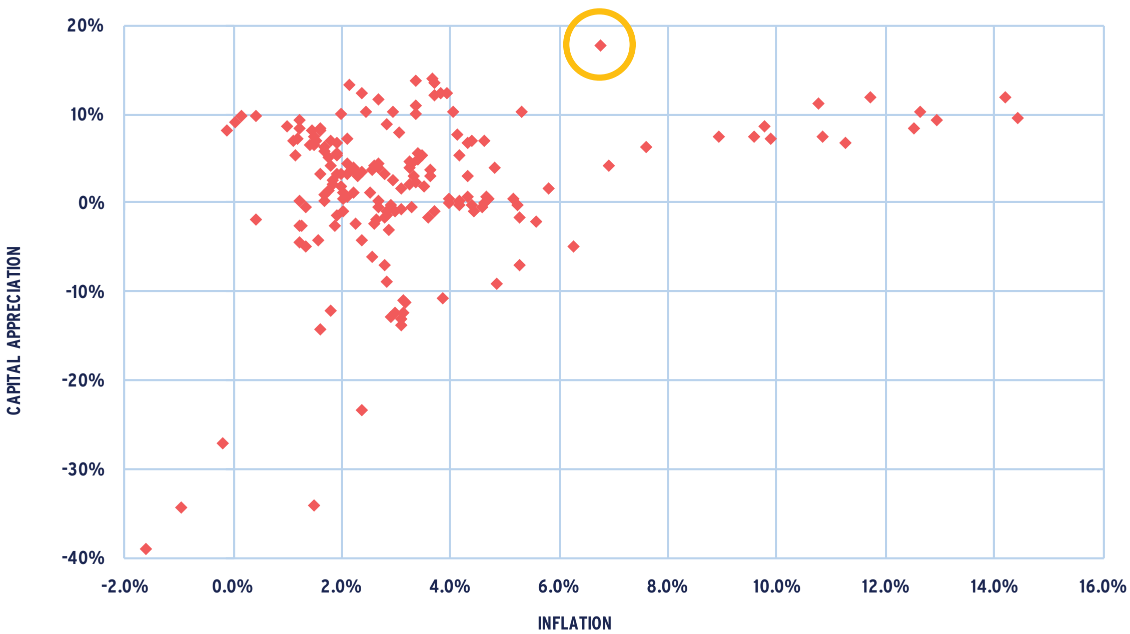


Source: S&P/Core-Logic/Case-Shiller, CBRE-EA

Final Thoughts

Investors have long sought asset classes that might provide offsetting protection from the ravages of elevated inflation, and commercial property is generally considered to offer at least some degree of inflation protection. Over the nearly 45 years for which there are consistent data, a broad diversified basket of commercial property has been shown to generate outsized capital appreciation during periods characterized by outsize consumer price inflation. While not perfect, Figure 12 shows a simple illustration of this relationship. During periods of excess inflation (primarily the later 1970s and early 1980s), U.S. commercial property, as represented by the large open-ended core fund (ODCE) universe, did record outsized capital appreciation. Similarly, during periods of very low (or negative) inflation (primarily the financial crisis periods of 2008/2009), property appreciation was very weak or negative. The most recent data (2021 Q4) is highlighted in Figure 12 and illustrates the highest year-over-year capital appreciation ever recorded in the ODCE fund history despite inflation, which while elevated, still remains far below the peak inflation rates of that earlier inflationary period.

FIGURE 12
YEAR-OVER-YEAR CAPITAL APPRECIATION IN ODCE FUNDS AND CONSUMER PRICE INFLATION



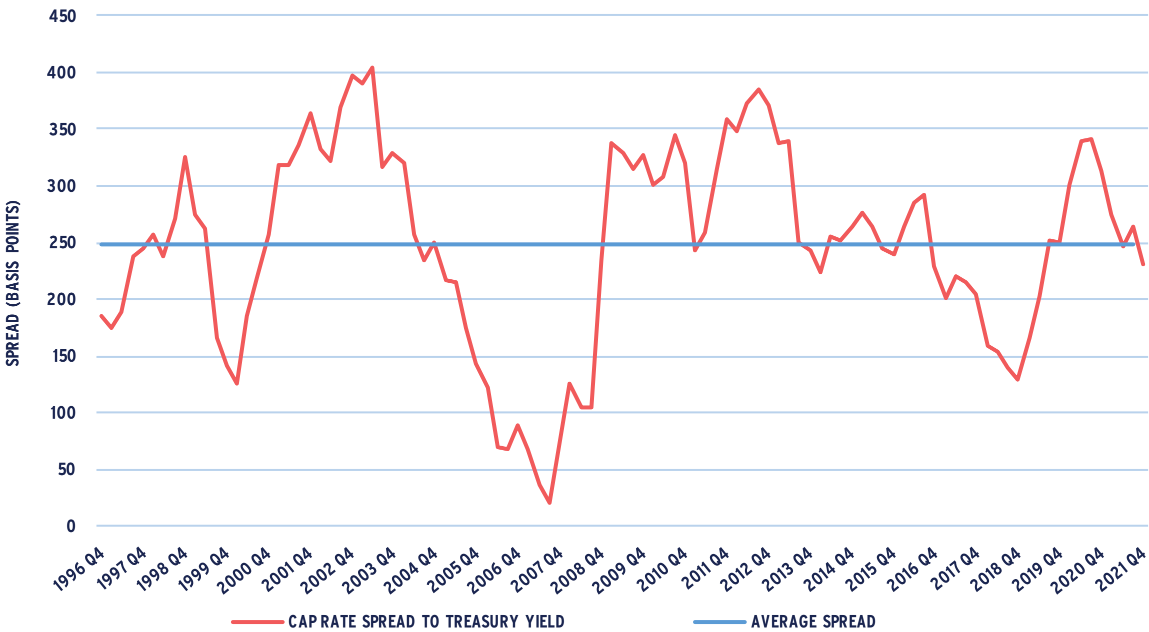
Source: Bureau of Labor Statistics (BLS), NCREIF

Finally, it seems clear that the U.S. economy and, by extension, the nation's property markets are entering a period of significant transition: transition from global pandemic to regionalized endemic, transition from extreme fiscal and monetary stimulus to normalized fiscal and monetary policy and transition from near constant post-GFC deflation/disinflation and accompanied low interest rates to at least near-term consideration of higher inflation and interest rates. The obvious question for property investors at this time is what will be the impact of all of this on property values and overall investment performance?

If the bond market is correct and Treasury yields normalize (expansion of ~50 bps over the next 3-5 years to 2%-2.25%) to levels last experienced during the last period of monetary policy normalization (2016-2019), it would seem likely property yields (cap rates) might also revert to prior levels (~4.4%). Today, the average appraisal-based property yield in the NCREIF Property Index is slightly less than 4%[1], roughly 50 basis points lower than in mid-2019 and approximately 200 basis points above the current ten-year Treasury yield[2]. Historically, the average property yield as a spread to Treasury bond yields has been approximately 250 basis points (see Figure 13).

[1]3.83% on a market valued weight basis as of 2021 Q4
[2]Approximately 1.8% as of February 1, 2021

FIGURE 13
PROPERTY YIELD (CAP RATE) SPREAD TO TEN-YEAR TREASURY BOND



Source: NCREIF, Federal Reserve

In the interest rate scenario described above, average property NOI would need to increase 10%-15% to maintain current valuations (see Table 1) if cap rates reverted by approximately 50 basis points and investors would need to accept a somewhat narrow yield spread as compared to the historical average (roughly the same yield spread in place today).

With respect to the former (NOI growth), future NOI growth would, of course, need to be higher to offset any greater increase in property yields (cap rates) or to generate increases in property valuation on the suggested change in yields. When we examine actual NOI growth over various historical periods, we see many instances of properties generating enough property income growth to sustain or increase values in the event of rising property yields. Table 2 presents the median four-quarter NOI growth rate for the post-GFC/pre-pandemic period (2010 Q4 – 2019 Q4) as well as the entire NCREIF historical period (1978 Q4 – 2021 Q4). From both measures, it appears that typical NOI growth in apartment and industrial properties would likely keep up with the property yield increases described above with perhaps less confidence for office and retail properties.

TABLE 1
NOI GROWTH NEEDED TO OFFSET CAP RATE INCREASES

	STARTING CAP RATE						
CAP RATE INCREASE	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%	4.50%
0.25%	8.3%	7.7%	7.1%	6.7%	6.3%	5.9%	5.6%
0.50%	16.7%	15.4%	14.3%	13.3%	12.5%	11.8%	11.1%
0.75%	25.0%	23.1%	21.4%	20.0%	18.8%	17.6%	16.7%
1.00%	33.3%	30.8%	28.6%	26.7%	25.0%	23.5%	22.2%

Source: NCREIF

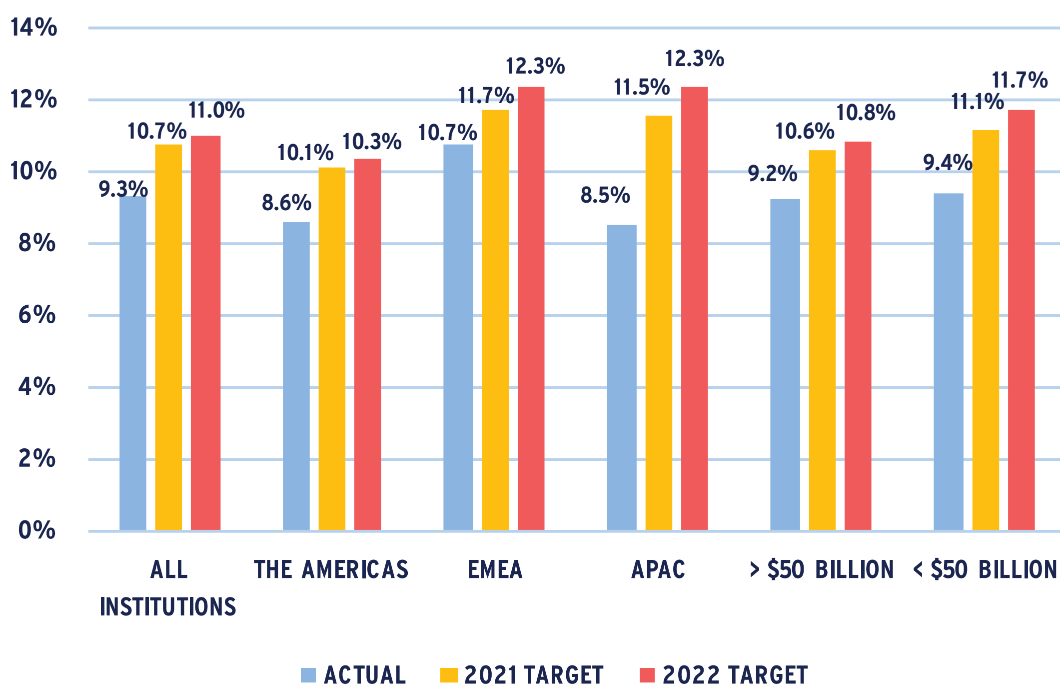
TABLE 2
MEDIAN FOUR-QUARTER NOI GROWTH

	APARTMENT	INDUSTRIAL	OFFICE	RETAIL
2010-2019	6.1%	5.6%	3.5%	2.9%
1978-2021	4.5%	3.2%	2.5%	3.1%

Source: NCREIF

With respect to the latter (acceptable yield spread), it is difficult to project future investor risk tolerance. As shown in Figure 13, there have been numerous times over the past several decades where investors have found narrower yield premiums adequate. These periods have tended to be times of sustained economic and, by extension, property income growth and the near-term economic outlook does not, at this time, deviate significantly from such an assessment. Additionally, there is evidence of significant and growing near-term capital pressure that may also act to lower property investor required yield. Recent asset allocation surveys suggest that institutional investors today are typically under-invested in real estate relative to current allocations, and current allocations are being increased in the near-term. These data combined with the significant increase in the total value of institutional investors' portfolios during the pandemic suggest significant dollar flows into commercial property over the next several years.

FIGURE 14
INSTITUTIONAL INVESTOR ALLOCATIONS TO REAL ESTATE[3]



Source: Hodes Weill Associates & Cornell Baker Program in Real Estate

[3]Institutional Real Estate Allocations Monitor–2021
Hodes Weill Associates & Cornell Baker Program in Real Estate

Office

The mood turned slightly more upbeat for the office sector in the fourth quarter with net absorption turning positive, arresting the escalation in office vacancies that had been in place since the pandemic began. That said, the vagaries of the pandemic continue to cloud the vision of both employees and employers on how best to manage a re-entry into a post-pandemic world. The decline of Delta's impact has been replaced by the Omicron surge over the holidays and into the new year, which forced many employers to once again push back return-to-work timeframes. While Omicron appears significantly less deadly, especially among the vaccinated population, the variant has proven notably more contagious and fast-moving, impacting people's willingness/ability to go to the office. Physical office use receded to 30% of pre-pandemic levels three weeks into the new year after peaking at a still low 40% in early December according to Kastle System's Back-to-Work Barometer, highlighting the near-term challenges that remain in place for the sector.

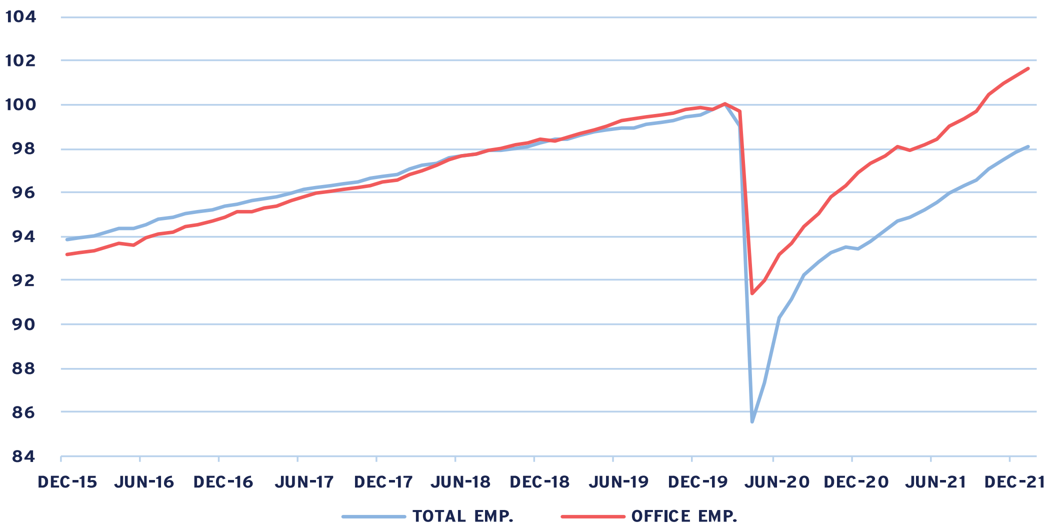
Despite being up 170 basis points (bps) for the year, office vacancies improved 20 bps in the fourth quarter to 16.6% as net absorption rebounded (18.7 million square feet) according to CBRE-EA. Total office availability rates (which includes space being actively marketed for occupancy in addition to vacant square footage) also dropped 30 bps to 22.7% in Q4 with the share of sublease space holding steady, suggesting the market has perhaps plateaued near its high point. The velocity of leasing activity has improved in 2021 with anecdotal evidence suggesting high-quality, well-located buildings are being favored. More broadly, however, office tenants appear to be taking a more measured approach to making significant changes to their space needs at this juncture as the return-to-work dynamics continue to evolve.

As noted last quarter, an encouraging sign is the relative strength of the underlying office employment picture. Traditional office-using jobs were expanding faster than overall employment prior to the pandemic and have been less impacted throughout, with many of those jobs benefitting from the ability to work from home. Indeed, office-using employment eclipsed the pre-pandemic peak, February 2020, in December 2021 and is now 1.6% (January 2022) above peak; in comparison, total employment remains 1.9% below peak. That said, the correlation between office-related employment and space demand is clearly shifting in real time as many employers integrate some form of a hybrid (remote/in-person) work model adding uncertainty to expected growth in office space demand longer-term. The impact of these dynamics will likely become clearer as leases roll over the next few years.

Individual office market dynamics have varied, but a few overriding trends have evolved. (1) Downtown markets have seen their vacancies impacted more dramatically over the past two years, although suburban markets have not been net beneficiaries; (2) Tech-oriented markets as well as; (3) growth markets with more robust supply deliveries in 2021 have also seen vacancy suffer more than average. These include markets like Charlotte, Portland and San Francisco with vacancies up between 350 and 550 bps in 2021. Other notable markets including Denver, Chicago, Austin, Seattle, Nashville and Manhattan with increases of 250-300 bps. A few metros bucking the trend included West Palm Beach, San Diego, Miami and Salt Lake with flat or improving vacancies for the year. Within the context of these broader trends, improvement was widespread in the fourth quarter with 51 of 64 markets seeing flat or improving vacancy rates prior to the Omicron surge when Covid appeared to be waning. Fort Lauderdale, Miami and Orange County were notable vacancy outliers improving ~150 bps while Portland (110 bps), Nashville (100 bps), Manhattan (80 bps) and San Francisco (50 bps) experienced the most notable increases. The fact that vacancies improved when pandemic dynamics appeared to wind down bodes well to the extent the Omicron impacts dissipate as quickly as they appeared given a more vaccinated/boosted population.

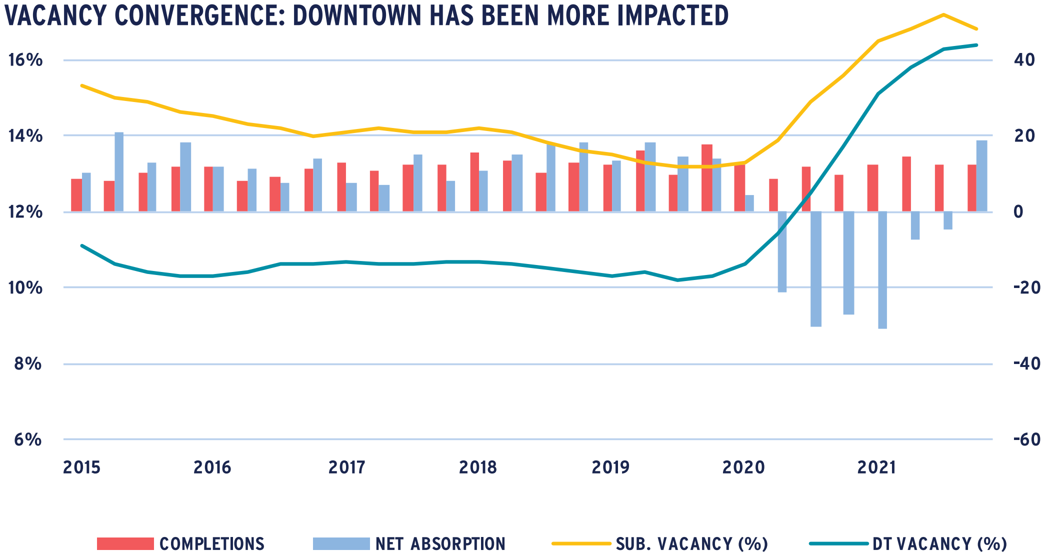
Overall, AEW Research reaffirms its belief that many companies will embrace a more fully integrated hybrid work model that will translate into a reduction in aggregate demand. That said, it will take time to play out as firms assess the impact of the shifting work model on productivity, profitability and the ability to retain talent. This will also translate into a flight to quality space and location premiums that often show up at this point in the cycle along with other dynamics outside of the pandemic like ESG. Commodity and Class B office space will likely be more challenged. Short-term, however, there has been a more significant pickup in leasing volumes over the last several quarters suggesting that the momentum is at least moving in the right direction.

FIGURE 15
U.S. OFFICE USING VS. TOTAL EMPLOYMENT LEVEL (FEBRUARY 2020 = 100)



Source: Bureau of Labor Statistics, Moody's Analytics

FIGURE 16
VACANCY CONVERGENCE: DOWNTOWN HAS BEEN MORE IMPACTED



Source: CBRE-EA

OFFICE	
VACANCY RATE	16.6%
12-MONTH HISTORICAL TREND	
VACANCY CHANGE	↑
RENT	↓
ABSORPTION	↓
COMPLETIONS	↔
CAP RATES	↓
TRANSACTION VOLUME	↑

Apartment

The apartment recovery accelerated further in the second half of 2021 and the market performance is the best it has been since market data started to be tracked in the late 1990s. Per RealPage, the national apartment market vacancy rate declined to just 2.6% in 2021 Q4, down 200 basis points (bps) from the previous quarter and nearly 200 bps from a year earlier. The market has more than recovered from the sluggishness brought about by the COVID-19 pandemic in 2020 and vacancies are now at a historic low, dropping 120 bps below the pre-pandemic low of 3.8% in late 2019.

Demand has continued to surge, setting new records in each quarter since early 2021. Indeed, in 2021 Q2, a record number of roughly 218,800 units were absorbed on a net basis; that record was reset again in 2021 Q3 as nearly 267,000 units were absorbed. In the final quarter of the year, roughly 140,000 units were absorbed; while this was a moderation from the previous quarter, it was off the charts for a fourth-quarter performance. Indeed, over the previous ten years, fourth-quarter demand has averaged less than 10,000 units, due to seasonality in the market. Overall, for the year, more than 673,000 units were absorbed, roughly 3x the annual average from 2008 to 2020. Further, the annual absorption rate jumped to 3.7%, up from a pre-pandemic rate of 1.9% in 2019 and far outpacing the 1.9% increase in supply. This is not to say that construction activity has slowed or is weak, rather the improvement in the market has been solely driven by demand. Indeed, completions as a share of inventory have generally lingered in the 1.7%-1.9% range since late-2016, well above the historical average of 1.0% from 1998 to 2015.

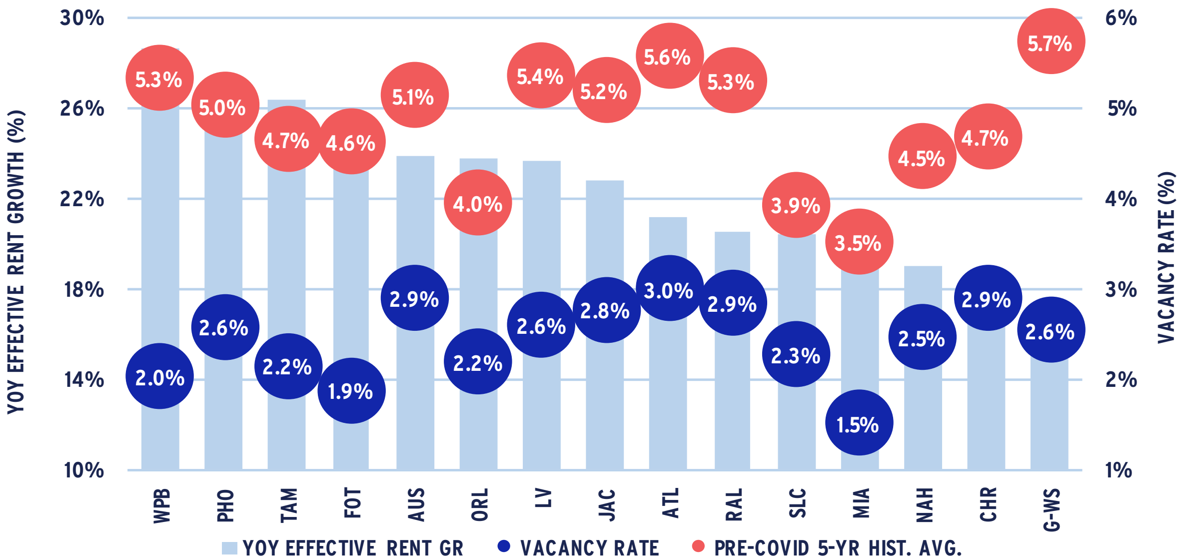
Regionally, 13 markets reported vacancies of 2.0% or less, with the Southern California markets of Orange County, San Diego, Riverside, and Sacramento among them; Providence, Miami, Norfolk, Newark, Detroit, Philadelphia, Fort Lauderdale, Cincinnati and West Palm Beach made up the remaining markets. An additional 26 markets reported vacancies between 2.1% and 3.0%. Overall, vacancies in half of all major markets (top 50) are at a historic low while an additional 11 markets are very near (within 30 bps) historic lows.

In addition to record-breaking demand and record-low vacancy levels, the pace of rent gains has eclipsed prior records. Effective rent growth has been particularly strong among Florida markets, with Florida metros posting five of the top ten greatest increases in effective rents on a year-over-year basis in December. West Palm Beach (28.8%) reported the largest increase in effective rents, while Orlando, Fort Lauderdale and Jacksonville joined Tampa in the top ten; additionally, Miami just missed the list, posting the 12th largest rent gain at 20.1%. Phoenix, Austin, Las Vegas, Atlanta and Salt Lake City rounded out the top ten markets for effective rent growth. The strength in Florida goes beyond the major markets as well. Indeed, if we include smaller markets, Naples (39.6%), Sarasota (31.4%) and Cape Coral (27.4%) would rank among the top performers. The exceptional performance in the Southeast and Southwest is owed to strong net in-migration during the pandemic and this has occurred at a cost to markets like New York, Boston, San Francisco and Seattle. That said, these core primary markets are improving at a robust pace. Indeed, during any other time the growth in rents reported in these markets – New York (15.7%); Boston (13.9%); Seattle (11.8%); Los Angeles (11.4%); Philadelphia (10.9%); San Jose (10.7%); San Francisco (9.0%); and Washington D.C. (8.8%) – would top the charts; however, in today's environment they are relatively restrained compared to markets in the Southeast and Southwest.

For the most part, Class A rent growth has outperformed Class B and C during the current recovery and this is primarily attributed to the greater rate reductions experienced among Class A properties during the pandemic and a subsequent snapback in the market. Indeed, demand for Class A, urban product collapsed during the pandemic and this occurred at the same time the market was still absorbing a wave of new supply. As a result, occupancies dropped, concessions ramped up and, in some cases, asking rents adjusted downward as well. While daytime office occupancies remain anemic in many markets (20%-50% pre-holiday and pre-Omicron), residents are moving back to the urban core and thus many urban markets are experiencing a strong V-shaped recovery, particularly in the Class A segment of the market. Nationally, Class A rents advanced 18% year-over-year in November, compared to 14% growth in the Class B sector and 6.6% among Class C properties. Across all classes, national rent growth totaled 13.9% year-over-year, nearly double the previous quarter's record growth of 7.8%.

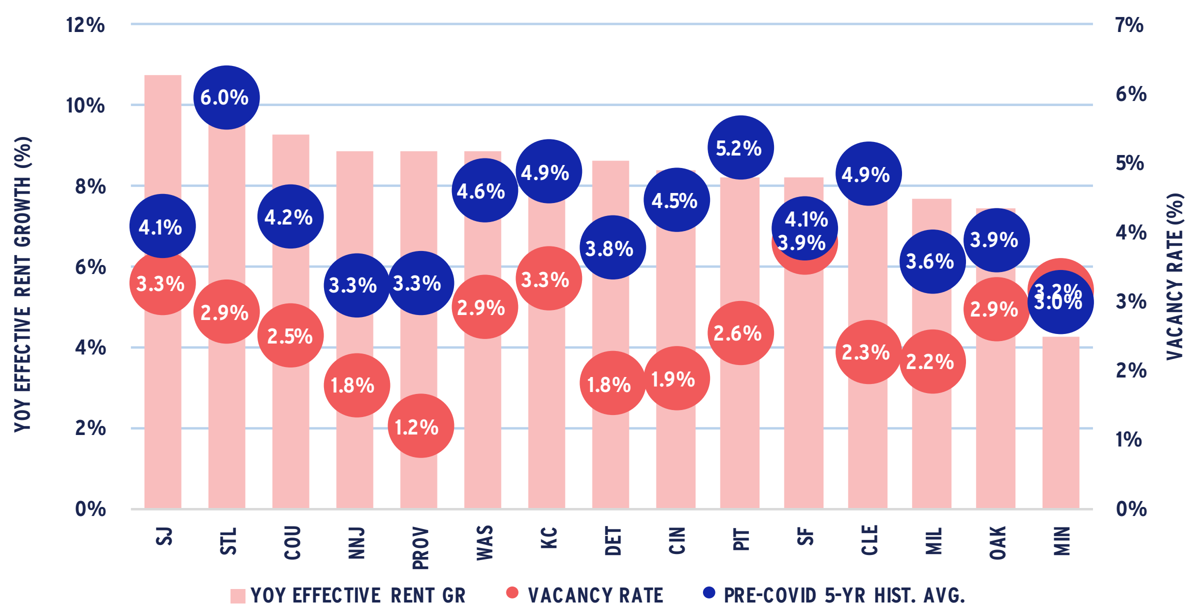
Going forward, demand will be supported by the continued economic recovery and ongoing job growth, which should support household formation. Meanwhile, a broad lack of affordability with respect to for-sale housing and limited supply of homes for sales continues to push many households into rental units. Near-term, we believe rent growth will be strong and above trend growth in 2022 and that urban core markets will experience robust rent growth as residents continue to return to these markets. While people may not be fully returning to offices, they are returning to cities. Indeed, demand in the Bay Area, New York, Boston, and Seattle is improving and rents in these markets should continue to recover as a result. During the height of the pandemic, concessions among urban-core Class A properties in these markets increased to as much as three months free and, in some cases, asking rents actually declined as well. We anticipate a further burn off of concessions in 2022, leading to effective rent growth between 8%-10% in San Francisco; New York; Oakland; San Jose; Boston; and Seattle. Effective rent growth in Los Angeles; Chicago; and Washington D.C. will also be strong at 6%; this will generally be in line with what we expect in the Southeast and Southwest. Midwest markets like, Cincinnati; Cleveland; Columbus; St. Louis; and Indianapolis will underperform relative to other markets; however, with expected rent growth between 3% and 4%, these markets will still be above historical trend.

FIGURE 17
TOP 15 MARKETS BY EFFECTIVE RENT GROWTH AND RELATIVE VACANCY PERFORMANCE



Source: RealPage

FIGURE 18
BOTTOM 15 MARKETS BY EFFECTIVE RENT GROWTH AND RELATIVE VACANCY PERFORMANCE



Source: RealPage

APARTMENT	
VACANCY RATE	2.6%
12-MONTH HISTORICAL TREND	
VACANCY CHANGE	↓
RENT	↑
ABSORPTION	↑
COMPLETIONS	↔
CAP RATES	↑
TRANSACTION VOLUME	↑

Industrial

In the fourth quarter of 2021, the industrial property sector continued its impressive run. Availability rates across the nation continued to tighten, as demand soared and the active supply pipeline lagged net absorption. Availability declined to 5.2%, down 30 basis points (bps) from the prior quarter and down 120 bps from the prior year. This sets a new historical low for national average availability rate for the third quarter in a row. Overall availability is now 410 bps below the quarterly historical average of 9.3% (tracked since 1989 Q1). Demand was high, with 122 million square feet (msf) being absorbed in the quarter, significantly above completions of 81 msf. With limited availability and robust demand, rents have been trending upwards. Per CBRE-EA, the industrial EA rent index increased 6.8% year-over- year (YOY) to a record high of $8.62.

These positive trends reported for the overall U.S. industrial market were seen across an extensive range of metros. Of the 69 markets tracked by CBRE-EA, 59 markets reported a decrease in availability YOY. Of the set that had decreasing availability, the average improvement reported was -150 bps. Some of the industrial markets that reported the largest availability contractions YOY were Savannah (-560 bps); Las Vegas (-480 bps); Greenville (-430 bps); Charlotte (-360 bps); and Riverside (-320 bps). On a related note, several markets are reporting soaring levels of net absorption relative to their historical averages. Several secondary markets in the Southwest and Southeast have seen net absorption jump in 2021 compared to pre-pandemic trends, with markets such as Austin; Salt Lake City; Nashville; Greenville; Phoenix; Charlotte; and Savannah showing expanding industrial demand (see chart).

FIGURE 19
PRE- AND POST-PANDEMIC NET ABSORPTION

Source: CBRE-EA

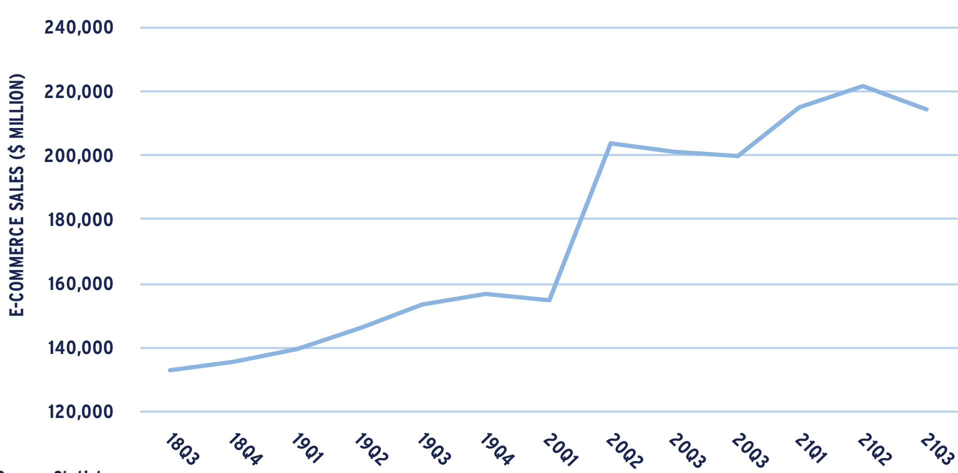
Meanwhile, industrial supply pipelines have been healthy, but are unable to keep up with this increasing demand. For the full-year 2021, of the 69 markets tracked by CBRE-EA, 57 reported net absorption outpacing new completions. Some of the markets where net absorption significantly outpaced new supply include Chicago; Riverside; and Los Angeles among many others (see chart). As challenging entitlements and a lack of accessible labor and raw materials are pushing out industrial development timelines, new supply will continue to be inadequate relative to growing demand. This will continue to drive strong fundamentals and ongoing rent growth.

FIGURE 20
FY 2021 SUPPLY-DEMAND COMPARISON

Source: CBRE-EA

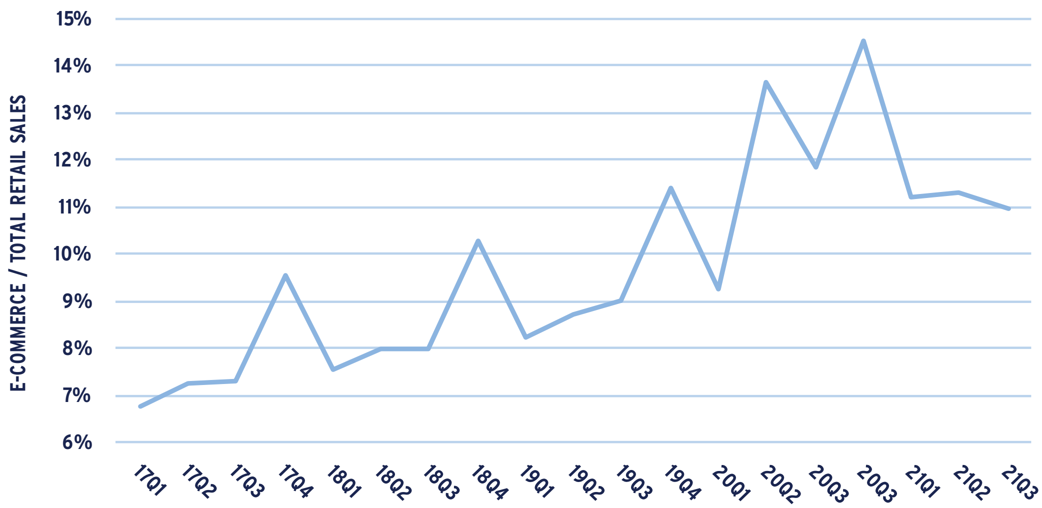
Retail sales, and particularly e-commerce sales, have remained strong into the fourth quarter of 2021. While e-commerce growth has decelerated from its exponential pace seen during peak lockdown in 2020, online sales are still above their pre-pandemic levels. E-commerce sales are expected to keep their healthy momentum and continue to grow at a reliable clip. The pandemic has likely impacted consumer behavior for the long-term, advancing online retail's market penetration. Per Green Street, e-commerce sales require roughly three times the warehouse space of brick and mortar sales. Thus, the rise of e-commerce has provided a ripple effect of boosting industrial demand amidst ongoing supply chain challenges. As seen in the prior quarter across U.S. ports, steady backlogs have disrupted the flow of goods. Retailers are hoping to increase their on-hand inventory with safety stock to compensate for potential delays, increasing net absorption of industrial space and driving import volumes. With increasing e-commerce sales and supply chain disruptions intensifying the need for held inventory, the strong demand for industrial space seen in 2021 Q4 should continue to grow moving forward.

FIGURE 21
U.S. RETAIL E-COMMERCE SALES



Source: Statista

FIGURE 22
E-COMMERCE AS A SHARE OF TOTAL RETAIL SALES



Source: Moody's

INDUSTRIAL	
AVAILABILITY RATE	5.2%
12-MONTH HISTORICAL TREND	
AVAILABILITY CHANGE	↓
RENT	↑
ABSORPTION	↑
COMPLETIONS	↔
CAP RATES	↓
TRANSACTION VOLUME	↑

Retail

The broad retail sector recovery continued through the end of 2021; however, the bifurcation in performance by property subtype has persisted with grocery-anchored neighborhood and community shopping centers (NCSC) and power centers (PC) outperforming malls and lifestyle (L&M) properties. Per CBRE-EA, total retail availability dropped to a record low of only 5.6% in 2021 Q4, an improvement of 30 basis points (bps) from the previous quarter and 100 bps year-over- year (YOY). The NCSC segment of the market again showed the greatest improvement in fundamentals with availability improving 130 bps over the course of the year, dropping to 8.0%. NCSC are now at their lowest level since mid-2006. The PC segment of the market followed with availability improving to 6.4%, down 30 bps quarter-over-quarter (QOQ) and 100 bps YOY. Availability in the PC segment of the market is back to levels last seen in early 2018. L&M availability, in contrast, expanded QOQ (40 bps) and YOY (50 bps), increasing to 6.9%. L&M availability is now at the highest level ever reported since CBRE-EA began tracking the market in early 2005.

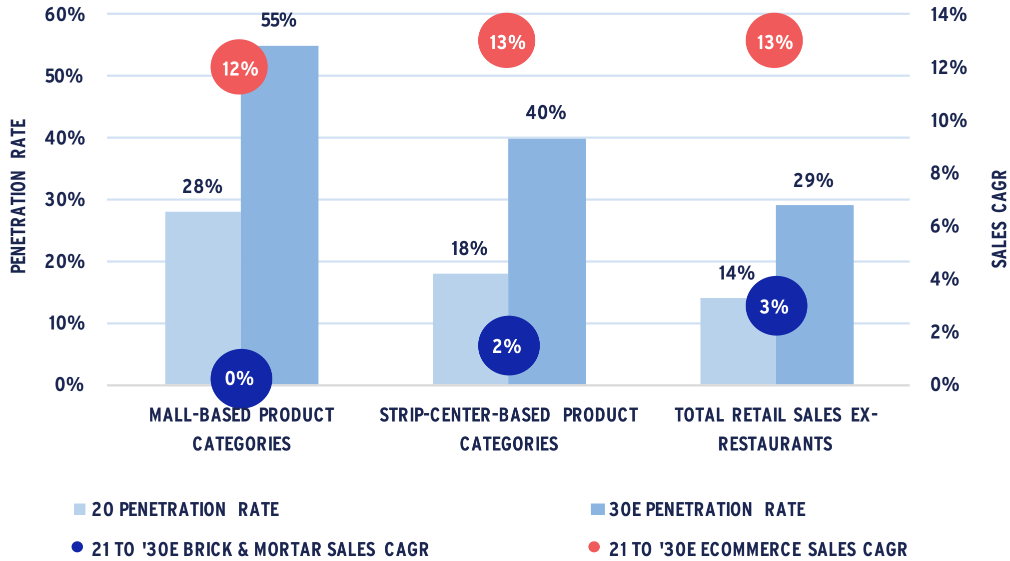
The strength in the NCSC market has been driven by a solid recovery in brick and mortar sales; per Green Street, brick and mortar retail sales grew 20% in the year, outpacing e-commerce sales growth. Further, the growth was not solely fueled by inflation as both nominal and real brick and mortar sales rose to record levels in 2021. A recovery in foot traffic has helped drive sales higher. Indeed, according to data from Placer AI, through November 2021, strip center (NCSC & PC) foot traffic was roughly 3% above pre-pandemic levels. Not surprisingly, with a return of customers, demand for space from retailers was strong. Broadly 100 million square feet (msf) of retail space was absorbed in the year, the highest demand since 2016. The NCSC subtype, which accounts for roughly 40% of retail inventory, accounted for nearly half (46 msf) of demand in 2021. The strength in demand was largely driven by small shop space, particularly for quick service restaurants and cellular tenants. Reflecting this, the average square footage leased fell to roughly 3,000 square feet, the smallest quarterly average historical footprint leased per CoStar. Roark Capital (Dunkin, Sonic, Arby's etc.), Starbucks, T-Mobile, AT&T and Yum Brands drove leasing for smaller spaces.

Within the PC segment of the market, nearly 9 msf of space was absorbed in 2021, the largest tally since 2013. With the wave of bankruptcies receding, stronger retailers have emerged and have expanded their presence. Typical PC tenants Burlington (1.4 msf), Target (1.2 msf) and Floor & Décor (1.1 msf) were among the largest lessees of space in 2021. Burlington is a perfect example of a stronger and more financially viable retailer that is targeting expansion; indeed, Burlington has plans to open 120 new stores in 2022 and close 30 underperforming stores. Of note, however, is that the average size of their stores will be smaller going forward. Among experiential retailers, Planet Fitness contributed 1.2 msf to net absorption while discounter Dollar Tree was the largest lessee, regardless of box size, at nearly 1.7 msf.

Finally, the lifestyle and mall segment of the market remains challenged with 2.8 msf of space being returned to the market, prompting the uptick in availability. However, there are some green shoots within the sector as Class A malls performed better than expected. Net absorption among Class A product turned positive in the second half of 2021, with nearly 1.0 msf absorbed in the two quarters; this offset negative demand early in the year. As such, availability among Class A product improved from a record high of 5.5% in mid-2021 to 5.1% by year-end. Further, demand has remained positive into 2022 with availability dropping to 4.9% by the end of January 2022. In contrast, Class BC demand remained negative through 2021, accounting for the entirety of the demand-side weakness in the L&M segment of the market. As such, L&M Class BC vacancy increased to a record high of 9.3% by year-end, up nearly 100 bps from a year earlier. Availability remains high as well at 7.4%, 50 bps above the L&M total and 250 bps above the Class A average. The recovery in Class A malls is occurring at a better pace than post-Great Financial Crisis and this is likely owed to the stronger balance sheets of consumers and retailers alike. Fewer bankruptcies and expansion among non-traditional mall tenants are helping to shore up demand in Class A malls. Dick's Sporting Goods, Round One and Dave & Buster's have been leading replacements to backfill vacated department stores.

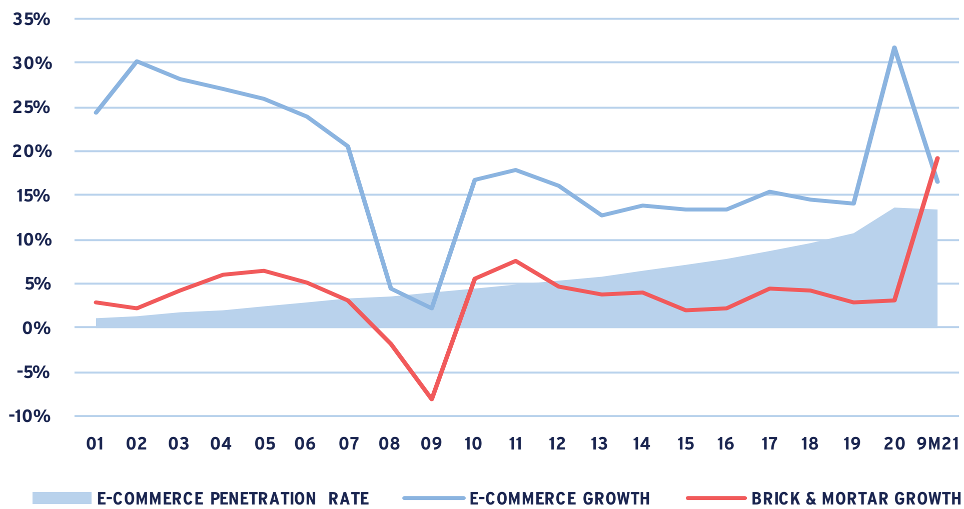
Going forward, with the wave of bankruptcies largely behind the retail sector, the biggest risks to the retail recovery are the pandemic and potential new variants and competition from e-commerce. Regarding the pandemic, enclosed malls are likely more at risk relative to open-air and necessity-based centers. Increased vaccination rates across the globe, however, may lessen the impact of the pandemic on retail. The increase in foot traffic shows consumers are more comfortable and confident in resuming in-person activities. The low levels of hospitalization among vaccinated people has also boosted confidence in travel and other experiential activities, as such the Omicron variant had a much more muted impact on retail relative to the Delta variant. With respect to e-commerce, unfortunately, malls are also at greater risk relative to NCSCs and PCs. Indeed, Green Street projects the e-commerce penetration rate for strip center-based retail categories will double from roughly 18% today to 40% in 2030; in comparison, the e-commerce penetration rate for mall-based retail categories is expected to grow to 55% from 28% over the same period. In terms of e-grocery, penetration will also pick up (growing to 25% by 2030); however, stores will continue to play a major rolein e-grocery fulfillment, which will allow for continued brick and mortar grocery sales growth. Indeed, the successful adoption of buy online pick up in store (BOPIS) and food delivery services (Instacart, Shipt, Mercato, etc.) by both grocers and consumers has shored up brick and mortar grocery sales. Against this backdrop, we expect the NCSC and PC segment of the market to outperform L&M segment for the foreseeable future, generating better rent growth, higher occupancies and NOI growth. Within the L&M segment, Class A product will continue to outperform the Class BC segment of the market.

FIGURE 23
BASE CASE SALES FORECAST BY PRODUCT TYPE



Source: Green Street

FIGURE 24
US RETAIL SALES GROWTH RATE AND E-COMMERCE PENETRATION RATE



Source: U.S. Census Bureau (BOC)

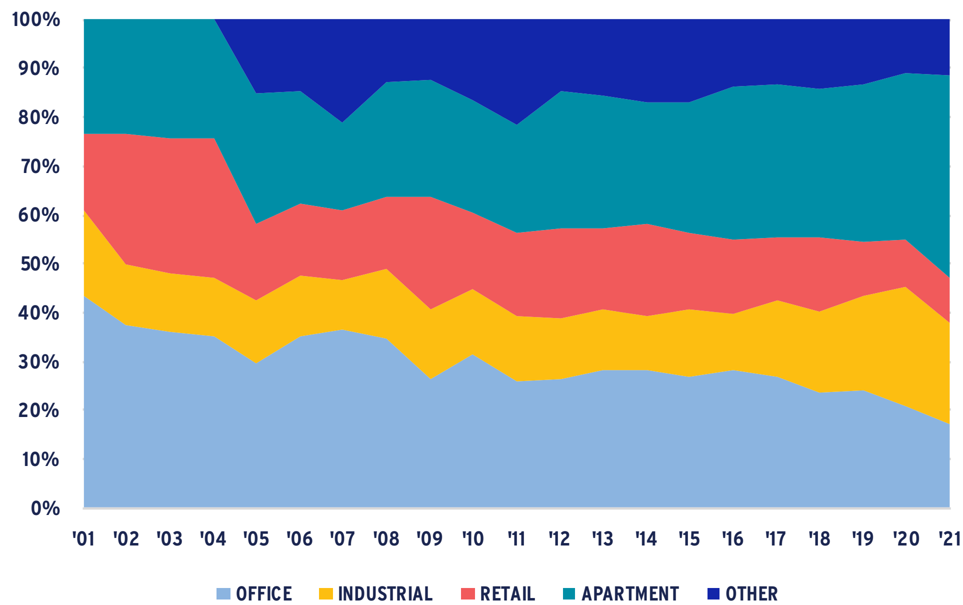
RETAIL	N&C SHOPPING CENTERS	LIFESTYLE & MALL	POWER CENTER
AVAILABILITY RATE	8.0%	6.4%	6.9%
12-MONTH HISTORICAL TREND			
AVAILABILITY CHANGE	↓	↓	↑
RENT	↑	↔	↑
ABSORPTION	↑	↑	↑
COMPLETIONS	↓	↓	↔
CAP RATES	↑	↑	↑
TRANSACTION VOLUME	↑	↓	↑

Capital Markets

2021 was a record setting year for transaction volume. Per Real Capital Analytics (RCA), nearly $810 billion in properties changed hands last year, up 88% from 2020 and 46% above the average volume over the five years leading up to the pandemic. Both individual ($573 billion) and portfolio ($193 billion) sales volumes rose to record levels while entity ($42 billion) transaction volume was the highest since 2007. Portfolio transactions were nearly double the 2020 level and were roughly 61% above the five-year pre-pandemic average. Meanwhile, individual transactions were 83% higher than 2020 and were 46% above the pre-pandemic average.

As has been the case since 2019, investors' appetites for apartment and industrial properties remains strong, with $335 billion in apartment properties changing hands, up from $178 billion in 2018. Apartment sales volume accounted for nearly 42% of all transaction volume in 2021, up from roughly 30% in 2018. Meanwhile, $166 billion in industrial properties changed hands, up from $98 billion in 2018. Like the apartment sector, industrial sales as a share of total volume increased notably, accounting for just over 20% of all volume in 2021, up from just under 17% in 2018. Office sales activity recovered significantly with $139 billion in properties changing hands, roughly in line with 2018 and 2019 sales; however, the share of volume in the sector declined to 17%, down from roughly 24% in 2018 and 2019. Finally, $77 billion in retail properties changed hands, down from 2018's ($87 billion) transaction volume but surpassing 2019's ($66 billion). Retail volumes accounted for only 9.5% of all transactions, the same as 2018, and the lowest share since RCA began tracking the market in 2001. Retail volume as a share of total volume is now 500 basis points (bps) below the post-GFC average share of volume.

FIGURE 25
TRANSACTIONS VOLUMES CONTINUE TO SHOW INVESTORS' STRONG PREFERENCE FOR APARTMENT AND INDUSTRIAL



Source: Real Capital Analytics

Among other property types, hotel, land and seniors housing volumes have recovered with roughly $45 billion (up 238%), $29 billion (up 22%) and $18 billion (up 70%) in properties changing hands in the respective sectors in the year. Volume in all three sectors eclipsed pre-pandemic levels; hotel volume surpassed the 2018-2019 average by 8% while land and seniors housing sales were 26% and 5% greater than 2018-2019, respectively.

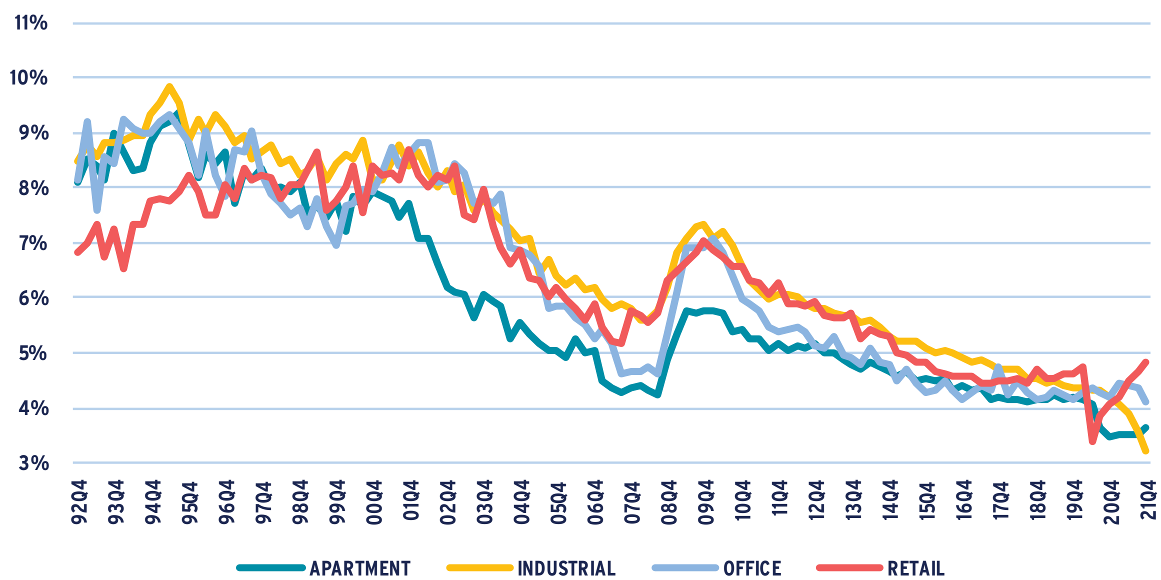
Given investors' voracious appetites for apartment and industrial properties, it is not surprising that these sectors reported the greatest price appreciation in 2021. Indeed, according to the RCA Commercial Property Price Index (CPPI), which tracks repeat sales, industrial pricing increased 29% in 2021, while apartment pricing advanced nearly 24%.

Retail and office price appreciation stood at 22% and 14%, respectively. Of note, however, with the weight of the pandemic affecting office space to perhaps the greatest degree, particularly in dense, urban areas, CBD office pricing was essentially flat, reporting an increase of only 3%.

NCREIF Trends seen in the previous quarter have continued into the fourth quarter. As of 2021 Q4, the total NCREIF NPI return was 6.2% on the quarter and 16.7% over the previous four quarters. This is up substantially from 2021 Q3, which had seen a 5.2% quarterly return and a 11.7% four-quarter return. The industrial sector had an outsized influence on boosting overall returns, outperforming the other major sectors by a meaningful amount. The Q4 industrial NPI return was 13.3% on the quarter, with a 37.9% annual return, a record-setting performance. Again, this is a large uptick from industrial's already robust returns in Q3 of 10.9% quarterly and 32.4% annually. The apartment sector had a Q4 NPI return of 6.8% quarterly and 18.9% annually. While the office and retail sectors are lagging the booming industrial and apartment returns, they have seen improvements from the dip they took in the last few years. The office Q4 returns stood at 1.7% on the quarter and 6.0% over four quarters. The Q4 NPI returns were up considerably from the negative 0.1% returns seen in 2020 Q2, which had been the lowest returns seen for the sector in a decade. The retail returns are also improving, and the fourth-quarter returns stand at 2.2% quarterly and 4.2% annually. The sector returns were negative across 2019 and 2020; however, now the retail sector has reported three consecutive quarters of positive returns, providing a more positive outlook.

As seen in the third quarter, the Q4 NCREIF cap rates have held at notably low rates across each of the major property sectors. On a market value-weighted basis, the NCREIF industrial cap rate declined 40 basis points (bps) this quarter to 3.2%. This is also a decrease of 100 bps year-over-year (YOY). The office sector also reported cap rate compression, declining 30 bps quarter-over-quarter (QOQ) and 10 bps YOY to 4.1% in the fourth quarter. In comparison, the apartment and retail sectors saw cap rates increase slightly. Apartment cap rates stood at 3.6%, up by 10 bps QOQ and 20 bps YOY. Retail cap rates stood at 4.8%, up by 20 bps QOQ and 80 bps YOY.

FIGURE 26
NCREIF CAP RATES BY PROPERTY TYPE (MARKET VALUE BASIS)



Source: NCREIF

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3.6%, up by 10 bps QOQ and 20 bps YOY. Retail cap rates stood at 4.8%, up by 20 bps QOQ and 80 bps YOY. Moving forward, the capital markets outlook is centered on the continued expansion of capital into the real estate sector. The transaction market has remained competitive throughout the tribulations of the last two years since the pandemic and economic after-shock began. Institutional investors have been reassured as real estate has proven to be resilient. In particular, the industrial and apartment sectors have continued to see strong rent growth and NPI returns. Regarding the office and retail sectors, as rent growth and returns have been more limited, investors will have to narrow in on the higher-performing subtypes, such as medical office, life science, neighborhood and community shopping centers, and power centers. Other subtypes like commodity office and mall retail may face more headwinds as the pandemic has changed the way people work and shop.

Overall, AEW Research maintains that cap rates should hold steady in the near-term, however, the normalization of monetary policy may put upward pressure on cap rates as it did in the post-GFC era. That said, an expansion in cap rates may not translate to declining values as prospects for NOI growth are favorable, particularly in the industrial and apartment sectors. A 50-bps increase in cap rates would necessitate a 10%-15% increase in NOI over the next five years in order to preserve values; this is more than achievable in the industrial and apartment sectors given current and expected market fundamentals. Office and retail may have more challenges given market fundamentals and the long-term lease structure in the sectors. Still, the bifurcation that we are seeing in market fundamentals within the office and retail subtypes will translate to a bifurcation in NOI growth, with shopping and power centers outperforming malls and creative and healthcare-related office outperforming commodity office.

PREA CONSENSUS NPI TOTAL RETURN SURVEY - 2021Q3

SECTOR	2021	2022	2023	AVG. '21-'25
NPI	8.0%	7.4%	7.6%	6.8%
OFFICE	3.4%	5.1%	6.5%	5.0%
RETAIL	0.9%	5.0%	6.0%	4.5%
INDUSTRIAL	19.7%	11.3%	10.3%	10.3%
APARTMENT	9.2%	8.4%	7.7%	7.3%

Source: PREA