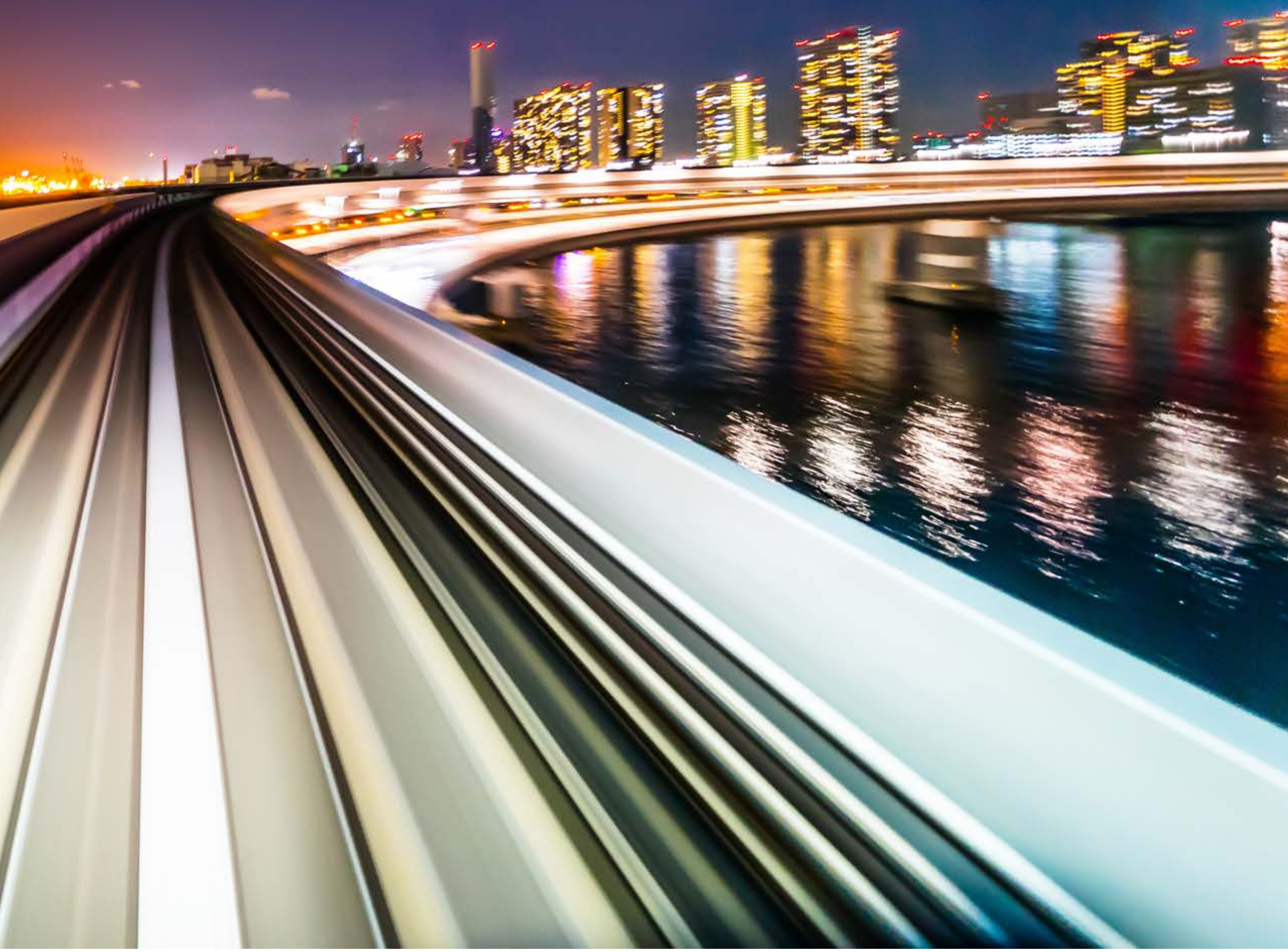
EXPECTATIONS & MARKET REALITIES IN REAL ESTATE 2020

FORGING AHEAD



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Expectations & Market Realities in Real Estate 2020
Forging Ahead

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Deloitte Development LLC
111 S. Wacker Drive
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NATIONAL ASSOCIATION OF REALTORS®
430 North Michigan Avenue
Chicago, IL 60611

RERC and SitusAMC
5065 Westheimer Road
Suite 700E
Houston, TX 77056

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FOREWORD

Dear Readers,

The nation's longest-ever economic expansion **forges ahead.** As trade tensions have eased, we have become more optimistic about the economy than we were a year ago. We expect steady, slow growth to continue this year, as has been the case throughout much of the recovery from the Global Financial crisis (GFC). Since the GFC, commercial real estate (CRE) has been a preferred asset class, offering investors solid risk-adjusted returns. Investors are likely to keep a risk-off approach, backing away from high-risk assets such as stocks and instead **forging ahead** with safe-harbor investments.

This is good news for CRE transactions. While overall deal activity was down in 2019, volume is picking up for particular property types and markets as investors keep looking for deals this late in the cycle. We expect CRE prices to stay at record highs as space market fundamentals remain healthy; strong valuations will likely support the high prices. We forecast CRE capital appreciation returns to decline over the next year before moving up again late in 2021. By the end of 2022, we may see income returns increase to levels not seen since 2016.

Among the property types, industrial continues to shine, thanks to more consumers shopping online. If the economy keeps growing, the office sector will likely experience a slight decrease in vacancy rates, and newer buildings with upgraded amenities are expected to be in high demand. Investor appetite for the apartment sector will likely be strong through 2020 as housing affordability issues continue to push people toward renting instead of owning. Hotel supply and demand should remain near equilibrium in 2020 if consumer confidence and disposable income remain steady. We expect retail to remain the weakest sector with more disruption caused by store closures and bankruptcies; nonetheless, fundamentals should improve with rising incomes and stronger household balance sheets.

RERC Research, a Situs AMC company, Deloitte and the NATIONAL ASSOCIATION OF REALTORS® would like to extend our gratitude to all who contributed to this report. This includes the data providers, survey respondents, economists, researchers and analysts, and reviewers and business colleagues, without whom this report would not have been possible. We also would like to thank our clients and subscribers for their continued support of this annual publication.

Matthew G. Kimmel, CRE, FRICS, MAI
Principal & U.S. Real Estate Services Leader
Deloitte Transactions and Business Analytics LLP

Lawrence Yun, Ph.D.
Chief Economist & Sr. Vice President
NATIONAL ASSOCIATION OF REALTORS®

Kenneth P. Riggs, Jr., CFA, CRE, MAI, FRICS, CCIM
Vice Chairman
RERC

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SPONSORING FIRMS & CHAIRS

Matthew G. Kimmel, CRE, FRICS, MAI
Principal
Deloitte Transactions and Business Analytics LLP

Lawrence Yun, Ph.D.
Chief Economist and Senior Vice President of Research
NATIONAL ASSOCIATION OF REALTORS®

Kenneth P. Riggs, Jr., CFA, CRE, MAI, FRICS, CCIM
Vice Chairman
RERC Research

LEAD CONTRIBUTORS

Jodi Airhart
Director
RERC Research

Scholastica (Gay) Cororaton
Senior Economist and Director of Housing and Commercial Research
NATIONAL ASSOCIATION OF REALTORS®

Todd J. Dunlap, MAI, MRICS
Senior Manager
Deloitte Transactions and Business Analytics LLP

Kenneth W. Kapecki, CRE, FRICS, MAI
Managing Director
Deloitte Transactions and Business Analytics LLP

Jen Rasmussen, Ph.D.
Vice President
RERC Research

ASSOCIATES

Amanda Bina
Senior Consultant
Deloitte Transactions and Business Analytics LLP

Nellie Desai
Senior Consultant
Deloitte Transactions and Business Analytics LLP

Charles Ellis
Associate
RERC Research

Nick Gibbs, MAI
Manager
Deloitte Transactions and Business Analytics LLP

Lucas Kane
Analyst
RERC Research

Surabhi Kejriwal
Research Leader, Real Estate
Deloitte Support Services India Pvt. Ltd.

Nick LeVeque
Senior Consultant
Deloitte Transactions and Business Analytics LLP

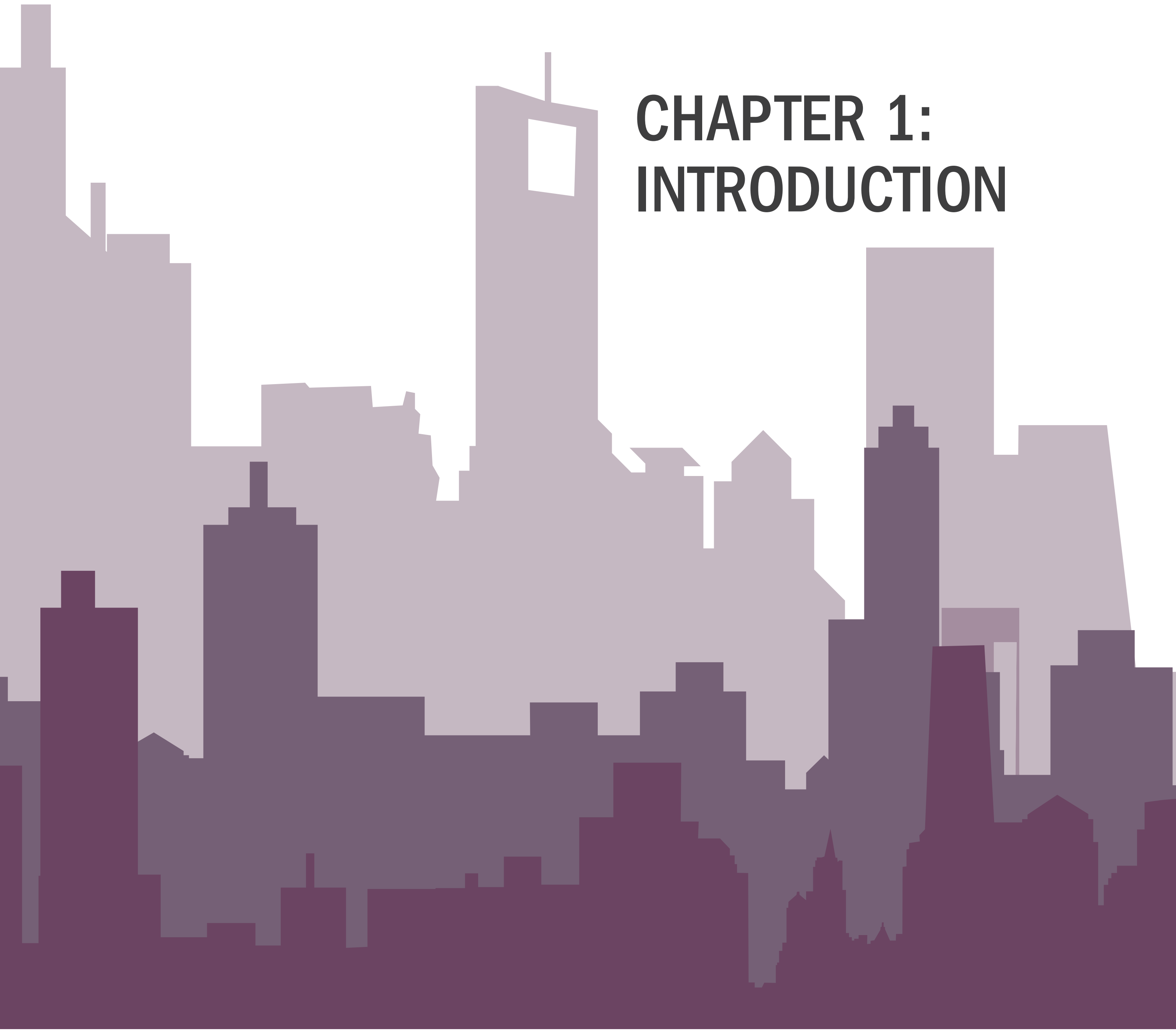
Saurabh Mahajan
Manager, Real Estate
Deloitte Support Services India Pvt. Ltd.

Madison Martin
Graphic Designer
RERC Research

Alec Roth
Analyst
RERC Research

Jack Tolchin
Consultant
Deloitte Transactions and Business Analytics LLP

CHAPTER 1: INTRODUCTION



INTRODUCTION

FORGING AHEAD

The new decade brings unique challenges and opportunities for CRE investors. The U.S. is well into the longest economic expansion in history, and the U.S. economy, financial markets and capital markets are **forging ahead** into 2020.

Forging ahead can mean either "moving slowly and steadily" or "moving with a sudden burst of speed."[1] While the former definition is applicable to current economic growth and overall CRE space market fundamentals, the employment situation, industrial sector performance and secular changes impacting the CRE market are aligning with the latter definition.

Economic data, in general, show support for continuing economic growth in 2020, albeit at a modest pace. Real gross domestic product (GDP) growth averaged 2.3% year over year (YOY) in 2019, compared to a 2.9% YOY increase in 2018.[2] By comparison, GDP growth ranged from 2.9% to 7.0% (averaging 4.6%) across all other recovery cycles since World War II.

While GDP growth has been slow, the U.S. unemployment rate has fallen from a peak of 10.0% in October 2009 to 3.5% in November and December 2019.[3] Consumer confidence, as measured by the Conference Board, has declined from its 2019 high in July, but remains near a 20-year high.[4] Personal income and consumer spending **forged ahead**, increasing every month since February 2019.[5,6] Through December 2019, the average hourly wage increased by 2.9% over the year, though real average hourly earnings increased by just 0.6% during that time.[7,8]

However, some cracks are beginning to show in the economic indicators. According to The Organisation for Economic Co-operation and Development (OECD), business confidence was near a three-year low in November 2019. Statistics from the December 2019 Manufacturing ISM (Institute for Supply Management) Report show that the U.S. manufacturing sector contracted in December. The Purchasing Managers' Index (PMI) fell to 47.2% in December 2019, down 0.9 percentage points from the previous month and dropping to its lowest reading since June 2009, when it registered 46.3%.[9] Additional economic analysis can be found in chapter 2 of this report.

The relatively strong economy has propped up CRE transactions. Data from Real Capital Analytics (RCA) show that overall CRE transaction metrics slowed in 2019, but remained strong.[10] Overall 3Q 2019 transaction volume was $151 billion, down 6% YOY. While overall deal activity is down, volume is picking up for particular property types and markets as investors try to find the diamonds in the rough this late in the cycle. As non-residential construction costs continue to rise (2.4% YOY in October 2019), investors are turning toward property types that have the lowest capital expenditures: apartment and industrial. A full analysis of the capital markets can be found in chapter 3 of this report.

According to CoStar, growth in overall CRE space market fundamentals was slow and steady, with the exception of the industrial sector, where fundamentals continue to strongly **forge ahead**.[11] Apartment fundamentals continue to progress at a steady, albeit slowing, pace. Office demand remains strong; tenants are signing leases at a record pace. Retail demand, however, continues to weaken, with net absorption at the lowest rate during this past expansion. We present an in-depth look at the property types in chapter 4.

In general, our collective firms' economic and CRE outlooks are optimistic; we do not expecte a downturn in 2020. Our current optimism is in contrast to what the industry expected at the beginning of 2019, as evidenced by the results of the 2019 Deloitte Dbriefs poll (described on the next page). Advances in trade negotiations, a more accommodative monetary policy, record low unemployment and steady economic indicators seen at the end of 2019 have led to what we believe to be a brighter outlook for 2020. We present all of our 2020 outlooks and forecasts in chapter 5.

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2019 DELOITTE DBRIEFS POLL RESULTS: EXPECTATION AND MARKET REALITIES IN REAL ESTATE 2019

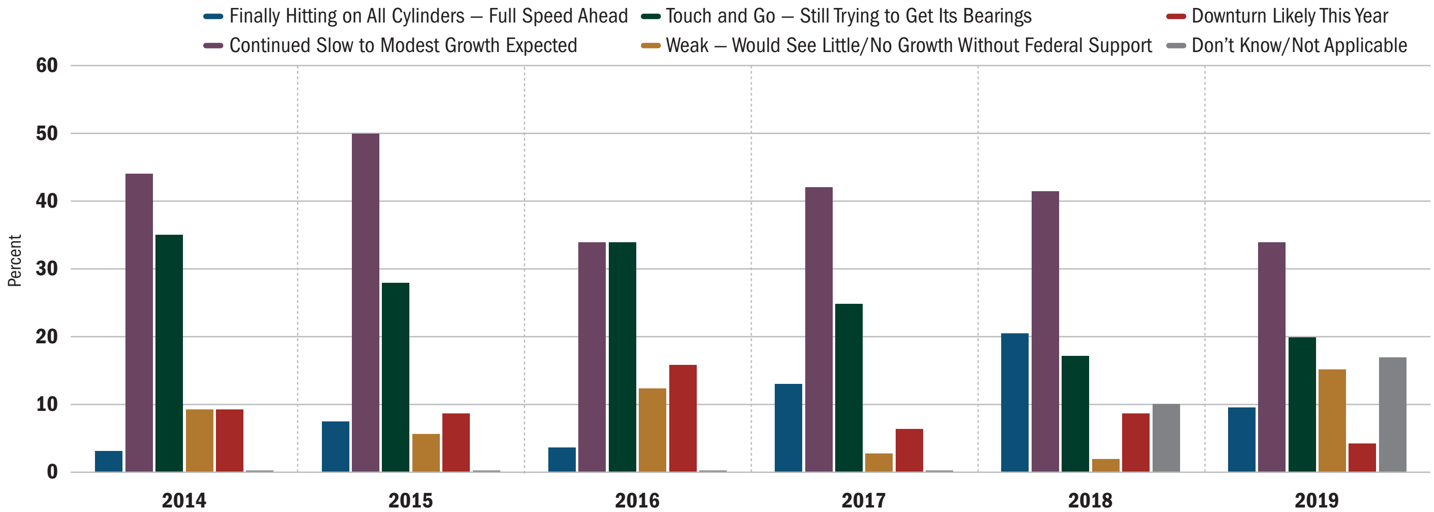
Since 2011, the authors of this report have used the Deloitte Dbriefs platform to showcase the results of our report. Each year, the webcast participants are polled to gauge their sentiment about the market. Nearly 5,000 people attended the 2019 webcast and nearly 4,000 people participated in the poll, which was conducted on Feb. 5.

The number of responses for these survey questions ranged from 2,869 to 3,803. See Exhibits 1-A through 1-E for charts of the poll results.

The 2019 Dbriefs poll participants showed less confidence in the state of the economy and a more pessimistic view of the CRE market compared to 2018. Only 9.6% of the respondents believed that the economy would hit on all cylinders in 2019, compared to 20.5% in 2018. Additionally, 34.0% of the respondents believed that the economy would continue to grow in a slow to modest pace in 2019, down from 41.5% of the respondents in 2018. There was an increase in the percentage of respondents who said the economy would be weak with little or no growth without support from the Fed – 15.2% in 2019 compared to 2.0% in 2018.

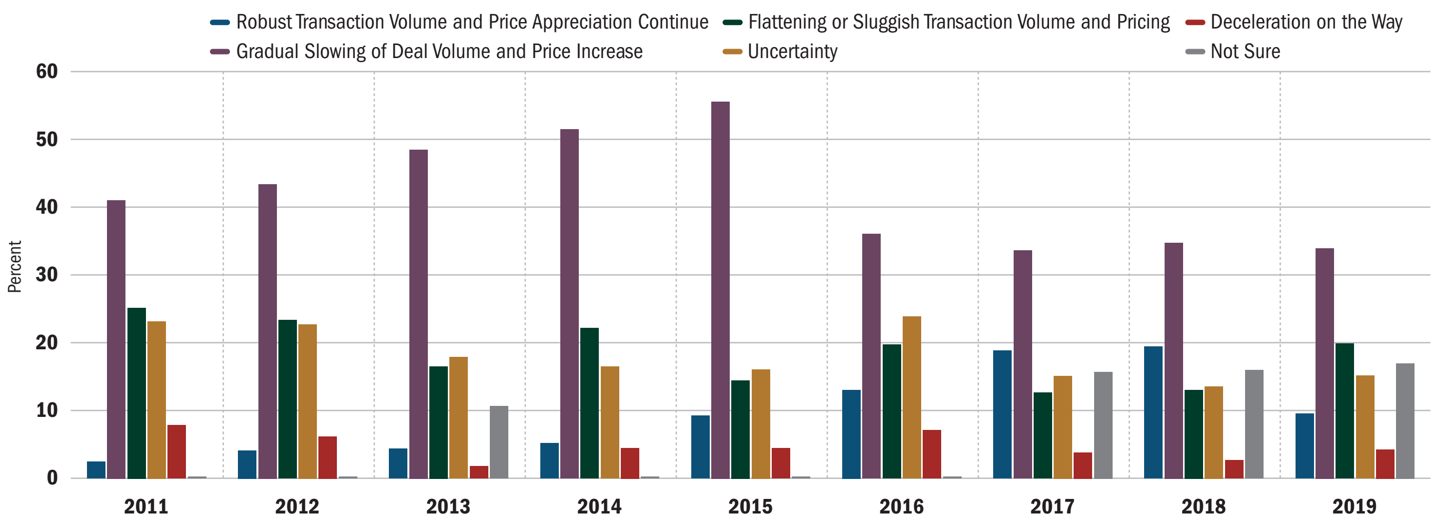
In terms of the CRE market, only 9.6% of the respondents believed that robust transaction volume and price appreciation would continue in 2019, compared to 19.5% in 2018. The highest number of respondents — 34.0%

EXHIBIT 1-A. DELOITTE Dbrief POLL RESULTS — WHAT IS YOUR VIEW OF THE STATE OF THE ECONOMY?



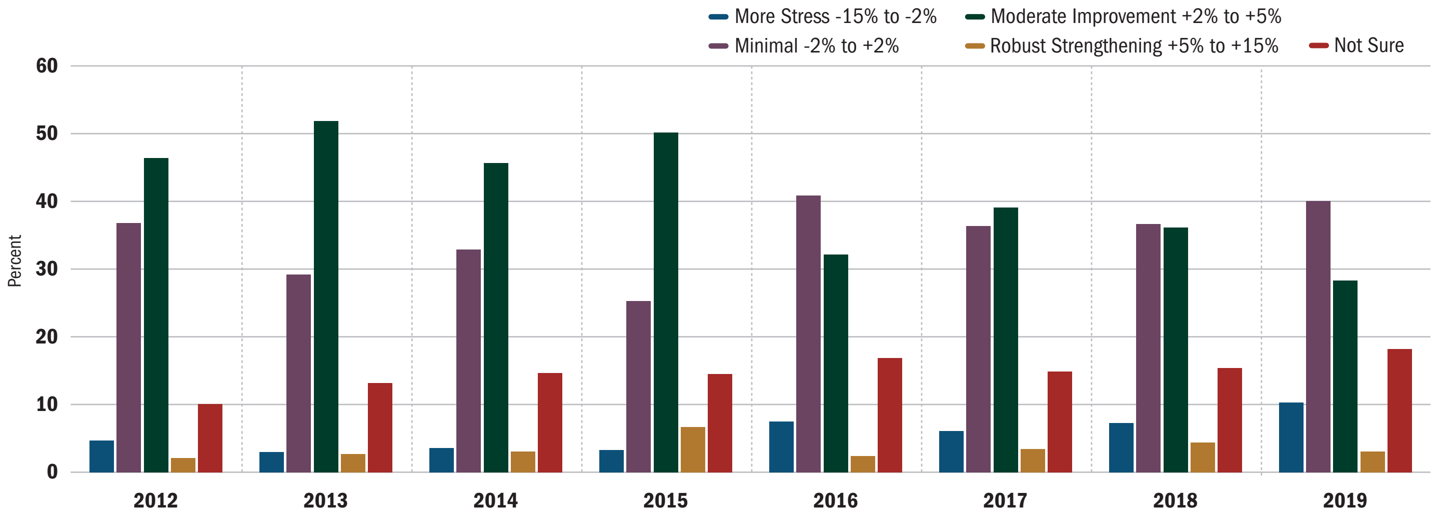
Sources The Deloitte Dbriefs Real Estate Series, *Expectations and Market Realities in Real Estate*, February 2019.

EXHIBIT 1-B. DELOITTE Dbrief POLL RESULTS — WHAT IS YOUR VIEW OF THE CURRENT STATE OF CRE?



Sources The Deloitte Dbriefs Real Estate Series, *Expectations and Market Realities in Real Estate*, February 2019.

EXHIBIT 1-C. DELOITTE Dbrief POLL RESULTS — TO WHAT EXTENT DO YOU EXPECT COMMERCIAL REAL ESTATE VALUES TO CHANGE OVER THE NEXT 12 MONTHS?



Sources The Deloitte Dbriefs Real Estate Series, *Expectations and Market Realities in Real Estate*, February 2019.

— believed that the CRE market was experiencing a gradual slowing of deal volume and price increase, slightly less than 34.8% in the previous year. Only 4.3% of the respondents believed that the CRE market would experience a deceleration in 2019, but that was still higher than 2.7% in 2018. While respondents in 2018 were split between anticipating minimal change (-2% to +2%) and moderate improvement (+2% to +5%) in CRE values over the next 12 months, respondents in 2019 were more likely to expect minimal change (40.1%) than moderate improvement (28.3%).

Slightly more than a third of the respondents said that multifamily assets had the most favorable investment opportunity in 2019 based on recent performance of fundamentals. Multifamily respondents represented the largest percentage at 35.3% among the property types though it was down slightly from 36.8% in 2018. This continued a downward trend in opinions about the multifamily sector. In 2017, 46.8% of respondents said multifamily would offer the most favorable investment opportunity; its favorability has been in the 35%-47% range since 2012. Multifamily has ranked highest among all the property types since the poll began in 2011, when 29.2% favored the sector.

The industrial/warehouse sector was deemed favorable by 18.2% of respondents in 2019, down from 20.4% in 2018, but still higher than 2017, when the percentage was 14.0%. The sector's popularity has been generally increasing since 2012, except for dips in 2016 and 2019. After ranking No. 3 among the sectors from 2011 through 2016, it surpassed office for No. 2 in 2017, and has remained there since.

Since 2012, the office sector's favorability has been in the 11%-16% range. The office property type was the most favorable investment opportunity for 13.3% of respondents in 2019, down from 14.0% in 2018 but up from its low point of 11.5% in 2017. Its peak was in the first year of the survey, 2011, at 17.5%.

The percentage of those favoring the retail sector increased slightly from 7.1% in 2018 to 7.6% in 2019. Dating back to 2011, the retail sector has ranked as the second-least favorable sector. The percentage of respondents who viewed retail as the most favorable investment opportunity generally fell every year from 2011 through 2014, rose in 2015, dropped again in 2016, and remained in the 6% to 8% range the past three years.

Hotel was rated the least favorable investment opportunity, with only 5.3% of the respondents preferring the asset class. Hotel has been the least-favorable sector in every year of the polling. Nonetheless, 2019 represented an increase from 4.0% in 2018.

Dbriefs participants believed that capital availability for CRE in 2019 would remain comparable to that of 2018. About 30% of the respondents believed that the standards and availability would remain the same in 2019, nearly identical to 30.6% in 2018. The percentage of respondents suggesting they would seek riskier positions declined from 24.8% in 2018 to 19.7% in 2019.

CRE FORGES AHEAD AS A PREFERRED ASSET CLASS

Since the GFC, CRE has been a preferred asset class, offering investors solid risk-adjusted returns. CRE is a tangible asset, offering relative safety during a downturn in the form of income returns while offering higher yields compared to bonds. As we continue into the long expansion cycle, we expect that uncertainty will continue to play a primary role in investment decisions. Investors are likely to keep a risk-off approach, backing away from high-risk assets such as stocks to retreat to safe-harbor investments.

The relative performance of CRE compared to benchmark low-risk investments will drive investment activity moving forward. With 10-year Treasury yields falling quarter over quarter (QOQ) and cap and discount rates flat, spreads widened in 3Q 2019, according to analysis from RERC Research, as they have for three consecutive quarters, to reach the largest in three years (see Exhibit 3-B). This means that CRE investors are getting a higher risk premium despite no perceived risk increases in CRE. Cap rate spreads over the 10-year Treasury are now above the three-year, five-year and 10-year averages. Moody's

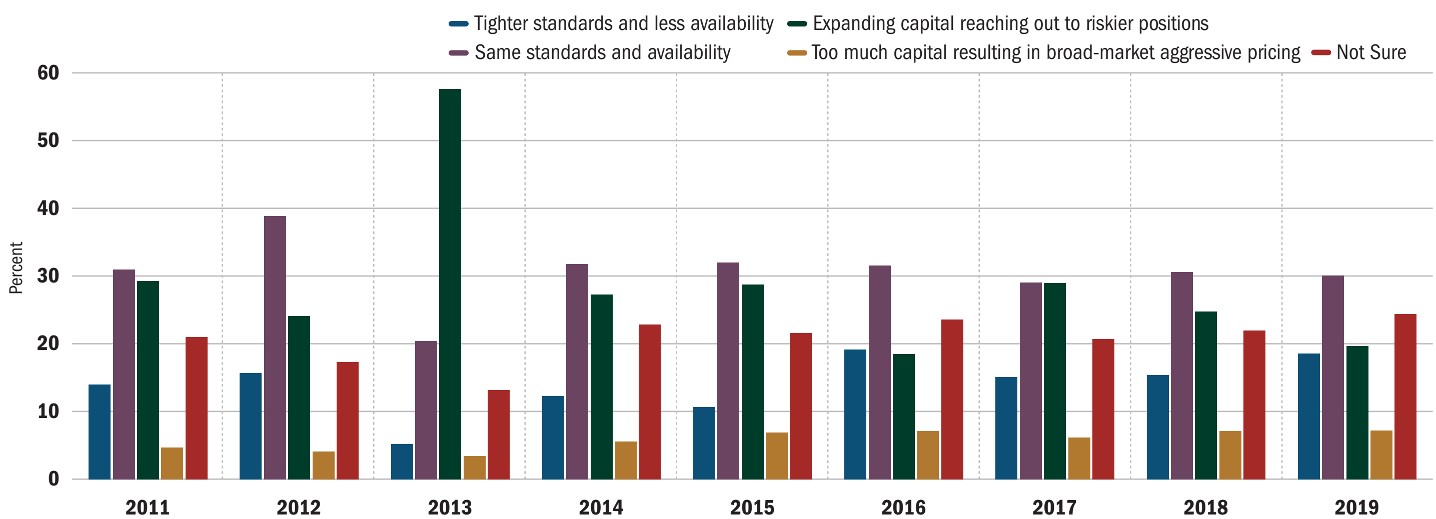
EXHIBIT 1-D. DELOITTE Dbrief POLL RESULTS — PROPERTY TYPE INVESTMENT OPPORTUNITY

WHICH PROPERTY TYPE DO YOU VIEW AS OFFERING THE MOST FAVORABLE INVESTMENT OPPORTUNITY BASED ON RECENT PERFORMANCE OF FUNDAMENTALS?

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Office	17.5%	13.1%	12.3%	13.0%	16.0%	14.0%	11.5%	14.0%	13.3%
Industrial/Warehouse	11.9%	10.0%	11.1%	12.4%	12.8%	10.4%	14.0%	20.4%	18.2%
Multifamily	29.2%	45.8%	46.8%	45.5%	35.5%	40.7%	46.8%	36.8%	35.3%
Retail	9.4%	8.4%	8.4%	6.5%	8.3%	7.7%	6.8%	7.1%	7.6%
Hotel	4.7%	3.7%	3.2%	4.4%	6.0%	6.9%	3.8%	4.0%	5.3%
Not Sure	27.4%	19.1%	18.2%	18.2%	21.4%	20.3%	17.1%	17.7%	20.3%

Sources The Deloitte Dbriefs Real Estate Series, *Expectations and Market Realities in Real Estate*, February 2019.

EXHIBIT 1-E. DELOITTE Dbrief POLL RESULTS — HOW DO YOU VIEW THE OUTLOOK FOR CAPITAL AVAILABILITY FOR COMMERCIAL REAL ESTATE IN 2020 VERSUS LAST YEAR?



Sources The Deloitte Dbriefs Real Estate Series, *Expectations and Market Realities in Real Estate*, February 2019.

Baa and Aaa yield rates also declined QOQ in 3Q 2019, pushing cap rate spreads higher. Cap rate spreads over both Moody's Baa and Aaa have increased for three consecutive quarters and are the widest in almost seven years. Cap rate spreads over both these bond rates exceed the three-year, five-year and 10-year averages.

THE INTEREST RATE ENVIRONMENT

The U.S. economy has appeared to reach a sweet spot where the economy has been growing and the unemployment rate dropping without sparking any appreciable increase in the inflation rate. In July 2019, the Federal Open Market Committee (FOMC) decreased the target rate range for the first time since 2008 in an attempt to keep the economy humming and followed up with identical quarter-point cuts in September and October.[12] The rate cuts undoubtedly helped the overall economy, while the inflation rate remained in the 2.0% range for the year. An accommodative FOMC will likely continue to keep short-term interest rates low in 2020.

The 10-year Treasury rate was volatile in 2019. After sharply declining through August 2019, the 10-year yield reversed course and increased 45 basis points (bps) by the end of the year. This followed advancements in trade negotiations and solid economic data, which pushed investors into riskier positions.[13] Despite the upward trend in yield late in the year, the 10-year Treasury rate declined 77 bps between December 31, 2018 and December 31, 2019.[14]

We note that on January 31, 2020, the yield curve between the 10-year and three-month Treasurys (10y-3m curve) inverted. In 2019, the 10y-3m curve was inverted for about 4½ months.[15] Research from the Federal Reserve of San Francisco found that the 10y-3mo spread had a predictive accuracy between 85% and 89% for indicating recessions one year out.[16] This has renewed investor concern over a possible recession in 2021, though the extremely low rates over the past decade possibly makes drawing parallels to previous recessions possibly problematic.

The impact of interest rates on CRE depends on economic growth and spreads between cap and discount rates and interest rates. RERC Research data show that cap rate compression has stalled over the past couple of years but remains at historically low levels, despite market participants' concerns about a long-in-the-tooth expansion. Assuming economic fundamentals remain positive over the year, the low interest rates could kick-start cap rate compression again.

If capital flows continue to intensify due to declining interest rates, CRE pricing will likely increase; this makes rational underwriting standards even more important. Remember that a 50 bps decline in the cap rate translates to a 10% increase in price. Historically low short- and long-term interest rates have driven a substantial across-the-board increase in property prices in nominal and real (inflation-adjusted) terms. But as long as fundamentals are strong, underlying values will support high prices. However, we are seeing an increasing bid-ask gap at such high prices. Sellers are often taking deals off the market and instead refinancing at ultra-low rates. This has left buyers with few quality options.

NEGATIVE INTEREST RATES: FROM ODD TO ORDINARY

The total amount of negative yielding bonds was $12.6 trillion as of January 27, 2020, the highest level in two months but well below the historical high of $17 trillion set in August 2019, according to Bloomberg.[17] Still, negative interest rates, which up until five years ago seemed absurd, have now become almost commonplace. The European Central Bank (ECB) turned to negative interest rates in response to the region's debt crisis and dangerously low inflation.[18] Several other countries followed suit. As of November 2019, the central banks of Sweden, Switzerland, Denmark, the Eurozone and Japan had negative interest rates. The economies of these countries account for nearly 25% of the global economy.[19] In December 2019, Sweden increased its borrowing rate to zero, but it remains to be seen if the change will impact Sweden's economy. The change is probably moot for pension funds, as it does nothing to encourage saving.[20]

Could the U.S. adopt negative interest rates? There is nothing stopping the U.S. from moving into negative interest rates, but several issues would arise should the U.S. decide to take that plunge. One of the biggest fears is that the FOMC would not have any tools left to employ when the next downturn occurs.[21] Global investors might lose faith in the safety of U.S. government bonds as negative interest rates and other forms of quantitative easing may be perceived as a sign of weaknesses in the economy. In addition, the portfolios of millions of U.S. investors would likely be hurt. According to the Office of Management and Budget, $16.8 trillion of the government's $22.7 trillion debt is held by the public of the U.S.[22] A large portion of the holders of U.S. debt are retired or soon-to-be retirees who have their portfolios in risk-free U.S. Treasurys. Many federal programs, including Social Security, Medicare and Medicaid, are also heavily invested in Treasurys, meaning these public programs would most likely lose money on the aggregate due to negative interest rates.

RISKS IN 2020

GEOPOLITICS

Geopolitical uncertainty makes it difficult for investors to predict and/or adapt to economic shifts, or to financial or governmental policies and regulations. In 2019, many countries were rocked by street protests involving varying amounts of violence by either the protesters or law enforcement agencies sent to quell them. Among the places that faced protests were Hong Kong, Chile, Saudi Arabia, India, Bolivia, Spain, Iraq, Iran, Russia and Sudan.[23] These violent clashes do not include the ongoing armed conflicts and civil wars throughout the Middle East, Africa and Eastern Europe and economic or government collapses in Venezuela, Lebanon and Moldova.[24] With international geopolitical turmoil, the U.S. has become a relatively attractive destination for investment capital as investors flee to safety. Additionally, the resilient U.S. economy, combined with favorable interest rate differentials relative to the rest of the world, adds to the attractiveness of U.S. assets to foreign investors.

BREXIT

British Prime Minister (PM) Boris Johnson, who took office on July 24, 2019, called snap elections in December and built a large majority (365 of 630 seats) in Parliament for his Conservative Party. On January 9, the Parliament, on a 330 to 231 vote, formally approved Brexit, nearly three years after the nationwide referendum. Johnson's plan is similar to one pushed by former PM Theresa May, but it adds a controversial customs border in the Irish Sea between Northern Ireland and the rest of the UK. The UK officially left the EU on January 31, 2020.[25]

The UK will remain under EU rules of trade until December 31, 2020. Johnson has said he expects to strike a trade deal with the EU by the end of the year, but European Commission President Ursula von der Leyen has said that's not enough time and she believes the UK will leave without a new trade deal in place.[26] Brexit has already cost the UK roughly 130 billion pounds (US$170 billion), and it's expected to cost another 70 billion pounds (US$91 billion) by the end of 2020.[27]

TRADE

In the beginning of 2020, several positive advancements in trade negotiations increased investor optimism about global economic growth. The Phase One deal with China was signed January 15, the same day that United States-Mexico-Canada Agreement (USMCA) was ratified by the U.S. Senate on an 89-10 vote.[28] And now with Brexit officially in effect, the Trump administration is setting its eyes on a new trade deal with the UK.[29]

The U.S., for the first time in four years, does not have any openly outstanding issues with any of its trade partners, but it's unclear how long this will last. Tensions remain between the U.S. and France; the EU has condemned the Phase One trade deal, and the EU might not take kindly to a trade deal between the U.S. and the UK.[30,31]

Under the U.S.-China trade deal, China will purchase an additional $200 billion in exports over two years from American farmers and other exporters.[32] The U.S., in turn, will cancel tariffs on $156 billion in goods and cut the tariff rate on $120 billion in goods from 15% to 7.5%.[33] The financial markets have responded well to the Phase One agreement, but given that past deals have fallen through, some investors are skeptical that Phase One will come to fruition or that it will have much impact in the long run.[34] China agreed to cut tariffs in half on about $75 billion of U.S. imports in response to the U.S. reducing tariffs on Chinese goods. Though the Phase One deal is a step in the right direction, both sides had to make compromises.[35] A Phase Two U.S.-China trade deal would likely lead to greater economic growth for the U.S., but such a deal is uncertain. Phase Two negotiations aren't likely to start until after the U.S. elections, if at all.[36]

2020 U.S. ELECTIONS

The 2020 election season introduces additional uncertainty for investors. While the final candidates will not be known until mid-2020, there are several policy proposals from Democratic primary candidates that would likely affect investors. In addition to these proposed policies, we discuss current policies and regulations that are impacting the capital markets in chapter 3.

They almost uniformly want to repeal all or most of the tax bill that Congress approved and President Trump signed into law at the end of 2017.[37] This tax bill lowered the maximum corporate income tax from 35% to 21%. Sens. Elizabeth Warren and Bernie Sanders and former Mayor Pete Buttgieg want to restore the 35% rate; former Vice President Joe Biden supports a 28% top rate; and Sen. Amy Klobuchar favors a 25% rate.

The estate tax, which Republicans have been trying to eliminate for years, currently applies to individuals who inherit more than $11.4 million with a top rate 40%.[38] Sanders has proposed lowering the threshold to $3.5 million. The tax rate would be 45% for those in the $3.5-10 million range; 50% for $10-50 million; 55% for $50 million to $1 billion; and 77% for more than $1 billion. Warren proposes returning to the levels in place when George W. Bush took office in 2001: a threshold of $675,000 and a maximum rate of 55%.[39]

The major candidates are also pushing for changes in the treatment and rate of capital gains taxes.[40] Biden would eliminate the step-up basis for inherited capital assets and end favorable rates on capital gains for

anyone making over $1 million. Warren, among others, wants to tax capital gains at the same rate as ordinary income.

Housing affordability and availability are also top issues for the candidates.[41] Sanders announced a "Housing for All" plan, with an emphasis on building more affordable housing and combating gentrification. Warren would expand the National Housing Trust Fund and provide $445 billion over 10 years to build, preserve and operate rental homes that are affordable for families with the greatest needs. Warren would also seek to lower the cost of renting. Buttigieg's Douglass Plan is designed to end homelessness for families with children, fund national investments in affordable housing construction and expand federal protections for tenants against eviction.

U.S. DEBT

U.S. debt levels are at all-time highs. Total public debt, which is the total of all government borrowing, was approximately $23 trillion at the end of 2020.[42] Total public debt as a percent of GDP topped 100% in 4Q 2012 and stood at 105.5% as of 3Q 2019. According to the Congressional Budget Office (CBO), high and rising public debt could reduce national saving and income, boost the government's interest payments, limit lawmakers' ability to respond to unforeseen events, and increase the likelihood of a fiscal crisis.[43]

The federal deficit in fiscal year (FY) 2020 is projected to be $1 trillion and average $1.3 trillion between 2021 and 2030.[44] This constitutes an increase in the deficit to GDP ratio from 4.6% in 2020 to 5.4% in 2030. By comparison, deficits have averaged 1.5% of GDP over the past 50 years. For FY 2020, net interest payments on current government debt outstanding are projected to account for $479 billion, slightly more than 10% of the total U.S. budget.[45]

The White House's FY 2020 budget stated, "If financial obligations continue to grow at the current pace, the Nation's creditors may demand higher interest rates to compensate [for the increased risk of default], potentially leading to lower private investment and a smaller capital stock, harming both American businesses and workers. If nothing is done, interest payments alone on the Federal Government's debt will double by 2023 and exceed spending on the U.S. military by 2024."[46] Lower demand for U.S. Treasurys would lead to higher interest rates and downward pressure on the dollar, further slowing economic growth.[47]

Despite these trends, evidence suggests that consumers may be showing debt restraint. In November 2019, consumers reduced balances on credit cards and revolving debt by $2.4 billion.[48] This was the largest decline in eight months.[49]

SECULAR CHANGES

DEMOGRAPHICS

The U.S. Census Bureau reported that U.S. population grew by just 0.5% between 2018 and 2019.[50] It was a lower growth rate than during the Great Depression of the 1930s and the lowest since the population dropped in 1918 during WWI.[51]

Several demographic changes are contributing to the decline. The number of births fell in 2019 in 42 states and Washington, D.C., likely because many millennials are waiting to have children. [52,53] With a rapidly aging population, the natural increase in population (the difference between births and deaths) fell below 1 million for the first time in decades. Four states — Maine, New Hampshire, Vermont and West Virginia — even had more deaths than births. The aging population is a concern in the U.S., with one in five residents projected to be over age 65 by 2030. By 2034, older people are expected to outnumber children for the first time in U.S. history.[54] With Americans living longer, programs for the elderly such as Social Security and Medicare will be in a tenuous position as fewer prime-age workers are available to pay taxes to support these programs.[55]

Immigration could offset the slowing natural population growth; however, fewer immigrants are entering the U.S. An estimated 595,000 immigrants moved to the U.S. in 2019, down from the decade high of nearly 1.1 million in 2016. This number could further decline with the Supreme Court's upholding of the Trump administration's "public charge" regulation that would allow the government to reject visas and green card applications, based on whether an applicant needs or may need public assistance.[56]

The aging demographic shift and slowing U.S. population growth presents challenges for the U.S. economy. A smaller working-age population means fewer people to drive the economy. In fact, economists at the Federal Reserve Board of San Francisco state that declining population was likely the main driver of the slow growth since the Great Recession.[57] These economists also find that when the slowing productivity growth over the past several decades is factored in, long-run economic growth is expected to be just 1.5%-1.75%.

CLIMATE CHANGE

Climate change around the world is becoming a challenge for investors in commercial and residential real estate – in obvious and more subtle ways.

In the most obvious way, climate change can damage or destroy investors' properties. Hurricanes, for example, are becoming more destructive. The five most costly hurricanes in U.S. history have all occurred since 2005, including three since 2012, and incurred about $497 billion in damages as of September 2019.[58]

When Harvey struck the Houston area in 2017, almost three-quarters of the damaged homes were outside the Special Flood Hazard Area, leaving thousands of residents and commercial landowners uninsured. Areas facing potentially severe damage (Category 3 areas or higher) accounted for one-fifth of the U.S. assets at risk to hurricanes, with a capital valuation of $16.6 billion.[59]

According to an MSCI report,real estate investors have three choices for dealing with property damage from climate change:[60]

- Avoid high-risk areas.
- Transfer the risk to insurance companies and tenants. In many cases, however, insurance premiums will rise or become unattainable.
- Control the impact of these risks by working with regulators or implementing their own plans.

But the challenge goes beyond potential property damage. According to a report by Deloitte, company CFOs say they are feeling increasing pressure from stakeholders to act on climate change.[61] These CFOs, however, say they lack a thorough understanding of the issue and have few plans in place to develop and implement comprehensive climate strategies. As the perceived threat of climate change has increased, investors have substantially increased their holdings in sustainable or green enterprises. Climate change exposes companies to transition risks, including changes in technologies, markets and regulation that can increase business costs, undermine the viability of existing products or services, or affect asset values. RERC Research is noticing that many investment firms have set up sustainability groups to investigate the financial risks associated with climate change.

The Los Angeles Times reports that one-fifth of CalPERS' $394 billion pension fund's public market investments are in sectors with high exposure to climate change, including energy, materials and buildings, transportation, and agriculture, food and forestry.[62] Climate change has direct financial implications stemming from rising sea levels, stronger and more frequent storms and heat waves. Besides the challenges from climate change itself, regulations aimed at reducing carbon emissions, lawsuits against polluters and market trends like the fast-dropping price of renewables exacerbate financial risk for investors. In September 2019, Gov. Gavin Newsome issued an executive order directing CalPERS and CalSTRS to decrease carbon emissions and increase climate resiliency. CalPERS has pledged to make its portfolio carbon-neutral by 2050.

On the bright side for investors, the challenge of climate change gives companies the opportunity to improve efficiency, spur innovation, and improve their supply chains by not relying as much on price-volatile fossil fuels. Most companies are increasing energy efficiency and using more climate-friendly equipment. They earn benefits from government incentives and reduced costs.

Microsoft pledged in January to be carbon negative by 2030 and to "remove from the environment all the carbon the company has emitted either directly or by electrical consumption since it was founded in 1975."[63] In addition, it plans to start a $1 billion climate innovation fund.


LOS ANGELES

Green tech offers investors a multitrillion-dollar opportunity in the years ahead in a variety of areas, including battery storage, urban mobility, renewables, software and artificial intelligence to help understand climate data, the food production ecosystem, building construction and even fashion sustainability, because clothing has a life cycle of waste.[64] Many of these areas are directly or at least indirectly related to CRE trends and performance.

Nonetheless, many companies aren't involved in much long-term efforts or coordinating with other companies to act on climate change. Companies need to not only measure their exposure to climate-related risks and subsequently manage them, but also incorporate climate change in their strategic plans. Failure to do so can undermine the sustainability of their businesses, according to Deloitte.[65]

TECHNOLOGY AND THE CRE INVESTMENT ENVIRONMENT

REITS AND FINTECH

Passive investing in CRE has been around since President Dwight D. Eisenhower signed Public Law 86-779, sometimes called the Cigar Excise Tax Extension of 1960. This act effectively created real estate investment trusts or REITs.[66] REITs are considered the best route for people who want to be passive investors in CRE. As of September 2019, the REITs market owned $3 trillion in gross real estate assets.[67] According to the FTSE Nareit All Equity REITs Index, REITs delivered a 27.9% return through November 2019. With continued expected growth and low vacancy rates, 2020 remains favorable for REITs.[68]

The latest development in fintech for CRE is the introduction of REIT ETFs on no-commission websites and apps. Apps such as Robinhood and websites such as Fidelity Investments, TD Ameritrade and Charles Schwab are offering zero-commission trades on REIT exchange-traded funds (ETFs).[69] These ETFs, including Vanguard's Real Estate ETF (VNQ) and Schwab's U.S. REIT ETF (SCHH), have expense ratios of less than 0.2%, which allows easier and cheaper investment in CRE than ever before.[70]

Another fintech development that may impact CRE is the introduction of blockchain. Not to be confused with cryptocurrencies, which will likely have no effect on CRE, blockchain is the underlying technology of cryptocurrencies and could potentially have a huge impact in every financial sector.[71]

An article by Nareit states that blockchain has the ability to completely transform CRE by creating efficiencies in things like property and title searches, financing, leasing, purchasing and selling, due diligence, managing cash flows, payment management, and cross-border transactions.[72] This would reduce risks and costs in CRE transactions. Blockchain is in its infancy, but it could lead to cheaper and smoother real estate transactions. Like most technologies in the financial sector, however, blockchain faces a serious lag between its development and implementation.[73] Even when blockchain is fully developed, it will likely have to pass through the gauntlet of state and Securities and Exchange Commission (SEC) regulations before it can be implemented.

THE 2020 DELOITTE COMMERCIAL REAL ESTATE OUTLOOK[74]

Digital technology and analytics are at the forefront of CRE secular changes, according to the 750 CRE professionals surveyed for the 2020 edition of Deloitte's Commercial Real Estate Outlook: Using digital and analytics to revolutionize tenant experience report.

DIGITIZATION AND TENANT EXPERIENCE

Tenant experience needs to be a top priority for CRE professionals, and that requires companies to put tenants and end-user preferences at the center of every business decision. Creating superior experiences extends beyond tenants; it requires extending services to day-to-day consumers of the space, including retail shoppers, residents in multifamily properties, employees in office space or manufacturers using warehouses.

The on-demand economy is reshaping tenant expectations about how real estate is consumed, and technology-enabled facilities and personalized experiences are transforming CRE. Environmental and security technological investments will improve the experience for tenants, who are expecting these features in smart or Internet of Things (IoT)-enabled buildings. Luxury retail brands have embraced sensor-enabled technologies, such as smart mirrors in fitting rooms that use smart lighting to help customers see outfits in different lighting.

Tenants are willing to pay a premium to live or work in smart buildings. Smartphones and tablets can provide security features such as app-based entry into buildings and property management or emergency contact information, building information, including maintenance updates and sustainability efforts, and advice about local points of interest. For CRE organizations, mobile apps can provide notifications about events, tenant handbooks and newsletters, and contact information.

THE GROWING IMPORTANCE OF DATA

Adoption of mobile apps from tenants and occupiers can give insightful data about tenants' experiences. This allows CRE owners and operators to improve predictive capabilities and offer unique experiences to every user. CRE companies need to develop platforms, processes and a governance structure that enable data discovery, availability, management and usability. Data analytics can use the information to enhance decision-making and improve operating performance. Data ownership should be outlined at the start of a service contract to avoid confusion on usage.

ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGY USE WITH CRE

AI technologies can evaluate sets of traditional and alternative data quickly and accurately. AI's predictive ability can improve profitability and returns and automate redundant tasks while improving tenant-related decisions, modernizing leases and helping create new revenue sources. It also can evaluate trends and patterns to predict tenant behavior and turnover and help make informed decisions about selecting tenants. In the process of all this, however, companies may need to hire employees with specialized AI skills.

Another opportunity is automating lease administration. This is especially important as more tenants seek flexible leases rather than traditional leases based on a specific time period. AI can significantly increase the speed and accuracy of mundane tasks in lease administration – and more accurately detect duplication and fraud while helping to evaluate potential earnings for new tenants and existing lease renewals. In the process, AI can be used to help generate new revenue sources, for example, by collecting data about people's movements within a building that can be sold to advertisers or urban planners.

DIGITAL REALITY

Digital reality (DR), which includes augmented reality (AR), virtual reality (VR), mixed reality (MR), 360-degree videos and immersive technologies, is not limited to the entertainment industry. DR is being used in CRE. Residential brokers first used VR to offer property tours 24-7, and now it is being used similarly to sell office, industrial and restaurant properties. It can help customize properties to each tenant's preference. DR can increase worker precision at job sites and supervisors can get 360-degree views of a site.

DATA SECURITY

Smart buildings can collect reams of data and personal information about tenants, employees and customers, which increases the risk of exposure to cyberattacks. Perpetrators can also attack building systems such as security, life safety, heating, ventilation and air conditioning. Governments and regulators around the world are introducing stricter rules to protect personal data and privacy. As a result, CRE leaders need to work continuously to improve cybersecurity and increase privacy.


NEW YORK CITY

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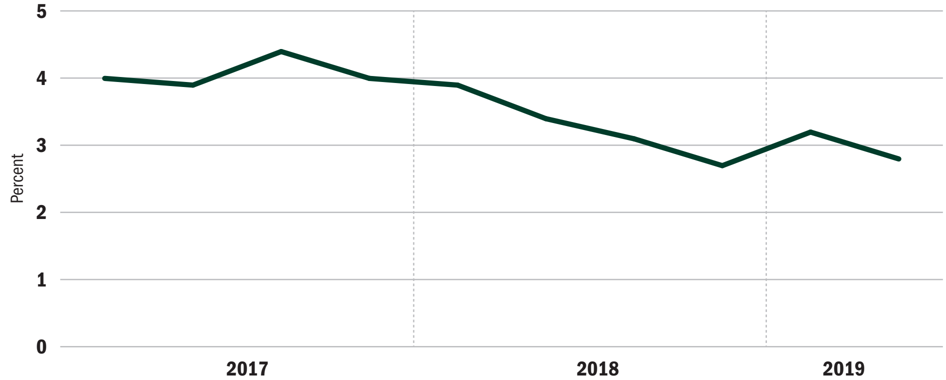
CHAPTER 2: THE ECONOMY

THE ECONOMY

GLOBAL CONDITIONS

Trade tensions between the U.S. and China that rippled through the global economy and country-specific conditions slowed economic growth in 2019. In its October 2019 World Economic Outlook Report, the International Monetary Fund (IMF) projected world output to expand at a slower pace of 3% in 2019, its lowest level since 2008-2009, from 3.6% in 2018.[1] The OECD also expected global GDP growth to slow to 2.9% in 2019, down from 3.5% in 2018.[2] Meanwhile, the World Trade Organization (WTO) expected world trade to expand at a slower pace of 2.6% in 2019 from 3% in 2018.[3] GDP for the G20 is found in Exhibit 2-A.

EXHIBIT 2-A. G20 REAL GDP ANNUAL GROWTH RATE



Note G20: GDP Constant Prices (SA, QOQ Change)
Source OECD, 2Q 2019.

China was expected to grow at subdued pace of 6.1% in 2019 (6.6% in 2018), with growth continuing to decelerate to 5.8% in 2020, according to IMF estimates. China's economic growth started easing in 2015 in the wake of regulatory reforms to curb debt accumulation — a positive step toward a stronger financial system and economy, but one that has slowed down growth from the torrid 10% expansion during 2001-2010. The U.S.-China trade tensions created another headwind for the economy. According to China's State Administration of Foreign Exchange, China imported 5% less ($928 billion) in goods in the first half of 2019 on a YOY basis, while it exported just 1% more ($1.15 trillion).[4]

Trade tensions simmered down on December 13, 2019, when the U.S. and China settled on an agreement in which the U.S. suspended the additional 15% duty on Annex C of about $160 billion of imports.[5] This included imports of cellphones and computers under Tranche 4, which was scheduled to take effect on December 15, 2019, in exchange for at least $200 billion in U.S. goods and services exports to China.[6] As of October 1, 2019, the U.S. had already imposed 30% tariffs on $250 billion of Chinese imports under Section 301 of The Trade Act of 1974, nearly half of U.S. imports from China.[7] The Section 301 tariffs are on top of the 25% tariff on imports of steel and aluminum authorized from all countries under Section 232 of the Trade Expansion Act of 1962, which took effect on March 23, 2018. The tariffs for imports from Mexico and Canada were removed in May.[8] China has imposed retaliatory tariffs on about $185 billion of imports from the U.S.[9]

The reduction in global trade has impacted export-dependent economies such as Germany, which narrowly escaped a recession in the first three quarters of 2019, managing to eke out 0.1% growth in 3Q.[10] The German government has cited the negative impact

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of the U.S.-China trade war on its economy, particularly on the car industry and the network of suppliers that account for about 14% of the German economy.[11,12]

In Canada, growth slowed to 1.5% in 2019 (from 1.9% in 2018), with growth expected to improve slightly to 1.7% in 2020, according to the Bank of Canada.[13] Canada's economy is heavily tied to the oil and gas industry, which, in turn, is highly dependent on the U.S. economy, which takes in 96% of Canada's oil exports.[14] In the first three quarters of 2019, U.S. crude imports from Canada fell 10% YOY.

The IMF expected Japan's economy to grow modestly by 0.9% in 2019, due to weaker exports to the U.S., China and Europe, especially of autos and electronics.[15,16] Consumer and investment spending are still expanding, but the October 1, 2019, increase in the consumption tax might may rein in consumer spending in 2020, so growth is expected to slow to 0.5% in 2020.

In Europe, an accommodating monetary policy has propped up economic growth. In 2016, the ECB further loosened monetary policy, bringing the interest rate down to 0% on its refinancing operations that provide the main source of liquidity to the banking system on top of the negative rate it imposed on bank deposits (currently at -0.5%) in 2016 to encourage bank lending.[17] The IMF projected the euro area to expand at a slower pace of 1.2% in 2019 (1.9% in 2018), with growth slightly improving to 1.4% in 2020.[18] The UK economy is expected to grow 1.2%, with growth improving slightly to 1.4% in 2020 as the outlook for the terms of Britain's exit deal with the EU takes firmer shape.

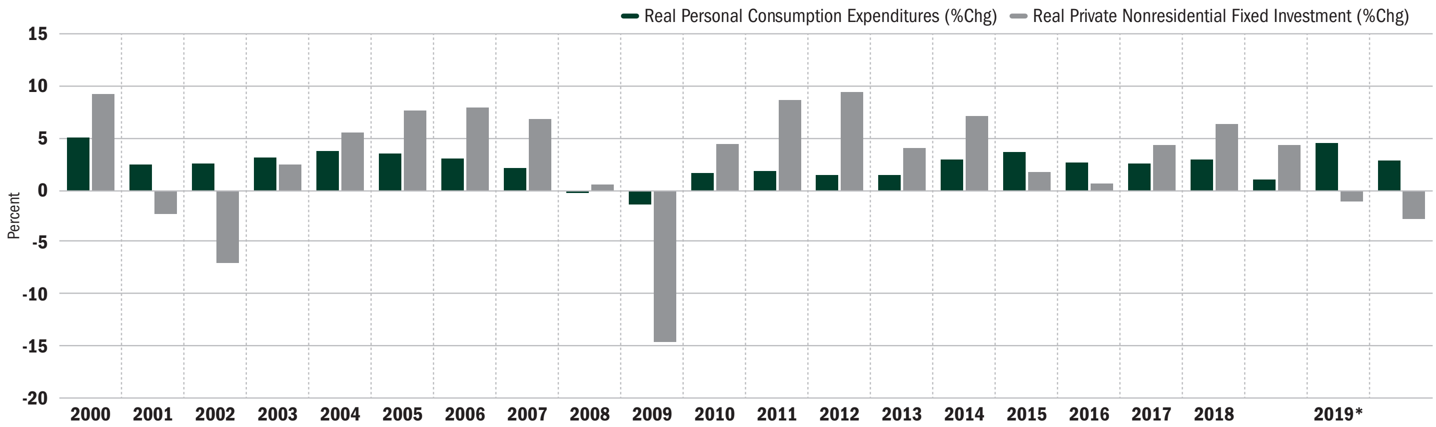
According to IMF estimates, Latin America and Caribbean economies were expected to show little growth – 0.2% in 2019 (1% in 2018) amid the continued collapse of the Venezuelan economy and weaker investment spending.[19] Investors are assessing the economic policy changes arising from new leadership in Mexico, Argentina and Brazil. Brazil, which relies heavily on Chinese imports of soybean, fuels and iron ore, is expected to post a modest growth rate of 0.9% in 2019.[20]

THE U.S. ECONOMY

GDP

Amid global tensions, an inversion of the

EXHIBIT 2-B. PERSONAL CONSUMPTION EXPENDITURES AND PRIVATE NONRESIDENTIAL FIXED INVESTMENT



*Quarterly data presented for 2019.
Source BEA, 3Q 2019.

yield curve that presaged recessions in the past, and concerns that the longest-running recovery is ready for a cyclical correction, the U.S. economy expanded at a slower annual rate of 2.1% in 3Q 2019. In 2018, GDP expanded at a slightly stronger pace of 2.9%.

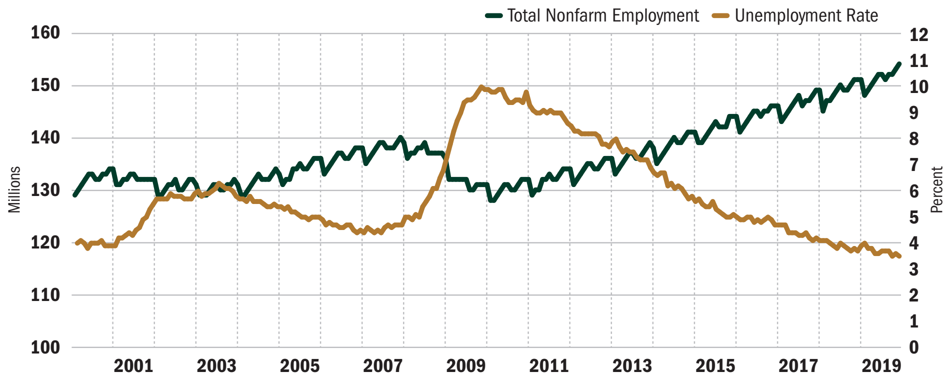
With a supporting monetary policy that kept up job growth, consumer spending outweighed the contraction in investment spending that occurred for the second consecutive quarter. The FOMC paused on increasing its policy rates in the first half of 2019 and lowered policy rates three times in the second half (July 31, September 18, and October 30), reducing the federal funds rate by a total of 75 basis points, to a range of 1.5% to 1.75%. This was the first time the FOMC lowered policy rates since 2008.

Gross private fixed investment contracted for two straight quarters as non-residential investment spending contracted to an annual rate of -2.3% in the third quarter. Investment spending for structures contracted for two straight quarters to an annual rate of -9% in 3Q 2019. Business spending for equipment also contracted to an annual rate of -3.8% in 3Q 2019. In contrast, residential investment spending rose at an annual rate of 4.6% in 3Q 2019 as declining mortgage rates led to a recovery in home sales (see Housing section in this chapter).

While businesses cut back on spending, consumers continued to spend at a healthy pace, as employment rose and wage growth outpaced inflation. Personal consumption expenditures, which typically accounts for roughly 70% of GDP, increased at an annual rate of 3.2% in 3Q 2019 (see Exhibit 2-B). Consumer spending for all items increased except for clothing and shoes and gasoline and fuel. Spending on durable consumer goods rose a hefty 8.1%, bolstered by spending for recreational vehicles (17.0%) and household furnishings and durable household equipment (6.0%).

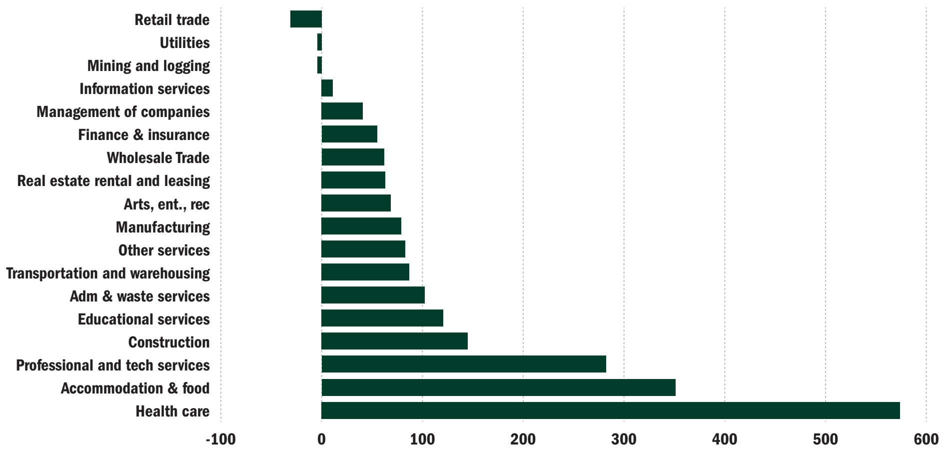
Real exports of goods and services rebounded slightly in the third quarter, expanding at an annual rate of 1.0% after contracting in the second quarter. Meanwhile, imports of goods rose to 1.8% from flat growth in the second quarter. In nominal terms, the BEA reported that the total dollar exports of goods during the first

EXHIBIT 2-C. EMPLOYMENT



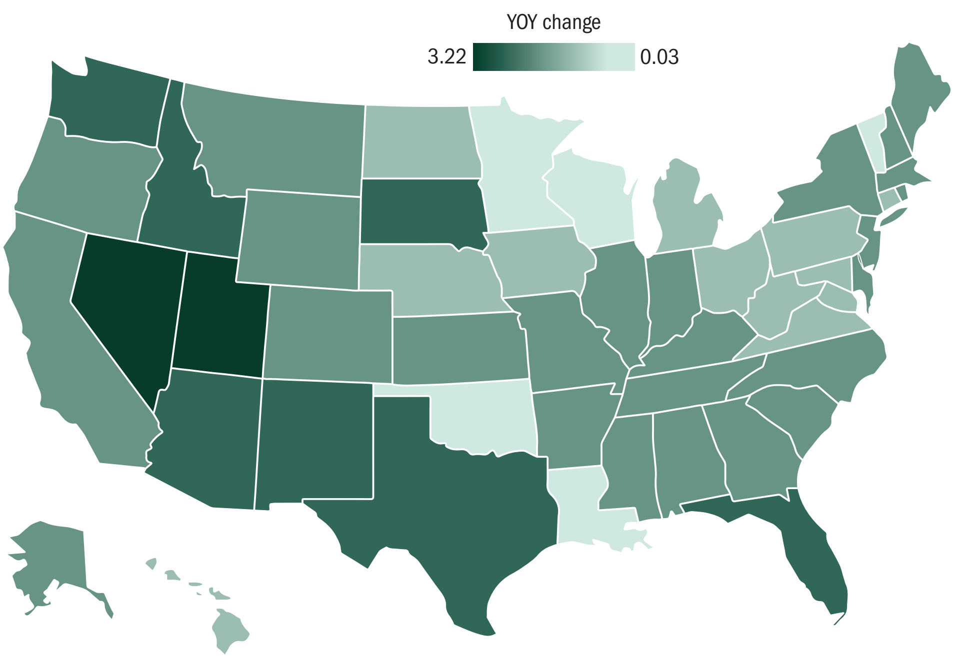
Source BLS, November 2019.

EXHIBIT 2-D. ANNUAL PRIVATE PAYROLL EMPLOYMENT



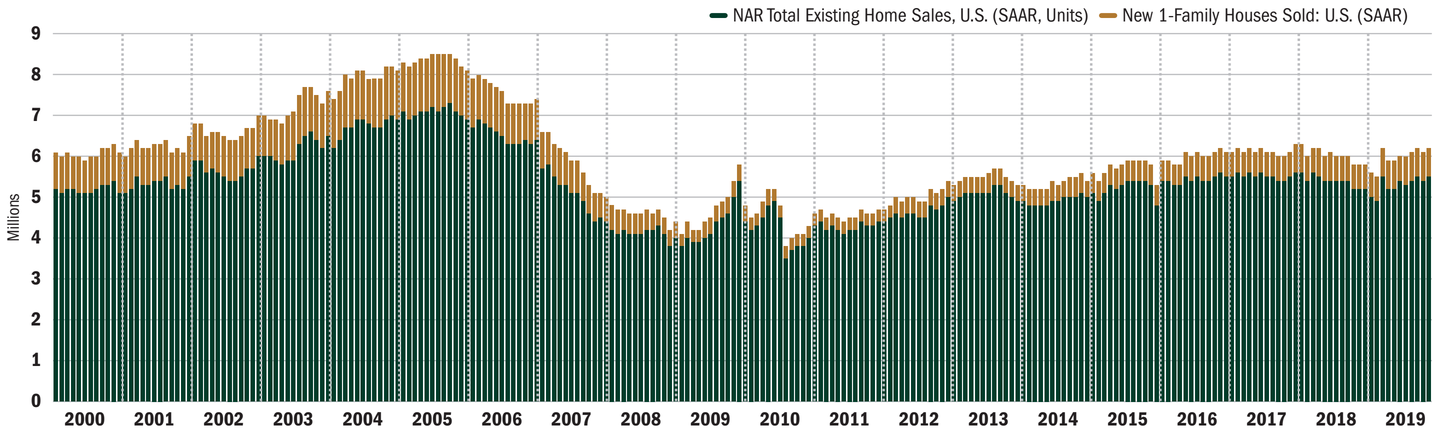
Source BLS, November 2019.

EXHIBIT 2-E. ANNUAL PERCENT CHANGE IN PAYROLL EMPLOYMENT GROWTH



Source BLS, 3Q 2019.

EXHIBIT 2-F. HOME SALES



Sources NATIONAL ASSOCIATION OF REALTORS®, U.S. Census Bureau, October 2019.

three quarters of 2019 were 1.2% below the level during the same period in 2018 while imports of goods were essentially unchanged.

Federal, state, and local consumer and investment spending expanded at an annual rate of 1.7% in 3Q 2019, as federal spending rose 3.3% while state and local spending increased 0.7%.

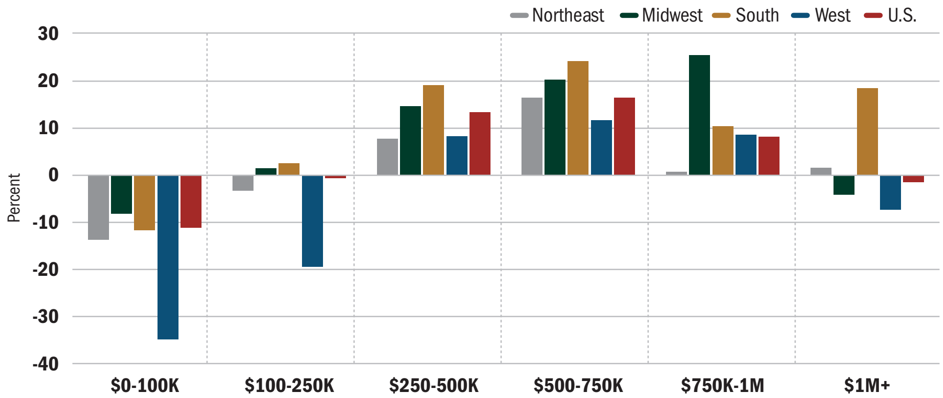
EMPLOYMENT AND INCOME

Employment conditions remained very healthy under an accommodating monetary policy, with strong job growth underpinning consumer spending. As of November 2019, 25.8 million more people were employed than in January 2010 when payroll employment hit its lowest level (not seasonally adjusted; see Exhibit 2-C). With strong employment growth, average hourly wages were up 3% as of November 2019, ahead of the inflation rate of 2.1%.

As of November 2019, the unemployment rate stood at 3.5%, the lowest in the past 50 years. As of November 2019, there were about 1 million more job openings (6.8 million) than the number of unemployed (5.8 million as of November 2019).[21] The unemployed are also finding jobs at a quicker pace: The median duration of unemployment is 9.4 weeks, less than half the peak of 22 weeks in 2011.

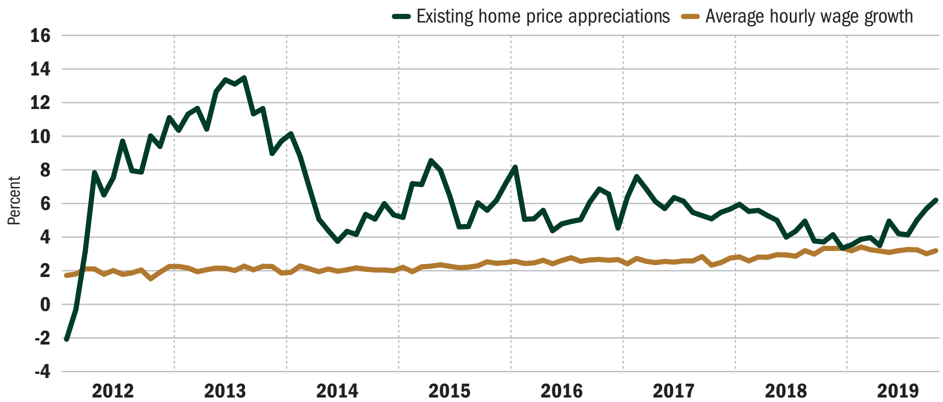
In the 12 months that ended November 2019, the economy created 2.2 million net new jobs. As shown in Exhibit 2-D, the

EXHIBIT 2-G. ANNUAL CHANGE IN EXISTING HOME SALES



Source NATIONAL ASSOCIATION OF REALTORS®, October 2019.

EXHIBIT 2-H. EXISTING HOME PRICE APPRECIATION AND WAGE GROWTH



Source NATIONAL ASSOCIATION OF REALTORS®, October 2019.

industries that created at least 100,000 jobs annually were education and health (573,800), accommodation and food services (350,900), professional and technical service (282,100), construction (145,000, educational services (102,700), and administrative and waste services (102,300). However, payrolls contracted in mining and logging (-4,000), utilities (-4,300) and retail trade (-30,000). The contraction in retail jobs reflects the increasing inroad of online shopping onto in-store shopping, although many e-commerce and brick-and-mortar stores are increasingly melding to efficiently and quickly respond to consumers who shop both online and offline. As retail trade jobs are lost, transportation and warehousing services jobs, which are the backbone for e-commerce logistics, increased (86,800).

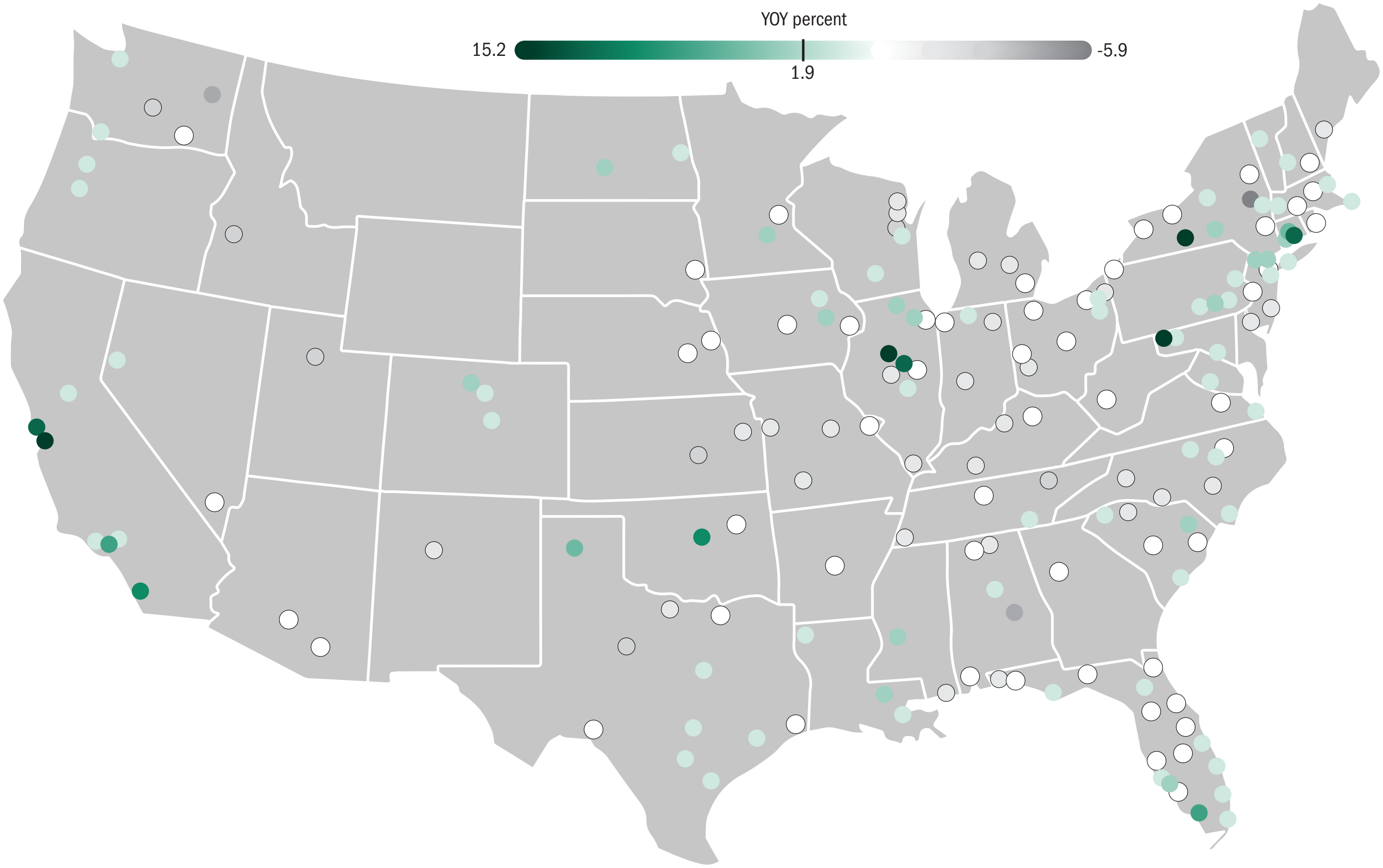
As of 3Q 2019, all states created net new jobs YOY (see Exhibit 2-E). Nationally, job growth rose 1.5% in 3Q 2019, with the strongest job gains in many Western and Southern states led by Utah (3.2%), Nevada (3.1%), Washington (2.7%), Florida (2.7%), Arizona (2.6%), Texas (2.5%), New Mexico (2.2%), South Dakota (2.2%), Colorado (2%) and Alabama (2%).

HOUSING

After the FOMC paused on increasing the federal funds rate in 2019, existing home sales measured on a seasonally adjusted annual rate started to pick up in May 2019, according to the NATIONAL ASSOCIATION OF REALTORS® (see Exhibit 2-F). Existing home sales on a seasonally adjusted annual rate (SAAR) started off slowly at 4.93 million in January 2019, but picked up steam during the year, hitting an annual rate of 5.46 million by October 2019. The U.S. Census Bureau also reported that single-family new home sales rose to a seasonally adjusted annual rate of 733,000 units as of October 2019 from 557,000 one year ago.

Home sales could perhaps be higher given how low mortgage rates have come. One reason is that sales remain constrained by supply. By many measures, the supply of housing for both owner-occupied and renter-occupied has not kept pace with household formation and replacement for obsolete or demolished housing. From 2012, housing starts has fallen

EXHIBIT 2-I. ANNUAL HOME PRICES APPRECIATION IN SELECT METRO AREAS



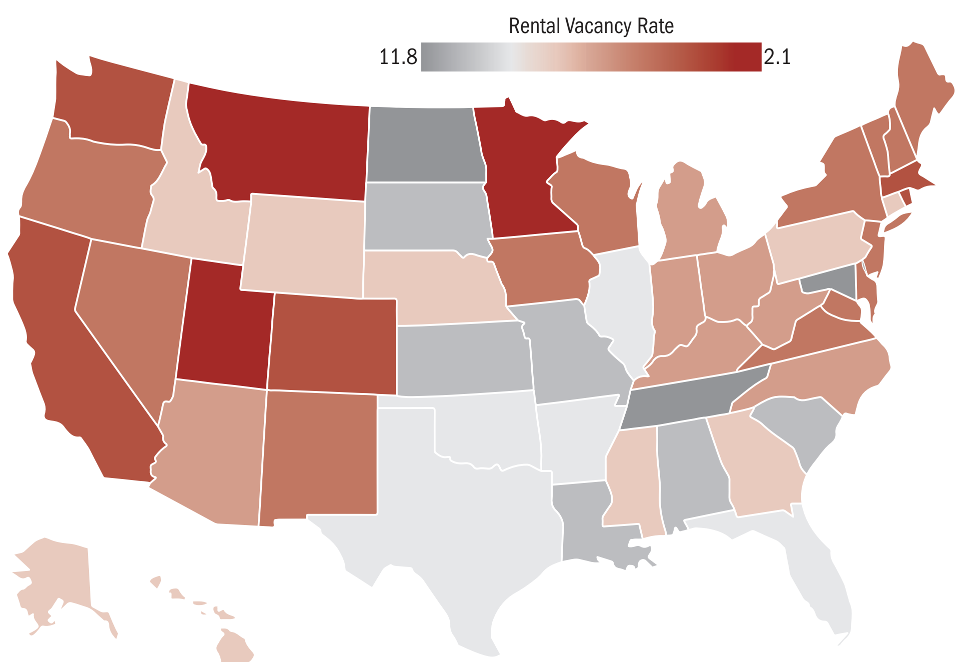
Source U.S. Census Bureau, 3Q 2019.

behind by about 7 million units relative to demand based on household formation alone as of September 2019.

For owner-occupied housing, the inventory of existing homes for sale as of the end of October was equivalent to 3.9 months of the level of monthly demand, well below the normal level of 6 months. Supply is most tight for homes below $250,000. Fewer existing homes were sold at below $250,000 in October 2019 compared to one year ago, according to the NATIONAL ASSOCIATION OF REALTORS®. Annual changes in existing home sales can be found in Exhibit 2-G.

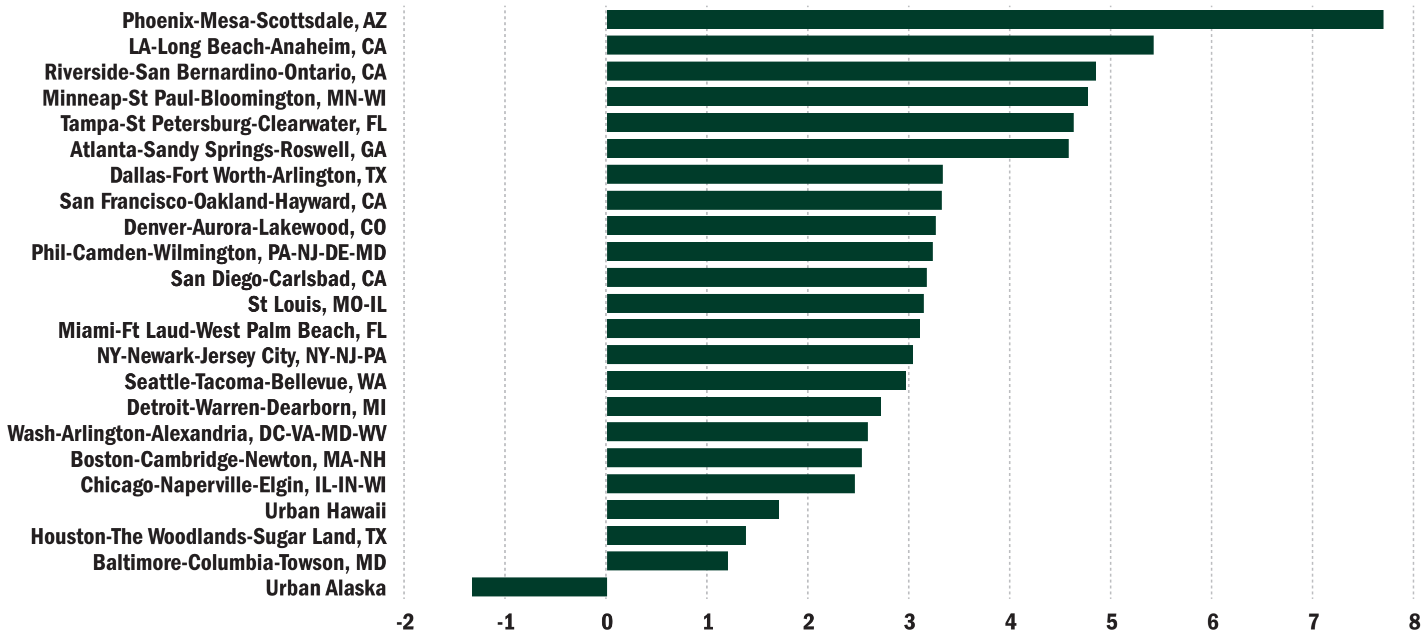
With a low level of inventory of homes for sale and demand, the median sales price of existing homes sold has increased at a pace stronger than the increase in hourly wage growth since 2012 (see Exhibit 2-H). In 3Q 2019, the median price of existing home sales increased in 93% of metro areas tracked by the NATIONAL ASSOCIATION

EXHIBIT 2-J. RENTAL VACANCY RATES IN 2019



Source BLS, 3Q 2019.

EXHIBIT 2-K. ANNUAL RENT GROWTH CHANGE IN SELECTED METRO AREAS



Source U.S. Census Bureau, November 2019.

OF REALTORS® (Exhibit 2-I). Strong price gains were registered in areas such as Spokane, Washington (12.6%); Salt Lake City, Utah; (12%); Boise City, Idaho (10.3%); Albuquerque, New Mexico (9.6%); Grand Rapids-Wyoming, Michigan (9.1%); Indianapolis-Carmel, Indiana (9.5%); Charlotte-Concord-Gastonia, North Carolina-South Carolina (8.7%); Columbus, Ohio (7.4%); Nashville-Davidson-Murfreesboro, Tennessee (6.5%); and Las Vegas-Henderson, Nevada (6.3%).

There is a lack of rental housing as well, using rental vacancy rates as an indicator. Nationally, the rental vacancy rate stood at 6.8% as of 3Q 2019, according to U.S. Census Bureau data. Rental vacancy rates are below 5% in states such as Minnesota (2.1%), Utah (3%), Montana (3.4%), Massachusetts (4.2%), California (4.3%), Washington (4.4%), Colorado (4.6%), and New Jersey (4.7%). See Exhibit 2-J for rental vacancy rates.

Given the tight rental vacancy rates, rent growth is up by at least 5% from one year ago as of November 2019 in areas such as Phoenix (7.7%), Los Angeles (5.4%), Riverside-San Bernardino (4.8%), Minneapolis (4.8%), Tampa-St. Petersburg (4.6%), and Atlanta (4.6%). Annual rent growth for other metros is found in Exhibit 2-K. Nearly 50% of renters spend at least 30% of their income on gross rent in 2018, according to NATIONAL ASSOCIATION OF REALTORS®'s analysis of the 2018 American Community Survey data.

SOURCES

[1]International Monetary Fund, Table 1.1, "World Economic Outlook, October 2019," October 2019.
[20]OECDiLibrary, "OECD Economic Outlook, Volume 2019 Issue 2," accessed February 7, 2020. Note: The members of the G20 are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union.
[3]World Trade Organization, "Global trade growth loses momentum as trade tensions persist," April 2, 2019. Note: As of 2018, the World Trade Organization reported China as the second world's largest importer, importing $2.1 trillion worth of goods, or nearly 11% of total world imports, next to the United States that imported $2.6 trillion, or 13% of world imports.
[4]State Administration of Foreign Exchange, "International Trade in Goods and Services of China Updated to December 2019," Feb. 3, 2020.
[5]Federal Register, "Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation," Dec. 18, 2019.
[6]Ibid.
[7]Federal Register, "Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation," Aug. 30, 2019. Note: The Section 301 tariffs were issued under three tranches or lists: 25% tariff on $34 billion Tranche 1 issued in March 2018 that took effect June 2018; 25% tariff on $16 billion Tranche 2 issued in June 2018 that took effect August 2018; 25% on $200 billion Tranche 3 (10% tariff issued on July 2018 and raised to 30% on September 2018 that took effect May 2019). The tariffs on Tranche 1, 2, and 3 increased to 30% on October 1. In August 2019, the U.S. Trade Representative imposed a 10% additional duty (from 25%) on $300 billion of Chinese goods separated in List 1 of Annex A of the August 2019 notice to take effect on September 1, 2019 and List 2 of Annex C to take effect on December 15, 2019. The 10% tariff on List 2 was later increased to 15%.
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[15]International Monetary Fund, Table 1.1, "World Economic Outlook," October 2019.
[16]Ben Dooley, The New York Times, "Japan Posts Surprising Growth but Economic Threats Loom," August 8, 2019.
[17]European Central Bank, "Key ECB interest rates," accessed Feb. 12, 2020.
[18]International Monetary Fund, Table 1.1, "World Economic Outlook," October 2019.
[19]Ibid.
[20]Pedro Rafael Vilela, Agencia Brasil, "Brazil plans to export goods with higher value-added to China," May 2019.
[21]Bureau of Labor Statistics, "Job Openings and Labor Turnover Survey," November 2019.

CHAPTER 3: THE CAPITAL MARKETS

THE CAPITAL MARKETS

POLICIES AND REGULATIONS IMPACTING THE CAPITAL MARKETS

NYC RENT CONTROL

Despite a nationwide push by the Trump administration to decrease regulations in all facets of the economy, many municipalities and states are moving in the opposite direction – especially regarding CRE. While these restrictions may be well intentioned, they may create unintended negative consequences for both investors and consumers.

Perhaps the most significant of these new regulations is the rent control law enacted in New York state earlier this year. Although rent control laws in New York City date back to 1943, the new law includes significant new restrictions that are expected to stay in place for a long time.[1]

Gov. Andrew Cuomo signed the rent control bill, known as the Housing Stability and Protection Act of 2019, on June 14, 2019.[2] The law makes it harder for apartment owners to increase rents and eliminates rules that allowed units to become free of any rent control. The new regulations dictate the rents of about 1 million apartments, amounting to about half of the apartments in New York City.

Some provisions include:

- Landlords can no longer increase rents by more than 20% when tenants move out.
- Landlords can no longer deregulate an apartment from price controls if its rent exceeds $2,774 a month or if the occupant's yearly income exceeds $200,000.
- Rents below the legally permitted rate are now frozen as long as existing tenants occupy the unit, and rent increases due to capital improvements are capped at 2% annually.
- Newly constructed buildings are classified as stabilized and therefore subject to the new laws; they can't be classified as exempt "affordable housing." ("Affordable housing" is defined as dwellings that cost their residents less than 30% of their income.)
- With new building taxes of as much as 30% of gross income, tax abatements are much less attractive because these programs regulate rents.
- Condo/co-op conversions now require that 51% of existing tenants buy their apartments before they can be converted, further complicating and limiting a traditional exit strategy.

For current renters, the new provisions will probably be positive. In most cases, their rents won't increase as long as they stay in place.

For people who want to become renters and landlords – especially in the long term – the effects might not be so good. In fact, some landlords, investors, and CRE professionals in New York City predict that the state's new rent control law will have a negative impact on valuations for assets that have a high concentration of rent-stabilized units – and especially those with revenues very close to their operating expense levels.

According to RERC Research, properties that have below-market rents will be affected the most; valuers are anticipating 1% to 2% income increases into perpetuity. Cap rates for some New York City apartments, which have been as low as the 3%-4% range, are expected to rise into the 4%-5% range, which could cause initial value to decline by 25% or more. After the impact of the new rent controls fully kicks in, the next buyers will have to factor these value losses into their calculations. Down the road, it won't be as attractive to buy or develop apartments.

In addition:

- Investors have become skittish and many transactions have been canceled.[3]
- The new law limits the recovery for capital improvements, and many landlords will decide to make minimal improvements to their properties.
- Investment demand will likely dwindle, further reducing the prospects for capital investment. This in turn will create the unintended consequence of a lower quality of living for consumers.

In light of these developments, appraisers and investors will have to look at properties

on a case-by-case basis, and sometimes a unit-by-unit basis. The fear is that regulated stock will deteriorate and tenants will move to market-rate projects that continue to maintain their properties.

FIRPTA UPDATES

The Foreign Investment in Real Property Tax Act of 1980 (FIRPTA) imposes a capital gains tax on foreign investors in U.S. real estate.[4] This tax does not occur in any other asset class and is considered discriminatory against foreign investors.[5] FIRPTA is argued to have discouraged capital investment that could be used to create jobs and improve U.S. real estate and infrastructure.[6] RERC Research posits that the law as it stands currently hinders foreign investors and deters the growth of CRE markets. The Real Estate Roundtable argues that to repeal FIRPTA would attract as much as $125 billion in global investments.[7]

In 2015, FIRPTA was modified to exempt foreign pension funds and double the amount foreign investors may invest in a U.S. REIT. These reforms in 2015 increased foreign investment in U.S. real estate by 33%.[8] In 2018, Congress passed clarifications for FIRPTA involving foreign pension funds. The technical corrections state that a wide variety of pension funds qualify for the exemption.[9] Following a clarification in June 2019, the U.S. Treasury Department released proposed regulations that should solve most, if not all, of the foreign pension funds questions.

In response to FIRPTA, there has been significant pressure to decrease the scope of the law and ultimately repeal it. In October 2017, the House Ways and Means Committee asked the Treasury Department to repeal IRS Notice 2007-55, which imposes FIRPTA on foreign owners of a domestically controlled REIT when the REIT liquidates.[10]

The Notice has arguably increased the cost of investing in U.S. real estate and decreased foreign investment in CRE. In April 2019, Rep. John Larson, D-CT, and Kenny Marchant, R-TX, introduced the Invest in America Act (H.R. 2210), which would repeal FIRPTA.[11] According to the Real Estate Roundtable, the law would remove an outdated tax regime that discriminates against foreign investment and constrains the ability to mobilize private capital for job-creating new investments.[12] In December 2019, 11 senators sent a bipartisan letter to the Treasury Department seeking repeal of Section 2 of IRS Notice 2007-55.[13] Section 2 applies U.S. capital gains tax to certain types of real estate transactions that were not treated as taxable by FIRPTA before.[14] The repeal of this section would decrease the cost of investing in U.S. real estate and in theory increase investment in U.S. real estate; specifically, it would increase investment in REITs.

RERC Research believes that the repeal of FIRPTA would decrease financial market frictions, thus increasing investment in U.S. real estate. This has been seen in other industries that decreased market frictions by implementing, for example, zero-commission brokerage accounts for the investor and have grown in the last four to five years. These other industries have grown in the last four to five years. By decreasing financial market frictions, CRE could potentially see an uptick in growth more comparable to that in the equity markets. In addition, the potential increase in foreign investment from a repeal of FIRPTA would have the combined result of driving new investment, economic development, construction and job growth in communities across the country.

CECL STANDARD

Beginning in January 2020, a new accounting standard, the current expected credit losses methodology (CECL), took effect for public companies that are U.S. GAAP conforming.[15] CECL replaces the allowance for loan and lease losses (ALLL). The CECL standard is relatively unique because its implementation has not been a finance-only effort. In order for successful implementation, there must be changes to governance, modeling, credit analysis, information technology and financial reporting.[16] According to the Federal Reserve, CECL requires that expected losses be estimated over the life of a loan, whereas ALLL required losses to be stated when they are incurred.[17] CECL affects entities holding loans, debt securities, trade receivables and off-balance-sheet credit exposures. For banks and nonbanks with qualifying assets, it could have a significant financial impact on impairment estimates, capital ratios and the volatility of profit and loss.[18] CECL could also involve changes to operations, including accounting/finance, IT, and risk and auditing business units.[19] Its anticipated impact is driving financial institutions to consider replacing their traditional spreadsheets and legacy IT solutions with a more responsive, configurable platform.[20] With the standards' far reaching implications for business operations as a whole, it has the possibility of affecting every industry, including CRE. Since the CECL implementation is still in its infancy, however, its true impact has yet to be realized.

FINANCIAL AND CAPITAL MARKETS OVERVIEW

THE EQUITY MARKETS

FINANCIAL MARKETS

In July 2019, the U.S. economy broke the record for the longest economic expansion since the government started collecting records in the 1850s – no small feat. According to the Federal Reserve Bank of St. Louis' economic database (FRED), the Dow Jones Industrial Average (Dow), Nasdaq and S&P 500 all had a year of record-setting highs and impressive growth, but the year was filled with volatility. The S&P 500 increased or decreased by more than 1% in a single day on 37 occasions.[21] After reaching a record high of 2,945.64 on May 3, the S&P 500 fell until June 3, when it bottomed out at 2,744.45, down about 7% in one month.[22] The loss was primarily due to a breakdown in trade negotiations between China and the U.S.[23] About two months later, after hitting a record high of 3,025.86 on July 26, the index had a sharp fall and by Aug. 5 it was sitting at 2,844.74, down almost 6% in two weeks.[24] After August, the S&P 500 finished the year strongly, reaching a high of 3,240.02 on Dec. 26 and finishing the year up 26.02%.[25] The markets rebounded strongly from 2018, when the Dow, Nasdaq and S&P all dropped more than 5%. The 10-year Treasury declined 74 bps throughout 2019 amid trade tensions, Brexit concerns, and domestic political unrest.[26]

The NPI and NFI-ODCE year to date (YTD) returns were 4.80% and 3.08%, respectively, as of September 30, 2019. The Fed's rate cuts are expected to increase capital availability in the CRE market, which could further compress already low cap rates. With an abundance of capital in the CRE market, it will become even more critical to ensure that underwriting remains tied to fundamentals.

A comparison of major market indexes is found in Exhibit 3-A. We use the total return indexes for the S&P 500 and the Dow for a more accurate comparison to CRE returns. A comparison of RERC Research's cap and discount rates to 10-year Treasury rates is found in Exhibit 3-B.

THE FED AND INFLATION

The FOMC cut interest rates by a quarter of a percentage point following its July,

EXHIBIT 3-A. CRE & INVESTMENT ALTERNATIVES

	YTD[6]	1-Year	3-Year	5-Year	10-Year	15-Year
NCREIF NPI[1]	4.80%	6.24%	6.76%	8.57%	9.77%	8.56%
NCREIF NFI ODCE[1]	3.08%	4.64%	6.34%	8.36%	9.84%	6.88%
NAREIT Index (Equity REITS)[2]	28.49%	20.70%	9.03%	11.07%	13.59%	9.37%
Consumer Price Index[3]	1.04%	1.76%	2.13%	1.53%	1.76%	2.04%
Dow Jones Industrial Average[2]	18.43%	3.84%	16.30%	12.23%	13.51%	9.48%
NASDAQ Composite[4]	20.56%	-0.58%	14.62%	12.23%	14.19%	10.07%
NYSE Composite[4]	15.23%	-0.72%	6.60%	3.98%	6.51%	4.65%
S&P 500[2]	20.55%	4.25%	13.39%	10.84%	13.24%	9.01%
	3Q 2019	3Q 2018	3Q 2016	3Q 2014	3Q 2009	3Q 2004
10-Year Treasury Bond[5]	1.80%	2.93%	1.56%	2.50%	3.52%	4.30%

[1]NCREIF total return, composed of capital and income returns.
[2]Based on total return index, and includes the dividend yield.
[3]Based on the published data from the BLS (seasonally adjusted).
[4]Based on price index, and does not include the dividend yield.
[5]Based on average quarterly T-bond Rates.
[6]Year-to-date (YTD) averages are not compounded annually except for CPI and NAREIT.
Sources BLS, Federal Reserve Board, S&P, Dow Jones, NCREIF, NAREIT, compiled by RERC Research, current as of 3Q 2019.

September, and October meetings. At the end of October, the target range was 1.5% to 1.75%. The FOMC cited slowing global economic growth and geopolitical uncertainty, especially the U.S. trade war with China, as the causes of the more aggressive policy stance. After reaching 2019 lows of 1.47%, the lowest rate since July 2016, at the end of August and early September, the 10-year Treasury yield trended upward through the end of 2019 and reached 1.92% at the end of December (see Exhibit 3-C). Still, the 10-year rate is historically low; it has stayed below 2.0% since August 1, 2019. The 10-year yield was down 77 bps YOY as of December 31.

The Consumer Price Index (CPI) was unchanged in September (seasonally adjusted) after rising 0.1% in August and 1.7% YOY (not seasonally adjusted; see Exhibit 3-D). Core CPI, which excludes food and energy, was 0.2% in October and 2.3% over the past 12 months. The personal consumption expenditures (PCE) Price Index rate is the Fed's preferred inflation measure. The annual core PCE rate was 1.7% as of 3Q 2019, compared to 1.6% as of 2Q 2019. In October, the IMF projected annual U.S. consumer prices to rise 1.8% in 2019, 2.3% in 2020 and 2.4% in 2021.

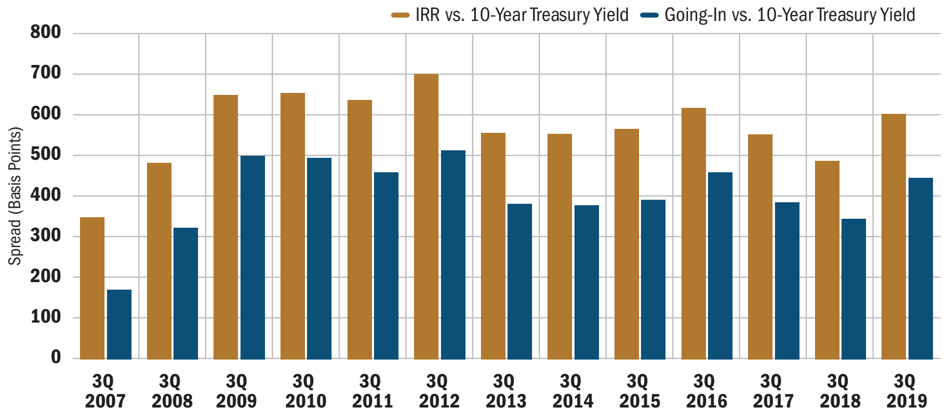
INVESTMENT ALTERNATIVES

According to RERC research, the preference for CRE declined QOQ from 5.9 to 5.7 (on a scale of 1 to 10, with 10 being excellent) in 3Q 2019 (Exhibit 3-E). However, the rating is still one of the highest over the past two years and remains the top investment alternative – as it has been for the past three quarters. With 3Q 2019 Treasury yields at the lowest in three years, the preference for bonds fell from 4.3 to 3.6 and was rated as the least preferred investment alternative compared to other asset classes. QOQ, the preference for cash also declined. The RERC Research CRE Attractiveness Index increased slightly from 111 in 2Q 2019 to 114 in 3Q 2019. Other than 4Q 2018, the Index has been above 100 (indicating that CRE is preferable over the alternatives of stocks, bonds and cash) since 4Q 2009.

AVAILABILITY OF CAPITAL AND DISCIPLINE OF UNDERWRITING STANDARDS

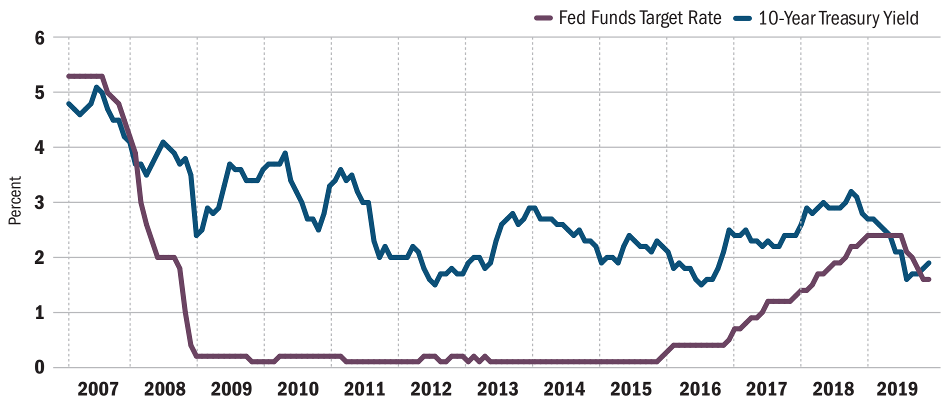
The availability of overall CRE capital

EXHIBIT 3-B. RERC RESEARCH HISTORICAL CAP RATES



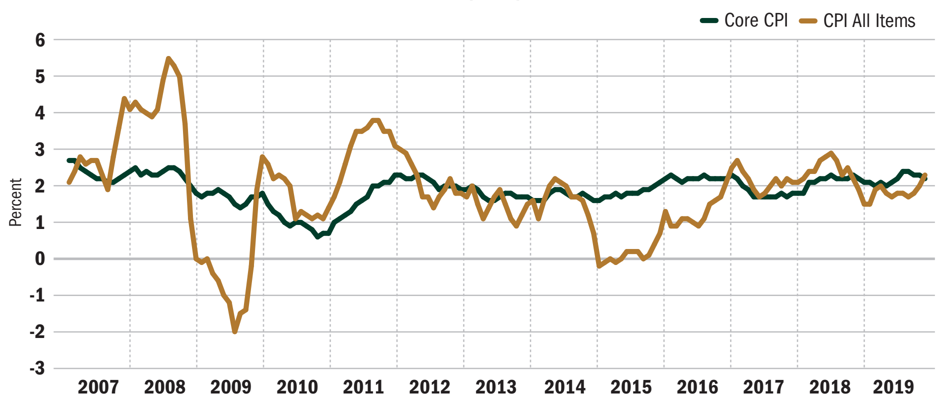
Source RERC Research, Federal Reserve 3Q 2019.

EXHIBIT 3-C. 10-YEAR TREASURY NOTE YIELD AND FEDERAL FUNDS RATE COMPARISON



Source Federal Reserve Board, December 2019.

EXHIBIT 3-D. CONSUMER PRICE INDEX (CPI)



Source BLS, November 2019.

decreased in 3Q 2019 but remained on par with capital availability from a year ago, according to an RERC Research survey of institutional investors. The 3Q 2019 capital availability rating was rated at 7.5 (on a scale of 1 to 10, with 10 being excellent), compared to 7.8 in 2Q 2019 and 7.5 in 3Q 2018. Despite the bump in quarterly ratings, overall CRE capital availability had been on a generally upward trend since 4Q 2016. Capital availability may rise in the coming months as an effect of the Fed's short-term rate cuts and the prolonged low 10-year Treasury rate.

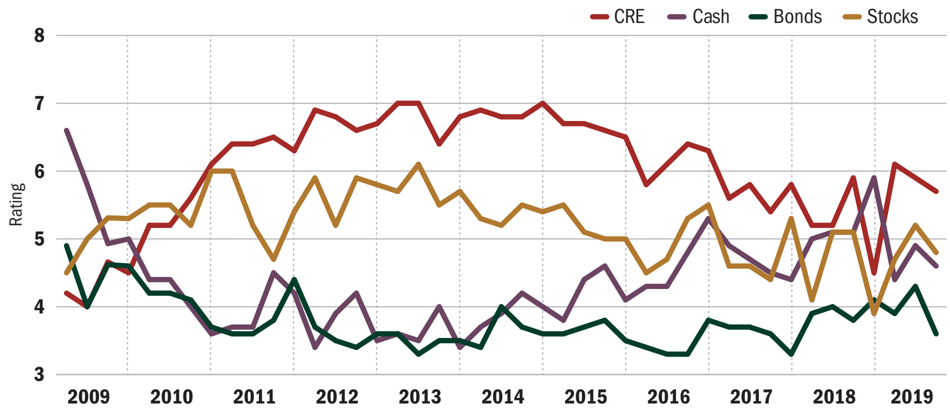
Discipline of capital decreased slightly QOQ (from 6.6 to 6.4) and was slightly lower than the 6.5 rating in 3Q 2018. As availability of capital has generally increased over the past few years, discipline has followed the same general upward trend, indicating that underwriting standards are rational — unlike what happened just prior to the GFC. The 3Q 2019 RERC Research Underwriting Index, which examines the extent to which the availability of capital and discipline of underwriting standards are aligned, indicates that availability of capital is exceeding discipline. However, the value of the index remains relatively low compared to historical data; underwriting standards are keeping the high capital availability in check.

For the past five years, RERC Research has been analyzing separately the availability and discipline of capital for debt and equity.

In 3Q 2019, the availability of equity capital decreased considerably, from 7.8 to 7.3; however, it remained the same YOY. Following the same trend as availability, equity disciplined declined QOQ, but remained the same YOY. Throughout the first three quarters of 2019, equity availability and discipline were the closest in alignment since RERC Research began collecting these data.

The availability of debt capital declined slightly in 3Q 2019 but remained the same YOY. The 3Q 2019 debt availability rating remained among the highest in four years. Debt discipline was the same QOQ and down only slightly YOY. Debt discipline was slightly above the five-year average. Broadly speaking, underwriters have maintained their level of discipline over the past few years, even as debt capital availability continues to grow.

EXHIBIT 3-E RERC RESEARCH RATINGS OF INVESTMENT ALTERNATIVES



Source RERC Research, 3Q 2019.

CRE DEBT MARKETS

According to RCA, the LTV ratio for the apartment sector rose from 66% in the beginning of the year to 69% by August 2019. On the other hand, there was more fluctuation in the LTV ratio for commercial (office, industrial and retail) with a range of 51% to 63% during the first three quarters of 2019, reaching 62% in August 2019.

Data on debt yield ratios were provided by RCA. Debt yield ratios increased slowly from 10.8% in January 2019 to 11.1% in August 2019 for the commercial sector. Debt yield ratios for the apartment sector hovered around 8.6% during the year, but fell to

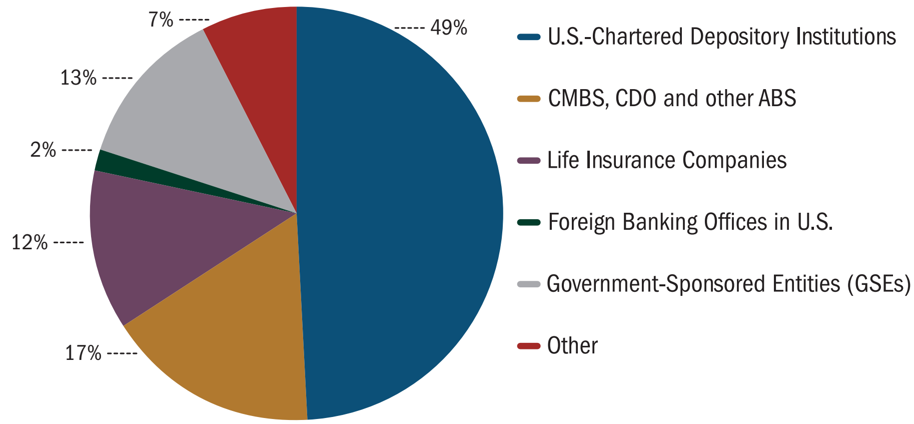
8.3% in August 2019. Debt yield ratios were below the high of 15% in 2010 for the commercial sector and the high of 10.5% for the apartment sector recorded in 2004.

RCA provided trends analysis regarding the debt service coverage ratio (DSCR). According to RCA's methodology, DSCR is provided through commercial mortgage-backed securities (CMBS) tapes and only includes ratios between 1 and 2.5. The commercial DSCR was volatile during 2019 — starting the year at 2.15, sliding to 1.84 in April but climbing back to 2.01 in August. The apartment sector was slightly more stable, with the DSCR at 1.46 in January, falling 1.41 in May and climbing to 1.53 in August. The volatility in the ratio could be, in part, due to trade war tensions rising in May 2019 and investors having concerns about the ability to service the high leverage moving forward.

According to Commercial Mortgage Alert (CMA), spreads tightened in 2019.[27] As of December 20, spreads on AAA conduits were S+87, below the 52-week average of 89. Spreads of BBB conduits were S+285, lower than the 52-week average of 303. The decreasing spreads were ascribed to an increase in demand due to end-of-the-year portfolio adjustments and an influx of investors unable to find enough subordinate paper in the primary market.

The Mortgage Bankers Association (MBA) reported that delinquency rates for commercial and multifamily mortgage loans remained relatively flat in 3Q 2019, with only 0.03% of the balance of commercial and multifamily mortgages held by life insurance companies and only 0.04% of the balance of multifamily mortgages held by Freddie Mac being delinquent.[28] The delinquency rate for CMBS was 2.29% in 3Q 2019.

EXHIBIT 3-F. COMMERCIAL REAL ESTATE DEBT UNIVERSE



Source Federal Reserve Board, compiled by RERC Research, 3Q 2019.

MBA reported that commercial and multifamily mortgage debt outstanding increased by $75.7 billion in 3Q 2019.[29] The total commercial and multifamily debt outstanding stood at $3.59 trillion at the end of 3Q 2019, with multifamily mortgage debt outstanding at $1.5 trillion — an increase of $40.6 billion or 2.8% from the second quarter. The increase was backed by agency and government-sponsored entity (GSE) portfolios and mortgage-backed securities (MBS) investments. For commercial and multifamily mortgage debt investments combined, banks and thrifts registered the largest increase in their holdings — $24.9 billion or 3.5%. The same report stated that total CMBS outstanding was $514.2 billion as of 3Q 2019.

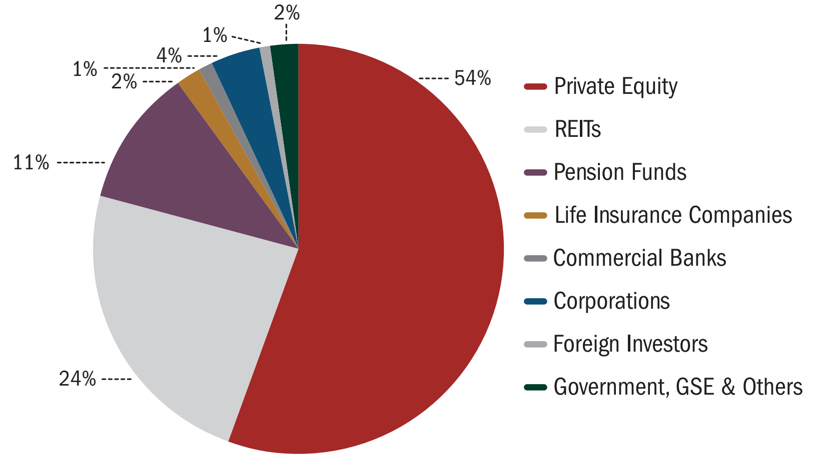
According to MBA, originations grew roughly 24% in 3Q 2019 YOY.[30] Commercial and multifamily mortgage loan originations rose 9% in 3Q 2019 QOQ. Originations rose for health care, industrial, office and multifamily properties, while retail properties and hotel originations fell YOY.

RERC Research estimates the composition of the CRE debt universe, as seen in Exhibit 3-F. Key investors in the debt market

included U.S.-chartered depository institutions (banks and savings institutions), GSEs, CMBS, collateralized debt obligations (CDOs) and other asset-backed securities (ABS), life insurance companies and foreign banking offices, among others.

The Fed indicated that total originations grew 7% YOY in 3Q 2019. U.S.-chartered depository institutions originations increased 4.8% YOY in 3Q 2019. Foreign banking offices in the U.S. accounted for 1.7% of the total debt market but increased 7.0% YOY in 3Q 2019, after meager growth of 2.2% YOY in 3Q 2018. The CMBS, CDO, and other ABS category remains strong, as its originations rose 6.5% YOY in 3Q 2019, albeit slowing from the 13.5% YOY growth in 3Q 2018. Life insurance companies' proportion of the debt market remained at 12%.

EXHIBIT 3-G. INSTITUTIONAL COMMERCIAL REAL ESTATE EQUITY INVESTMENTS



Source NAREIT, NCREIF, RCA, compiled by RERC Research, 3Q 2019.

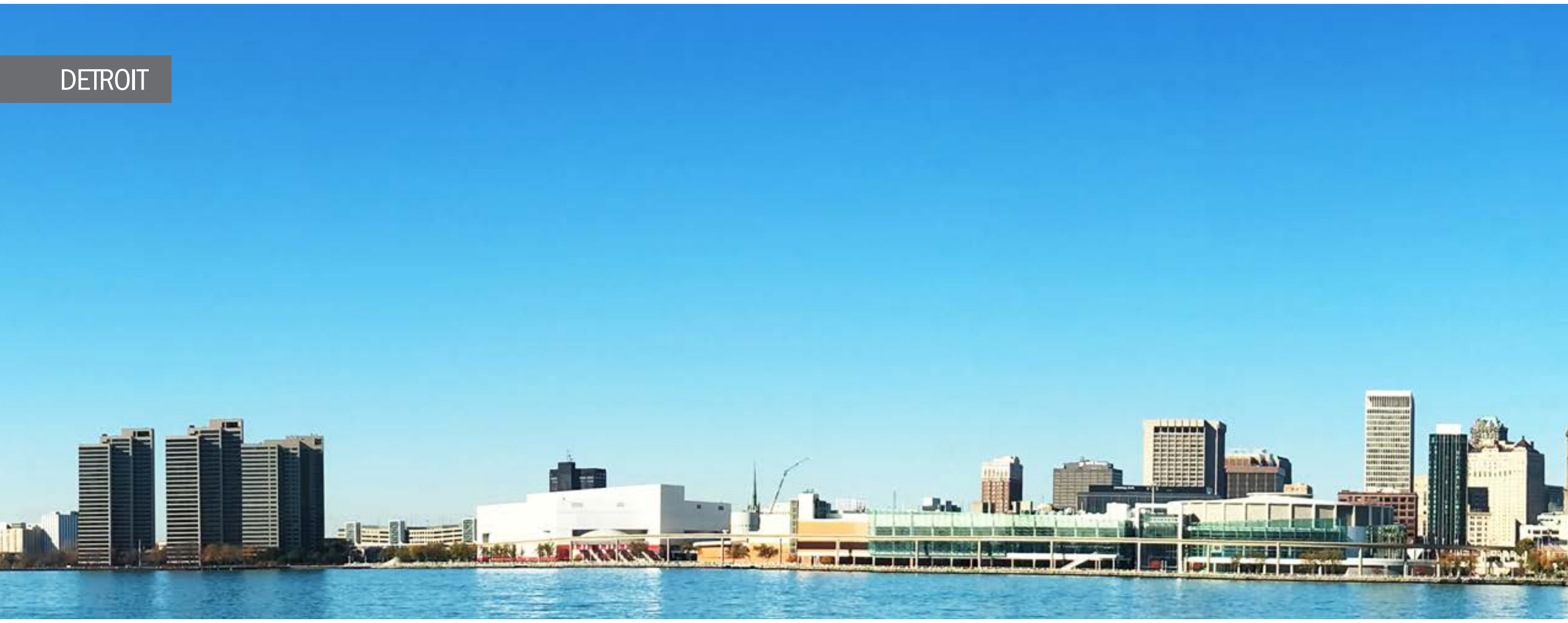
CRE EQUITY MARKETS

RERC Research estimates the composition of institutional CRE equity investments, as shown in Exhibit 3-G. Equity investors included private investors, REITs, pension funds, foreign investors, life insurance companies, commercial banks, GSEs and others.

At 55% as of 3Q 2019, RERC Research estimates that private equity continued to hold the majority of equity-based CRE. REIT investment continued to account for the next largest piece of the investor universe, at roughly 24% of total equity. The remaining equity investment was held by pension funds (11%), corporations (4%), life insurers (2%), government, GSEs and others (2%), foreign investors (1%), and commercial banks (1%).

Over $399 billion in total CRE acquisitions occurred through the first three quarters of 2019, according to RCA.[31] This is a 1.6% decrease over the approximately $406 billion in total acquisitions during the same period in 2018. Institutional investors, REITs and private investors contributed positive net capital flows in the first three quarters of 2019, while foreign investors made up the bulk of dispositions through 3Q 2019 (see Exhibit 3-H).

As of 3Q 2019, foreign investment in the U.S. CRE market totaled nearly $64 billion on a trailing four-quarter basis, according to RCA. Canadian investment made up the lion's share of the total cross-border transactions — approximately 40% — which drove the increase in total volume despite a decrease in investment from former major players like China. In 2019, Canada, Germany, Switzerland and Singapore were the top four countries investing in the U.S. After being the top cross-border investor into the U.S. in 2016, China's investment has declined to just 2% of the total foreign



investment in the U.S. in 2019. The decrease is attributed to more stringent Chinese capital controls that have been implemented over recent quarters. Investment from Germany increased 198% YOY, allowing it to become the second largest foreign investor.

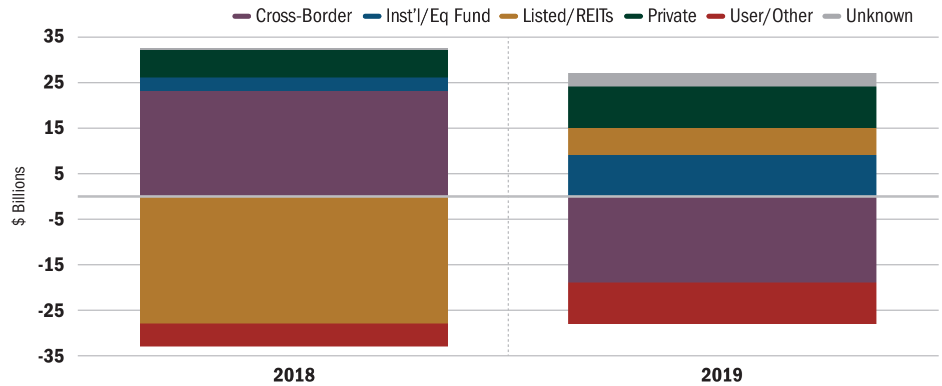
Per RCA, the biggest changes in investor composition were evident in a 52% pullback of capital by foreign investors in the first three quarters of 2019 versus the first three quarters of 2018. Through the first three quarters of 2019, institutional investors increased acquisitions by nearly 13% YOY along with private investors who increased acquisitions by 4.5% YOY compared to the first three quarters of 2018. A list of major transactions, as reported by RCA, can be found in Exhibit 3-I.

Since the recovery began, private CRE prices, as measured by the RCA Commercial Property Price Index (CPPI), have exceeded their pre-recession peaks for all property types, except retail (Exhibit 3-J). But are property valuations in line with these price increases? According to RERC Research, solid property fundamentals are underlying strong valuations, and these valuations are supporting the high prices. Favorable economic conditions, including historic employment gains, are expected to allow further room for rent growth. The RCA CPPI National All-Property Index rose 2.1% QOQ in 3Q 2019. The index was up 6.4% YOY in 3Q 2019.

According to transaction data from RCA, overall volume for the first three quarters of 2019 was down 1.6% from the first three quarters of 2018 (see Exhibit 3-K). Total office volume decreased 5.5% YOY in 2019, with the majority of the transacted volume in the suburban office sector, which was on par with suburban office volume one year ago. Central business district (CBD) office, on the other hand, increased 13.4% YOY as of 3Q 2019, but made up only 40% of total transaction volume. Medical office volume was down 13.1% YOY. Cap rates for the overall office sector reached their pre-GFC low of 6.5% in 2016 and have increased only slightly in recent quarters to 6.7% in 3Q 2019 (see Exhibit 3-L for cap rates by property type).

Overall industrial transaction volume in 3Q 2019 increased by 63% from 3Q 2018, and ramped up from the prior quarter by over 108%, according to RCA. Warehouse

EXHIBIT 3-H. COMMERCIAL REAL ESTATE NET ACQUISITIONS



Note Data reflect first three quarters of each year.
Source RCA, 3Q 2019.

EXHIBIT 3-I. REAL ESTATE TRANSACTIONS

NAME: 30 Hudson Yards
PLACE: New York, NY
BUYER: Related Companies JV Alliance
SF/UNITS: 1,463,234
SELLER: WarnerMedia
OFFICE

NAME: Coca-Cola Building
PLACE: New York, NY
BUYER: SHVO JC Bilgili Holding
SF/UNITS: 354,000
SELLER: Nightingale Properties JV Wafra
OFFICE

NAME: Waldorf Astoria Boca Raton
PLACE: Boca Raton, FL
BUYER: MSD Capital
SF/UNITS: 1,047
SELLER: Blackstone
HOTEL

NAME: Lord & Taylor (Manhattan)
PLACE: New York, NY
BUYER: Rhone Group JV The We Company
SF/UNITS: 667,350
SELLER: Hudson's Bay Company
RETAIL

NAME: Levi's Plaza
PLACE: San Francisco, CA
BUYER: Jamestown
SF/UNITS: 931,160
SELLER: Gerson Bakar & Associates JV Interland Corp
OFFICE

Source RCA, 3Q2019.

transactions continued to far surpass flex in terms of dollars transacted and number of properties, making up over 80% of total dollar volume in 3Q 2019. Cap rates for the overall industrial property type and warehouse subtype remained near their record lows, with both hitting rates of 6.1%, in 3Q 2019. The love-hate relationship in retail is evidenced in transaction data for 3Q 2019. The general perception of the retail sector is negative, while there was a jump in overall retail transaction volume from 3Q 2018 through 3Q 2019, volume decreased by 55% YOY, according to RCA. This was the largest YOY decline in volume since 2Q 2009. The large decrease was driven primarily by retail center transactions in second quarter and third quarter, which decreased 51% and 65% YOY, respectively. This loss in momentum can mostly be explained through a pullback in mall transaction volume. Per RCA, malls drew back significantly YOY in the first three quarters of 2019 – 71%, 94% and 98%, respectively. In 1Q 2019, malls had their lowest dollar volume since 2Q 2009.

Apartment transaction volume in 3Q 2019 was down approximately 7% YOY. While there was a decrease in 3Q, 2019 saw continued growth from mid- to high-rise properties at 1.5% YOY, and had volume significantly higher than the yearly average from the past decade, according to RCA. Cap rates stayed at historically low levels in the overall apartment sector (5.4%) and in the garden (5.6%) and mid- to high-rise (5.0%) subtypes.

RERC RESEARCH VALUE VS. PRICE

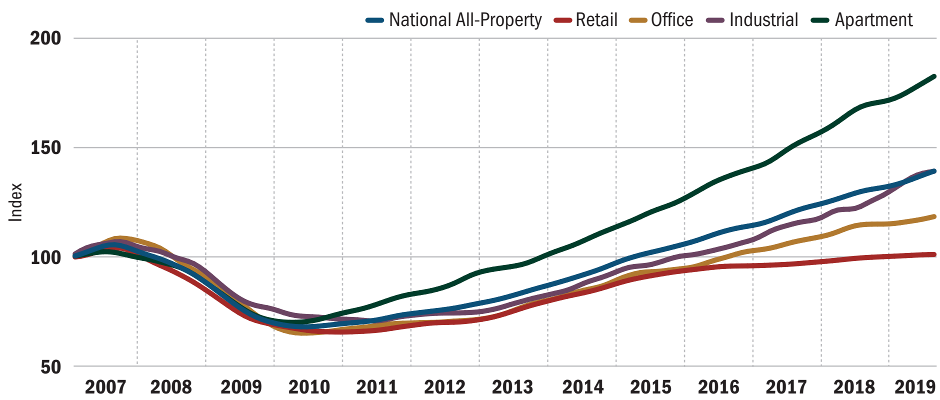
RERC Research surveys institutional investors about perceptions of CRE values relative to prices (i.e., whether the CRE market underpriced or overpriced?). Institutional investors say that the overall CRE market is overpriced — and has been for the past 3½ years (except for a spike in 4Q 2016). RERC Research's value vs. price rating (on a scale of 1 to 10, with 10 meaning that value far exceeds price) for overall CRE dropped QOQ from 4.7 to 4.4 in 3Q 2019, indicating higher prices relative to value. The 3Q 2019 rating was slightly higher YOY from 4.3. In general, the overall CRE market has become increasingly overpriced since 2014. All property types were considered overpriced in 3Q 2019, except for the industrial sector, which was considered relatively fairly priced (see Exhibit 3-M).

Among the property types, the value vs. price rating for office dropped significantly QOQ in 3Q 2019 from 4.6 to 4.1; the decline was even greater YOY from 4.8. Institutional investors believed that the office sector was the most overpriced since the GFC.

The industrial sector's value vs. price rating increased slightly from 5.0 to 5.1 QOQ in 3Q 2019, but it was down from 5.5 a year ago. Industrial was the only property type that was not rated as overpriced in 3Q 2019. Since the GFC, the sector has been underpriced except for two quarters: 2Q 2018 and 4Q 2018; however, the sector has been moving closer over the past three years toward being fairly priced.

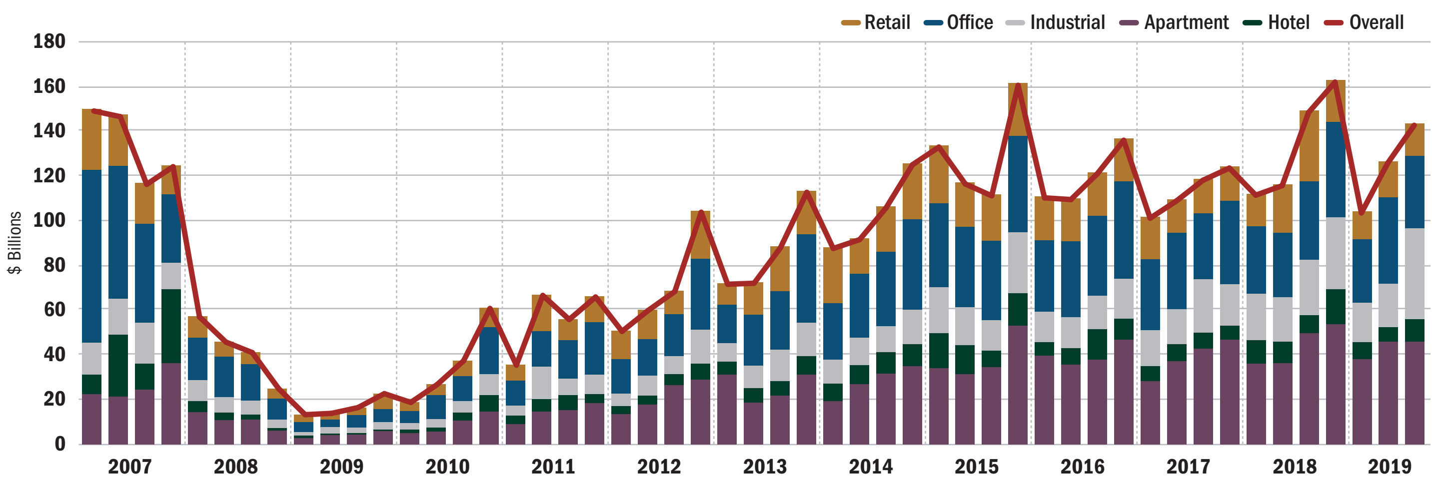
The retail sector's 3Q 2019 value vs. price

EXHIBIT 3-J. RCA CPPI



The RCA CPPI is based on repeat-sales (RS) transactions that occurred at any time up through the month of the current report.
Source RCA, 3Q 2019.

EXHIBIT 3-K. COMMERCIAL PROPERTY VOLUME



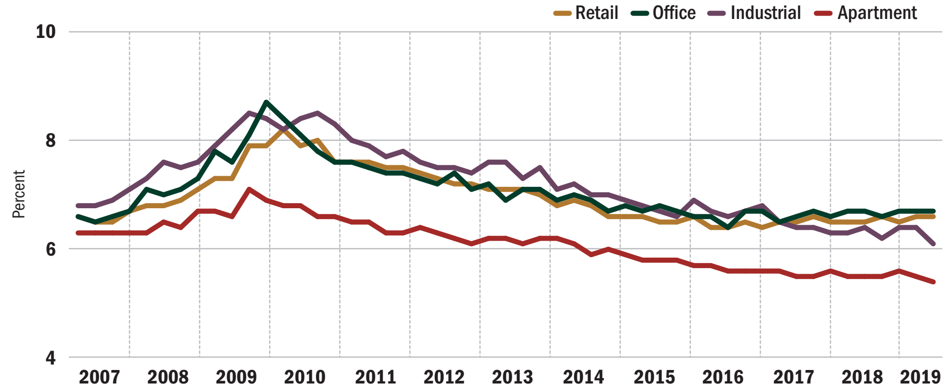
Source RCA, 3Q 2019.

rating remained slightly overpriced QOQ at 4.8, but was closer to equilibrium than a year ago, when it was 4.5. After trending downward between 2014 and 2017, the rating has been less predictable over the past two years as investors note the extreme bifurcation in the sector. Investors are finding it extremely difficult to sell any mall below prime Class A, according to RERC Research.

The value vs. price rating for the apartment sector dropped from 4.8 in 2Q 2019 to 3.7 in 3Q 2019 and was down from 5.1 YOY. The apartment sector was seen as the most overpriced among the property types. The apartment sector was the most overpriced it has been since RERC Research began collecting these data in 2Q 2006.

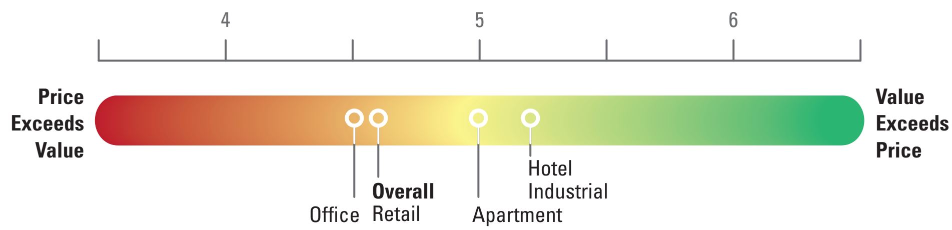
Institutional investors maintained that the hotel sector was overpriced in 2Q 2019, with a 4.7 rating, but the 3Q 2019 rating was up QOQ from 4.5. There was no change YOY. In general, the rating has been below average since 3Q 2016 and remained below the post-recession average of 5.1.

EXHIBIT 3-L. COMMERCIAL PROPERTY CAP RATES



Source RCA, 3Q 2019.

EXHIBIT 3-M. VALUE VS. PRICE



Ratings are based on a scale of 1 to 10, with 10 indicating that return far exceeds risk or value far exceeds price.
Source RERC Research, 4Q 2019.

SOURCES

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[29]Mortgage Bankers Association (MBA), “Quarterly Data Book — 3Q 2019,” Dec. 31, 2019.
[30]Ibid.
[31]All CRE transaction volume, pricing and cap rate data is provided by RCA, 3Q 2019.

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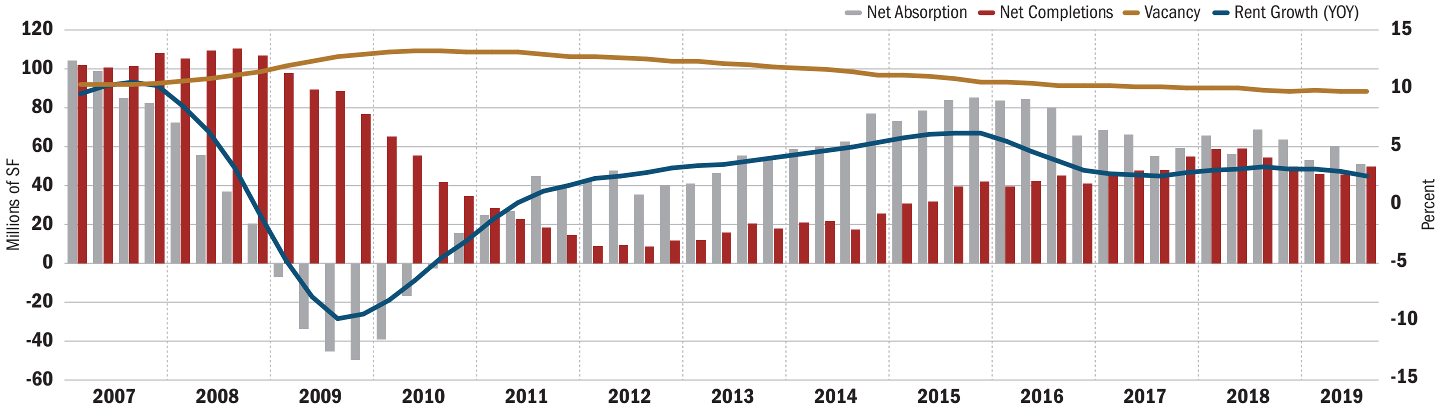
CHAPTER 4: THE PROPERTY MARKETS

THE OFFICE MARKET

EXHIBIT 4-A. OFFICE PROPERTY TYPE FUNDAMENTALS



Source CoStar Market Analytics (www.costar.com),3Q 2019. The information is provided "As Is" and without any representations, warranties or guarantees.

OFFICE SPACE SUPPLY AND DEMAND

Amid greater wariness about the economic outlook, net absorption slowed to 51.0 million square feet (SF) in the 12 months that ended in 3Q 2019, a 26% decline YOY.[1] Net completions in the 12 months that ended 3Q 2019 decreased to 49.6 million, a 9% drop YOY. Office fundamentals can be found in Exhibit 4-A.

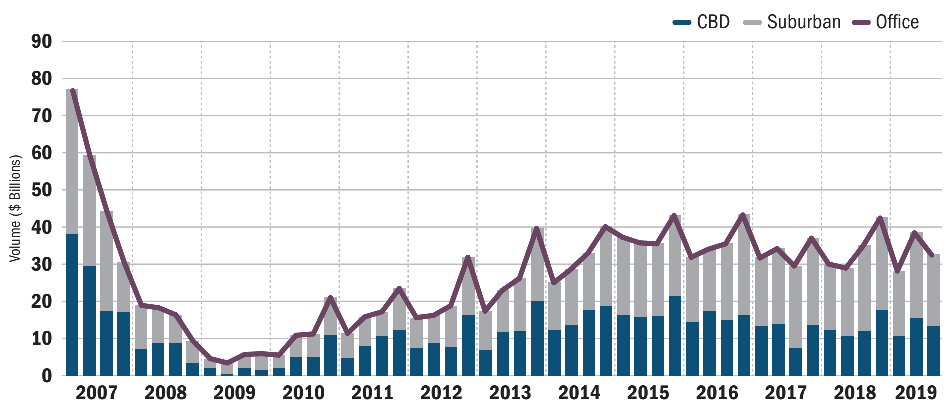
The office sector is highly sensitive to economic conditions. During the GFC, the sector experienced negative net absorption, which increased the vacancy rate to 13% in 2010, according to CoStar market data.

One positive trend is that the surplus of office space is increasingly being used up, with the office vacancy rate continuing to trend down to 9.7% in 3Q 2019. During the GFC, the office vacancy rate peaked at about 13%. The office vacancy rate is still higher than the rates in the multifamily and industrial sectors.

The total return on office property averaged 7.5% in 3Q 2019, based on CoStar market data. Most of the return was derived from income, at 6.75%, with an appreciation return of 0.7%. Since 2017, most of the return on investment has come from income rather than price appreciation even as rent growth has slowed. Office rents were up 2.4% YOY as of 3Q 2019. Office rent growth has stabilized at around 3% annually since 4Q 2016, a modest pace compared to 6% in 2015.

SALES TRANSACTIONS

EXHIBIT 4-B. OFFICE ACQUISITIONS



Source RCA, 3Q 2019.

In the first three quarters of 2019, the dollar volume of acquisitions for office properties or portfolios of at least $2.5 million rose to $99.3 billion, up 5.6% from the same period in 2018, according to RCA data (see Exhibit 4-B).[2] However, it remains to be seen if the office volume of acquisitions in the fourth quarter will match the $42.6 billion of 4Q 2018.

While the bulk of office acquisitions was still in suburban areas, the volume of acquisitions grew faster in 2019 for CBD office property. In the first three quarters of 2019, acquisitions in CBD rose 13.4% to $39.4 billion while acquisitions in suburban markets marginally increased 1% to $59.9 billion.

Investors increased their acquisitions in the six major markets (New York City metro, Boston, Washington, D.C., metro, Chicago, San Francisco metro, and Los Angeles metro) at a higher rate than in non-major markets, based on RCA data. Total sales volume in the first three quarters of 2019 in the six major markets rose to $52.5 billion, an 8.5% gain YOY, while office sales volume in non-major markets rose to $46.8 billion, a 2.5% increase YOY. The six major markets accounted for 53% of all office property acquisitions in the first three quarters of 2019, up from 51% in the prior period.

Manhattan ranked first in office transactions volume, with $10.4 billion in office sales as of the first three quarters of 2019. However, sales declined 23% YOY with 20% fewer properties sold. Investors likely retreated from Manhattan as the price of office space rose to an average of $936 per SF with a cap rate of 4.9%. However, office acquisitions increased in Northern New Jersey, Long Island and the other New York City boroughs where office space is much cheaper. Office space in Northern New Jersey, at $158 per SF, is about one sixth of the price in Manhattan.

Among markets with at least $1 billion in sales during the first three quarters of 2019, the largest increases in office sales volume were in metros with a booming technology industry: San Francisco ($8.7 billion; 149.4% YOY); Boston ($6.5 billion; 54.6% YOY), Seattle ($6.1 billion; 34.7% YOY), San Jose ($5.6 billion; 71% YOY), Washington, D.C. ($3.2 billion; 11.6% YOY), Austin ($2.5 billion; 112% YOY), East Bay ($2.0 billion; 8% YOY), Charlotte ($1.2 billion; 27% YOY) and Nashville ($1 billion; 30% YOY).

For transactions of at least $2.5 million, the average price per SF for commercial office space rose to $315 in 3Q 2019, a 15% gain YOY (see Exhibit 4-C). Price per SF in CBD rose a hefty 62% to $539 per SF, while suburban office space price per SF rose at a much more modest pace of 3%, to $238 SF.

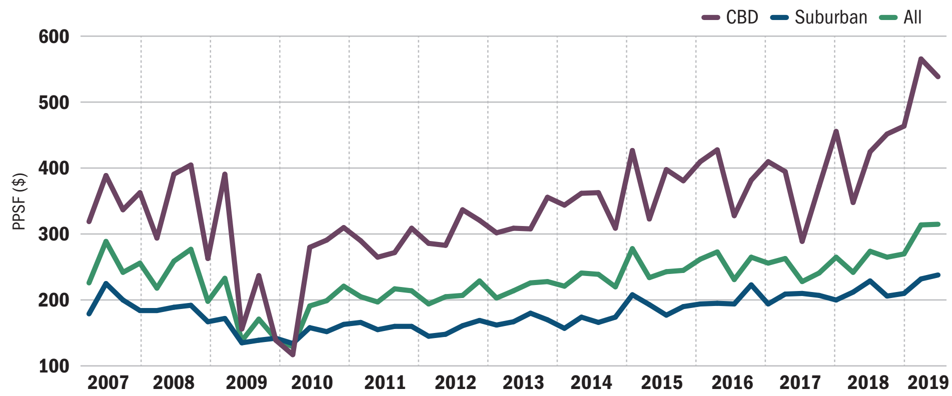
In the six major metro areas, the average sales price per SF rose to $479 in 3Q 2019, a gain of 33%, while the average office sales price per SF in non-major markets rose to $203, up 20% YOY. Among all metro areas tracked by RCA, Manhattan had the most expensive office space per SF ($936), followed by San Francisco ($874), San Jose ($575), Washington, D.C. ($527), Seattle ($518) and Boston ($500).

Cap rates fell to a low of 6.4% in 2016 and moved up only slowly to 6.7% in 3Q 2019 (see Exhibit 4-D). The gap between cap rates and the 10-year Treasury bond widened to about 4.9 percentage points, from 3.6 percentage points in 4Q 2018. The wider gap reflects the higher uncertainty and risk outlook of investors compared to one year ago.

Members of the Society of Industrial and Office REALTORS® (SIOR) reported that office market activity and market conditions were still broadly strong in 3Q 2019 compared to one year ago. The SIOR CRE Index-Office was at 116.5 (Exhibit 4-E). However, the index has been trending downward since 1Q 2018, indicating weakening growth. The index is based on 10 indicators of development activity, sales/acquisitions and leasing. An index above 100 means that the office market was broadly "strong" in 3Q 2019 compared to one year ago.

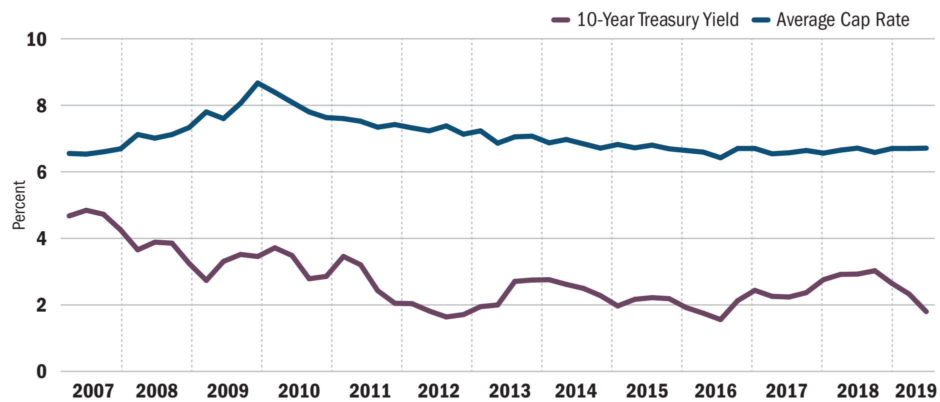
REALTORS® who typically do business in the small CRE market where transactions are typically below $2.5 million reported that the office market was still broadly strong in 3Q 2019 from one year ago, according to the NATIONAL ASSOCIATION OF REALTORS® 2019 Q3 Commercial Real Estate Quarterly Market Survey. The sales and leasing diffusion indices for office properties were above 50, which means more respondents reported an increase than a decrease in transactions in 3Q 2019 compared to one year ago. The diffusion indices were highest in the apartment and industrial markets.

EXHIBIT 4-C. OFFICE AVERAGE PRICE PER SQUARE FOOT



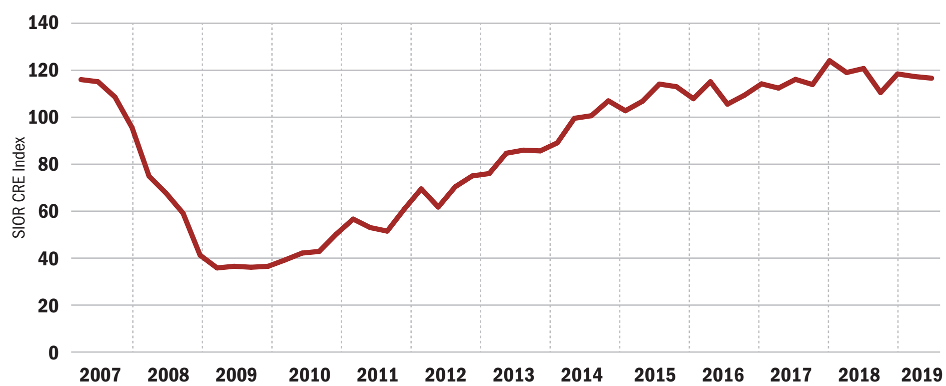
Source RCA, 3Q 2019.

EXHIBIT 4-D. OFFICE AVERAGE CAP RATE



Source Federal Reserve, RCA, 3Q 2019.

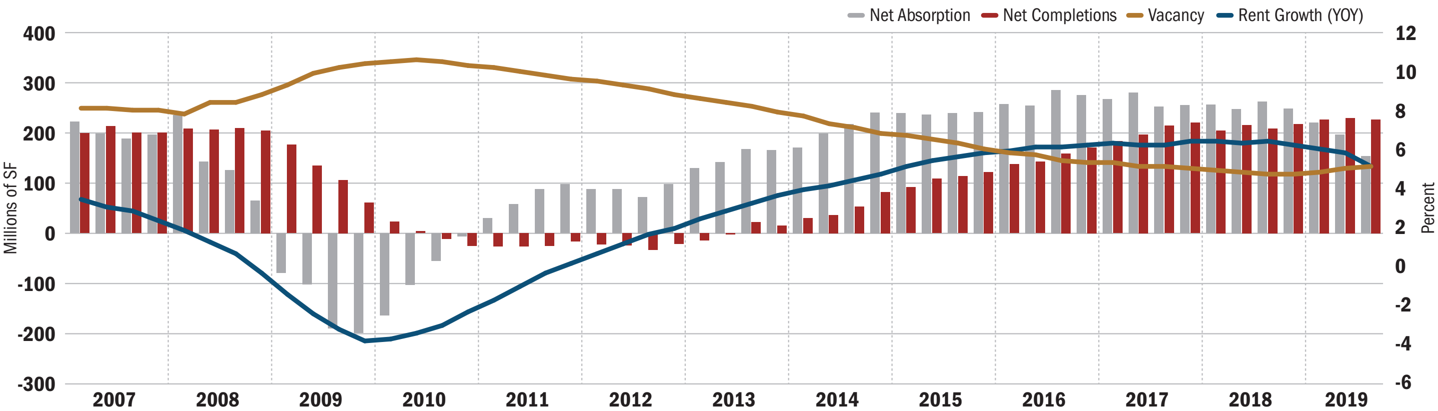
EXHIBIT 4-E. SIOR CRE INDEX — OFFICE



Source Society of Industrial and Office REALTORS®, NATIONAL ASSOCIATION OF REALTORS®, 3Q 2019.

THE INDUSTRIAL MARKET

EXHIBIT 4-F. INDUSTRIAL PROPERTY TYPE FUNDAMENTALS



Source CoStar Market Analytics (www.costar.com),3Q 2019. The information is provided "As Is" and without any representations, warranties or guarantees.

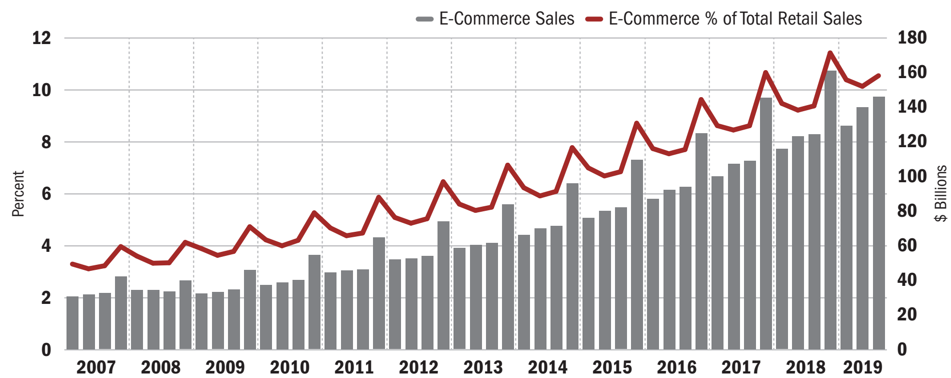
INDUSTRIAL SPACE SUPPLY AND DEMAND

Net absorption for industrial space weakened somewhat in 2019 amid slowing economic growth. In the 12 months that ended 3Q 2019, net absorption decreased to 153.7 million SF, a 41% drop from 3Q 2018, according to data from CoStar (see Exhibit 4-F).[3] However, net completions were still up 9%, with 227 million SF of space completed YOY in 3Q 2019. The increase in net completions indicates that investors remain bullish about the industrial market's medium- to long-term prospects. With completions outpacing absorption, the vacancy rate edged up slightly from 4.7% to 5.1% one year ago. Despite the slight uptick, the vacancy rate is about half that of the office sector.

The demand for industrial space is driven heavily by e-commerce sales, which has experienced explosive growth. As of 3Q 2019, the Census Bureau reported e-commerce retail sales of $145.7 billion, or 10.5% of the $1.3 trillion total retail sales (see Exhibit 4-G). In 2000, retail e-commerce was less than 1% of retail trade.

Investors on average had a total return on their industrial property investment of 10.8% in 3Q 2019, with the bulk due to an income return of 6.7% and 4.1% from price appreciation, based on CoStar market data. The return on industrial property investments has moderated from about 15% in 2015, but industrial property investments are still yielding a higher return compared to office property acquisitions, which had a total return of 7.5%. Rent growth for industrial space moderated to 5.1% in 3Q 2019 from 6.4% one year ago.

EXHIBIT 4-G. GROWTH IN E-COMMERCE SALES



Source Census Bureau, 3Q 2019.

SALES TRANSACTIONS

In the first three quarters of 2019, sales transactions totaled $77.7 billion, an 18% increase YOY, based on data from RCA (see Exhibit 4-H). Driving the expansion was warehouse transactions, which totaled nearly $63.7 billion (82% of total industrial transactions volume). Warehouse sales transactions were up 26% YOY in the first three quarters of 3Q 2019. While sales volume for warehouses rose, sales volume for flex office space decreased slightly to $13.9 billion, a 7% decline YOY. The total dollar volume of industrial transactions has grown phenomenally in the past two decades from $16 billion in 2001 for transactions of $2.5 million or more.

Industrial properties sales transactions increased in both the six major markets (New York City metro, Boston, Washington, D.C., metro, Chicago, San Francisco metro, and Los Angeles metro) as well as the non-major markets. The six major markets took in $27.7 billion of investments, while the other metro areas got the bulk of investments, $49.9 billion. In the first three quarters of 2019, Los Angeles had the largest volume of industrial property acquisitions ($4.4 billion; 30% YOY). Chicago was the second top destination although it garnered fewer acquisitions compared to one year ago ($4.0 billion: -11% YOY). The metro areas with at least $1 billion in sales volume and that increased in transactions volume YOY were: Inland Empire ($3.4 billion, 11% YOY), Northern New Jersey ($2.7 billion, 28% YOY), Orange County ($2.4 billion, 76%

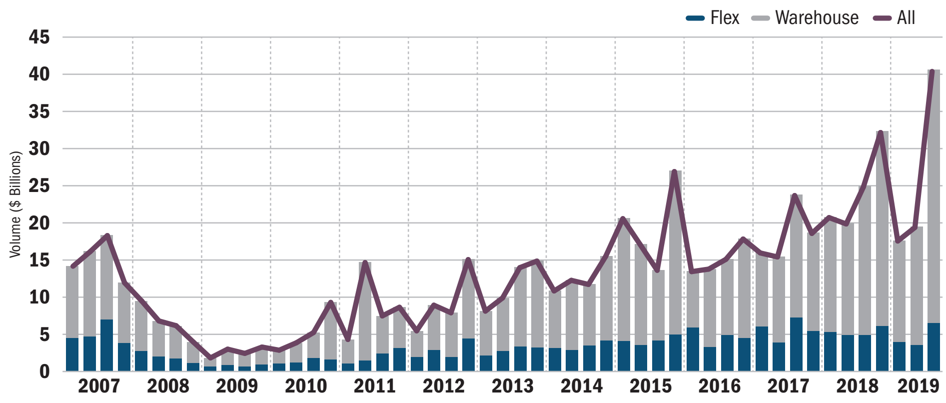
YOY), New York City boroughs ($2.1 billion, 50% YOY), Seattle ($2 billion, 19% YOY) and East Bay ($2 billion, 39% YOY).

The average price per SF for industrial space rose to an average of $110 as of 3Q 2019, up 16% YOY (see Exhibit 4-I). Flex space averaged $165 per SF, up 11%, while warehouse space averaged $98 per SF, up 17%. In the six major metro areas, the price per SF rose to $170, up 12% from one year ago. Price per SF in the non-major metro markets are about half the cost, at $85 per SF, with prices rising at a stronger pace of 18%. The top five most expensive areas industrial spaces in price per SF were Manhattan ($1,379), San Francisco ($515), San Jose ($295), Washington, D.C. ($288) and Los Angeles ($223). Compared to these metro areas, the price for an industrial property are a bargain in Chicago ($78) Dallas ($83) and Atlanta ($66).

As sales prices rose, cap rates continued to compress to 6.1% in 3Q 2019. Cap rates for warehouse were slightly lower at 6.1% compared to flex space at 6.3%. But while cap rates did go down, the spread between the 10-year note and the industrial cap rate widened to 4.4% in 3Q 2019 from 3.5% one year ago, an indication that investors are placing a higher risk premium on industrial property acquisitions (Exhibit 4-J).

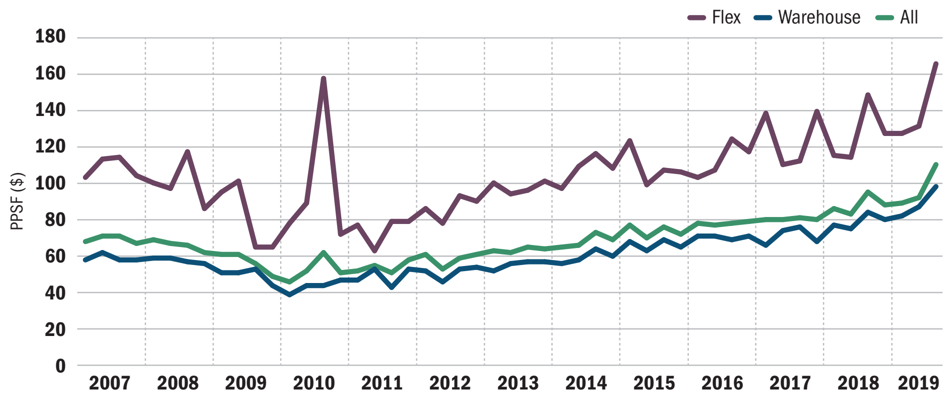
Members of SIOR reported that industrial commercial activity and market conditions were still broadly strong in 3Q 2019 compared to one year ago.[4] The SIOR CRE Index-Industrial was 134.4 (see Exhibit 4-K). However, the index has been trending downward since 1Q 2019, indicating weakening growth. The index is based on 10 indicators of development activity, sales/acquisitions and leasing. With the index above 100, the industrial market was broadly "strong" in 3Q 2019 compared to one year ago. Similarly, REALTORS® who typically do business in the small CRE market where transactions are typically below $2.5 million reported strong growth in the industrial market in 3Q 2019 compared to one year ago, according to the NAR 2019 Q3 Commercial Real Estate Quarterly Market Survey. The sales and leasing diffusion indices for industrial properties were above 50, which means more respondents reported an increase than a decrease in transactions in 3Q 2019 compared to one year ago. The diffusion indices were highest in the apartment and industrial markets.

EXHIBIT 4-H. INDUSTRIAL ACQUISITIONS



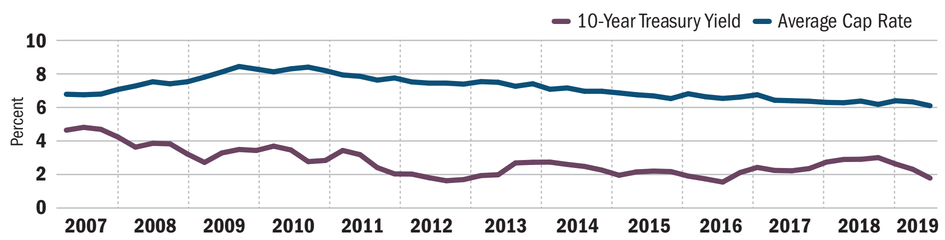
Source RCA, 3Q 2019.

EXHIBIT 4-I. INDUSTRIAL AVERAGE PRICE PER SQUARE FOOT



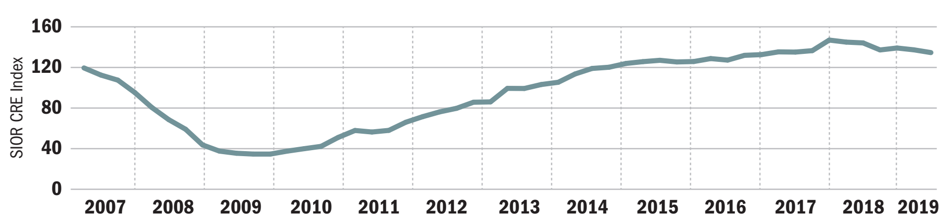
Source RCA, 3Q 2019.

EXHIBIT 4-J. INDUSTRIAL CAP RATES VS. 10-YEAR NOTE YIELD



Source Federal Reserve, RCA, 3Q 2019.

EXHIBIT 4-K. SIOR CRE INDEX — INDUSTRIAL



Source Federal Reserve, RCA, 3Q 2019.

THE RETAIL MARKET

In November 2019, the U.S. Census Bureau indicated that sales in the retail and food service industry increased by only 3.4% since 2018, which indicates lower, yet normalized growth, compared to 5.4% growth in the industry the previous year.[5] The greatest YOY growth reported was in the food service & drinking places subcategory at 4.5% and the motor vehicle & parts dealers subcategory at 3.9%. While other retail subcategories reported modest growth, ranging from 0.4% to 3.1%, several notable subcategories declined YOY. Sales in electronics & appliance stores and department stores declined 3.7% and 5.4%, respectively, while the sporting goods, hobby, musical instrument, and bookstore category declined 2.0%. It is likely not a coincidence that as sales in these specific subcategories decline, the nonstore retailers subcategory, which includes online shopping, continues to grow, increasing 12.1% YOY.

While it has since been established that brick-and-mortar stores and e-retailers can coexist, industry leaders now realize that the two concepts depend on one another. This has sparked changes within the retail real estate market. Certain retail concepts and store types remain strong, while others are struggling or disappearing. The extreme decline of malls and department stores seems to be offset by the store locations that have figured out how to use technology and e-commerce to their advantage, leaving the retail real estate market caught in a balancing act.

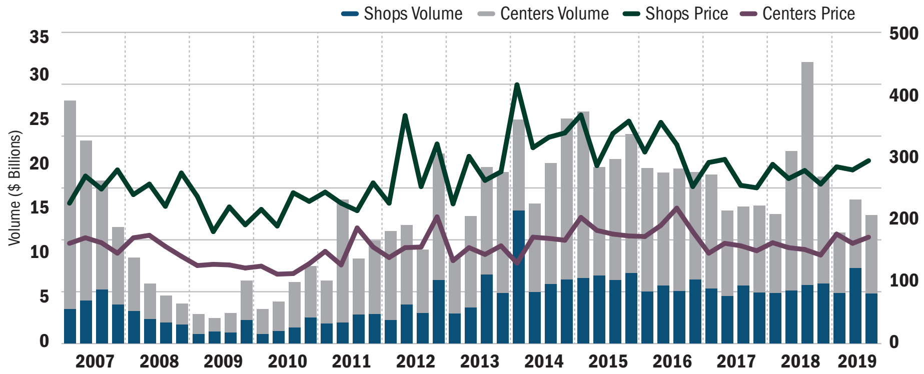
The narrative for the future of the retail real estate industry in this new decade echoes trends observed in years prior. Retailers continue to work to strengthen their businesses by identifying the optimal balance of e-commerce versus brick-and-mortar. While it may seem like a simple code to crack, finding this balance has proven quite difficult and requires substantial consideration of the consumers' wants and needs. Generation Z (Gen Z), which is defined as those born between 1996 and 2010, has entered the consumer market, requiring retailers to cater to their needs if they want their business.[6] According to a January 2020 Chain Store Age article, consumers use technology to research products for price or specifications prior to purchasing, and enjoy the convenience of shopping online, or on a mobile device through social media or specific applications developed by retailers.[7] However, their desire for the experience to touch items urges retailers to continue, or even create, their physical presence in shop space. Popular brands that originated online selling items such as eyeglasses, mattresses and specialty clothing or accessories that can be purchased from the comfort of your own home continue to open physical locations in the largest retail markets across the U.S. According to a Retail

Dive article, the most sought-after markets for e-retailer pop-up locations are New York, Los Angeles and Toronto, while the most desired metros for brands' first permanent locations are New York, Los Angeles, San Francisco and Chicago.[8] These brands have done their homework, observing that in some cases, there is more foot traffic in their stores than online traffic, as consumers prefer to stop in to experience the products themselves that they previously researched online before purchasing, according to a January 2020 article from Franchising.com.

After continued discussion about the end of malls as we know them, they too are working to maintain a balance that they hope will contribute to their continued success. According to a November 2019 Crain's article, diversification is key in the mall submarket.[9] Owners continue to bring in experiential tenants like movie theaters and indoor miniature golf, as well as lifestyle tenants such as restaurants, food halls and fitness centers, in addition to pop-up concepts that can create buzz in the market. Several popular malls are even converting vacant anchor space into apartments to bring consumers as close to the remaining shops and experiences as possible, according to Crain's.[10] Regardless of how each mall decides to diversify its tenant mix, it is apparent that Gen Z consumers desire a mall that is not only a place to purchase clothing, but that also offers entertainment and life services, according to a Retail Touch Points article.[11]

The fate of malls appears to be relatively straightforward based on trends observed in the market: Prime Class A malls and nice Class B malls will continue to function as they creatively make changes to their tenant mix or renovations to the property in order to adapt to the fluctuating retail market, according to a 2019 Town Square article.[12] However, the weakest Class C malls will likely continue to struggle, with their fate possibly appearing bleak as anchor retailers such as department stores continue to close in waves. Mall landlords are understandably concerned about the impact that closed anchor and department stores will have on their properties. Some smaller retailers have co-tenancy clauses that allow them to terminate or renegotiate their leases if an anchor leaves the mall, according to Crain's.[13] While 2019 was likely the peak for store closures, they are expected to continue throughout 2020, albeit at a lower rate, according to Retail Dive.[14] It will remain crucial for landlords to be creative and act on the trends to diversify the tenant mix and use of space to balance out the loss of department stores.

EXHIBIT 4-L. RETAIL (SHOPS AND STRIP CENTERS) VOLUME AND PRICING



Source RCA, 3Q 2019.

The financial aspect of the retail real estate market is not exactly booming, as tenants, landlords and owners take the time needed to understand the market and apply necessary adjustments. The data presented herein indicates relatively moderate growth in the market, with notable declines in values, sales and cap rates of malls. However, smaller space retail such as urban storefronts and shop space appear to be handling the fluctuations of the retail environment well, thus assisting with the balance of the retail real estate market as a whole.

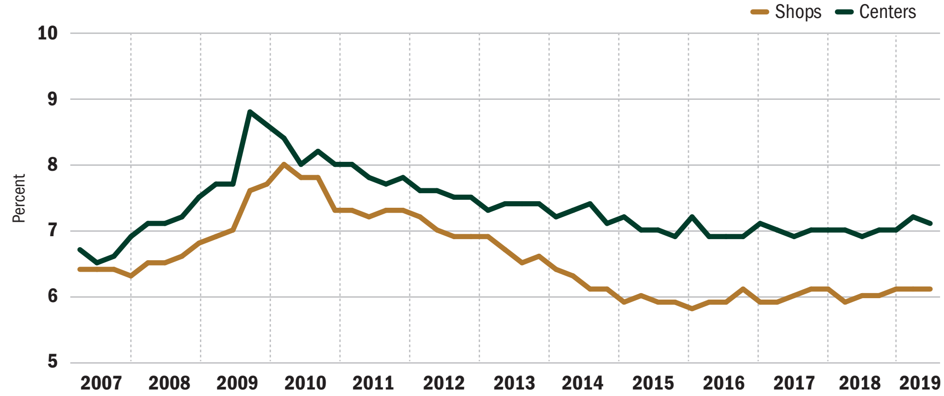
RETAIL PROPERTY VOLUME AND PRICING

According to RCA, volume of retail property sales totaled approximately $43.1 billion YTD as of 3Q 2019, which represents a 36.4% decrease in retail property sales from $67.9 billion in the same period in 2018 (see Exhibit 4-L).[15] Two-thirds of the retail sales that occurred in 2019 ($27.8 billion) were in non-major metropolitan areas, while the remaining one-third ($14.5 billion) occurred in major metropolitan areas. Just over half of the retail subcategories experienced decreases in property sales YTD, with the mall subcategory leading the pack with a drastic decline in sales YTD. This strongly contributed to the decrease in property sales for the retail market as a whole. It should be noted that while the sale of mall properties decreased 96% YTD to $910.8 million, with an average price per SF of $136. This comes after a record year for mall sales over the past 15 years in 2018, when property sales totaled $25.7 billion. While over 200 properties were sold in 2018, compared to the 25 properties in 2019, it may be suggested that, where some owners saw challenges in the mall subcategory, others saw potential. With the sales of malls and centers experiencing the largest YTD decreases of 96% and 53%, respectively, sales of lifestyle/power centers, anchored retail, urban/store front retail and unanchored retail reported YTD decreases of 36%, 22%, 9% and 5%, respectively.

Meanwhile, sizable increases were observed in certain property types, notably big box retail, where $943.4 million in sales volume represents a 25% increase YTD, and single-tenant retail, which increased 23% YTD, reporting $6.5 billion in sales volume, according to RCA. Moderate to low increases in the shop space, drugstore and grocery subcategories were reported at 9%, 7% and 5% YTD, respectively. The signs of recovery, which were observed through increases in sales in the marketplace in 2018, appear to have slowed, as the declines in some subcategories offset the improvements in others.

According to RCA data, the average price per SF for the retail market increased from 2018, reaching $211 per SF in 1Q 2019, $203 per SF in 2Q 2019, and $201 per SF in 3Q 2019, compared to an average of $184 per SF in 2018. While the average price per SF for most retail subcategories appeared to fluctuate through the recent quarters, the unanchored retail and single-tenant retail subcategories have

EXHIBIT 4-M. AVERAGE RETAIL CAP RATES



Source RCA, 3Q 2019.

experienced a high mark, where the average price per SF for 3Q 2019 of $226 and $258, respectively, is the greatest reported in over a decade. This is the first time that average price per SF for the retail market as a whole has been greater than $200 per SF since 3Q 2016, which may have investors looking optimistically toward the future.

AVERAGE RETAIL PROPERTY CAP RATES

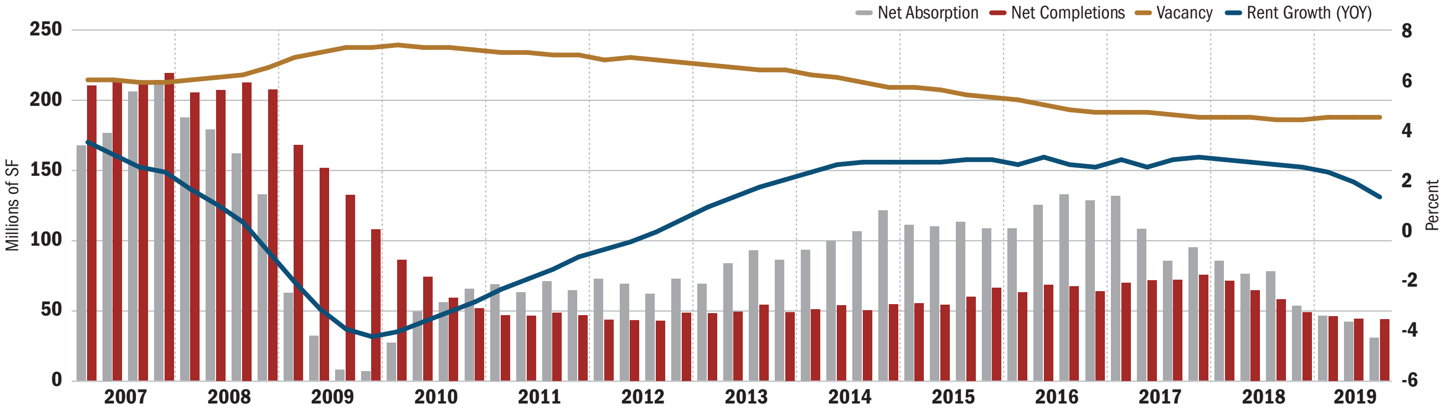
Average cap rates are slowly increasing, rising 10 bps YOY since 3Q 2018, according to RCA, which shows cap rates climbing slightly from 6.5% at the start of 2018 to 6.6% in 2019, with a spread of 489 bps over the 10-year Treasury (see Exhibit 4-M).[16] Within the subcategories, cap rates were mostly stable in 2019 compared to 2018, except for two subcategories. A 70-basis point increase occurred in the big box submarket since the start of 2018, with the cap rate starting at 6.7% and sitting at 7.4% as of 3Q 2019. Cap rates declined from 8.9% in 4Q 2017 to 5.0% in 4Q 2018 but increased 240 bps to 7.4% by 3Q 2019. This significant fluctuation in the submarket could suggest instability. However, the cap rate for the mall subcategory decreased 110 bps from 6.8% in 1Q 2018 to 5.7% in 3Q 2019. With the large fluctuation of sales in the mall submarket, these cap rate changes are not surprising.

INVESTOR COMPOSITION

According to RCA, private investors increased their share of the buyer pool YTD in 3Q 2019 to own the majority at 64% as of 3Q 2019. This has essentially normalized the market compared to the last five years, as private investors have once again become the biggest player in the market. Institutional/fund investors have slightly increased their share of the buyer pool, from 11% in 2018 to 12% YTD as of 3Q 2019. REITs position in the pool has fluctuated over the past five years, ranging from18% in 2015 to 4% in 2018, according to RCA. As of 3Q 2019, REITs made up 11% of the buyer pool, which represents a 61% increase YOY, while user/other investors remain consistent with only 4% of the buyer pool. Cross-border investors have dramatically decreased their involvement in the market by 86% YOY, making up 5% of the buyer pool as of 3Q 2019, down from 34% in 2018.

The lender pool proportions appear largely the same as years prior, with the exception of a change in the largest player between 2018 and 2019, according to RCA. Regional/local banks make up the largest share of the lender pool at 27%, passing CMBS, which make up 18% of the lender pool. This represents a low point for CMBS over the past five years, with their share of the market decreasing from a high of 33% in 2018. Financial/fund institutions have had the most significant increase in their presence in the market, making up 19% of the lender pool, up from 7% in 2018. Additionally, these lenders account for 54% of the lender pool for malls, as they attempt to help out the struggling submarket. National banks and insurance agencies have remained stable, making up 15% and 12% of the pool, respectively, with international banks and private/other agencies combined comprising the remaining 10% of the lender pool.

EXHIBIT 4-N. RETAIL PROPERTY TYPE FUNDAMENTALS (OVERALL RETAIL)



The information provided is "As Is" and without any representations, warranties or guarantees.
Source CoStar Market Analytics, 3Q 2019.

RETAIL PROPERTY FUNDAMENTALS

According to 3Q 2019 CoStar data, vacancy rates within the national overall retail market have remained relatively stable, hovering around 4.4%-4.5% since 1Q 2018 (see Exhibit 4-N).[17] This represents a steady and continued decrease through the past decade, when vacancy rates were as high as 7.3%. The current vacancy rate of 4.5% represents the start of a potential slight increase in vacancy rates that are forecast to begin in the coming quarters, reaching 4.7% in 4Q 2020.

Net asking rents for the overall retail market averaged $21.29 per SF as of 3Q 2019, which represents a 2.6% increase over asking rents of $20.76 per SF in 1Q 2018, according to CoStar. Gradual increases are forecast to continue through the coming years, with rents expected to reach $21.59 per SF in 4Q 2020.
It is important to note that while the retail market as a whole is remaining relatively stable in regard to vacancy rates and net asking rents, the mall submarket is experiencing increasing vacancy rates, along with slightly increasing net asking rent. Vacancy rates as of 3Q 2019 were 4.7%, according to CoStar data, which has been increasing since a low point of 3.7% in 2Q 2017. However, asking rents for 3Q 2019 have increased by 2.4% YTD, reaching $30.44 per SF, compared to $29.39 per SF in the first three quarters of 2018. While this increase isn't huge, it represents potential in the submarket.

THE APARTMENT MARKET

Building on an impressive run, apartments continue to be a preferred investment sector even as concerns about an economic slowdown appear to be evident in certain markets and property types. Numerous factors have led to the continued success of this sector, including changes to the U.S. economy, housing affordability, employment trends and changes in the views of many toward homeownership. As some investors prepare for a potential recession, apartments are also considered attractive given the low ratio of capex costs to net operating income (NOI) relative to other property types as noted by RCA.[18]

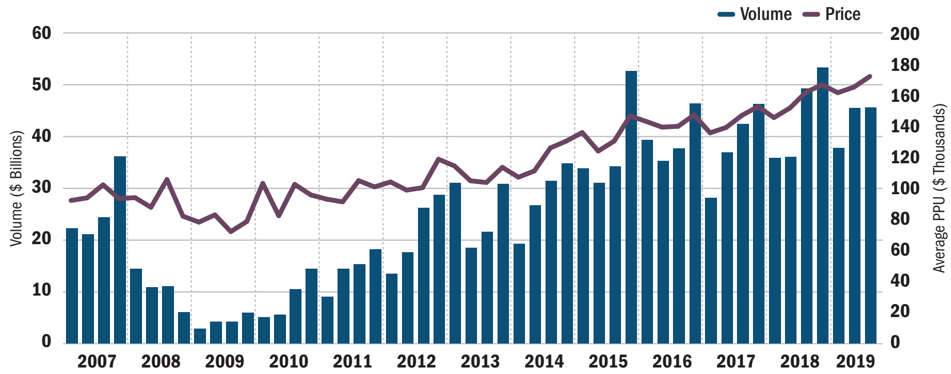
A total of $129.9 billion of significant apartment properties was sold in the first three quarters of 2019, resulting in a YOY increase of 6.4%, based on RCA data (see Exhibit 4-O). This increase is just over half of the increase from the same period in the prior year, but it is noteworthy considering that the transaction activity this year has been largely driven by smaller transactions as opposed to portfolio and entity-level transactions. In fact, sale activity for individual apartment assets in 3Q 2019 was the highest ever for a third quarter.

Among apartment types, the YOY increase in volume for garden-style properties (9.2%) far surpassed that of mid/high-rise properties (1.5%) in the first three quarters of 2019. Additionally, over this time frame, garden apartments comprised approximately two-thirds of the overall transaction volume.

Based on the RCA CPPI, pricing for apartment properties nationally increased approximately 8% YOY through September 2019. This is the second largest increase of the major property types over this time frame (behind only industrial), and pricing for apartments is now nearly 75% above previous peak levels from late 2007. The average price per unit (PPU) has also increased, averaging $168,170 in 2019 compared to $154,829 in the first three quarters of the prior year, per RCA.

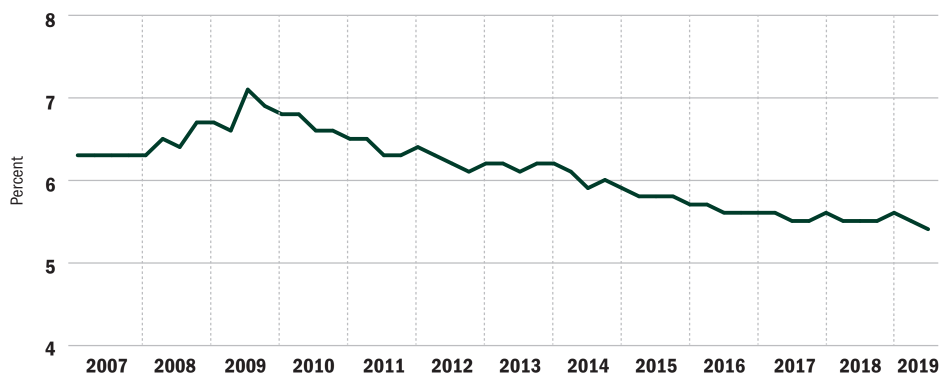
As presented in Exhibit 4-P, average cap rates for the apartment sector have remained relatively stable over the past several years, with rates in the range of 5.4% to 5.6% in every quarter since 3Q 2016.

EXHIBIT 4-O. APARTMENT VOLUME AND PRICING



Source RCA, 3Q 2019.

EXHIBIT 4-P. AVERAGE APARTMENT CAP RATES



Source RCA, 3Q 2019.

As of 3Q 2019, the average cap rate for mid-/high-rise properties stood at 5.0%, while the average cap rate for garden-style properties dropped to 5.6%. Notably, the delta between cap rates for these two apartment types is getting smaller. In both cases, the rates are well below historical levels, reflecting the availability of capital, low mortgage rates and the high demand for this property type. It appears cap rates may continue to hold steady in 2020.

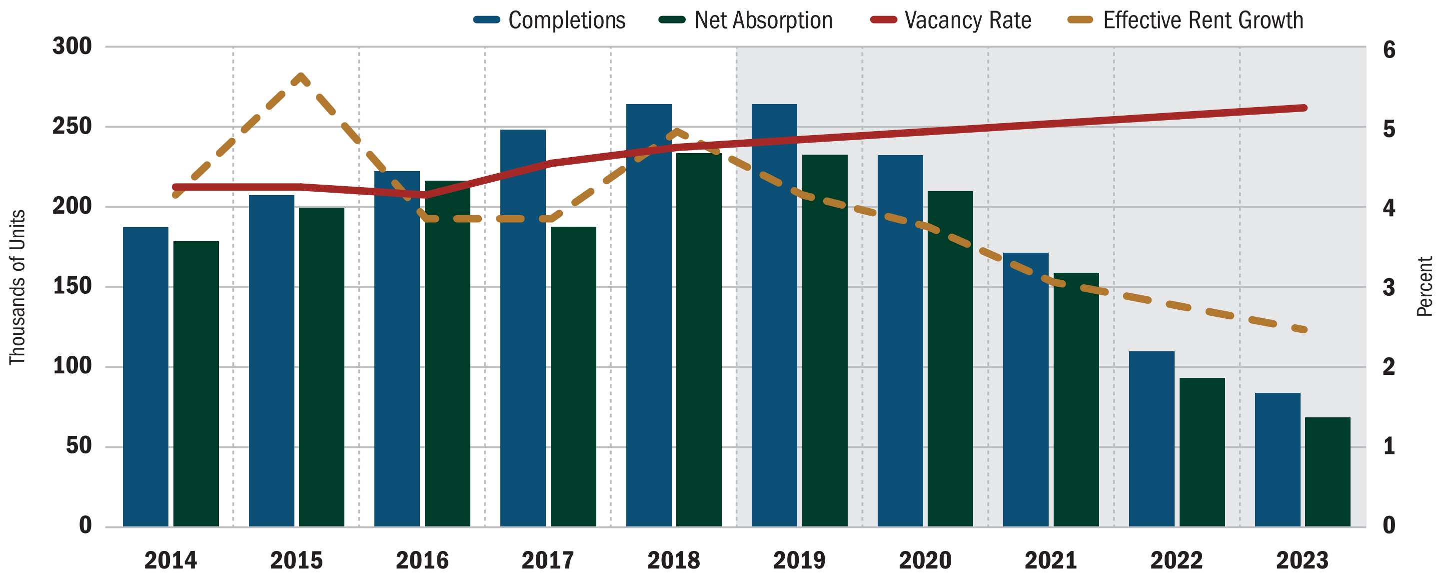
INVESTOR COMPOSITION

Private investors have dominated the market in the first three quarters of 2019, representing 63% of all apartment acquisition activity, based on RCA data. The second largest group of buyers has been institutions/funds at 20%, a decrease from 24% in the first three quarters of 2018. REITs accounted for just 5% of apartment acquisition activity in the first three quarters of 2019.

Blackstone Real Estate Income Trust (a Blackstone entity) has been the most active buyer (in terms of investment volume) through 3Q 2019, according to RCA. Other notable buyers were Cortland (which acquired Pure Multi-Family REIT in a $1.2 billion transaction in September), Tricon, Blackstone and Kushner Companies. The top sellers during this time frame were Lone Star, JP Morgan, Starlight Investments, Holland Partners and PGIM Real Estate.

Through the first three quarters of 2019, the geographic areas leading in transaction volume for apartment properties included Dallas, Los Angeles, Atlanta, Phoenix and Houston, according to RCA. However, markets exhibiting the biggest YOY increases

EXHIBIT 4-Q. APARTMENT MARKET VACANCY AND EFFECTIVE RENTAL GROWTH RATE



Shaded area indicates forecast.
Source Moody's Analytics REIS, 3Q 2019.

included Boston, Baltimore, Tampa and Las Vegas.

A diminishing supply of apartment properties, strong sector fundamentals and intense competition have led to a significant pipeline of new apartment projects, as developers look to capitalize on the tight market conditions. According to Moody's Analytics REIS' baseline forecast, 265,199 apartment units were expected to be delivered in 2019, followed by 232,522 and 172,221 in 2020 and 2021, respectively.[19] A new supply of apartment units has increased in every year since 2011 — from just 42,255 units in that year to 264,544 in 2018. Based on the projection data from Moody's Analytics REIS, this trend is expected to peak in 2019, thereafter gradually declining to 84,246 units in 2023. The total apartment stock as of 3Q 2019 was approximately 11.3 million units.

APARTMENT PROPERTY FUNDAMENTALS

According to Moody's Analytics REIS, annual effective rent change was 5.0% in 2018, and based on YTD information it is forecast to be 4.2% in 2019.[20] Based on Moody's Analytics REIS' baseline forecast, the annual effective rent change is projected to continue to decline steadily through 2023 to 2.5%.

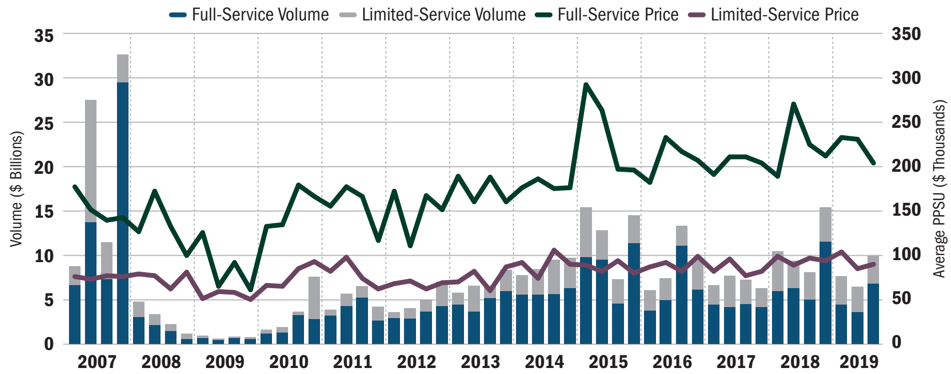
Since the apartment recovery began in late 2009, the vacancy rate fell in each year through 2016 – from 8.0% to 4.2% (see Exhibit 4-Q). Since then, the vacancy rate has inched back up slightly and was at 4.7% as of 3Q 2019. The vacancy rate is expected to remain in the 5% range over the next several years, per Moody's Analytics REIS .

According to forecast information from Moody's Analytics REIS for the top 50 markets, Chicago, Raleigh-Durham, Denver, Phoenix and Charleston are expected to have the highest cumulative effective rent change by the end of 2023. Of the top 50 markets, the lowest performing markets are expected to be Sacramento, Philadelphia and Hartford.

THE HOTEL MARKET

Meager hotel performance showed early signs of correction at the end of 2019. Although the national occupancy is forecast to remain near a record high set in 2018, average daily rate (ADR) growth has not maintained momentum and is forecast to slow to the lowest rates experienced within the last five years.[21] New rooms are still projected to be added in the coming year and above the long-term average, but fewer will be added than in 2019. Additionally, demand growth trends show signs of moderation and are below the long-term average. By and large, supply and demand are forecast to remain in equilibrium through 2020 with occupancy and ADR growing slightly, but in step.[22]

EXHIBIT 4-R. HOTEL VOLUME AND PRICING

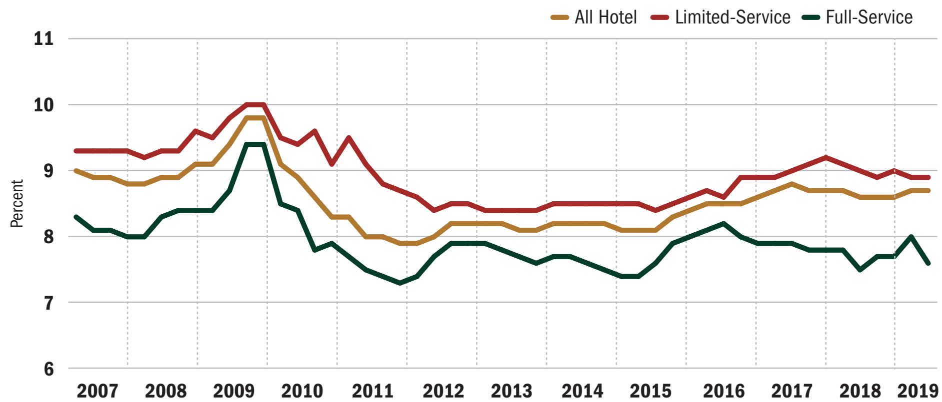


Source RCA, 3Q 2019.

TRANSACTION TRENDS

Transactions seem poised to grow based on a changing strategy among investors who were awaiting any lag or deceleration in the market before scooping up properties on their wish list. Capital is sufficient to fund acquisitions as many private equity funds seem eager to put their capital to work.[23] Despite a year that was marked with caution from hotel institutional investors, which is reflected in Exhibit 4-R, the U.S. market is in a position of strength compared to foreign markets and may use this position to renew interest in hotel purchases. According to RCA, rolling four-quarter transaction volume for full-service hotels was $107.3 billion, which was 19.7% higher than 4Q 2018's mark. Further, limited-service volume was $52.5 billion, which was 0.2% higher than 4Q 2018. Total hotel volume was $159.8 billion, which was 12.5% higher than 4Q 2018's mark.[24]

EXHIBIT 4-S. AVERAGE HOTEL CAP RATES



Source RCA, 3Q 2019.

Transaction highlights for 2019 include purchases by Top Players: Blackstone, Pebblebrook Hotel Trust and Park Hotels & Resorts, Inc. Combined, the three buyers acquired 91 hotels with purchase prices ranging from approximately $116.7 million to $138.9 million.[25] Additional capital on hand for institutional investors could lead to even larger transactions throughout 2020.

Building upon past successes, the hotel markets in New York, Oahu and San Francisco continue to dominate the lodging space by forecasting above-average occupancy and average rates. By mid-2018, fewer lodging markets recorded average daily rates higher than that of the national average as compared to the prior year. Standout markets for growth include Denver and Nashville.[26]

From a U.S. regional perspective, per the RCA Capital Trends Hotel Report, the Southeast and West were the clear leaders in sales volume transacted at $8.0 billion and $7.3 billion, respectively.[27]

By market, Manhattan led the U.S. with $3.3 billion in sales volume, followed by Miami with $1.5 billion, San Francisco with $1.2 billion, and Palm Beach and Phoenix at approximately $1.0 billion each. This is a bit of a shake-up, as in 2018 the leading markets by transacted volume were Manhattan with $3.5 billion, San Francisco with $2.2 billion, Hawaii with $1.9 billion, Boston with $1.6 billion, and Phoenix with $1.6 billion.[28]

According to the 3Q 2019 Korpacz/PwC Investor Survey for the Full-Service Lodging Segment, the average discount and overall cap rates decreased 30 bps from the prior year to 9.90% and 7.43%, respectively. This represents a moderation from prior years when the rates decreased at a higher rate. The survey notes that the most respondents believe the market is moving toward the "latter part of the real estate cycle," resulting in more conservative cash flow projections.[29] According to the RCA Trend Tracker, cap rates for full and limited-service hotels remained relatively stagnant compared to 3Q 2018, as shown in Exhibit 4-S.

Data from the Real Capital Analytics Trends &

Trades Report show cross-border foreign capital investment in the hotel sector increased from $6.5 billion to $10.3 billion YOY, as shown in Exhibit 4-T.[30] Cross-border investors completed 11.7% of all hotel acquisitions. Cross-border transactions had an average of $283K per key, which was down 29.9% YOY. The average cap rate on cross-border transactions was 8.4%.[31]

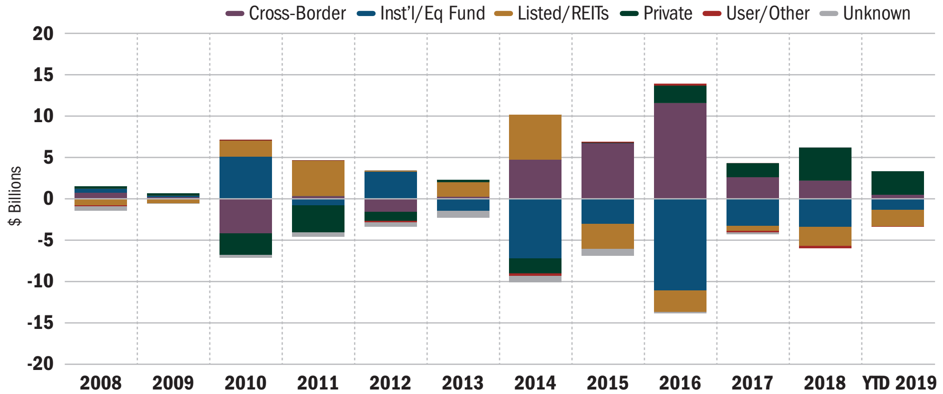
FUNDAMENTALS

Occupancy was strong yet again in the lodging industry at 66.1%, well above the long-run average of 62.5%, although early signs point to moderating growth in the upcoming year.[32] Similarly, while ADR remains strong, YOY increases are forecast to be below inflation.[33] In the latest Cushman and Wakefield U.S. Lodging Industry Overview, Smith Travel observed significantly fewer markets with positive occupancy growth in 2019 compared to the prior year. For those markets that experienced positive overall revenue growth, the revenue per available room (RevPAR) benchmarking achieved an average of 3.4% growth.[34] The chain scale segment to have the highest growth in occupancy was economy with 1.4%, while luxury, upper upscale, upscale, upper midscale and midscale declined. All six chain scale segments had positive ADR growth, ranging from 20 to 160 bps, with the upper upscale chain scale increasing the most — 1.6% YOY. Per CBRE's Q3 2019 U.S. Hotel Report, occupancy had a relatively stagnant moving average YOY, while ADR's growth was positive, yet declined slightly each quarter, as shown in Exhibit 4-U.[35] Overall, supply and demand increased in parity YOY, except for the economy chain scale, which decreased slightly in supply and increased slightly in demand.[36]

Nineteen of the top 27 markets are projected to report positive RevPAR growth for the year. While most markets are projected in the 1.0% to 5.0% range, Phoenix and San Francisco are projected to grow in the 5.0% to 7.0% range. The markets with negative RevPAR growth include Seattle, Dallas, Houston, Minneapolis-St. Paul, Miami-Hialeah, New York, Orlando and Washington, D.C.[37]

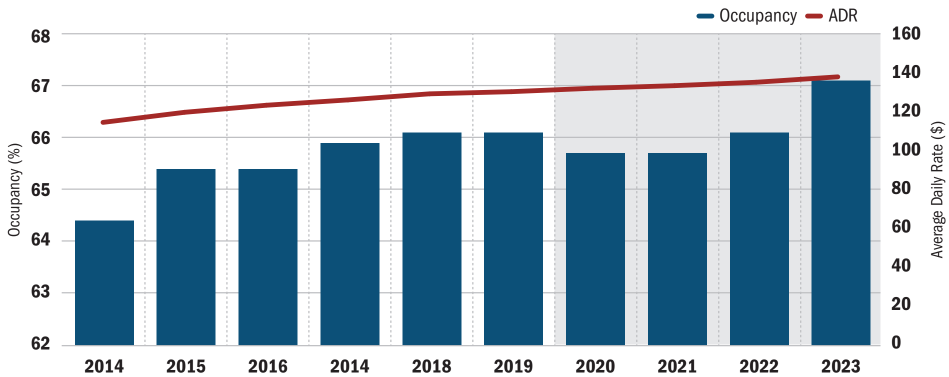
According to Cushman & Wakefield, as of June 2019, the U.S. reported 202,000 new hotel rooms under construction. Upscale and upper midscale hotel rooms have comprised over

EXHIBIT 4-T. HOTEL NET ACQUISTIONS BY INVESTOR TYPE



Source RCA, 3Q 2019.

EXHIBIT 4-U. HOTEL ADR AND OCCUPANCY

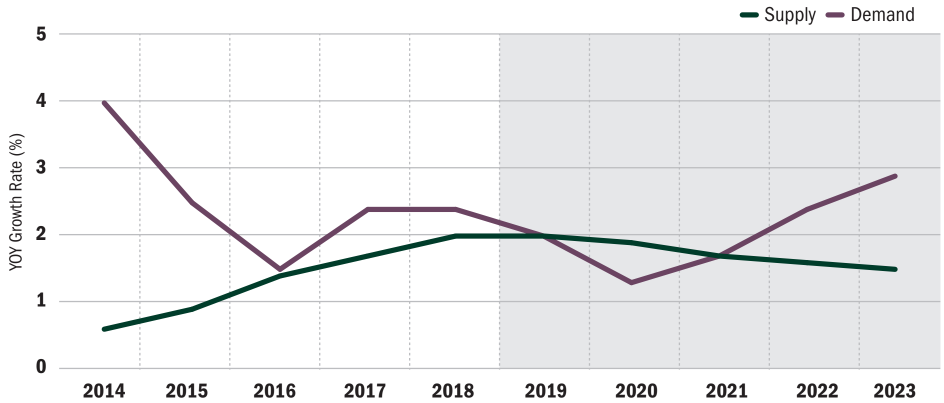


Note Shaded area reflects forecast rates.
Source CBRE Hotels' Americas Research, STR, 3Q 2019.

70% of new room construction, continuing a trend over the past few years. Profits have been at record highs in the industry, as well, to coincide with the record revenue growth. However, with expenses slated to increase and occupancy projected to decrease due to a large increase in supply, profitability is forecast to decline over the next few years.[38]

In general, the outlook appears to be patchy for hotels, despite stable fundamentals, increasing transaction activity and stabilizing cap rates. Strength and stability in profitability forecasts should provide a financial foundation despite slowing growth in occupancy and ADR.

EXHIBIT 4-V. HOTEL SUPPLY VS. DEMAND GROWTH



Note Shaded area reflects forecast rates.
Source CBRE Hotels' Americas Research, STR, 3Q 2019.

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SOURCES

[1]CRE fundamentals data are provided by CoStar Market Analytics (www.costar.com), 3Q 2019. The information is provided "As Is" and without any representations, warrantees or guarantees.
[2]RCA, 3Q 2019.
[3]CRE fundamentals data are provided by CoStar Market Analytics (www.costar.com), 3Q 2019. The information is provided "As Is" and without any representations, warrantees or guarantees.
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CHAPTER 5: OUTLOOK

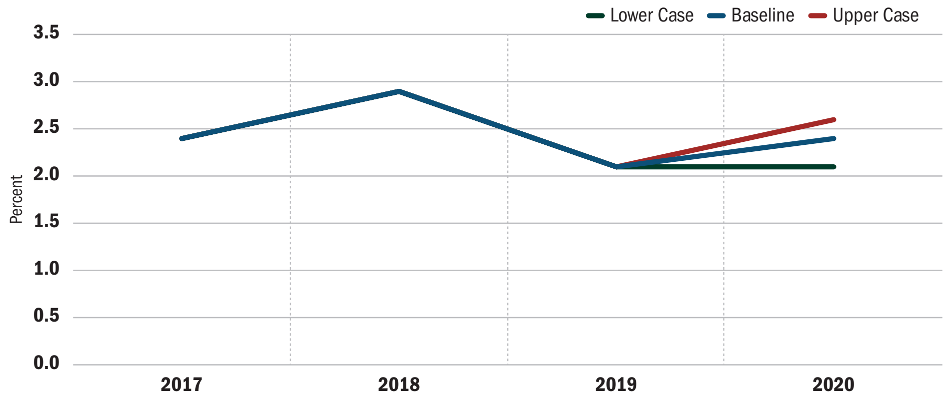
OUTLOOK

ECONOMY

MACROECONOMIC OUTLOOK

The U.S. economy appears set to continue to grow in 2020. Global economic conditions are showing some signs of improvement, while the U.S.-China Phase One trade deal has reduced policy uncertainty. Monetary policy will continue to support growth in 2020. The FOMC will likely maintain the federal funds rate at the current range of 1.5% to 1.75% to sustain the U.S. economy given the risks that might arise from slower-than-anticipated global economic growth.

EXHIBIT 5-A. 2020 GDP GROWTH SCENARIOS



Source NATIONAL ASSOCIATION OF REALTORS®, November 2019.

In December 2019, the NATIONAL ASSOCIATION OF REALTORS® conducted a survey of housing and CRE economists. Some 69% of respondents expect no increase in the federal funds rate in 2020.[1]

The results from this survey also suggested that the economy is likely to avoid a recession in 2020. A strong majority (71%) of housing and CRE economists who participated in survey agreed that a recession is not likely in 2020. This survey was conducted prior to the announcement of the Phase One trade deal so a higher percentage might believe this now.[2] The Federal Reserve Board estimates that the risk of a recession declined to 10% in November 2019 from 30% in December 2018.[3]

With these developments, the U.S. GDP is expected to expand by 2.4% (Exhibit 5-A). If a more comprehensive U.S.-China trade package takes shape and the global trade environment improves, investment and exports could pick up, resulting in a higher GDP growth projection of 2.6%. However, growth could fall to 2.2% if trade negotiations stall or worsen (e.g., Phase Two talks are not pursued and/or fail and anti-trade rhetoric resumes).

All of our economic outlooks are found in Exhibits 5-B and 5-C.

Under the baseline scenario of 2.4% GDP growth, nonfarm payroll employment is expected to grow by 1.2%, with 1.9 million new nonfarm jobs created throughout the year. The unemployment rate will fall slightly from 3.7% in 2019 to 3.6% in 2020. With modest economic expansion, inflation will remain subdued at 1.9% in 2020.

With the 30-year fixed contract rate likely to stay below 4% and a projected net household formation of about 1.2 million, about 1.36 million new housing units are expected to be constructed (942,000 for single-family and 420,000 for multifamily units), an increase of 107,000 units from 2019.[4] This is an attainable level given that housing starts reached an annualized level of 1.36 million in November 2019.

RESIDENTIAL MARKET OUTLOOK

In November 2019, housing starts rose to 1.36 million on a seasonally adjusted annual basis. This level is expected to be sustained in 2020 given the pickup in homebuilder confidence. The National Association of Homebuilders reported that homebuilder confidence in October 2019 rose to a 20-month high, crediting the rising confidence to low mortgage rates, solid job growth and the reduction in new home inventory.[5] Home construction is still challenged by zoning regulations, a lack of construction labor, and the volatility of the cost of construction materials. These challenges,

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however, are being addressed, albeit modestly, through innovations in housing design (e.g., micro-apartments, manufactured housing) and some easing of zoning regulations by local and state governments such as in California, which has allowed the construction of accessory dwelling units, and in Oregon and Minneapolis, where duplexes and triplexes can be built in single-family zoned areas.

If housing starts are sustained at a level of 1.36 million in 2020, existing and new-home sales are likely to surpass 6.3 million (5.56 million of existing home sales and 750,000 of 1-unit new home sales). With housing starts a little above the household formation rate of 1.2 million but still short of the 1.6 million needed to meet both household formation and replacement, housing prices are expected to increase at a modest pace. The median existing-homes sales price is projected to rise by 3.6% to $280,200 and the median new-homes sales price is expected to increase by less than 1% to $314,200.

CAPITAL MARKETS

FINANCIAL MARKETS

The outlook for the stock market in 2020 is positive. Trade tensions seem to be easing; the U.S. and China signed Phase One of their trade deal and the U.S. Senate passed the United States-Mexico-Canada Agreement (USMCA) in January 2020.[6] Trade was one of the top concerns for investors and corporations in 2019, so the signing of these deals should bring stability and lead to financial market growth in the near term. In Europe, Bloomberg analysts suggest that Brexit might make EU economic conditions stronger. Meanwhile, Greece seems to have turned a corner with its economic hardships. These two trends should bring more economic stability to the region.[7] The prospect of higher economic stability and growth in Europe has investors excited to see how 2020 plays out.

According to FRED, the Chicago Board Options Exchange Volatility Index (VIX) shows stock market volatility during the first week of 2020 around 13.5%, compared to an average of about 15% in 2019.[8] The VIX suggests that the market is taking the opening days of 2020 optimistically and, for the near term at least, has a positive outlook on the economy.

EXHIBIT 5-B. U.S. ECONOMIC OUTLOOK (BASELINE)

	ACTUAL		FORECAST	
	2017	**2018**	**2019**	**2020**
Economic Indicators (Annual Growth Rate*)				
Real GDP	2.4	2.9	2.1	2.4
Nonfarm Payroll Employment	1.6	1.7	1.3	1.2
Annual Change in Non-farm Employment ('000s)	2,272	2,450	2,256	1,854
Consumer Prices	2.1	2.4	2.0	1.9
Percent				
Unemployment	4.4	3.9	3.7	3.6
Fed Funds Rate	1.0	1.8	2.3	1.7
30-Year Fixed Rate	4.0	4.5	4.0	3.8
Housing Indicators (Thousands)				
Existing Home Sales**	5510	5340	5362	5560
New Single-Family Sales	613	617	678	750
Housing Starts	1209	1250	1255	1362
Single-Family Units	855	876	870	942
Multifamily Units	354	374	385	420
Median Home Prices				
Thousands of Dollars				
Existing Home Prices	247.2	259.3	270.4	280.2
New Home Prices	323.1	326.4	313.5	314.2
Percent Change — One Year Ago				
Existing Home Prices	5.7	4.9	4.3	3.6
New Home Prices	5.0	1.0	-4.0	0.2

*Quarterly figures are seasonally adjusted annual rates.
**Existing home sales of single-family homes and condo/co-ops.
Source NATIONAL ASSOCIATION OF REALTORS®, November 2019.

RERC RESEARCH 10-YEAR TREASURY FORECAST

RERC Research forecasts the 10-year Treasury under three different scenarios.[9] Historical and forecast rates are found in Exhibit 5-D. In 3Q 2019, the 10-year Treasury rate was 1.8%, continuing a downward trend in rates since November 2018. Since third quarter's end, however, the rally in the bond market has subsided; the 10-year Treasury rate increased about 25 bps in the six weeks ending on November 8.

The base case scenario assumes the most probable economic situation over the next two years, with Treasury rates increasing in 2020 and 2021. This scenario assumes that unemployment remains at record lows, inflation remains near the target rate, and the Fed holds off on any rate changes over the next year. The base case scenario sees the 10-year Treasury rate ending 2020 around 2.0% and increasing to 2.4% by 3Q 2021.

The higher case scenario reflects stronger economic growth but has a lower probability of occurrence compared to the base case. The higher case scenario assumes that U.S.-China trade talks progress, inflation finally begins to pick up, and the Fed starts increasing short-term interest rates again. This scenario predicts the 10-year Treasury will increase to 2.9% by the end of 2020 and reach 3.2% in 3Q 2021.

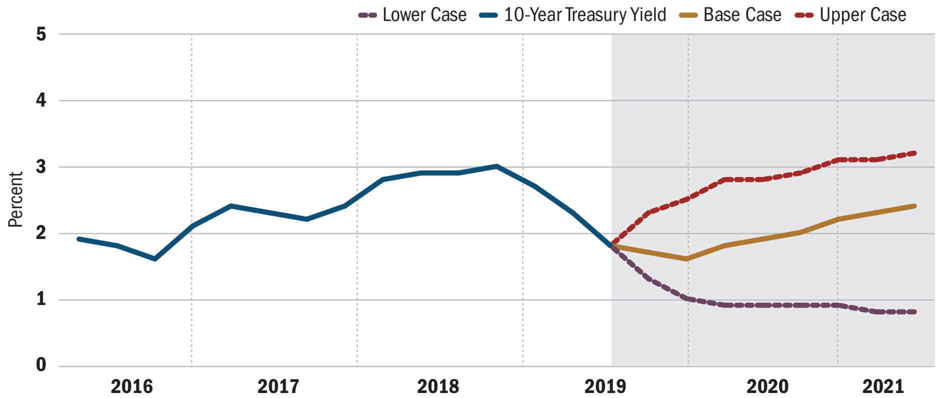
The lower case scenario reflects a more pessimistic economic situation and is also less likely than the base case scenario. This scenario assumes that the global economy slows, investors return to the safety of the U.S. 10-year Treasury amid ongoing geopolitical strife, and the Fed continues on its track of short-term interest rate declines. This scenario predicts the 10-year Treasury rate will drop to 0.9% by the end of 2020 and continue to decline to reach 0.8% by 3Q 2021.

EXHIBIT 5-C. GDP GROWTH OUTLOOK (BASELINE)

	ACTUAL		FORECAST	
	2017	2018	2019	2020
Real GDP	2.4	2.9	2.1	2.4
Personal Consumption	2.6	3.0	2.8	2.9
Private Investment	4.4	5.1	-0.6	2.1
Nonresidential	4.4	6.4	-0.5	1.4
Residential	3.5	-1.5	-1.0	4.8
Exports	3.5	3.0	-0.2	0.6
Imports	4.7	4.4	0.1	2.2
Government	0.7	1.7	2.9	2.1
Federal	0.8	2.9	4.2	3.0
State and Local	0.6	1.0	2.1	1.5

Note Figures represent annual growth rate
Source NATIONAL ASSOCIATION OF REALTORS®, November 2019.

EXHIBIT 5-D. RERC RESEARCH'S 10-YEAR TREASURY FORECAST



Note Data based on quarterly average. Shaded area indicates forecast.
Source Federal Reserve, compiled and forecast by RERC Research, 3Q 2019.

CRE DEBT MARKET OUTLOOK

Based on 3Q 2019 survey data from RERC Research, the outlook for debt capital availability is strong. Availability of debt capital remains strong, and we expect availability to be high in 2020 as the Fed likely refrains from any rate increases. RERC Research's data indicate that debt discipline (underwriting standards) is slightly above the five-year average. Broadly speaking, underwriters have maintained their level of discipline over the past few years, even as debt capital availability remains high. In general, we expect strong fundamentals and historically low interest rates will support the CRE lending environment in 2020.

Debt originations volumes are likely to increase in 2020, albeit at a more modest pace. According to MBA, investor-driven lenders like mortgage REITs and debt funds are expected to drive originations in 2020.[10] Fannie Mae and Freddie Mac are likely to be the next largest capital sources for originations growth. With CMBS delinquency rates at post-financial-crisis lows for 3Q 2019, CMBS is likely to provide a growth source of originations in 2020 as well.[11]

CRE EQUITY MARKET OUTLOOK

The outlook for foreign investment into U.S. CRE is dipping. Cross-border acquisitions were 18.5% of the total U.S. transaction volume in 3Q 2018, but they pulled back significantly to 6.8% in 3Q 2019, based on data from RCA. However, with the 10-year Treasury rate hovering near historical lows at the end of January 2020, domestic investors are likely to be drawn to the more favorable risk-adjusted returns of CRE and demand for the asset class is expected to stay strong.

According to RERC Research, solid property fundamentals are underlying strong valuations, and these valuations are supporting high prices. Favorable economic conditions, including historically low unemployment, are expected to allow further room for rent growth in many property types. Though capital is readily available, high prices and lack of quality deals will likely result in positive, but moderating, overall CRE volume growth in 2020.

Deloitte's 2020 Commercial Real Estate Outlook report states that 65% of respondents believe rental growth will continue to grow and 73% of respondents see transaction activities increasing in the next 18 months.[12]

The expected rental growth and transaction activities could bolster CRE performance over the next year. However, with prices at all-time highs in most property types, CRE returns are expected to be driven primarily by income instead of capital appreciation.[13] Steady cash flow growth is still available in most markets, but at a slower rate than in previous years. Still rising construction costs, capital expenditures and tenant improvements (Tis) remain a concern for investors.

RERC RESEARCH TOTAL RETURN FORECASTS

RERC Research forecasts total returns for the NPI-ODCE as well as the income components and capital components of total returns (see Exhibit 5-E). All of RERC Research's forecasts incorporate data from the NPI-ODCE and are for unleveraged, institutional-grade properties. Although we provide individual forecasts for each of these components, it is important to note that RERC Research's forecast for NPI-ODCE returns assumes interdependency among these (and other) metrics. Therefore, any changes in one metric would affect the other forecasts.

In addition, all the returns are projected out in three possible scenarios — base case, lower case and higher case. The base case is the most probable scenario. The higher case scenario assumes stronger fundamentals and capital appreciation, but is less likely to occur than the base case scenario. The lower case scenario assumes weaker fundamentals and capital appreciation and is also less likely to occur than the base case scenario.

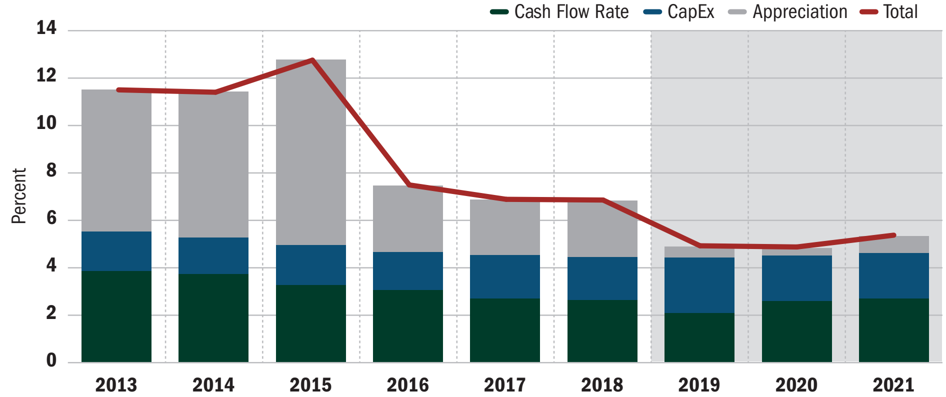
Per NCREIF, the free cash flow yield (FCFY) is the quarterly net operating income (NOI) minus ordinary or routine capital expenses, divided by the beginning market value in the quarter. It focuses on quarterly net cash flow from operations, which accounts for ordinary or routine capital expenditures. This measure represents additional income beyond rent that investors can expect to receive from investing in the properties at a particular time and is comparable to a stock dividend yield after capital expenditures have been paid. Our base case scenario calls for FCFY to be 2.60% at the end of 2020 and increase to 2.70% in 2021.

NCREIF implied cap rates can be interpreted as the current quarter NOI divided by the current quarter-ending market value. This result is then multiplied by 4 to get an annual rate. In 4Q 2018, the national NCREIF implied cap rate fell to a historic low of 4.21%. RERC Research's base case scenario predicts the NCREIF implied cap rate will be 4.44% at the end of 2020 and to 4.55% in 2021.

CRE value can be described in terms of a price change, which combines capital expenditures and capital returns, or capital appreciation only. RERC Research's capital appreciation forecast provides an alternative way to examine prices, because a significant portion of the run-up in CRE prices is due to capital improvement projects (including leasing activity). Capital returns have drastically declined since 2015. RERC Research forecasts that appreciation will be 0.33% at the end of 2020 before increasing to 0.73% in 2021.

Although national NPI-ODCE total returns

EXHIBIT 5-E. RERC RESEARCH TOTAL RETURN FORECAST (BASE CASE SCENARIO)



The total return forecast is RERC Research's proprietary model based on RERC Research data and data from NPI-ODCE and is for unleveraged, institutional-grade properties. Total returns are derived from an income component and a capital appreciation/depreciation component. Shaded area reflects RERC Research's outlook for the base case scenario for 2020, 2021 and 2022.
Sources RERC Research, NCREIF, 3Q 2019.

have been strong in recent years, it is important to note that annual returns continue to decrease from their 2015 highs. After a sharp decrease from 2015 to 2016, declines for the NPI-ODCE total return have been less dramatic. RERC Research's base case scenario predicts the NPI-ODCE annual total return will be 4.83% at the end of 2020. In 2021, total returns are expected to increase to 5.33% by the end of the year. Income returns will continue to drive the majority of total returns.

CRE appreciation is expected to decline over the next year before picking up steam at the end of 2020 as both income returns and capital appreciation begin to grow. By the end of 2021, income returns are expected to increase to levels not seen since 2016, supported by strong growth in cash flow. For RERC Research's total return forecasts by property type, please refer to Exhibits 5-F through 5-I.

PROPERTY TYPES

OFFICE MARKET OUTLOOK

The demand and supply imbalance in the office property market should continue to improve as unused space is absorbed by demand for office space, with 1.8 million new jobs expected. Vacancy rates will continue to fall, although slowly, due to low demand for old vacant office properties.

According to CoStar, the vacancy rate is expected to fall slightly to about 9.7% and office rent will likely grow about 2%, about the same as in 2019, but there is an upside potential with the recent improvement of trade relations between the U.S. and China after they signed the Phase One trade deal. With steady rent growth, CoStar projects cap rates to average about 6.7% in 2020.

Class A or B office buildings will likely be more in demand than older office stock, given the preference for improved energy efficiency, spaces that promote a healthy work-life balance (e.g., exercise areas, lounging areas), and flexible offices with state-of-the-art technology and fully furnished spaces. Driving the demand for these office features is the growth of technology jobs and 24/7 online connectivity. The BLS projects computer and information technology occupations to be the fastest-growing industry from 2018 to 2028, adding about 546,200 new jobs in work areas such as cloud computing, collecting and storing big data, and information security.[14]

Metropolitan areas that are able to create jobs and that provide affordable housing and office rent will likely have an advantage in attracting and retaining new businesses and workers. These metros include Dallas; Atlanta; the suburbs of Virginia and Maryland around Washington, D.C.; Northern New Jersey; Phoenix; Raleigh-Durham, North Carolina; Nashville, Tennessee; Columbus, Ohio; and Chicago. These areas have affordable office rent and well-known universities and have a greater potential for office space development compared to other major metropolitan areas, such as New York, Boston, Washington, D.C., Los Angeles and San Francisco, where office rents are pricier.

The invigoration of space research and the increasing commercialization of the space industry in rocket development, space equipment manufacturing, remote sensing and planetary prospecting, and crew transportation to and from Earth and the International Space Station is an emerging development.[15] This will have an increasing impact on land and office development in suburban areas that are homes to NASA's space centers such as Cape Canaveral, Florida (Kennedy Space Center); Huntsville, Alabama (Marshall Space Flight Center); Cleveland, Ohio (Glenn Research Center); New Mexico (Spaceport America); and the suburbs of Virginia and Maryland (NASA headquarters).

INDUSTRIAL MARKET OUTLOOK

Driven by the robust growth of e-commerce retail sales, the industrial market should continue to have the strongest underlying market fundamentals among the property types. E-commerce is likely to keep growing as younger generations join the workforce and increase the consumer base.

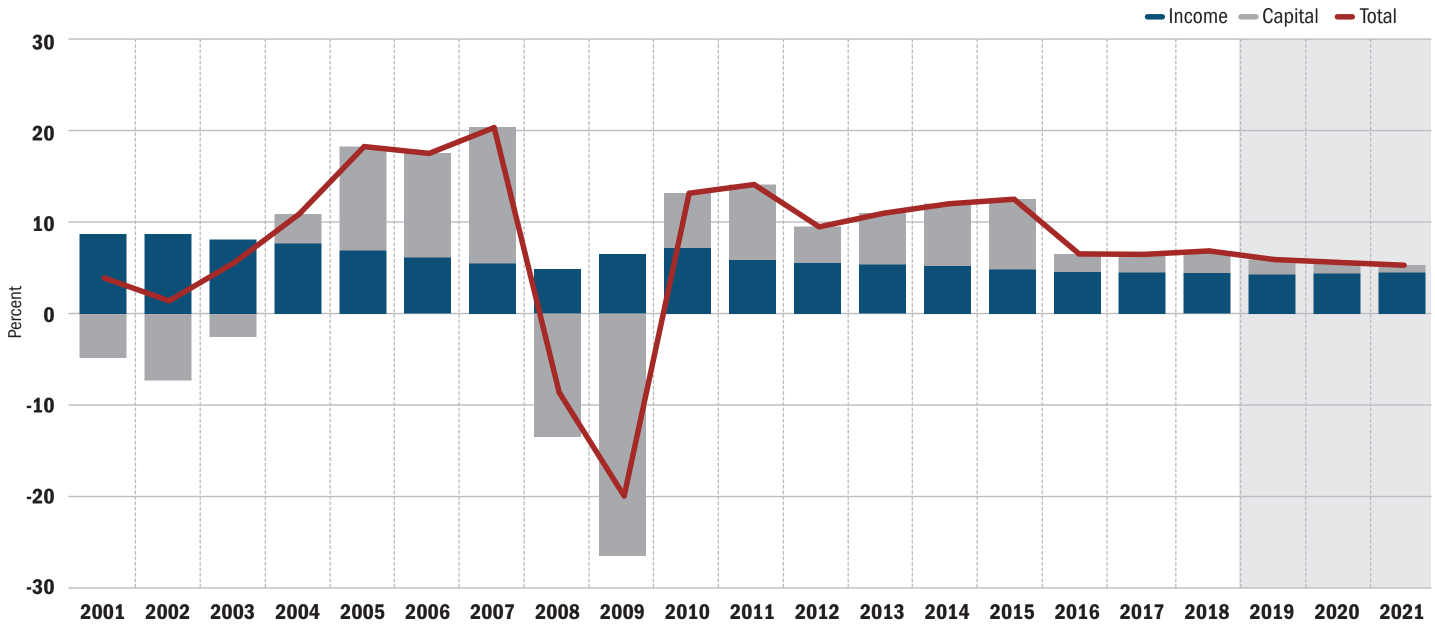
According to CoStar, vacancy rates are expected to increase from 3.5% in 2019 to 4% in 2020, causing rent growth to fall from 5.1% in 2019 to 3.7% in 2020, but vacancy rates could fall further if the trade environment further improves as subsequent phases of the Phase One trade deal take shape during the year.

Manufacturing and retail firms will seek to minimize the total cost of warehouse space and transportation, especially for last-mile transportation, to reduce delivery time. Last-mile transportation — delivering orders right to the doorstep of customers — is expensive, so firms may accept higher warehouse rents if that means spending less on last-mile transportation. The demand for warehouse space near urbanized centers will still likely increase as warehouse occupiers seek to satisfy consumer demand for faster delivery time, with one-day delivery as the gold standard.

Not many companies have the financial wherewithal of Amazon or Walmart, among others, to set up the chain of logistics from warehousing, to distribution and last-mile delivery, so retailers will continue to turn to third-party logistics (3PL) providers and co-warehousing facilities for storage and delivery services. Co-warehousing facilities also provide short-term space during peak times for inventory overflows even for the big companies that have their own distribution networks.

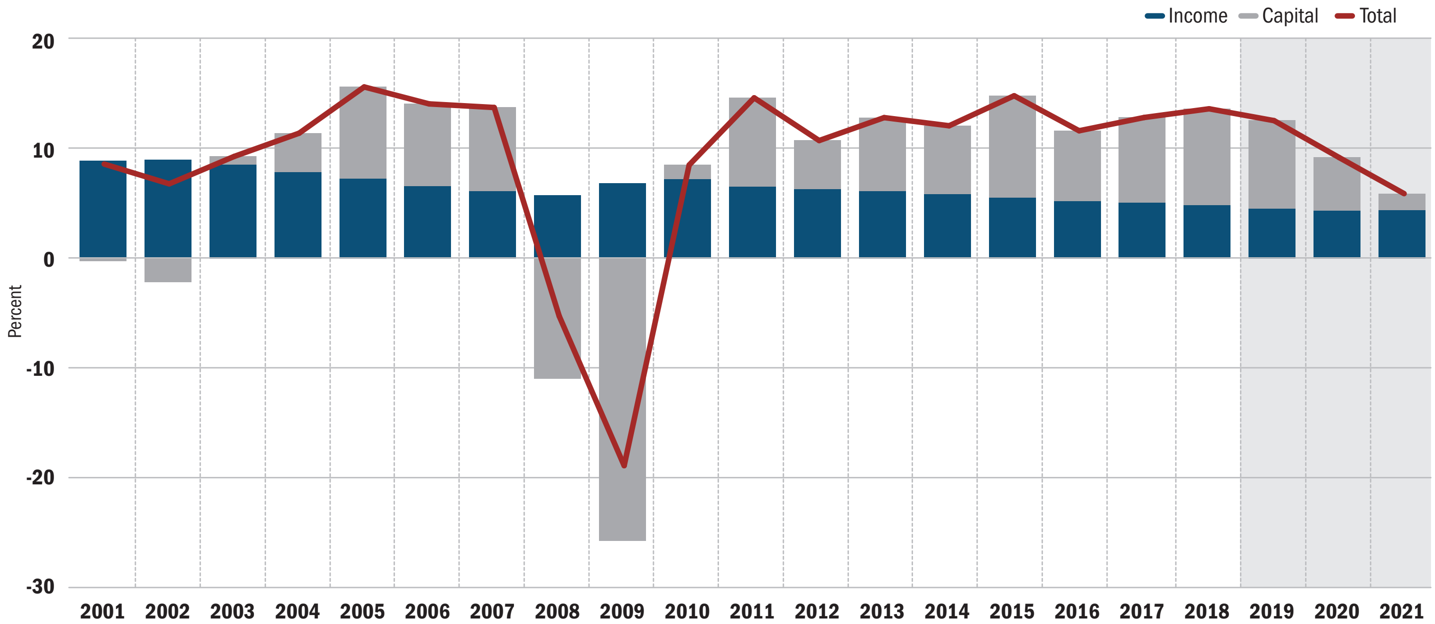
The demand for industrial properties is driven by e-commerce sales, which in turn depends on a growing consumer population. Metro

EXHIBIT 5-F. RERC RESEARCH TOTAL RETURN FORECAST — OFFICE (BASE CASE SCENARIO)



Sources RERC Research, NPI-ODCE, 3Q 2019.

EXHIBIT 5-G. RERC RESEARCH TOTAL RETURN FORECAST — INDUSTRIAL (BASE CASE SCENARIO)



Sources RERC Research, NPI-ODCE, 3Q 2019.

areas with growing population will likely be the most attractive for development of industrial warehouse facilities, such as Dallas; Houston; Atlanta; Las Vegas; Minneapolis; Columbus, Ohio; Tampa, Florida; Charlotte, North Carolina; and Nashville, Tennessee.

RETAIL MARKET OUTLOOK

A prominent trend in retail real estate, which could also be the key to continued success in the market, is taking action to adjust a retailer's footprint to match today's omnichannel marketplace, according to Chain Store Age.[16] For many department stores or big-box concepts, this could mean introducing smaller-format stores that either carry less inventory in general or carry inventory considered specifically relevant for the market, re-branding to fit the desire for experiential shopping, or shuttering underperforming locations altogether, according to Retail Dive's article 10 retail trends to watch in 2020. Meanwhile, for many e-retailers, this could mean stepping into the brick-and-mortar space by opening a built-out flagship location in one of the prime markets in the country or continuing to grow their portfolio by obtaining more storefront space across urban and suburban areas. The industry is bracing itself for the next large disruption in the market — perhaps additional store closures or bankruptcy announcements, or maybe the emergence of a new technology that will shift how Gen Z and their fellow consumers prefer to shop, or even an economic recession. In the meantime, retail property owners will need to continue to adapt their properties, and retailers will re-examine their business models to strategically participate in the omnichannel market at their full potential and realize growth in the year ahead.

APARTMENT MARKET OUTLOOK

The outlook for the apartment market appears to be positive in the short term, with continued investor appetite in this sector and increasing property values.

According to 3Q 2019 U.S. Census Bureau data, the homeownership rate, which had been in sharp decline throughout the current real estate cycle and a major driver behind the strength of the apartment market, bottomed out at just under 63% in 2016 and has since increased to 64.8% in 3Q 2019. This is still well below the most recent high of over 69% in 2004, but it shows a notable shift from a nearly 15-year downward trend.

Given trends in fundamentals, the apartment sector may be moderating after a long and sustained period of growth. However, relative to the other major property types, apartments still appear to be an attractive choice for investors, particularly given a potential economic slowdown on the horizon.

HOTEL MARKET OUTLOOK

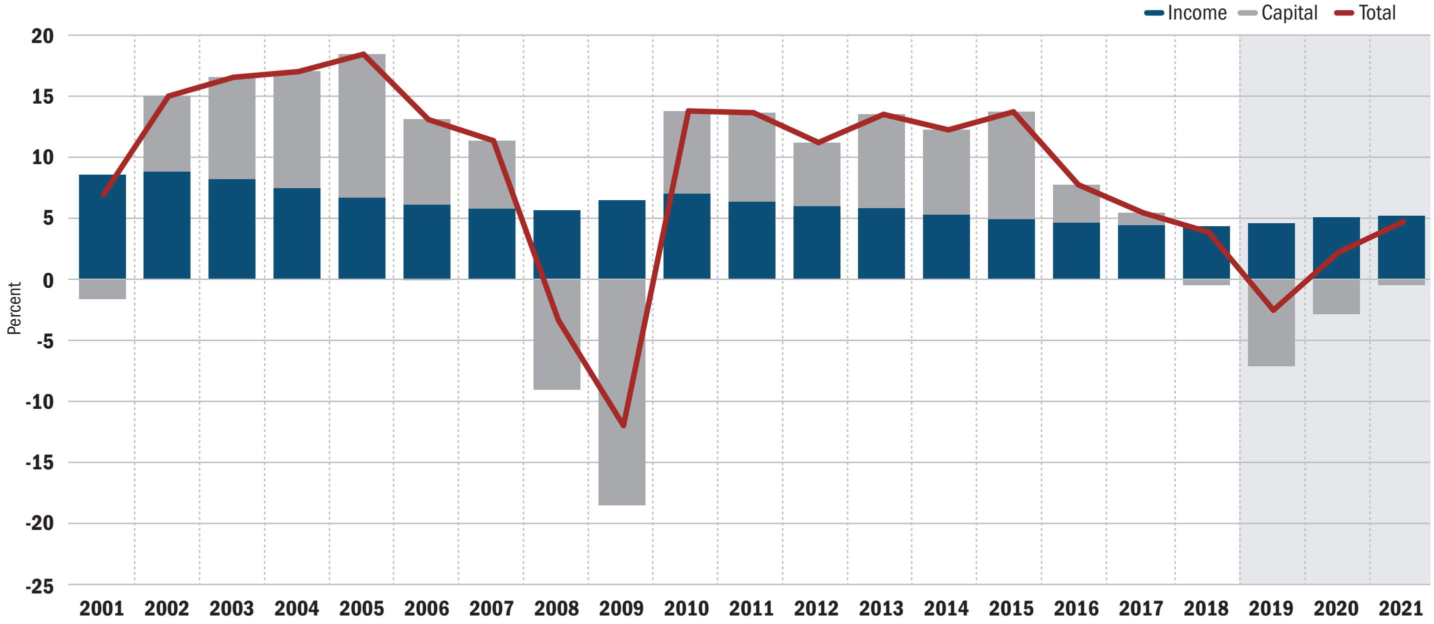
CBRE forecasts annual U.S. lodging ADR at $131.08 for 2019, which is 90 bps higher than the 2018 average of $129.97, while RevPAR had a projected increase of 70 cents from $85.95 to $86.65.[17] CBRE projects that over the next four quarters, occupancy will decrease by 40 bps to 65.8%, ADR growth will decrease by 30 bps to 0.9%, RevPAR growth will fall 100 bps to 0.3%, and demand growth will decrease 70 bps to 1.4%.[18]

CBRE's December 2019-February 2020 Hotel Horizons report predicts a RevPAR increase of 0.8% for the year. Through 2022, CBRE projects ADR growth of less than 1.5% annually. Alongside low ADR growth projections, RevPAR growth is forecast below 1.0% until 2021. Due to this, it will likely be difficult to achieve consistent profitability in the lodging industry.[19]

From a supply and demand perspective, Cushman & Wakefield's Lodging Industry Overview expects a decrease in new construction caused by the stabilization in demand due to slowing revenue growth and an expected increase in construction costs.[20]

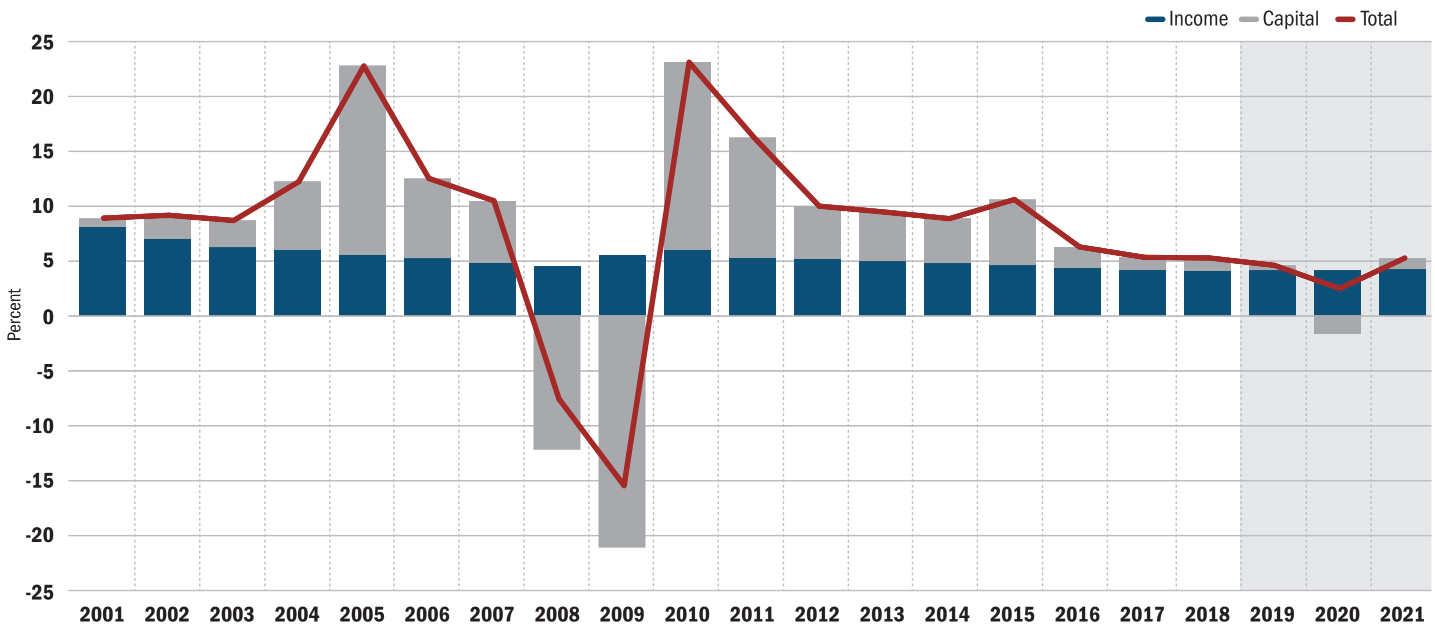
After nearly a decade of straight growth, it should be of no surprise that investors and owners are practicing caution with regard to the lodging market going forward. However, while it is likely wise for investors and owners to be skeptical of the market's ability to continue its historic run, there have been few true causes for concerns or indications of a substantial downswing. It is expected that hotel investors will be monitoring GDP growth and consumer confidence, while still cautiously pursuing acquisition opportunities and taking advantage of market fundamentals and pricing to the extent that buy-sell assumptions converge.

EXHIBIT 5-H. RERC RESEARCH TOTAL RETURN FORECAST — RETAIL (BASE CASE SCENARIO)



Sources RERC Research, NPI-ODCE, 3Q 2019.

EXHIBIT 5-I RERC RESEARCH TOTAL RETURN FORECAST — APARTMENT (BASE CASE SCENARIO)



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[9]Note: Predicting rates is a difficult endeavor under any circumstance. The above scenarios are RERC Research’s best estimates of inflection points for expected rates. The RERC Research 10-year Treasury Forecast produces similar results to other third-party consensus forecasts and models, including analyses from Moody’s, Kiplinger and The Wall Street Journal.
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[18]Ibid.
[19]Ibid.
[20]Cushman & Wakefield, “Capital Markets – Hospitality,” Mid-Year 2019.

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LEADERSHIP

STEVEN J. POWEL
Executive Chairman, SitusAMC
713.328.4403
StevePowel@situsamc.com

MICHAEL FRANCO
CEO, SitusAMC
646.518.8159
MichaelFranco@situsamc.com

KENNETH P. RIGGS, JR.
CFA, CRE, MAI, FRICS, CCIM
Vice Chairman, RERC
312.587.1900
riggs@rerc.com

BRIAN T. VELKY
CFA, CRE
Managing Director, RERC
515.309.7601
bvelky@rerc.com

RERC
319-352-1500
www.rerc.com

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Sources Builder Online 2018, NAREIT (9/18), P&I (May-December 2018), PERE Fifty (2018), Fortune 500 (2018), NREI (November 2017, April-November 2018), Commercial Mortgage Alert (6/18), NREI (4/18-11/18), ENR (5/18)

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CONTACTS

Robert O'Brien
Partner
Global Real Estate Leader
Deloitte & Touche LLP
312.486.2717
robrien@deloitte.com

Jim Berry
Partner
U.S. Real Estate Leader
Deloitte & Touche LLP
214.840.7360
jiberry@deloitte.com

Matt Kimmel
Principal
Real Estate
Deloitte Transactions and Business Analytics LLP
312.486.3327
mkimmel@deloitte.com

John D'Angelo
Managing Director
U.S. Real Estate Consulting Leader
Deloitte Consulting LLP
15.783.7570
johndangelo@deloitte.com

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CONTACTS

Lawrence Yun, PhD
Sr. Vice President, Chief Economist
lyun@realtors.org

Scholastica (Gay) Cororaton
Senior Economist and Director of
Housing & Commercial Research
scororaton@nar.realtor

NATIONAL ASSOCIATION
OF REALTORS®
Headquarters
430 North Michigan Ave.
Chicago, IL 60611

DC Office
500 New Jersey Ave., NW
Washington, DC 20001

800-874-6500
www.nar.realtor

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