



Emerging Trends in Real Estate®

United States and Canada 2018



Emerging Trends in Real Estate® 2018

A publication from:



Emerging Trends in Real Estate® 2018

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Notice to Readers

Emerging Trends in Real Estate® is a trends and forecast publication now in its 39th edition, and is one of the most highly regarded and widely read forecast reports in the real estate industry. *Emerging Trends in Real Estate*® 2018, undertaken jointly by PwC and the Urban Land Institute, provides an outlook on real estate investment and development trends, real estate finance and capital markets, property sectors, metropolitan areas, and other real estate issues throughout the United States and Canada.

Emerging Trends in Real Estate® 2018 reflects the views of individuals who completed surveys or were interviewed as a part of the research process for this report. The views expressed herein, including all comments appearing in quotes, are obtained exclusively from these surveys and interviews and do not express the opinions of either PwC or ULI. Interviewees and survey participants represent a wide range of industry experts, including investors, fund managers, developers, property companies, lenders, brokers, advisers, and consultants. ULI and PwC researchers personally interviewed more than 800 individuals and survey responses were received from more than 1,600 individuals, whose company affiliations are broken down below.

Private property owner or developer	34.0%
Real estate advisory or service firm	26.8%
Investment manager/adviser	6.8%
Homebuilder or residential land developer	8.2%
Bank lender	5.4%
Equity REIT or publicly listed real estate property company	4.3%
Institutional equity investor	4.1%
Private REIT or nontraded real estate property company	2.3%
Institutional lender	1.1%
Real estate debt investor	0.6%
Securitized lender	0.4%
Mortgage REIT	0.2%
Other entity	5.8%

Throughout the publication, the views of interviewees and/or survey respondents have been presented as direct quotations from the participant without attribution to any particular participant. A list of the interview participants in this year's study who chose to be identified appears at the end of this report, but it should be noted that all interviewees are given the option to remain anonymous regarding their participation. In several cases, quotes contained herein were obtained from interviewees who are not listed. Readers are cautioned not to attempt to attribute any quote to a specific individual or company.

To all who helped, the Urban Land Institute and PwC extend sincere thanks for sharing valuable time and expertise. Without the involvement of these many individuals, this report would not have been possible.



Navigating at Altitude

“We are in a long cycle, not in boom/bust. The key to the next few years is to expand horizons, market by market, property type by property type.”

All frequent flyers know that the most critical times in air travel are takeoff and landing. Real estate has been soaring as of late, and thankfully so. This year’s discussions in *Emerging Trends in Real Estate®* focus on managing the descent safely, keeping in mind the lessons of past bumpy touchdowns.

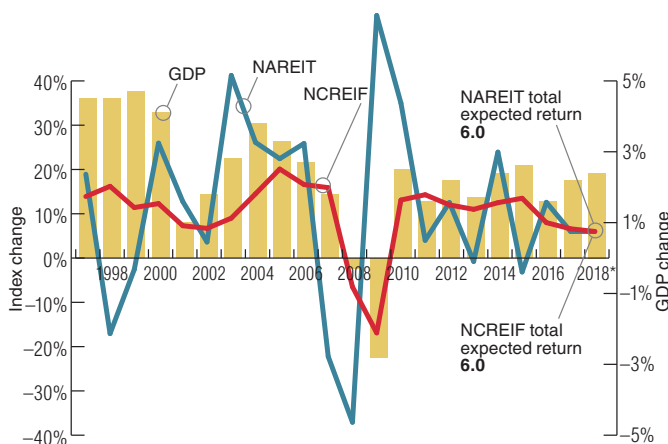
Fortunately, a sudden drop in altitude does not seem to be in the offing. Instead, our survey respondents, focus groups, and interviewees expect a long glide path for the economy and for the industry—the extension of the current cycle for 2018 and perhaps beyond. A tailwind of demand is expanding real estate utilization rates across a procession of generations extending from baby boomers, through the millennials, and now to generation Z. Each generation is large in numbers (although gen Z is

somewhat smaller than the others) and complex in composition—and is contributing to real estate’s forward momentum.

The pilots, however, are going to be coping with new instrumentation as the guidance previously provided by the London Interbank Offered Rate (LIBOR) is replaced by a new benchmark for debt costs. It is as yet unclear what the new altimeter for interest rates is going to look like, but the engineers are already hard at work.

Real estate capital managers are poring over the maps, pondering the destination for amply available funding. As we enter 2018, the money is flowing in something resembling the hub-and-spoke pattern familiar to the major carriers, with more and

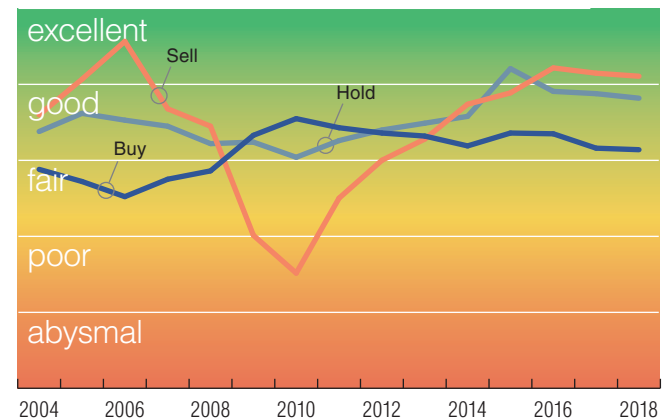
Exhibit 1-1 U.S. Real Estate Returns and Economic Growth



Sources: NCREIF, NAREIT, Bureau of Economic Analysis/U.S. Department of Commerce, *ULI Real Estate Economic Forecast*.

*NCREIF, NAREIT, and GDP data for 2017 and 2018 are based on forecasts for these indicators in the *ULI Real Estate Economic Forecast*, October 2017.

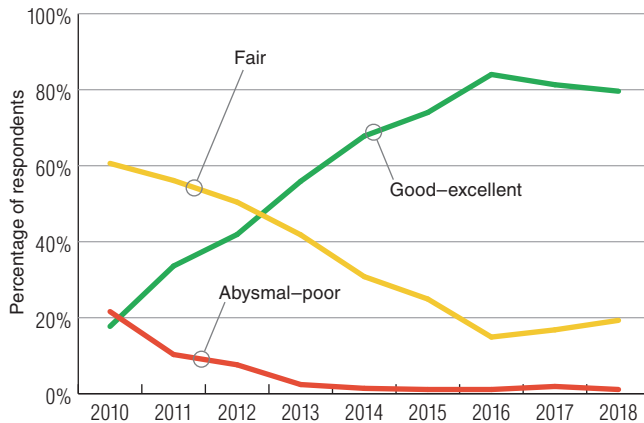
Exhibit 1-2 Emerging Trends Barometer 2018



Source: *Emerging Trends in Real Estate* survey.

Note: Based on U.S. respondents only.

Exhibit 1-3 Firm Profitability Prospects for 2018



Source: *Emerging Trends in Real Estate surveys*.

more service being provided to select secondary cities and to well-situated suburbs where customer demand is on the rise.

Data keep flowing through real estate’s equivalent of the air traffic control system, and we identify several of the most important indicators on the radar screen, from politics, to technology, to basic employment and income. Recent events have also underscored the importance of elements of literal turbulence—major natural events such as drought and storms—that should be causing us to check our seatbelts. With a close eye on the beacons guiding a safe descent, investors and developers can be said to be bringing the flaps down gradually, keeping real estate well above stall speed and on track for a soft landing at the end of a long and profitable cyclical ride.

1. Long Glide Path to a Soft Landing

Baseball announcers have taken to a phrase that captures the situation when nine innings find the score tied. They proclaim, “Free baseball!” Our *Emerging Trends* interviewees have tired of the “what inning are we in?” metaphor. They have the sense that no particular clock is ticking on this real estate cycle. While loathe to claim that cyclical risk is passé, few are willing to identify signs of a coming downturn. While it has been a very long time since economists have seen a “soft landing” in their projections, we may indeed be on a glide path to that result. Importantly, it seems that many in the industry are implicitly anticipating such a scenario.

Is the wish the father of the thought here? After all, soft landings are comparatively rare in economic cycles. It is arguable that only in 1994, during Alan Greenspan’s “maestro period,” have we seen a confluence of public policy and private sector per-

Exhibit 1-4 Real Estate Business Prospects for 2018



Source: *Emerging Trends in Real Estate 2018 survey*.

formance that produced a deceleration without bumping into a recession. Yet our interviewees see accumulating evidence that the final years of this decade may replicate that pattern.

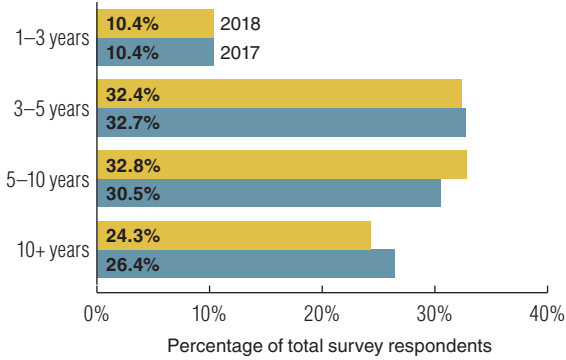
Why?

The case for the soft landing starts with the slow pace and moderate scale of the post-global financial crisis (GFC) recovery. Based on Newton’s third law (“For every action, there is an equal and opposite reaction”), the gradual slope of economic increase since 2010 lacks the obvious characteristics of a “boom” that would trigger a compensating “bust” to correct its excesses. This recovery has seen gross domestic product (GDP) growth averaging just 2.1 percent annually—hardly a “boom.”

It might be argued that the gradual glide path is a more secular phenomenon. The recovery of the 1980s averaged 4.3 percent annual GDP growth; the upcycle of the 1990s saw 3.6 percent yearly change in real output; and the pre-GFC years of the “aughts” had average GDP growth of 2.7 percent. So 2.2 percent growth continues the pattern, and economists see such a level as a natural outcome of demographic and productivity trends.

Yet each of those earlier expansions saw “hard landings”—the collapse of the savings-and-loan (S&L) industry in the late 1980s, the bursting of the dot-com bubble at the end of the 1990s, and the cataclysm of 2008 as the subprime lending bubble triggered a systemic financial meltdown. What seems to be the difference now?

Exhibit 1-5 Time Horizon for Investing



Source: *Emerging Trends in Real Estate* surveys.
 Note: Based on U.S. respondents only.

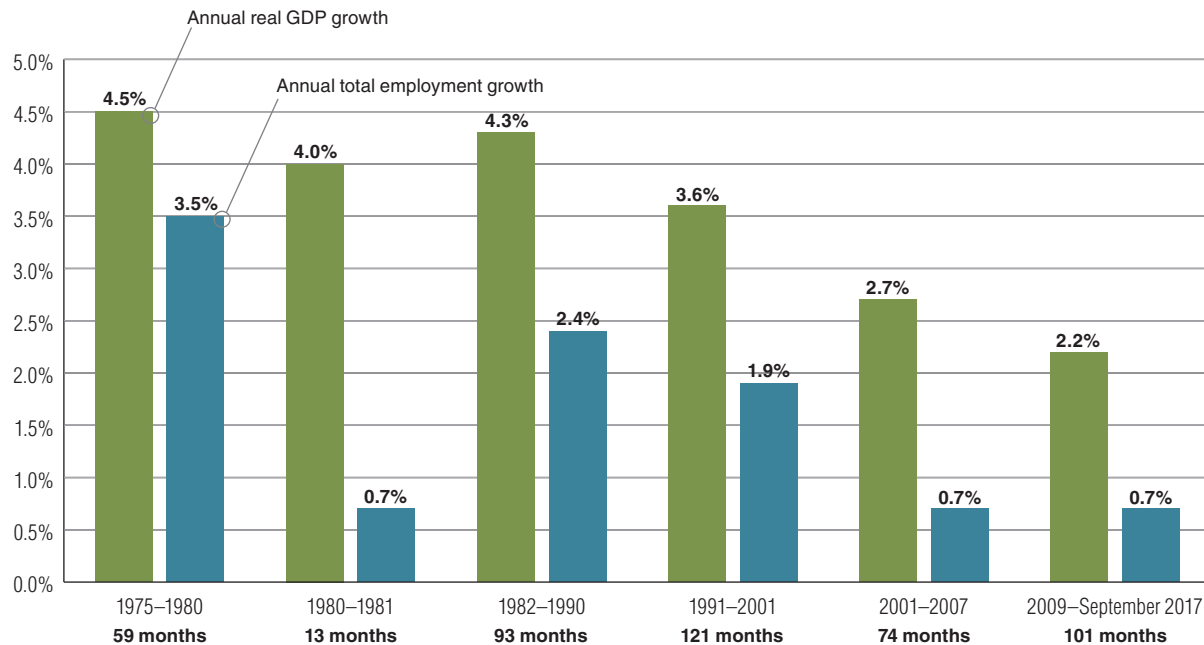
The chief economist for a major international real estate firm believes that the lack of “late-cycle optimism” in continued upward momentum is a hedge against risk. He lists several indicators suggesting a “winding down of the expansion.” Such indicators are the very low unemployment rate, the policy shift toward tightening at the Fed, and high asset prices in both real estate and in stock equities. This expert leans toward the soft-landing scenario even while recognizing those factors. The

reason? “We don’t see much ebullience in investors’ expectations.” A senior private equity executive concurs: “We’ve been getting and continue to get generally more conservative, more defensive” as the cycle has matured.

Such a defensive posture has translated into discipline on both the equity and the debt side, in the view of many interviewees. The trends in lower leverage discussed in detail in chapter 2’s analysis of the capital markets are taken as the key lesson learned from the previous hard landing. As one money manager put it, “People don’t lose money on the real estate; they lose it on leverage.” Another New York-based international fund manager remarked, “Lenders are being tougher, and that’s a good thing. Our view is to pull back and wait in a late cycle.” Deals have clearly been fewer and more cautiously closed.

Transaction data from Real Capital Analytics bear this out. First-half 2017 volume was down 5 percent from the same period in 2016, and down 13 percent from the fourth-quarter 2015 peak. But one must keep things in perspective: six quarters after the fourth-quarter 2007 peak—the last cycle—volume had cratered by 83 percent. Owners of the most coveted assets are more frequently electing to hold rather than sell. If a distinction between a hard and soft real estate landing can be measured, that statistic is a good place to begin.

Exhibit 1-6 Annual Real GDP and Employment Growth, Current and Recent Five Business Cycles



Source: U.S. Bureau of Economic Analysis.
 Note: Months = months of growth per cycle, trough to peak, as identified by the National Bureau of Economic Research.

From a fundamental perspective of supply and user demand, markets now are clustered in a place of very good balance, according to a veteran analyst of real estate cycles. Very few markets are descending into what he terms “the hyper-supply phase,” and he suggests that we should be viewing this as a long cycle propelled by the “new normal” of generationally low interest rates that have been defying forecasts of sharp increases. This could minimize the risk of a major price correction. That’s another “soft landing” vote. That may imply, in this analyst’s words, “Caution may be a little bit of a mistake.”

So where are the risks? If a so-called black swan is out there, it could be less in overheating than in unraveling. The long-term strength of the U.S. economy has been in the stability and growth in middle incomes. Upward mobility in both the blue-collar and white-collar sectors has fueled housing demand, consumer spending, and even office sector growth. After all, the term “yuppie” was an acronym for “young upwardly mobile urban professional.” The three-decade-long exacerbation of income inequality, wage stagnation, and regional economic disparities threatens the breadth of the demand drivers across the economy, and for real estate as well.

The rise of populism is a warning signal not only for politicians, but also for all who are invested in the future of the economy. The prospects for a soft landing should not be taken as a reason to dismiss those warnings, but as an opportunity to use time wisely to start the corrective process.

2. Working Smarter and Working Harder

Both industry and academic economists have struggled with America’s productivity statistics. From one perspective, it looks like we are in trouble. Since 2011, output per hour has grown at a meager 0.6 percent per year. By contrast, labor productivity from 1991 to 2010 averaged a gain of 2.4 percent per year. So even as millions of jobs have been added in this recovery, the overall growth of the economy has been disappointing. We have an economic expansion, but it sure doesn’t sound like we are thriving.

Certainly, the dislocation of the Great Recession skews the statistics of the past decade. The total number of hours worked as of July 2017 was just 7.6 percent higher than at the onset of the GFC, or just about a 0.7 percent increase per year. To be fair, gains in hours worked equal 2.2 percent per year from the trough of the recession—with much of that increase just making up for the massive layoffs between 2007 and 2009.

What does it matter for real estate? A whole lot. Economic growth as measured by GDP is a function of the number of

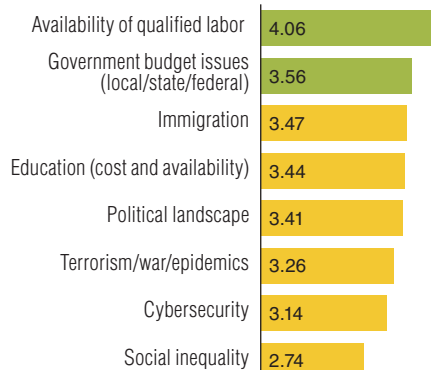
Exhibit 1-7 Importance of Issues for Real Estate in 2018



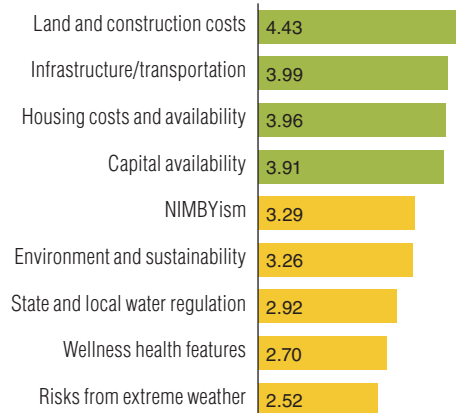
Economic/financial issues



Social/political issues



Real estate/development issues



Source: *Emerging Trends in Real Estate 2018* survey.

people working, and their output at work. If, as *Emerging Trends* has stressed for several years, a defining characteristic of this era is an ever-tightening supply of labor, more and more of the nation's economic potential depends upon increased output per worker. Effective demand for commercial real estate is not simply a function of headcount, but of what (and how much) is produced—whether goods or services—in the buildings. In the end, it is the revenue from production that pays the rent.

In recent years, office design has taken another approach. Space compression has been accepted as the most prominent trend, modulated by the provision of “creative commons” areas where office workers can move away from their solitary tasks for more interaction with coworkers. The idea seems to be “planned serendipity,” which is, of course, an oxymoron. The real test is whether or not more work gets done, and the aggregate figures on productivity make that a very real question.

It is not just the configuration of the office, but its superiority as a workplace that is being evaluated afresh. The rethinking of optimal office work is leading even tech sector companies to question their commitment to telework, exactly because the expected cost savings have not translated into sufficient business growth. A recent discussion by one such corporate decision maker in the computer field notes that “putting workers in the same physical space hastens the speed of work and sparks innovation.”

Analysts are speaking about “curated properties.” What does this nonce term mean? The accelerating stream of technological

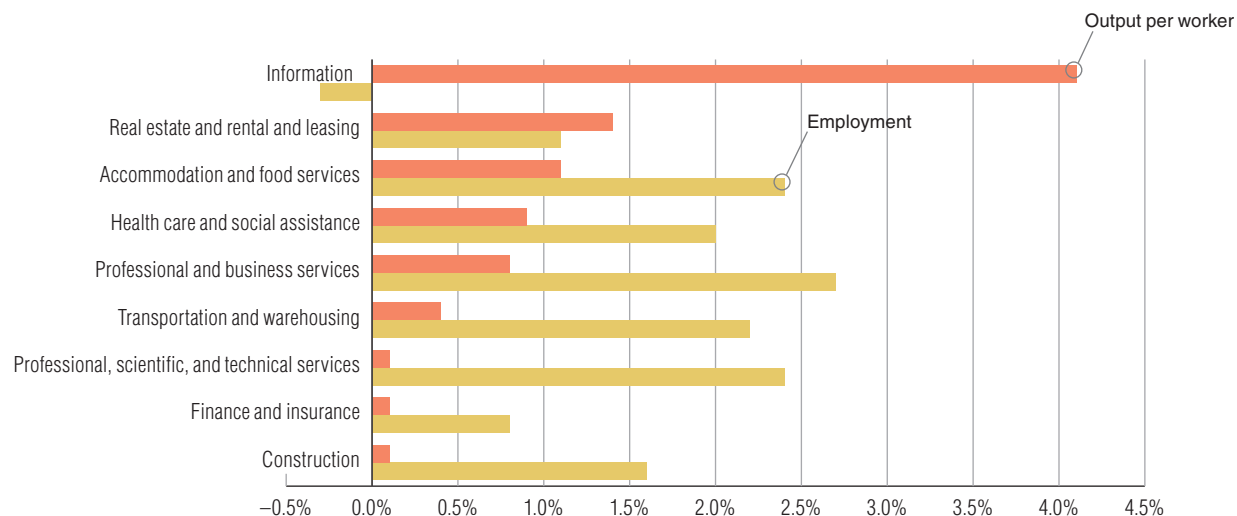
change is challenging real estate operations to keep up with an ever-more connected world of work. One veteran executive puts it this way: “The work space is rich in sensors, beacons, communication devices linked by the ‘internet of things’ to enhance space utilization—not in increased density, necessarily, but in greater productivity per square foot of space—extending time efficiency, improving workflow, capturing a workforce constantly on the move.”

In other words, smart properties and smart human resource management go together.

One interviewee, who sits on several real estate corporate boards, points to energy efficiency as a still-significant concern for operations. There has been a long-term trend toward greater energy efficiency, but he feels that the job is far from completed. “We will do anything that makes sense, anything that pencils [out],” he says. An executive with an international investor remarks, “We’re hopeful that the industry gets more sophisticated about how it measures and improves things. Input costs are actually moderate at this point; you have to be very efficient in figuring out what changes you want to do to a building so it maintains an attractive occupancy cost for the tenant.”

Similar changes in corporate planning are occurring in the financial field as well. Several interviewees, for example, noted that a big bank has committed to anchor tenancy in a new Manhattan skyscraper, bringing together traditional banking divisions with the IT engineers who are key to its burgeoning electronic financial functions. And this is happening in some of the most

Exhibit 1-8 Change in U.S. Worker Output versus Employment Growth by Sector, 2009–2017



Sources: U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics.

expensive office space to be found in the nation. The premise is that occupancy costs pale in comparison with the profit potential that those talented workers represent, if deployed in the right location and as part of the right team.

A corporate real estate veteran remarks, “The biggest trend is toward flexibility, agility, quality. Real estate facilities are not just ‘overhead,’ but a way to improve not just employee happiness and engagement, but also productivity.” What does that mean? “Technology can be an enabler. Get smart about the workplace . . . today it’s all about the smart experience, not just the smart building. With AI [artificial intelligence], the building teaches itself.” She concludes, “It is all about ROI—and it is human capital that counts the most, where investment really pays off.”

And in support of human capital, there is a growing trend to address the theme of wellness. As one large investment manager puts it, “We just view that as good asset management.”

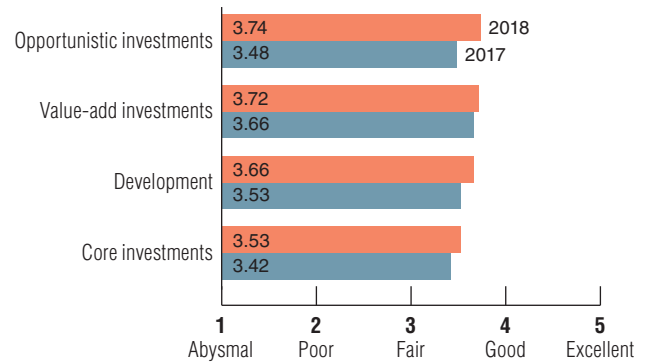
A managing director for real estate equity at an institutional investor elaborates: “More and more people are attracted to buildings that have wellness features. There’s a growing body of research that [such buildings] improve the productivity and satisfaction of your workforce. Research has shown that people are more productive in buildings that have a lot of fresh air circulation. Then it gets into the health and fitness facilities, the food service, all that kind of stuff geared to maximizing the health and productivity of your workforce. That is certainly a trend we’re seeing now. The trend is not reversing, this added dimension around wellness.”

Studies of indoor air quality, for instance, indicate that a greater than 60 percent improvement in employee output can be tied to strict control of carbon dioxide in the workplace. Even outdoor air pollution can inhibit productivity by 5 to 6 percent, a study of call center efficiency discovered.

A managing director for an institutional real estate fund manager puts it this way: “Green building and sustainability [are] very much part of our consideration now. I think that wellness and well building [are] the next wave. . . . We’re starting to get to the point with a lot of these initiatives that enough of them have been done, so you can track your ROI.”

So, plenty of indications exist that the “working smarter” trend is gathering momentum at both the human resource management level and at the property operations level. “Working harder” seems to be an equally powerful trend.

Exhibit 1-9 Prospects by Investment Category/Strategy, 2018



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

On the surface, it would seem that the current generation of American workers does have it easy, compared with their parents and grandparents. After all, the average number of yearly hours worked in 1950 was 1,920, a figure that dropped to 1,704 in 2011. (Current data on average hours worked suggest that 2017 averages are about the same as in 2011.)

The mix of industries explains a fair amount of the difference in the trend for America since the mid-20th century. The shift from a manufacturing to a services-dominant economy has been accompanied by a shorter workweek across the entire spectrum. The goods-producing industries still have an average workweek exceeding 40 hours, according to 2017 data from the U.S. Bureau of Labor Statistics. This compares with 34.4 hours per week for the broadly defined services sector.

For the goods-producing sector, output comes to \$205,000 per job thanks to the immense investment in physical capital that magnifies the contribution of each worker. For the services sector, which now is five times larger in terms of employment, the GDP per worker is only \$84,000.

This, in turn, needs to be looked at by industry. For example, office-using occupations such as financial services generate about \$160,000 in output for every worker, as compared with hotel and food service workers at \$62,000 per job. Tellingly, workers in the information, financial, and professional/business services sector—the core of office employment in many metro areas—work longer on average than their non-office-using services counterparts. Unquestionably, the office-using sectors have also invested in technology to work toward the “working smarter” goal. But they also have extended working hours, and

the official statistics probably understate the degree to which that is true. Connectivity with the office 24/7 by email, mobile devices, and the flash drive has blurred the line between work life and home life. “Working harder” is definitely part of the equation, as many real estate industry professionals can attest.

3. Procession of the Generations

Just when you were getting tired of thinking about the impact of millennials, great news! It’s time to think about generation Z, the next demographic cohort in line. It is a tricky topic. Just as no one pattern to summarize the large millennial group exists, generalizations about generation Z will paint in broad brushstrokes trends that will subsume a great deal of variety in individual cases.

Making discussion even more difficult, demographers (both scholarly and pop) do not have consensus about the generational “dividing line” between millennials and generation Z, placing the start date for the cohort anywhere from 1995 to 2001. Depending on the start date, gen Z is estimated in size at between 65 million and 75 million—a smaller cohort than millennials but still representing approximately one-fifth to one-quarter of the U.S. population currently. They are now the newest labor force entrants, and are poised to alter household formation patterns, consumption, and even workplace design preferences. In other words, real estate needs to prepare for change, once again.

As a defining characteristic, generation Z has never known a low-stress social environment. They are the generation shaped by 9/11, the Great Recession, income inequality, and political polarization. They are also the first generation born into the age of the internet, the smartphone, incessant social media streams, and constant connectivity. As a group, they are at the center of a powerful push/pull of preferences. On one hand, their experience of stress orients them to pragmatism, caution, and personal security. On the other, technology’s impact makes them—at least at the level of devices—social, mobile, and interactive.

While seemingly tugged in both directions, though, generation Z doesn’t consider this a dilemma of choice. It is simply the way of its world.

Following are some of the early observations on how gen Z may affect real estate trends in the coming years.

In housing, this generation is likely to show the same initial preferences for urban centers that the millennials did. The reasons are much the same: that’s where first jobs are most likely to be found, and where peer-to-peer social interaction is easiest. The extension of rental housing demand from generation Z, then, will be an element of continuity with the millennials. At the

Exhibit 1-10 “It isn’t what you don’t know that you should be worried about; it’s what you think you know.”

Cohort	What we thought we knew	What we need to know
Baby boomers	Will retire early to mild climates and enjoy the wealth they accumulated in their peak earning years.	Continue to work due to financial necessity or by choice. If they do leave suburban home, it is to relocate where their kids are or possibly to urban core of own metro area.
Gen X	Bigger houses in the suburbs and a steady climb up the corporate ladder.	Rocked by the GFC, leading to lower rates of homeownership, more focus on work/life balance; will be less financially ready for retirement than previous generations.
Millennials	Users of the sharing economy, love urban living; financial conditions and choice will keep them in the major urban cities.	Are increasingly forming households and having kids; looking at select suburbs and secondary markets for quality of life and cost
Gen Z	Tech savvy from birth; will have grown up in the sharing/gig economy; will converge on the urban core and solidify all other millennial trends.	?

same time, surveys of housing preferences by brokerage firms indicate a much higher desire for homeownership among gen Z than millennials. The same constraints of affordability, student debt, and lack of savings affect both cohorts. Generation Z identifies as a do-it-yourself (DIY) cluster, suggesting that lower-cost fixer-upper houses could become a wider-spread option. This may presage yet another wave of urban gentrification.

Retailers will see the “gadgeteria” ethos of gen Z as both a challenge and an opportunity. Consumer immediacy is a gen Z characteristic, and omni-channel is the taken-for-granted shopping milieu. Social media is a two-way enterprise: buy it and show it right away on Snapchat or Instagram! The cataloguing of individual preferences is presumed by gen Z, whose only reservation is risk of identity theft. So stores with rich connectivity hold appeal, as long as cybersecurity is felt to be effective. This is the first generation where all these factors have been present from their first experience.

Research into gen Z workplace preferences indicates that this generation will be distinct from their millennial precursors. A major personnel staffing firm surveyed gen Z candidates and found the following hierarchy of desired attributes in a first job: opportunity for growth (36 percent); stability (19 percent); fulfilling work (19 percent), and a friendly environment (10 percent). Interviews posted by the Society of Human Resource Management (SHRM) on its website indicated that this generation's experience of growing up in uncertainty and stress leads it to seek salary and benefits features more than "making a difference" in their jobs. In seeking stability, 61 percent of the generation Z sample would stay ten or more years with an employer—a far different tendency than the more footloose, gig economy-oriented millennials.

Workplace design needs to think of generation Z on its own terms. Where millennials were all about collaborative workspace, the more competitive and more easily distracted generation Z needs and wants more structure. A soundbite comment reported by SHRM is that "35 percent of gen Z would rather share their socks than their office space." Multitasking is bred in the bone of generation Z, but learning research is increasingly exposing the inefficiencies of multitasking. This means more hands-on management and mentoring in the office—interactions that gen Z appears to crave rather than resent. It also means that this generation may be less prone to desire "work-at-home" arrangements. While not dismissing collaborative space, such attributes suggest the return of possibly more structured/personal office space.

Coworking spaces have broken ground in demonstrating the benefits of flexible design, and more traditional employers have already taken those design lessons on board. It is a mistake, though, to take this as the last word. Given gen Z's propensity to seek order, structure, and predictability, along with their tech-savvy skills, a back-to-basics trend will likely emerge.

Generation Z understands that it is hitting the job market at a time when talent is very much in demand. These workers are willing to select for a career path and high-quality work environment if employers will invest in their growth as well as their preferences for their physical surroundings. What was old may be new again. As the 19th-century coffee magnate John Arbuckle remarked, "You get what you pay for."

4. But Don't Forget the Baby Boomers

If any generation has demonstrated an extended capacity to surprise, it is the baby boomers, the so-called pig in the python of demographic studies. Untold numbers of forecasts predicted that, by 2018, the boomers would be swelling demand for resort

and retirement communities—or at least 55-and-older active-adult developments catering to retirees or near-retirees. Freed from the ties of generational dependence, the boomers by now were anticipated to be footloose. If not taking to the road in their recreational vehicles, they were at least expected to be a "snow-bird" generation with Sun Belt second homes or heading south for permanent residence.

However, many rosy scenarios were darkened by the Great Recession, and the conventional wisdom about the baby boomers has had to be rescripted. American habits of overconsumption and under-saving had been noted long before the global financial crisis, but unpreparedness for retirement turned from a theoretical to an actual sticking point in the financial collapse. Many seem to believe that the stock market recovery and the return of average home prices to 2007 levels mean that baby boomers' financial situation has turned out okay. It has not.

A 2016 survey showed that 37 percent of boomers had less than \$50,000 in savings to draw on. Whatever savings they had took a hit in the crisis, when millions lost their jobs and had to tap whatever they had in the bank. The financial crisis placed additional secondary demands on the boomers, too. As millennials piled up student loan debt, many parents took on obligations as cosigners and faced liabilities when entry-level jobs dried up. Then, too, there were the so-called boomerang kids—children in their late 20s and early 30s who returned to the parental home by the millions, straining the household budget. Add to that the financial costs that many boomers assumed as their own parents aged and it is clear that many in this generation have not hit their retirement years fat and happy.

As one prominent retail specialist noted, "Many boomers have spent their nest eggs, so we'll see people staying in the workforce longer, or even retiring and picking up a part-time job."

One seasoned residential broker observed, "Boomers bought and now price their homes based on size. Millennials are buying based on the qualities of the house." For most American households, the most significant investment asset they have is home equity—but 7.3 million homes either went into foreclosure or short-sale between 2007 and 2014, according to data from RealtyTrac. Those boomers who have been able to ride out the cycle still have the dilemma of finding buyers—since millennials who are in the market for a home to own may not be looking for the kinds of McMansions many boomers will seek to sell.

In a way, that actually opens up opportunities for homebuilders willing and able to scale product to millennials' preferences—

smaller and more energy-efficient homes, townhouses, condos, and “affordable” starter homes.

For baby boomers still pinched by reduced savings, the reality has indeed been working longer. A recent human resources survey indicated that 81 percent of executives think that the recession is causing workers to defer retirement by at least five years, with 31 percent believing that retirement could be pushed back as much as ten years. Unquestionably, the shift from defined-benefit pension plans to defined contribution plans has contributed to these trends.

It is not totally out of necessity that baby boomers are remaining in the workforce, either. Many would agree with a former REIT CEO who remarked, “There is a big impact of boomers still productive, still at work, figuring out what to do with their time. The world has changed: how much golf do you want to play?” And he also observed, “The smartphone is just ten years old. Boomers have adopted the technology and it extends their activity in both space and time.” As they defer retirement—in whole or in part—baby boomers are aided by technological change in staying relevant in an increasingly multigenerational workforce.

The pattern of working later in life is very much a saving grace for the economy as a whole, since we are facing a moderate to severe labor shortage through the middle of the next decade, a combination of a smaller generation Z and at least a near-term tightening of immigration. The raw numbers say that, as of 2016, nearly 9 million people aged 65 or older were still on the job. Beyond this, there are the later boomers, now aged 55 to 64, numbering 25.5 million in the workforce, and likely to swell the ranks of the 65-plus (working?) cohort by 15 million by 2025.

So, the boomer story is not just about senior housing, which truly only starts to kick in with force around age 80 these days. It is, surprisingly, a story of continuity as much as a story about change. On one hand, boomers have been forced to be resilient, and on the other, that resilience has given the economy and real estate markets some flexibility that will be a positive factor as trends evolve through the next few years.

5. It's Different This Time . . . Isn't It?

“It's different this time.” It is a phrase that has become synonymous with, “Look out, things are about to go horribly wrong!” Don't look now, but secondary markets are seeing an increased level of interest just as they did in the 2005–2007 period. Such a focus is not necessarily new, but the staying power of secondary markets may be.

The *Emerging Trends 2018* investment outlook for secondary markets increased nearly 12 percent compared with our 2013 survey. Over the same time period, the investment outlook for primary markets has decreased by 6 percent. Investors now appear to see more upside potential in secondary markets.

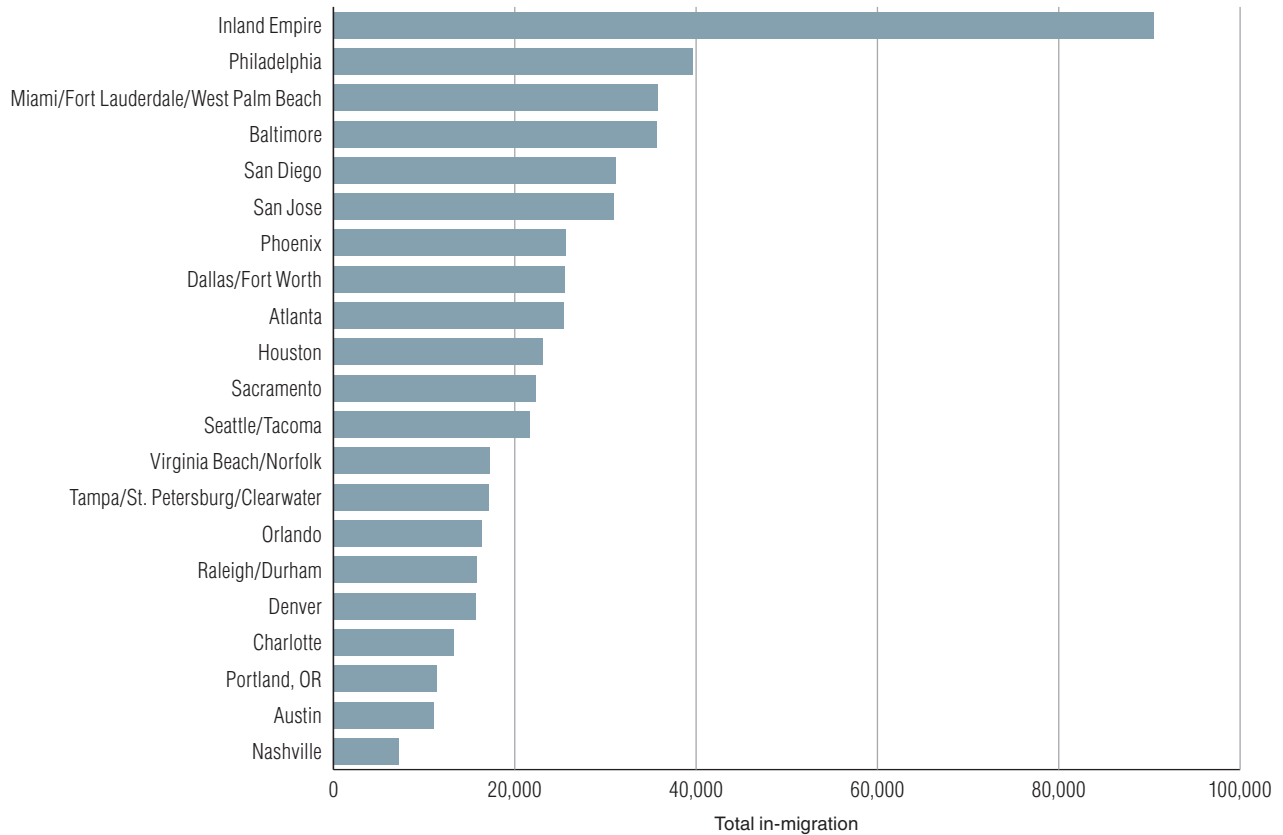
Why?

First, more investors have taken time to educate themselves about the nuances of secondary markets. Next, secondary markets have not suffered from the level of overbuilding seen in previous cycles. Third, the amount of investable foreign capital looking for a home in the U.S. real estate market has grown significantly, focused mainly on primary markets. On the whole, asset pricing in secondary markets has remained relatively favorable, potentially providing more upside in the current market. Finally, these markets have a lot to offer to businesses and residents, suggesting that the current level of demand will be sustainable going forward. As one institutional investment advisor put it, “People always talk about supply-constrained markets, I like demand unconstrained markets!”

The unusual length of the current real estate cycle led one multisector portfolio manager to say, “At this point, everyone is looking for ways to enhance yield, but since the expansion is getting older they still want to be conscious of taking on too much risk.” This opinion is shared by a number of interviewees who mentioned that investors are spending more time exploring the potential of investing in property sectors and markets they previously avoided. The additional time to study new markets has given them greater opportunity to meet their risk/return requirements.

Most markets are back at levels above the last cyclical peak in terms of jobs and gross metro product. Economic activity is driving real estate demand, but lesser access to capital and developer restraint have kept most secondary markets from adding much new supply. One institutional investor commented: “The markets we have always thought of as supply-constrained have added a lot of space in this cycle, while the markets we expect to overbuild have been uncharacteristically well behaved.” For most markets, the only sector with more space under construction in 2017 than in 2007 is multifamily. New supply in the secondary markets is not expected to surge any time soon, as capital for new investment projects remains disciplined. One investment manager mentioned, “I love this capital market. There is plenty of capital for developers with a solid reputation and good projects, but very little competition from the more speculative crowd.”

Exhibit 1-11 Top Destination Markets for Migration from Primary Markets, by Total In-Migration, 2011–2015



Source: U.S. Census Bureau, Metro Area-to-Metro Area Migration Flows, 2011–2015.

As the capital markets chapter of *Emerging Trends in Real Estate® 2018* notes, international capital represents a growing component of the investment pool, 15.5 percent of all transaction volume for the 12 months ending June 2017, according to Real Capital Analytics. Historically, the majority of global capital has looked primarily at investment opportunities in primary markets. Over the past year, global capital investments represented 20 percent of all real estate investments in primary markets. The amount of global capital investing in primary markets has greatly increased the competition for assets.

Increasingly, though, offshore investors are showing interest in secondary markets, representing 10 percent of all secondary market transactions over the past year and up from the cyclical trough of 6 percent. International capital sources are recognizing the same dynamic as U.S.-based investors. A real estate investment adviser summed up the market decision: “Why deal with the uncertainty of a global market when there are opportunities in secondary markets like Salt Lake City and San Antonio?”

I feel a lot more comfortable with my ability to understand these markets than I can a market in China or India.”

Real estate pricing in both primary and secondary markets has regained all the losses experienced in the global financial crisis. According to the Real Capital Analytics CPPI, primary market asset pricing returned to previous cycle peaks in early 2014, while asset pricing in secondary markets took nearly two years longer, getting back to peak levels in late 2015. From the trough of the market until early 2016, the year-over-year growth in primary market price appreciation consistently exceeded the change seen in the secondary markets. This relationship reversed in early 2016 with secondary markets beginning to outperform the primary markets. As of the middle of 2017, primary market pricing is now 1.5 times the previous cycle peak, while secondary markets are at 1.1 times the previous peak. Many consider it reasonable to expect that secondary market pricing still has room for appreciation.

More attention is now being given to the significant business and living cost advantages in the secondary markets. This may become even more vital in an economic environment where slower top-line growth makes cost containment vital to maintaining profitability. The average cost of doing business, as reported by IHS Markit, in secondary markets is 16 percent lower than business costs in primary markets. The real estate and energy-related costs are where the secondary markets have the largest advantage at 38 percent and 22 percent lower respectively. Labor costs also are lower on average in secondary markets, with the labor component 14 percent below that found in the primary markets.

Despite the lower labor costs, new residents also are seeing the advantages of living in secondary markets. Average secondary market housing costs, measured by an affordability index that factors in home prices in relation to income, are 45 percent more affordable than in primary markets. Along with more affordable

housing, an increasing number of secondary markets also offer some of the amenities of the primary markets at a much lower cost. A national housing expert observed: “Don’t be surprised to see millennials who had been living in urban areas, move to the suburbs when they decide to start a family.” Not surprising, the twist comes when you add in, “The suburbs just won’t be in the same metro area. Rather than move to a suburb around New York, they will move to a suburb in Charlotte.”

6. Housing at a Technological Tipping Point?

The arrival of Japan-based operator-owners in North America has heightened interest in the question of how homebuilders, residential developers, and investors can improve productivity at the construction operations level using more progressive workflows, construction automation, and processes. More builders and residential developers we talk to look ahead at the not-too-distant future—at the cost side of what they do—and see two opposing realities.

Exhibit 1-12 Rising Home Prices Don’t Guarantee New Supply, 2000–2018



Sources: U.S. Census Bureau, National Association of Realtors.

One is that those costs—including land, labor, lumber, lending, and so on—will keep squeezing margins, as new home prices collide with what people can and will pay for homeownership.

Another is that builders and their developer and investor partners will focus on those cost factors and somehow leverage technology to ratchet them down to a new basis for expense assumptions per square foot of vertical construction. By resetting those costs, and by amping up productivity, the business model changes. A changed business model would have immediate and profound effects on what newly constructed houses would cost homebuyers, what local politics and regulation's position would be, and how capital would then flow into such a transformed operational template.

Up to now, all but a few fringe visionaries might say, "All of that has been tried before, and it doesn't work, and it will never happen. Period." A majority of builders, whether they're at the job-site level or in corporate big builder offices, continue to feel that way.

But a growing minority has started to believe it should be on the table, even if the reality is not next year or the year after. One senior-level financial executive's comments reflect more of what's in the air these days than ever. "For 25-plus years, I've been working in this space, I've been hearing talk about how technology, automation, modular construction were about to transform the way builders build homes," this executive said. "Now, I look at what's been happening in the recent past, and for the first time ever, I'm thinking it's more than talk."

Off-site factory construction, robotics, 3-D printing, componentization, and a growing number of hybrid construction workflow systems and models blending two or more of these technologically advanced processes are cropping up at the sector's fringes, getting ever closer to the kind of scale such a breakthrough would need. One of the nation's well-known manufactured home construction units, whose core skill set is in producing and distributing below \$150,000 manufactured prefab housing across America, has aroused a great deal of curiosity with the purchase of five regional site-builder homebuilders in the Southeast and in Colorado. Still, other than scaling purchasing and distribution, a new model that would mesh the factory with the home site is far from clear.

Some of the elements of that new model are already emerging on work sites around the country, though. General contractors and construction managers are looking to limit the number of "trips to the trailer" by incorporating a fine-grained wi-fi mesh of information, communicated instantaneously. Not only are key

construction documents now available on tablets to subcontractors working on plumbing and electrical systems, but drones and sensors help keep track of construction progress as it occurs across the entire site. Even on sites that use prefab components—perhaps even especially on such sites—monitoring the "just-in-time" elements of delivery and installation is a vital key to productivity.

This benefits supervisors, certainly, but also helps the workers themselves. For example, workflow management tools integrate information about task sequences, the location of workers, and the availability of equipment. Notification about changes in the status of any these factors can help lessen worker frustration about scheduling snafus that waste time, energy, and money. Job-site managers clearly care about these issues, but it is the workers who experience the stress of job-site inefficiencies.

Such stresses can factor into worker safety. Where speed and efficiency are critical to bringing in the job at an affordable cost, an understandable temptation exists to make up for lost time. This can lead to excessive risk-taking on the job site—a place with many sharp objects, power tools, and potential for dangerous falls. Homebuilding presents a particular set of hazards, since many small firms are represented in residential subcontracting. According to research at Virginia Tech, 47 percent of all construction fatalities are accounted for in firms with fewer than ten workers.

Even assuming that scale and improved processes and technologies will reduce the costs and sustain the achieved gains in quality involved in shipping off-site assembled homes to sites, there is at least one major catch: land.

As one astute observer says: "Scale control of the vertical development and construction process without scale control of horizontal acquisition and development process is a fancy way to describe the factory-built mobile home business. Technology is making a difference on the margins in the homebuilding business, more so now than before the Great Recession. Still, unless you amass dirt, and gain scale control of the entire value chain, from real estate to the buyer's experience, efficiencies gained off site in factories will wind up getting lost at the site level."

This circles back to the "opposing realities" that builders face as they look at their costs, narrowing the delta between what it costs to deliver a home and what buyers are prepared to pay for it. Affordability will continue to rank among the most important challenges that players in residential development and investment face in 2018. Technology's role in making vertical

construction less expensive, more highly productive, and more profitable will remain an integral part of the affordability question.

7. Retail Transforms and Stores Remain

Most experts agree that American retail is changing at the fastest pace since the introduction of regional malls in the 1950s and the widespread proliferation of discount big-box retail in the 1980s.

While U.S. retail sales continue at a long-term annual growth rate of 4 to 4.5 percent, retail and retail real estate are at an inflection point as major department stores and smaller midprice apparel brands fail, foot traffic at most retail centers declines, and new retail brands arrive on the scene at a slower and slower pace.

While most of these changes are routinely attributed to expansion of e-commerce sales, industry executives are becoming increasingly aware that more and bigger influences are at work and responsible for retail instability than e-commerce alone.

Recent interviews with retailers, retail real estate executives, developers, REIT executives, lenders, and researchers indicate that five key trends are converging to reshape this sector as it faces generational change. These trends are detailed in chapter 4 of this report and include:

- Department store deconstruction and obsolescence;
- Overall retail industry maturity;

- Fundamental changes in apparel manufacturing;
- Changes in consumer demographics and preferences; and
- Advances in retail technology, including e-commerce.

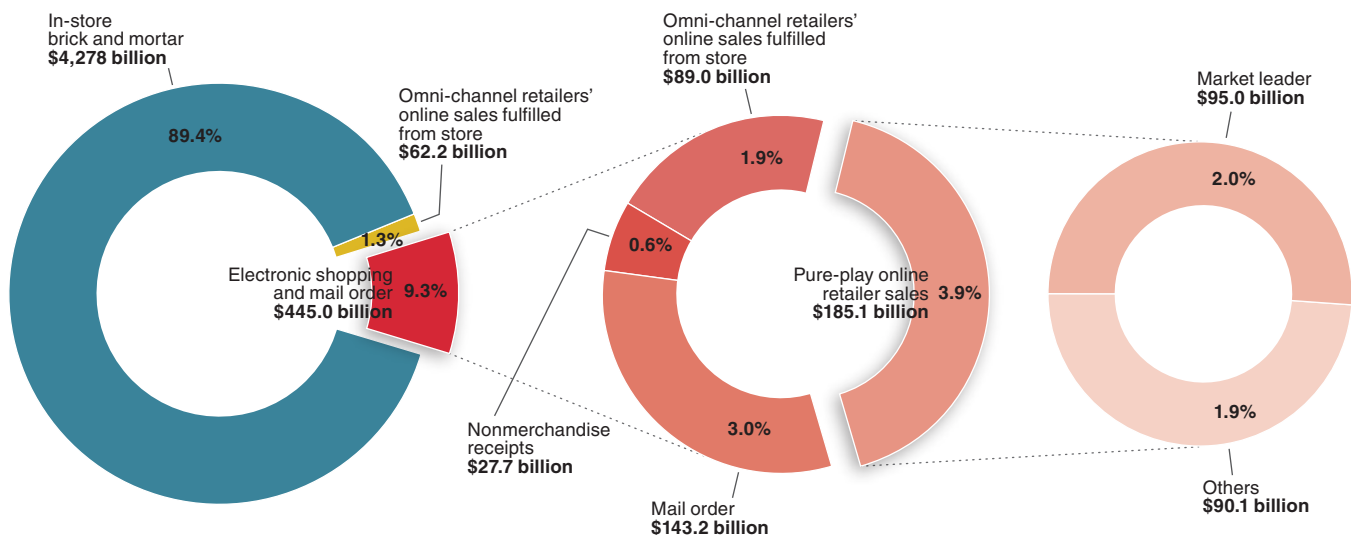
Retail overcapacity is the result, as opposed to a primary cause, of these significant transformations. Nevertheless—and despite the obvious stresses that have drawn public attention—retail property is considered by interviewees to be relatively healthy, with abundant capital available to owners and investors.

Even with these changes taking place, the industry is still considered healthy overall, with abundant capital available to owners and investors at historically low cost. And while retail overcapacity is widely acknowledged to be a problem for the industry, financial markets have largely priced this risk into individual asset valuations and investors are still widely attracted to well-conceived, well-positioned retail real estate assets.

Despite all the complex changes occurring in retail and retail real estate, it is hard to imagine a world in which brick-and-mortar stores will play anything other than a dominant role in the distribution of a vast majority of retail goods and services. The recent activity of e-commerce retailers purchasing brick-and-mortar chains or opening their own stand-alone locations only reinforces this view.

Even within this context, e-commerce remains a player in the picture and consumers' devices remain on even while their own-

Exhibit 1-13 Distribution of Total Retail Sales, 2016



Sources: U.S. Census Bureau; ICSC Research; National Retail Federation; Euromonitor.

ers are shopping in the store. That gives merchants the ability to target-market close to the point of sale, a tech-enabled option with great power. The discussion of “augmented reality” in last year’s *Emerging Trends* report introduced a form of seamless engagement with shoppers, where the key is less the sales of product features as it is the cultivation of consumer experience. Text messages are popping up on GPS-enabled smartphones: “You are near our store! Here’s why you should drop in!”

8. Tax Reform: It’s Going to Take Some Time This Time

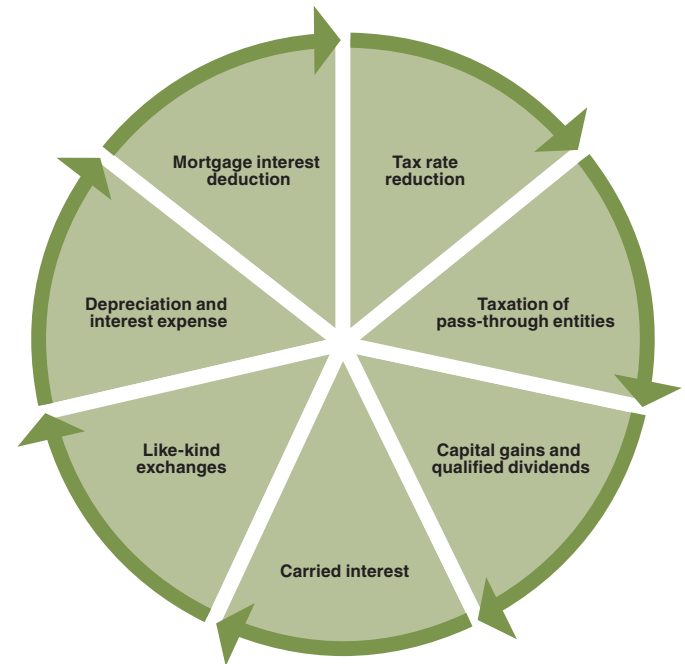
If health care represents about one-sixth of the U.S. economy, taxes affect virtually the entire span. It has been a generation or more since the tax system has been given a thorough overhaul. The Reagan-era Tax Reform Act of 1986 has been repeatedly tweaked, but continues to be the basic framework for federal levies. The election of 2016 was won at least in part on the premise that taxes would be cut and the tax code reformed.

In the eyes of many, the “Trump bump” on Wall Street immediately after the election reflected markets’ expectation that lower rates, less regulation, and a lighter touch from Washington generally would bolster profits and spur growth. Optimists note that with corporate financial veterans running cabinet departments—Treasury, State, Commerce—and with sympathetic deregulators in place at Energy, Environmental Protection, and Interior—the team is in place to craft pro-growth, pro-business tax and operational policy.

But if the hope was for swift and sure change, the optimists are already recognizing a need to recalibrate. After the first 200 days of the new administration, the tax plan, as articulated officially, was still a mere sketch of goals and talking points. Complex legislative initiatives necessarily weave their way through a welter of details and require trade-offs. That process is just beginning and should be expected to be lengthy.

Let’s take a look at some of the major pieces as proposed, with an eye toward their impact on emerging real estate trends. A centerpiece of the program is the reduction of the 35 percent corporate tax rate, with a stated goal of 15 percent by the administration and a 20 percent objective by leaders in the House of Representatives. One of our interviewees, a respected academic and consultant to real estate owners, sees such sweeping change as unlikely. “What’s going to happen on tax is very similar to what’s happened on tax for the last 30 years. There will be little changes important to people but not the major stuff. The major stuff just takes too much, that’s why it hasn’t been done for 32 years.” To put a number on it, the reduction in

Exhibit 1-14 Potential Tax Reform Implications for Real Estate



Source: PwC Real Estate Tax Alert.

federal revenues over ten years by a reduction from 35 percent to 15 percent is estimated at \$2.3 trillion. Budget hawks in Congress are unlikely to acquiesce to such large increases in the government deficit.

Always “unintended consequences,” or perhaps collateral consequences (intended but not primary), lurk in any policy change. One such impact for real estate would be a reduction in the value of low-income housing tax credits (LIHTCs), which has become a linchpin for affordable housing efforts since its passage in 1997. The value of these credits is a function of the tax liabilities of the purchaser of the equity credits, and reduced exposure means that the credits have lesser market appeal. An executive at one residential manager remarks, “Tax reform is a potential low-income-housing threat: at a 15 percent corporate tax rate, the market for tax credits evaporates.”

Also on the unintended or collateral consequences list is the proposal to double the standard deduction on personal income. The primary intent is to simplify tax filing for millions of lower- and middle-income households. Particularly targeted are the home mortgage interest deduction and the federal tax write-off for state and local tax payments. Although many legislators

on both sides of the aisle are resisting this suggestion, there is a potential ripple effect not only for homeowners, but also for developers and for service firms connected with the housing industry. This bears watching.

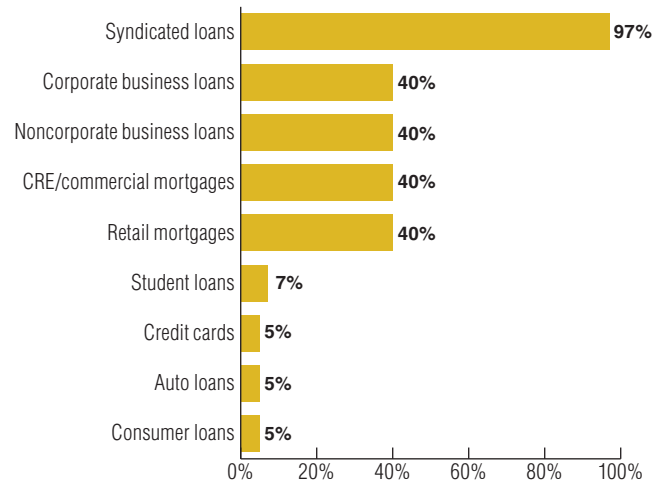
The interest deduction issue also has ramifications for businesses. House leaders have proposed limiting the deduction for using debt in the capital structure, which real estate and other industries typically use in their investment strategies. This, like the home mortgage deduction elimination, is proposed as a “revenue enhancement” to offset the cost of other tax cuts. If those increases to revenue are not enacted, the budget-balancing possibilities that go hand in hand with tax reform (as contrasted with simply tax cuts) are essentially compromised.

Another such impact comes from the alteration of investment amortization, now known as “expensing.” The 1981 Economic Recovery Tax Act, as industry veterans will remember, had a similar provision, then labeled “accelerated depreciation.” Such write-offs were (and would be) a windfall for business but costly to the federal budget. Three decades ago, accelerated depreciation contributed to soaring U.S. deficits, as well as some ill-considered commercial property development, until the provision was altered in the 1986 tax reform. Among the collateral consequences was the overbuilding of real estate that was a contributing cause to the collapse of the thrift industry. One broker active in national industry affairs noted, “Congress does not really understand the time-value of money.” A commercial banker is unsettled by the economic consequences of the “expensing” concept: “Anything that would disrupt the way that value is determined in real estate could have a deleterious effect in the marketplace. That’s probably the largest single thing [of concern] that’s on the horizon.”

The 1031 tax-free exchange program also is on the radar screen, under the broad rubric of “closing loopholes in the tax code.” Advocates of the program indicate that it promotes liquidity in the marketplace, with about 6 percent of all commercial transactions using such like-kind exchanges, a proportion that grows to 10 percent to 18 percent in states such as Arizona, California, Colorado, and Oregon. Other effects include increased market velocity, greater capital-expenditure investment following the exchange, and lower use of leverage reducing risk in the capital structure.

One East Coast developer/investor affirms, “There is big demand for 1031 product, and there will be until Congress blows it up.” Another interviewee, from the West Coast but active nationwide, concurs: “1031 is just too easy to attack,” since it is perceived as tax avoidance rather than deferral—although

Exhibit 1-15 Financial-Instrument Exposure to LIBOR



Source: Financial Stability Board, *Market Participants Group on Reforming Interest Rate Benchmarks: Final Report*, March 2014.

academic research indicates that 88 percent of such properties eventually do pay tax on the capital gain.

This is not to indicate that tax reform is deliberately targeting real estate for pain. It is just that, like health care, “it’s complicated.” Certainly, the proposal to create a special tax rate (variously indicated at 15 percent by the administration and 25 percent by congressional leaders) for “pass-through” businesses such as sole proprietorships, partnerships, and S-corporations has as an objective tax relief for many property investors.

All indications are that the “trend” in taxation is toward lowering tax burdens on individuals and on business. It is a question of degree, of structure, and of timing. The devil, as the cliché has it, is in the details.

9. Replacing the Yardstick

There are \$350 trillion in financial instruments that use LIBOR as the benchmark for transaction pricing and interest rate adjustment. To put this in context, the World Bank’s estimate of global GDP for 2016 (denominated in current U.S. dollars) is \$75.7 trillion. LIBOR’s influence is embedded in agreements affecting consumers directly—for example, in rates on student loans and credit cards—as well as institutional instruments like interest rate swaps and corporate bonds. From a real estate standpoint, variable-rate financing such as construction loans and adjustable-rate mortgages are pegged to LIBOR. The National Association of Home Builders identifies LIBOR as the most widely used benchmark after the prime rate for residential development lending. And the federal government’s Consumer

Financial Protection Bureau calls LIBOR the “most commonly used index for mortgages in the United States.”

So it is a very big deal that LIBOR is being phased out between now and 2021.

One of the consequences of the global financial crisis was to expose not only fraud but also inherent structural weakness in this benchmark rate. The fraud prompted the lurid headlines of insiders manipulating the supposedly objective standard of interbank lending. It came as a shock to many to realize that this yardstick was not based upon verifiable data but a subjective survey of a few “data submitters.” These individuals were asked what they believed their bank would offer as an interest rate to other banks for unsecured loans of varying maturities. In the extreme, the actual volume of loans in a given year might amount to a couple of dozen or less. Real estate as well as the general public suffered as a result.

There was an element of smoke and mirrors where there should have been safety and soundness. More than \$9 billion in fines and penalties have been levied on institutions in the United States, the United Kingdom, the Netherlands, Switzerland, and Germany. Once the structural deficiencies were exposed, the demise of LIBOR was probably inevitable.

The trend affecting real estate over the next four or so years will be the learning curve and adjustment of the industry to a new benchmark. As one banker puts it, “The alt-rate section of our loan documents is now the most-read section in our contracts! Prior to the announcement, this section got very little attention.”

What can we anticipate at this point?

First of all, the outline of the structural changes can be seen in an important statement of principles from the International Organization of Securities Commissions, in a report that was issued as early as 2013. This report specifies the conditions of data adequacy, transparency, hierarchy of inputs, and verification of relevancy for new financial benchmarks. Key elements include these factors:

- Sufficiency of sample size relative to the volume and distribution of trading in the market.
- Observable evidence that competitive supply and demand forces are represented and that reliable price discovery undergirds the index.

- Where bids and offers are included as inputs to a benchmark, that such information be subordinate to evidence of arm’s-length transactions.
- Statistical attributes of the benchmark be made available to users, and that averages, ranges, and distributional characteristics must be disclosed.
- A plan for periodic review of the benchmark to evaluate its efficacy as a measure of market comparison.

Clearly, this is a tall order. And it is complicated by the need to transition in real time through 2021 from a long-established benchmark so embedded in the financial system.

Since November 2016, a working group comprising 15 government and private sector institutions (known collectively as the Alternative Reference Rates Committee) has been carrying on an intensive examination of possible replacements for LIBOR. They have been assembling and testing data from active markets in swaps, currency instruments, interest rate instruments, and Treasury repurchase agreements to craft one or more reliable benchmarks. It is safe to say that details are yet to be worked out—but the task has begun.

A manager at a Midwest investment advisory firm notes, “Our biggest concern is the potential for unintended consequences related to any change.”

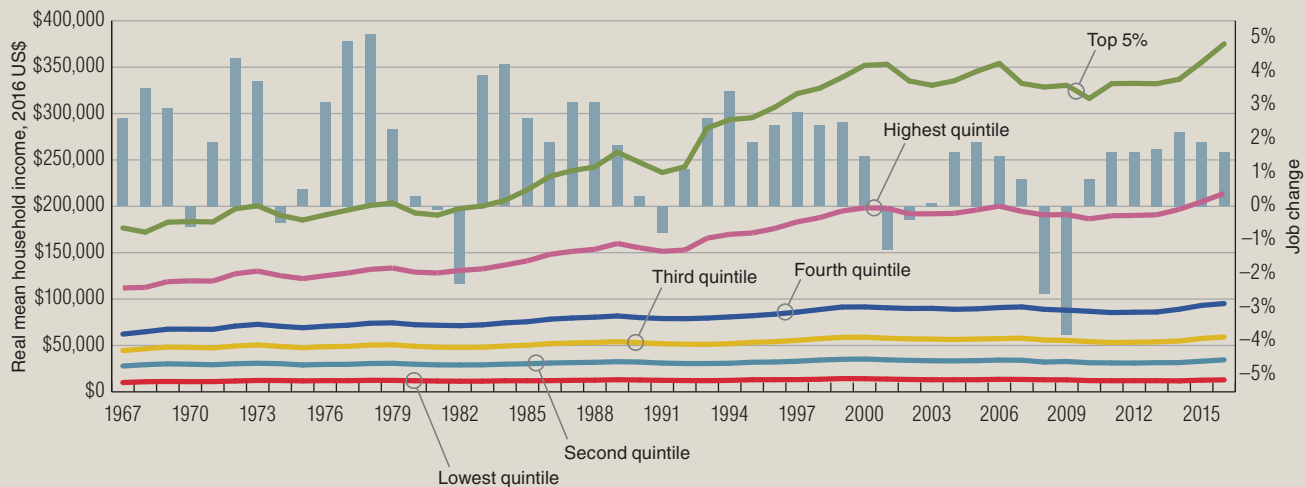
What should the real estate industry get ready for right away, and as a replacement to LIBOR enters into practice?

Expect a voluminous redrafting of contracts. With LIBOR inked into the terms of trillions of dollars’ worth of deals, there will be enormous time pressure to accommodate the inevitable changes needed to switch to a new standard. This could be a full employment act for real estate attorneys.

Next is a possibly unexpected result: downward pressure on interest rates. Why? Some of the alternative benchmarks under consideration, such as rates in the Treasury repo market, have been substantially lower than LIBOR itself. Moreover, the spread has been widening, at least partly because of lessening confidence in LIBOR itself. A more reliable benchmark may have the beneficial effect of taking some of the uncertainty out of the spread required by lenders.

Also, though, the market will need to price in the novelty of the new benchmark. Every new system has its bugs; this won’t be any different. The learning curve could have unpleasant sur-

Exhibit 1-16 Growth in U.S. Income Distribution Gap, 1967–2016



Sources: U.S. Census Bureau; U.S. Bureau of Labor Statistics.

prises, and both borrowers and lenders will share this risk. Real estate and corporate lawyers and risk managers are going to find themselves extremely busy through 2021 and probably beyond.

Staying on the Radar

Like it or not, we are all living in the vortex of the 24/7 news cycle. News feeds via our laptops and smartphones, the incessant news and commentary over broadcast and cable channels, and the endless chirping of social media all keep our attention spans short and our capacity for reflection more shallow than it ought to be. The generally good times that the real estate industry is enjoying, as indicated by the scores earned in our survey for real estate business prospects (exhibit 1-4), may be influencing real estate's evaluation of the issues of importance to the industry as rated in exhibit 1-7. It is probably worth a brief closer look at some of those factors shaping trends in real estate over the longer-term future.

A Major Leap in Importance: The Political Landscape

The presidential election of 2016 resulted in an unpredicted victory for Donald J. Trump, and a consolidation of executive and congressional power in a single political party. Such a political alignment is neither rare nor totally uncommon, having been the case 16 times (32 years) in the 72 years since the end of World War II. Normally, this means a first presidential year of impressive legislative activity, but 2017 has been anything but normal. Thus, we see the steep rise in importance for real estate of the political landscape, with an almost 30 percent increase in rating over last year's survey.

The talking-point agenda is significant: health care, tax reform, infrastructure, trade, immigration, jobs. The consequential challenge—and the uncer-

tainty—are in the translation of rhetoric to law. As a major dealmaker told our interviewers, "It's more of a mind-set question than a membership in a political party. Leaders who can encourage growth and business creation add value, as do leaders who can help create the programs that get people back on their feet and into the workforce."

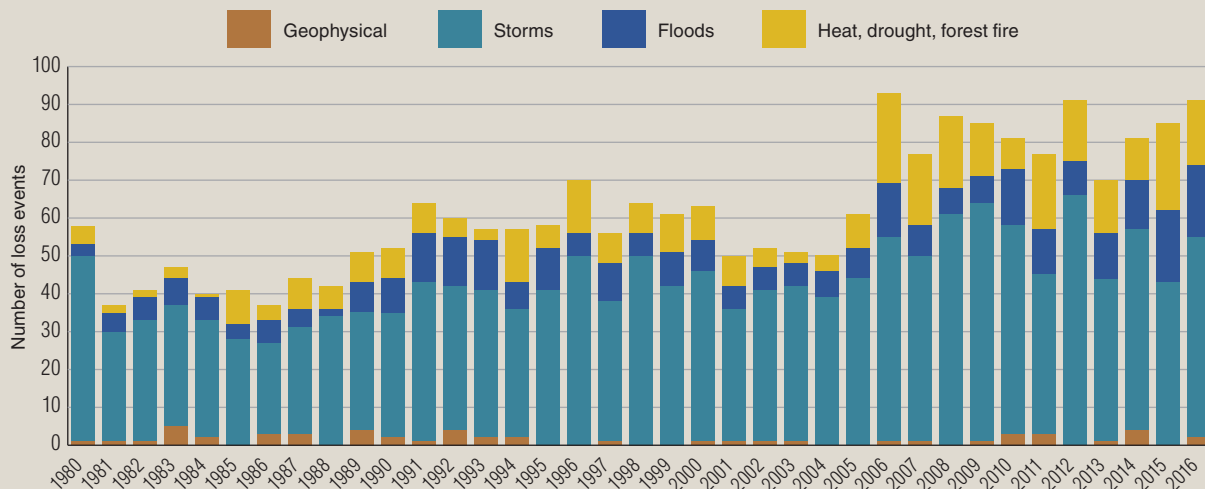
Still High on the List: Jobs and Income Growth

This year and last, our survey found these basic economic issues, paycheck issues, of considerable importance, rivaled only by the particular development concerns of land and construction costs. The real estate industry has not forgotten the brusque mantra, "It's the economy, stupid."

One academic and institutional consultant lays the story out this way: "We can't grow as fast because we can't add as many jobs; therefore, we don't have as much demand for space. The job growth average was about 250,000 jobs monthly in 2014. This year [2017] is going to average closer to 150,000 jobs, and in 2018 we drop to 135,000 jobs. So instead of 2.4 million for the year, it'll end up being 1.6 million or less by 2018. Lowered job creation means less absorption of space, all categories of space, just less real estate demand in the aggregate."

It is not just about head count, but also about how incomes are distributed across the employment spectrum. The managing director of a West Coast private equity firm remarked, "We continue to see a dumbbell distribution of incomes. The top 1 percent has done great, but middle-income stresses are increasing." This is obviously having an impact on retail, but it is also exacerbating the jobs/housing divide. A Bay Area developer sees those stresses throughout northern California: "Regionalism is back on the rise, mainly in response to the jobs/housing imbalance, which is unsustainable. One recent victory has been the passage

Exhibit 1-17 Number of U.S. Natural Catastrophes, 1980–2016



Source: Insurance Information Institute.

of accessory dwelling unit regulation superseding local development regulation. Still, NIMBYism is a big problem; local elected officials who vote for affordable housing face well-funded opposition. Hyper-local interests prevail.”

Rising land and construction costs make the affordability issue all the more difficult, and constitute the supply-side pressure that combines with income inequality to lock households out of the ownership market. So, although income inequality, rated as to its importance to real estate in 2018 in our survey, was scored comparatively low, as was social inequality, housing costs and availability—a directly related consequence—was among the top-rated issues.

It’s Not Nice to Fool with Mother Nature

Our survey was completed in July, long before the devastation of Hurricane Harvey visited the Texas coast, flooding Houston and Beaumont and bringing record rains to Louisiana and up the Mississippi Valley. Harvey was quickly followed by two more historically powerful hurricanes—Irma, which visited destruction on the Caribbean and throughout Florida, and Maria, which pummeled the Caribbean—yet again. So perhaps the survey result showing that “risks from extreme weather” ranks lowest in our respondents’ estimate of importance might have changed if the tally had been done in September. But the graphic above, from the Insurance Information Institute, clearly shows that complacency is unwarranted in the face of a long-term rise in significant natural disasters since 1980.

Between 2007 and 2016, the insured property losses from natural catastrophes exceeded \$200 billion—and of course costs beyond insurance coverage were significant and only add to the impact. All signs are that 2017 will join years like 2005 (Katrina and Wilma), 2008 (Ike), and 2012 (Sandy)

as a vivid example of real estate’s exposure to meteorological risk. It appears certain that the 2017 damage total will hit an all-time high.

But it doesn’t stop with storms. Since 2006, there has been a significant share of overall loss that has come from climatological events such as extreme temperature, drought, and forest fire. During 2017, Seattle set a record of 55 consecutive days without rainfall. During that time and afterward, haze from wildfires in the Cascade Range and as far away as British Columbia degraded air quality in the Puget Sound region. While the percentage of total U.S. area under drought conditions has fallen from 44 percent to 30 percent over the past year (as of early September 2017), the fraction under the most severe categories of drought has risen: 4.1 percent of the country (in Montana and the Dakotas) suffers that disastrous level of water shortage.

And, speaking of water, sea levels continue rising (and warming—a contributor to hurricane severity). That’s going to increase the incidence of flooding in Boston, Miami, New York, Norfolk, and other population centers, as well as resort and recreational areas in the Carolinas and along the Gulf Coast. Harvey and Irma may be seen as a harbinger of future flooding affecting billions of dollars’ worth of real estate.

It is well to remember that while natural events catch our attention, climate trends are longer-range changes, but ones that developers and investors will be increasingly wise to pay close attention to.

Fiscal Pressure on States and Cities Will Grow

When asked what key issues the real estate industry might be missing, one institutional investment manager led with this: “Fiscal health and its effects on real estate investment returns.” He was not alone, as government budgets at the state and local levels ranked second among the social/political issues

in our survey. The CEO of a development firm acknowledged, “There is a limited public capacity to invest. Coming fiscal pressure of public employee pension liabilities will stress local governments. There will be more reliance on states [if they are healthy], the private sector, and philanthropy.”

The numbers are fairly startling. According to a 2017 Hoover Institution study, unfunded government pension liabilities at the state and local levels stand at \$1.378 trillion as conventionally accounted for, but could be as much as \$3.846 trillion if properly marked-to-market. All states are nominally in shortfall, but some are better off than others when assets are compared with liabilities. Among the top ten in terms of fiscal health are New York, Florida, North Carolina, Oregon, and Tennessee. Greater risks may exist in states at the bottom of the asset/liabilities ratio calculation: Illinois, Kentucky, New Jersey, Arizona, and Connecticut. Interestingly, the fiscal outlook appears to follow no simple pattern of geography or of political leaning.

Thus, careful analysis is definitely required. The institutional money manager first quoted in this section mentioned in his interview, “We are increasingly taking into account the fiscal problems in states. States that have their fiscal houses in order will receive increased investment. States and municipalities that have failed to be able to keep their fiscal house in order need to create some reasonable level of confidence that they won’t shove through counter-growth tax and regulatory policy changes.”

The Digital World: For Better or for Worse

“Doing it by the numbers” once meant sharpening the pencil and doing careful calculations on pre-electronic spreadsheets. (Remember them?) But now, just about everything seems to confirm what was believed by Pythagoras (569–475 B.C.): the whole world is made of numbers. Digital photography is the least of it. Our very bodies are digitized in biometric identification. Our preferences are catalogued as we shop, and “suggestions” for our next purchase flow to us unbidden. From the factory to the store to our home, goods are tracked and the supply chain automatically flashes with alerts to manufacturers, shippers, retailers, and accounting departments.

Emerging Trends has been pondering for several years about the implications of technological change: autonomous vehicles, blockchain, augmented reality. A recent study on artificial intelligence projects that 47 percent of the jobs now done by human are potentially replaceable in the advance of digital applications. Think of how many personnel have been replaced by personal digital assistants, which have now learned to speak to us in ordinary language.

Our interviewees recognize that the wave of change may be long, but it appears to be inexorable. One West Coast developer cites physical changes in vertical transportation, sorting out passengers by destination, clustering them, and selecting the elevator car that will deliver them most efficiently. Does this presage what commutation to work is going to look like? What about the implications for services professionals? Now that legal documents have largely been routinized and basic accounting functions outsourced around the world, will we be seeing the human elements of judgment reduced to algorithms in appraisal and underwriting? Most interviewees seem skeptical about using technology as a substitute for decisions, rather than as a way of getting right inputs.

But the truth is we really don’t know what’s possible five, ten, or 20 years from now. That’s the real estate decision dilemma for the short term: what’s the right thing to do for now, while keeping an eagle eye on the horizon. All this also brings up a related key question, though: with all our investment in new technology, how is it that we haven’t seen the anticipated acceleration in productivity that was supposed to justify that IT spending?

In this context, and given recent experience, it is hard to understand our survey’s finding about cybersecurity, which received a fairly moderate score. Given the computer hacking stories in politics over the past year or so, and high-profile invasions of corporate systems—including the theft of customer records—one might expect a greater degree of guardedness. Consider one case that began with an intruder entering a password into an HVAC system that, as it turned out, “talked to” other computers in a merchant’s customer network. Stories of ransomware are becoming more common, alarmingly in educational and health care systems supposedly

protected by Family Educational Rights and Privacy Act (FERPA) and Health Insurance Portability and Accountability (HIPAA) safeguards. As commercial and residential buildings become more and more connected via the internet of things, it would seem that cybersecurity could potential rise as an area of concern in future surveys.

Expected Best Bets for 2018

1. Evolving Housing Demand

It seems obvious, but the residual squeeze of the housing crisis has not gone away. The trouble is that residential development is overbuilding in the luxury sector in a handful of cities, while

the sweet spot in demand is in midpriced single-family houses that are affordable to a larger buyer pool. These homes are typically smaller than the McMansions that became popular during the last housing boom, especially in the Sun Belt and in select suburbs close to the gateway markets where lot costs were comparatively inexpensive. *Emerging Trends* interviewees see middle-market development as an opportunity. The type of product can range from tract housing to urban rowhouses, but the elusive key is getting the price point right while maintaining attractive economics for the developer.

At the same time, affordable rental units for millennials should see solid demand. Similar to the owner-occupied housing market, the rental market has seen more focus on high-end luxury units. Affordability is not just an issue for 24-hour cities or 18-hour cities, but also for markets thought to be some of the most affordable in the United States. Our focus groups see unmet needs in markets as diverse as Charleston, Atlanta, and San Antonio, as well as in Sacramento, Colorado, and southeast Florida. As in the single-family segment, opportunities exist across development segments: garden apartments, mid-rise rentals in the core, housing as part of transit-oriented development. The upper-income market is well served at this point, so builders can profit by going where demand has not yet been adequately met.

2. Focus on Income over Potential Appreciation

One of the critical factors in interpreting cap rates is an awareness that low yields often signal the expectation that current income will be less important than future appreciation for the investor. However, we are now at the point in the cycle where rent recoveries have matured in many markets and across property types. Cap rates have been compressed, but are leveling off. Even if—as many of our respondents expect—rising rates will not compromise value, appreciation is likely to be muted even in secondary and tertiary markets. That means focusing on cash flow and asset management in the immediate and mid-term future.

Even in the value-add space, managers need to husband NOI while assessing the need for tenant improvements and other forms of capital expenditure. That points to investments in well-leased industrial properties and triple-net-leased properties secured by corporate credit in the retail sector. It also means that build-to-suit buildings should do well for office developers. In fact, financing is more and more dependent upon demonstrated income stability. Late-cycle conditions and the prospect of only moderate economic growth do not encourage speculation. For now, conservation of capital takes priority over stretching for yield.

3. Experiential Retail

If an opportunity exists for contrarians, it has to be in the retail sector. “Food, fun, and fitness” are elements of consumption where brick-and-mortar shops compete effectively with e-commerce, where the shopping transaction is more social than a mere exchange of cash for goods. The desire for “an experience” is not restricted to the young, by the way. High-street tourism destinations, ethnic marketplaces, and even traditional stores using social media to amplify on-site interactions with

customers provide an energy and excitement that are missing from the “click and wait for delivery” model of online shopping. Convenience counts, of course, and so does value. But the market has for centuries been a place where the community gathers. That tradition meets a deep human need.

For real estate, however, that presents certain challenges. Active management, an acute ear for consumer preferences, and operational flexibility are *sine qua non*—this means property owners who are as entrepreneurial as the merchants to whom they lease. So, such opportunities are most appropriate for those in the opportunistic investment style—developers and property managers who are nimble and culturally embedded with their customer base. There is an amazingly broad base to the commercial real estate pyramid that fits that bill, even as retail remains challenging for low-risk “core” passive investors.

4. Senior Housing Momentum Growing

Put aside any thoughts of uniformity in the context of the housing needs of America’s seniors. Tremendous intragenerational diversity exists in our oldest age cohorts. Addressing the residential needs of the population moving through their 60s, 70s, and 80s is creating a spectrum of opportunity for the real estate community. That spectrum spans geography and reveals an array of market niches defined by levels of service. The driving force, though, is the inexorable increase in the senior demographic cohort. As of 2016, there were 49.4 million U.S. residents aged 65 or older, or about 15 percent of total population. By 2030, that figure is projected to grow to 75.5 million, or 21 percent of the population, according to the U.S. Census Bureau.

The range of product types extends from active age-targeted communities for new retirees or near-retirees, to facilities with graduated levels of living assistance and health care. While it is the 82-to-86-year-old cohort that dominates the assisted living and more intensive care sector, even that demand segment will be increasing by the millions. Since this has been considered a specialized investment segment, many are not aware of the rising liquidity (more than \$14 billion in transactions in the year ending second-quarter 2017) and returns outpacing the NCREIF NPI benchmark by 400 basis points. Housing for seniors topped the list of all residential segments in this year’s survey in terms of its development and investment prospects for 2018. While supply has been on the increase, recent annualized completions remain relatively modest at about 22,000 units. The outlook for senior housing is discussed in greater detail in chapter 4 of this year’s *Emerging Trends* report.

Capital Markets

“We’ve seen 18 months of cap rates leveling off . . . we’ve not seen the market driving up prices with reckless abandon. On balance, real estate looks good.”

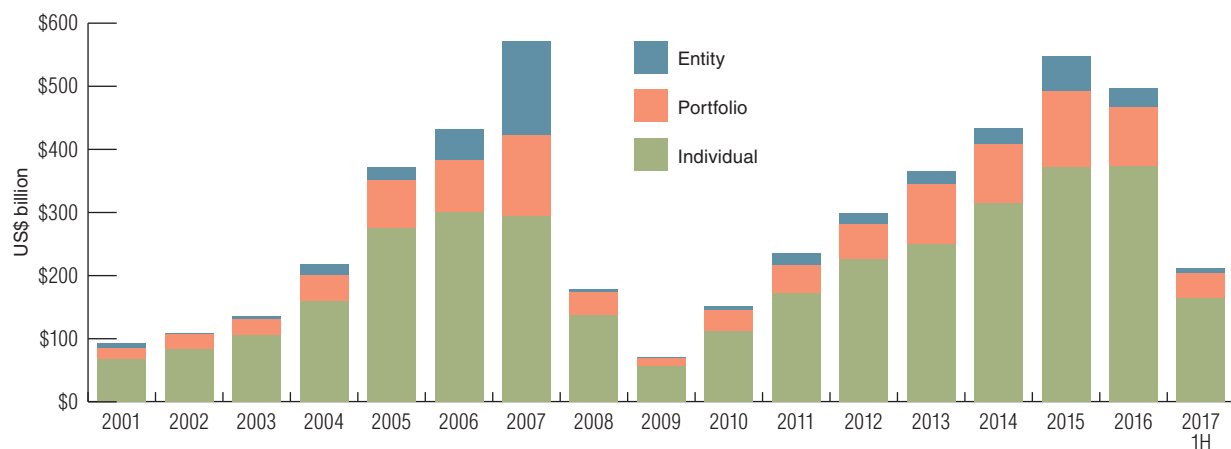
The capital pool is deep, diverse, and favorably inclined toward U.S. real estate investment opportunities. That’s good. But this is not the first time that such conditions have prevailed, and the outcomes have not always been positive. A surfeit of capital, arguably, distorted the markets during the late syndication boom of the 1980s, in the tech bubble of the 1990s, and in the housing market dislocation of the last decade.

But it is equally arguable that the problem was not the volume of capital itself, but rather its pattern of deployment. While we should all be skeptical of the claim “this time is different,” that does not necessarily mean the claim must be false. Some significant differences can be identified at the present time.

In a phrase, we might find capital deployment having the following, more encouraging, attributes: in structure, in selectivity, and in staying power.

Structurally, we are seeing investment on both the equity side and the debt side of the market adjusting itself to a manifestly more conservative distribution of risk, with more emphasis on return of capital and lower expectations about more speculative return on capital. Thematically, we will see this in our discussion in this chapter about capitalization rates and other yield measures, in risk premiums, and in the very interesting evolution of the middle of the capital stack—preferred equity and mezzanine debt.

Exhibit 2-1 U.S. Sales of Large Commercial Properties



Source: Real Capital Analytics.

Note: Based on independent reports of properties and portfolios \$2.5 million and higher. Before 2005, RCA primarily captured sales valued at \$5 million and above.

Selectivity is at the root of the apparently contradictory conditions in the investment transaction market. While all indications are that capital is growing more abundant, transaction velocity has been slowing. “Dry powder,” meanwhile, is on the rise in the private equity space. Underwriting of commercial real estate loans is tightening across all categories (land and development; multifamily; and nonresidential commercial property). *Emerging Trends* survey respondents suggest that the result will be a modest reduction in effective capital availability in 2018.

Still, little evidence exists that we will be seeing a rush to the exit as this cycle unwinds. Interviewees do not regard “hot money” as a factor. Rather, there is an appreciation that greater sophistication in both the institutional and the private wealth sectors of real estate capital is supporting pricing. World Bank studies identify three factors increasing the supply of global savings through 2030: aging populations, developing nations’ economic growth rates, and the deepening of financial markets. Ample reason exists to think there is significant staying power in the capital pool. U.S. real estate is certainly competitive as an investment product as that pool grows over time.

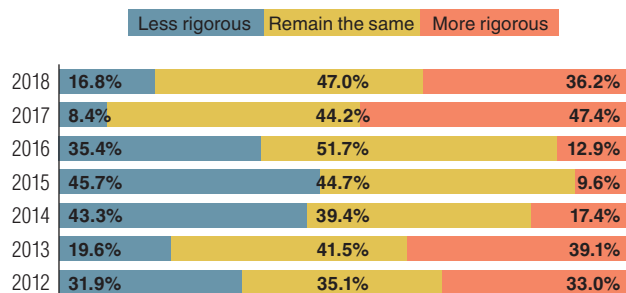
The Debt Sector

A veteran executive in institutional investment management describes a sea change in attitude among capital sources: “Debt is having a terrific run. While it was seen as a stodgy strategy ten years ago, now it’s considered a clever play.” A real estate investment trust (REIT) chief executive officer (CEO) concurs: “The debt side is very dynamic—lots of flavors on the menu.”

Data from the Federal Reserve (in its June 2017 report) show year-over-year growth in mortgage debt outstanding at 3.7 percent. Tepid change in one-to-four family loans (2.4 percent) was far outstripped by commercial nonresidential assets (4.8 percent) and by a major surge in multifamily loans (9.7 percent). Banks registered an 11.3 percent increase in their multifamily portfolios, while posting a significant 8.6 percent increase in commercial property loan assets. Life companies, meanwhile, showed an even more rapid increase (9.2 percent) in their portfolio of commercial real estate loans. There is some similarity, too, in capital flowing through federal agencies. While the overall loan portfolio held by government agencies grew just 3.1 percent year-over-year, Fannie Mae’s multifamily holdings surged 16.5 percent.

Classically, lending is a trade-off between safety and yield. If anything, the trauma of the global financial crisis (GFC) reinforced this basic economic principle. There is every sign that security of capital will dominate over a drive toward higher yield for the balance of this decade.

Exhibit 2-2 Debt Underwriting Standards Forecast for the United States



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

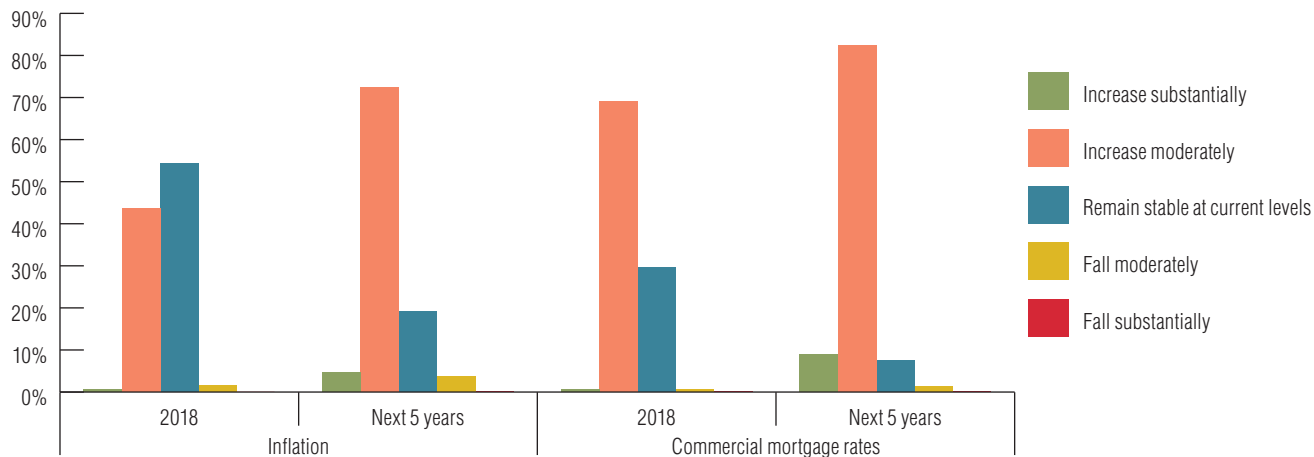
Many expected a reversion-to-the-mean phenomenon when loan-to-value (LTV) ratios were driven down to 60 percent or so immediately following the GFC. The thought was that LTV ratios would drift upward to a “more normal” 70 to 75 percent as the market strengthened. Such expectations are being frustrated.

Even in strong sectors such as multifamily or regions such as the U.S. Southeast, interviewees report LTV ratios in the range of 55 to 65 percent. With borrowers, as usual, seeking to take advantage of higher leverage, lower LTV ratios on senior debt have created wider opportunities in the middle of the capital stack.

Right now (and for the near-term future), the playing field is tilting toward mezzanine lending rather than preferred equity. Mezzanine debt is collateralized and therefore cheaper. The security of the mezzanine lender can be firmed up by careful intercreditor agreements and still yield returns in the high single digits. Both senior and junior lenders are underwriting on cash flow and debt-service coverage. Lenders are reluctant to fund speculative development, given the impact of failed land and construction loans on institutional balance sheets a decade ago. Natural reluctance is buttressed by the Basel III HVCRE (high-volatility commercial real estate) requirement, which, since January 2015, has mandated a 150 percent risk-weight capital requirement for new construction unless there is 15 percent cash equity from the developer and the loan is no more than 80 percent of estimated value at completion. Such regulatory requirements help explain why oversupply is a lower-than-normal risk at present.

Real estate has a long history of aversion to regulation, but many top executives are now taking a more nuanced view. One international investment manager suggests that a benefit exists to “preventing the poor lending practices of the previous cycle.” Another worldwide investor notes that “the major banks have

Exhibit 2-3 Anticipated Inflation and Interest Rate Trends, 2018 and the Next Five Years



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

reached their internal caps” for construction loans and want to demonstrate discipline to their financial overseers. A top institutional researcher says, “Believe it or not, the big banks don’t want the regulatory framework rolled back. They view the cost of regulation as a barrier to entry to other lenders coming into their space.” Some bankers disagree, however, seeing a void into which less experienced lenders will step, expanding the risk of failed development.

Builders want to build, and so they have indeed been seeking alternative sources of financing. One developer in the Carolinas, long familiar with offshore equity sources, has turned to capital markets in Tel Aviv for construction financing, using his strong balance sheet as an alternative to project-level collateralization. South Korean debt funds also are expanding their footprint in the United States.

Strong tenant credit supports deals in office and industrial development. An officer at a West Coast firm says, “A build-to-suit with one of our high-credit tech company users is a deal we would make all day.” And, for higher-risk ventures, there are now debt funds oriented toward higher-yield product.

Emerging Trends is detecting no signs of “irrational exuberance” among lenders. Many potential borrowers and deals out there are seeking funding. That puts lenders in the driver’s seat.

Banks

Depository institutions hold approximately \$4.6 billion in mortgage debt, or 32 percent of all mortgage loans outstanding. But they punch above their weight in the multifamily sector, with a

36 percent share, and well above their pro-rata share with 61 percent of nonresidential commercial mortgages.

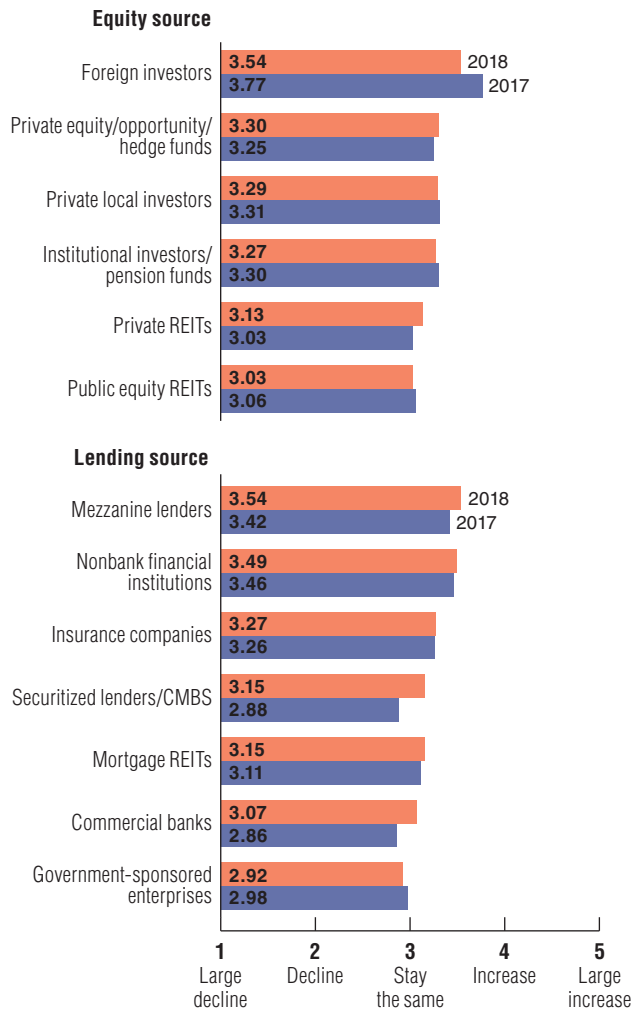
Our survey respondents indicate that they expect commercial bank lending to stay “about the same,” scoring 3.07 on our survey scale.

Our interviewees would love to see a greater expansion of bank mortgage activity. Bank pricing is favorable when compared with debt funds, and represents a broader market for borrowers than they find in the life insurance companies. And there is still the element of relationship banking that borrowers favor when compared with CMBS. Even so, according to a senior manager at a major mixed-asset investor, “the banks are pulling back.”

Why? The Federal Reserve posed exactly this question in its most recent Senior Loan Officer Survey. The answer came back this way: “Banks cited a less favorable or more uncertain outlook for CRE property prices, capitalization rates, and vacancy rates or other fundamentals as their most important factors. Participants also cited a reduced tolerance for risk.” An interviewee from a major multifamily owner-operator says, “Eighteen months ago, you’d have four or five banks beating down your door. Now you have to call them all, and you may get one workable response.”

Regulatory constraint has fallen most heavily on the biggest banks, opening lending territory to regional and community banks. In many ways, such more local institutions know the secondary and tertiary markets more intimately. They have relationships with local developers. And they have their finger on the

Exhibit 2-4 Availability of Capital for Real Estate, 2018 versus 2017



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

pulse of the small businesses that make up much of the tenant base in metro areas under 1 million in population.

However, as those remembering the savings-and-loan collapse of the late 1980s can attest, such local knowledge is not proof against loan losses. One Bay Area banker frames his discussion this way: “Systemic risk from real estate is actually lower in the money center banks. Regional and community banks are where real estate drives earnings, and where signs of more aggressive lending is occurring . . . with incentive programs payable on originations.”

While the acquisition of distressed debt is far off its recessionary peak, it has not gone away. An officer in a well-established firm specializing in distressed debt sees a pick-up in portfolios from smaller metro areas across the U.S. Midwest, describing the product as “business loans, land loans, middle-quality real estate, whose loan duration tends to be short at floating rates.” A \$5 billion bank in Louisiana recently went down, and its underwriting showed an overly optimistic extrapolation of post-Hurricane Katrina demand growth indefinitely into the future. The local economic base could not reasonably sustain this expansion.

Fundamentally, there is no reason to think that commercial banks will be a diminished source of debt capital going forward. Mortgage lending is a core function for these financial intermediaries. Profits are high and steady in the banking sector, roughly \$110 billion as of early 2017. Cost of funds is exceptionally low—in the Fed Funds rate, and in the infinitesimally small rate paid on deposits. So the spread on mortgage lending is excellent. And the outlook for regulation is “less, not more” as pressure to ease Dodd-Frank strictures now prevails in Washington. Borrowers always want the loan spigot open wider, but, objectively, commercial bank lending is unlikely to be disappointing in 2018.

CMBS

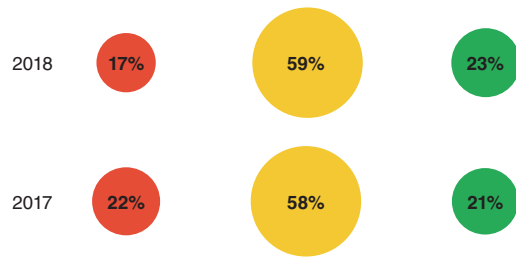
Since last year’s *Emerging Trends in Real Estate* survey, the score for anticipated availability of debt from CMBS and other securitized vehicles has risen from 2.88 to 3.15. This 27-basis-point increase is the biggest improvement of all capital sources, but still places CMBS in the “about the same” classification for lending availability.

Low expectations reflect the degree to which this debt financing source has failed to snap back to anything near its pre-global financial crisis vigor, which reached \$228.6 billion at its peak—just as the bubble burst. Few expected issuance to return to that level, but securitization boosters cheered as CMBS surpassed the \$100 billion mark again in 2015. But structured debt dropped a sharp 25 percent in 2016, and early-2017 volume is barely keeping pace with that lower figure.

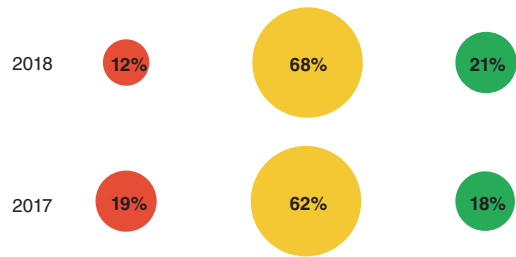
CMBS is a niche product in the debt markets for the time being. The good news is that delinquencies are muted. “Muted” is a relative term, frankly: CMBS delinquencies are running at about 5 percent, while other lender categories are less than 1 percent, according to published reports from the Mortgage Bankers Association. Nevertheless, this is far from the catastrophe that many feared as the “wall of maturities” of the sketchy product underwritten a decade ago hit the market. The most serious risk remaining in aging CMBS is in the retail sector, and securitized

Exhibit 2-5 Real Estate Capital Market Balance Forecast, 2018 versus 2017

Debt capital for acquisitions



Debt capital for refinancing



Debt capital for development/redevelopment

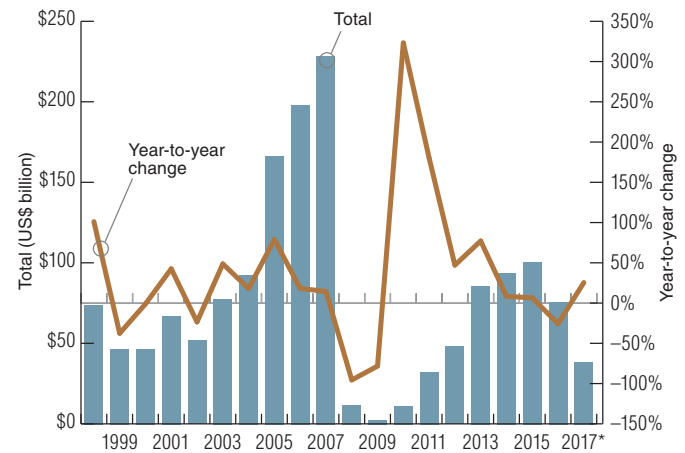


Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

debt is hardly the only real estate segment struggling with the retail property type.

One indication of the diminished capacity in CMBS world is the aggregate volume of debt outstanding. This now stands at \$463 billion, down about \$82 billion from just a year ago. As borrowers value flexibility and adaptability more and more, the constraints of dealing with special servicers once trouble appears in the lower tranches of CMBS are putting off those who consider “working with the lenders” as a feature of late-cycle finance.

Exhibit 2-6 U.S. CMBS Issuance



Source: *Commercial Mortgage Alert*.

*Total through June 30, 2017. Change in 2017 is from the first half of 2016.

That said, there is unquestionably a place for this product on the cafeteria menu of debt options. Originating banks are getting their arms around the risk retention requirements, and finding how overall pricing needs to reflect that cost.

One large money manager put it this way: “CMBS is available for those with less-than-sterling credit. Such deals tend to be in tertiary markets, but also for the largest deals in prime markets, either for single-asset CMBS or for portfolios. The B-piece buyers are money managers, with BBB tranche going to bond funds based in Europe.”

A data provider with a broad window into transaction financing concurs: “CMBS doesn’t have a huge pricing advantage anymore, although it can handle big assets and big portfolios that traditional lenders can’t manage alone, without a ‘loan club’ to fall back on.”

But even among the balance sheet lenders, there is no inclination to write off the role of CMBS. As a senior executive at a large life insurance company remarked, “Issuance is slowly gaining traction. Price recovery has helped enormously. CMBS should be seeing moderately rising volumes over time.”

Life Insurance Companies

Mortgage lending by life insurers can be expected to continue to press forward on the steady path they have been blazing since reentering the market in force in 2011. The life insurance companies now hold \$472 billion in mortgage assets. Their asset base has been growing at about 9 percent over the past year. The American Council of Life Insurers (ACLI) reports that its mem-

bers generated \$64.9 billion in commitments in 2015 and \$66.7 billion in 2016. New commitments thus far in 2017 suggest that the trend line will extend upward again this year.

Emerging Trends survey respondents rate the 2018 prospects for insurance company loan availability at 3.27 on our 1-to-5 scale, indicating an expectation that it will “stay the same” compared with the previous year. The life companies almost always have a queue of potential borrowers on hand. Contract interest rates for fixed-rate commercial mortgages are holding at about 4 percent, indicating about a 200-basis-point spread to the lender. The ACLI data put the average loan-to-value ratio at 58 percent, although higher LTV ratios are available for apartments and selected mixed-use assets.

As balance sheet lenders, life insurance companies diversify their portfolios across property types and geography. In keeping with strategies seeking to minimize volatility, the vast majority of their lending will continue to be fixed-rate instruments rather than floating-rate instruments, with maturities approximating ten years.

The exception, noted in previous editions of *Emerging Trends*, is development financing in the insurers’ “build to core” product line where a seamless facility provides construction financing for high-quality assets in the nation’s top markets—underwritten very conservatively—with the permanent “take-out” loan pre-arranged by the issuer. This is a very selective product line that provides the life insurance companies with a pipeline of product where spreads are not bid down excessively in the larger competitive market for mortgage originations.

Life insurance companies can also be expected to expand in other debt areas, including bridge loans and mezzanine debt, as well as forward commitments for foreseeable capital expenditure needs. As the chief operations officer (COO) of an East Coast developer observes, “Everybody is jumping into everybody else’s sandbox.”

Mortgage REITs

Like all REITs, mortgage REITs (MREITs) provide a tax-advantaged vehicle for investors to participate in the real estate markets. MREITs are secondary debt market participants, buying and pooling residential and commercial mortgages as well as previously securitized CMBS (discussed above) and RMBS (residential mortgage-backed securities, either those issued by government agencies or by so-called private-label entities). According to June 2017 statistics published by the National Association of Real Estate Investment Trusts (NAREIT), there were 39 MREITs with a total market capitalization of \$63.3

billion—a comparatively small slice of the real estate debt markets. However, they are traded in the public markets, which makes for liquidity and pricing transparency that is important to many investors.

Respondents to the *Emerging Trends* survey expect moderate growth for MREITs in 2018, with a score of 3.15, up from 3.11 last year. MREITs contribute to the recapitalization of originators, affecting the pool of overall debt capital available in the primary mortgage market. There is \$49.2 billion in MREIT capitalization (78 percent) in the residential sector, with the remaining \$16 billion focused on commercial property debt.

Since MREITs effectively arbitrage short-term capital (traded daily) against longer-term instruments, they must pay close attention to interest rate risk. Expectations of a rising and somewhat flattening yield curve have generally caused analysts to be cautious about MREIT prospects, but they have performed well (rising 22 percent in 2016, for instance). Part of the reason is high yield, with five-year total returns for residential MREITs (through May 31, 2017) at 10.8 percent and at 17.8 percent for commercial MREITs. Plausibly, near-zero Fed interest rates over that span contributed heavily to those outsized yields, and rising rates could affect returns. The Fed has been very careful to signal its application of monetary policy, and the worldwide appetite for U.S. Treasuries is dampening the upward movement of the yield curve. Nevertheless, both policy and financial market-based trends could pose downside risk for MREITs.

The other key risk for MREITs is the quality of the underlying mortgages, of course. It is unlikely that investors will forget anytime soon how inattention to fundamentals led to losses, big time, during the global financial crisis. Trends in the primary lender space—conservative LTV ratios, attention to debt-service coverage, skepticism of aggressive cash-flow assumptions, and the like—bode well for principal protection in the mortgages held by MREITs.

One additional variable should be considered, although it remains an “unknown” at present: tax reform. The attractiveness of MREITs is anchored in the tax-advantaged status of all real estate investment trusts. Should a dramatic change in tax rates alter the playing field for investors, lowering exposure to taxation across the board, some of that advantage is likely to be compromised. Any changes in the tax code will likely be biased toward lower, rather than higher, tax rates. Like everything else, it is a trade-off, and the MREIT sector will need to do some careful math to discern the impact of policy proposals on its business outlook.

The GSEs

Government-sponsored enterprises (GSEs) have held remarkably steady in our survey, with a score of 2.92, down slightly from 2.98 a year ago but right in the “stay the same” interpretive band on the *Emerging Trends* scoring scale.

As it happens, the mortgage holdings of federal agencies increased a little over 3 percent in the past year and now stand just above \$5.2 trillion. Most of this is directed to the residential sector, largely in one-to-four family lending, although Fannie Mae has continued to participate in the multifamily market.

No indication exists that a major shake-up will be deflecting these trends anytime soon. Since the government took Fannie Mae and Freddie Mac into conservatorship in 2008, the GSEs have contributed tens of billions of dollars of net profits to the U.S. Treasury, and have substantially higher returns on the so-called bailout investments when compared with other GFC federal programs. Some believe this argues that the GSEs should be released from conservatorship, but here is where market-oriented policies collide with budget-balancing exigencies in evaluating fiscal impacts. Upsetting the apple cart, killing the golden egg-laying goose, cutting off your nose to spite your face: pick your cliché, but it would be a surprise to see an effective move to upset the positive trend of GSE operations in the near future.

Debt Funds

A couple of years ago, we noted that “debt funds are springing up like dandelions.” Oh, yes, that was indeed an emerging trend! The private mortgage sector accounts for about \$677 billion in loans outstanding to the multifamily and commercial property markets, according to Federal Reserve data, once adjusted for the previously discussed MREITs. As an officer at one institutional investor observed, “There are a huge number of debt funds out there that are filling the gap” opened by traditional lenders that take the more conservative path in underwriting.

Mezzanine lenders and nonbank lenders top our survey results when it comes to expected change in availability of mortgage money for 2018; both are slightly up in their survey scores compared with a year ago. It is reasonable to expect that the debt funds will be “filling the gap” again.

How so?

This is the source of real estate mortgage funding that is most likely to be at play in the middle of the capital stack—particularly in the mezzanine space and for “transitional assets” (i.e., fund-

ing for value-add properties). One large and well-established institutional fund manager remarked, “You’re going to see a lot of debt funds being raised at lower returns; the old debt funds probably raised money at an 11 to 13 percent total returns and the new debt funds probably are really around 8 percent. There’s going to be, as in the equity market, a compression of yields.” Why? Once again, the widening space has made the necessary risk premiums lower—with senior debt below 65 percent LTV, the mezzanine tranche has much better security in its collateral.

What is the spread premium for the debt funds? At least 100 to 150 basis points, and as much as 300 basis points, depending upon deal specifics, according to our *Emerging Trends* interviewees.

More and more cross-border investors are playing in this space. “We are seeing the South Koreans, for instance, very active there,” said one New York-based capital manager. A prominent data analyst chimed in, “The Germans and the Swiss are in there, too. Sovereign debt is even lower—sometimes negative—elsewhere in the world.” Still, some understandable nervousness exists among our interviewees that foreign debt, in junior positions, is shielding domestic equity capital in secondary and tertiary markets.

If the unwinding of this economic and real estate cycle turns out to be as gradual and moderate as expected, investors in debt funds should be well satisfied and the trend toward this niche in capital allocation could continue to strengthen. However, as in all evaluations of risk, the trick is to match the pricing of risk with the potential severity of loss and its probability. It is doubtful that we yet have algorithms to fully accomplish that.

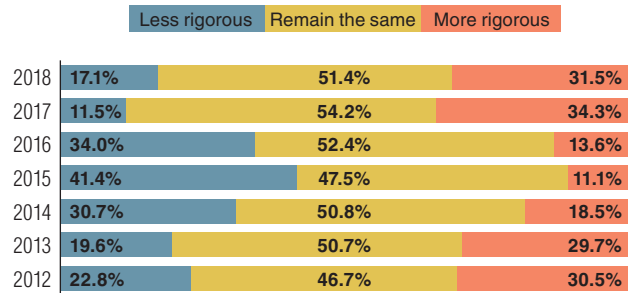
The Equity Sector

It is an all-too-easy temptation to consider real estate as an inside game. There are certainly enough details and depth, enough complexity of process and analysis, enough scale from a physical and/or financial standpoint, enough diversity in product or geography to be entirely self-regarding—to view real estate simply in real estate context.

That sells the industry short.

Real estate is embedded in the economy and, more powerfully, in people’s lives. Our buildings are where we live, work, and shop. When we travel for business or pleasure, we use property including the built environment and the natural environment within which buildings exist. In sickness and in health, we depend upon functioning real estate. And, though this is

Exhibit 2-7 Equity Underwriting Standards Forecast for the United States



Source: *Emerging Trends in Real Estate* surveys.
 Note: Based on U.S. respondents only.

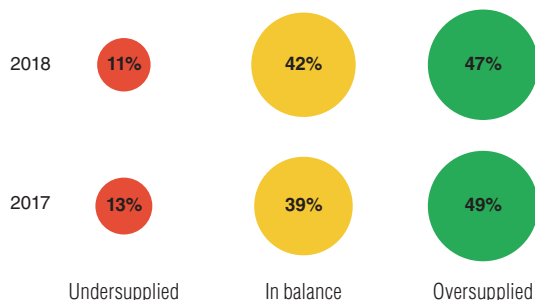
sometimes forgotten, we grow our food, harvest our timber, and extract our natural resources on the fundamental form of real estate, which is the land itself.

Equity investment in real estate is a tangible and dynamic function most clearly understood in its network of socioeconomic connections. The selection of where to place investment, by location and by property type, is not just a matter of picking winners and losers. It helps shape the future economy by the very commitment of capital.

Consequences of investment choice affect not only the sources of capital, but also the places where the real estate is located. Value enhancement in real estate bolsters local economic activity and shores up municipal finances, both indirectly through the rejuvenation of neighborhoods by new development or renovated older properties and directly in the strengthening of the tax base. Disinvestment, on the other hand, moves cities, suburbs, and small-town America in another direction entirely.

Exhibit 2-8 Real Estate Capital Market Balance Forecast, 2018 versus 2017

Equity capital for investing



Source: *Emerging Trends in Real Estate* surveys.
 Note: Based on U.S. respondents only.

So, the way to read any discussion of equity investment in real estate just begins with the financial aspects. The more complete story has to do with how property investment serves to increase the vibrancy of place and the quality of life for all who live and work across America's thousands of communities.

Institutional Investors

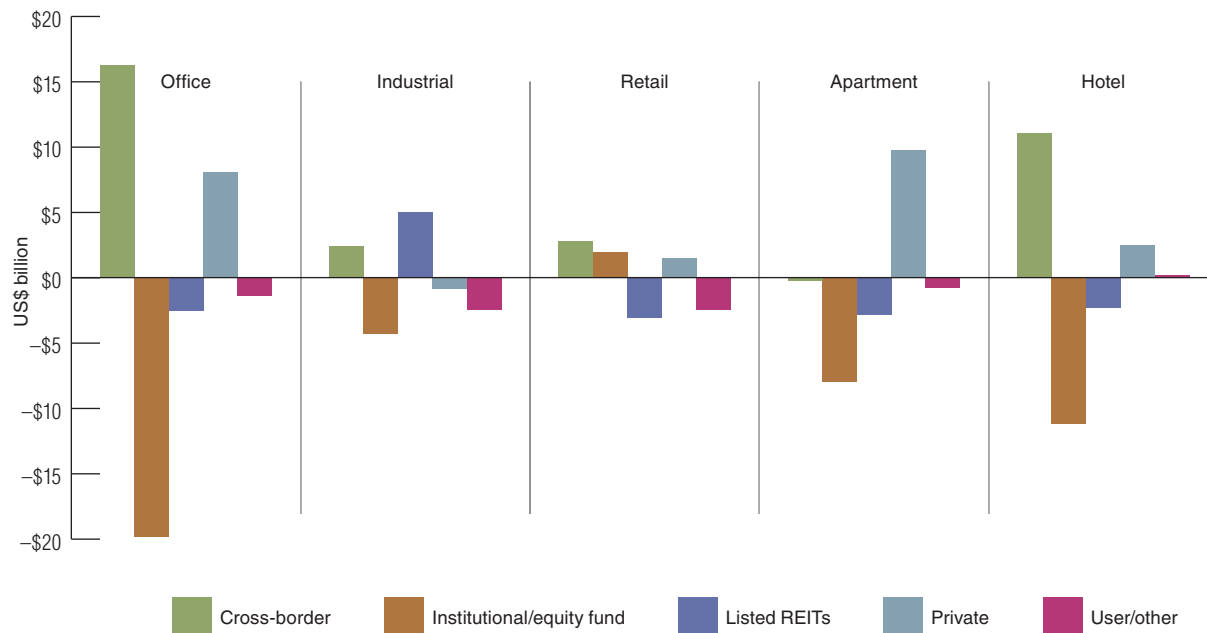
Interviewees are describing institutions as "fully invested" in real estate equity. While this does not imply that portfolios are frozen in place, it does suggest that activity will largely consist of moving pieces on the chessboard in order to improve strategic positioning. If that sounds boring, it actually is not dull, nor is it unimportant. A well-respected analyst indicates, "While institutions have been taking profits, especially as finite-life funds reach their maturities, this is really a positive signal of discipline."

As one capital manager put it, "There is little sign that institutional investors have relaxed their standards, although everyone has a full menu of 'style' options from core to opportunistic. AUM [assets under management] is a key driver. For funds with a good track record, there is no trouble raising money." Another large money manager acknowledges, "The focus on core assets and gateway markets has reached saturation. This is leading some institutions to go further out on the risk curve in search of yield."

What yield is required, or can reasonably be expected, will be coming more and more into public discussion. For one thing, it is almost impossible to listen to a discussion of public finance right now without hearing the term "unfunded pension liabilities." Substantial disagreement exists about what it will take to address the retiree funding gap, but there is certainly an awareness that funds that do not have the capacity to meet their obligations are in serious trouble under the Employee Retirement Income Security Act.

Many are watching states like Kentucky, which are reducing their actuarial assumptions for return on investment below 6 percent, anticipating a long-term environment of low investment yields. Other fiduciaries suggest that real estate in particular can generate earnings averaging in the range of 7 to 8 percent over the long haul, even if stock and bond portfolio performance may be in question. (It should be noted that even with the global financial crisis taken into account, the most recent ten-year return for the Dow Jones Industrial Average has been 7.23 percent and for the S&P 500 has been 6.94 percent.) At midyear 2017, the total return to the NCREIF Property Index portfolio hit 7 percent exactly, although the FTSE/NAREIT index went up just 5.09 percent year-over-year. (All cited returns as of mid-2017.)

Exhibit 2-9 U.S. Buyers and Sellers: Net Acquisitions, by Source and Property Sector, 2Q 2016 to 2Q 2017



Source: Real Capital Analytics.

Clearly, institutional managers are feeling a lot of performance pressure, especially with a prevailing sense that values are at or near a peak. Fund sponsors are continuing to consolidate managers, but that does not mean homogenizing the attributes of the managers. According to one industry association executive, some of these managers are “sharpshooters” who scour the country for the best deal in any given submarket. Others are “big guys” who are able to scoop up large portfolios across multiple markets, making for greater efficiency in putting capital to work. But it does appear that less institutional demand exists for the midsized generalist in the fund management business.

Competition is sharp, obviously, and that is why things are not boring, even in the world of historically conservative institutional real estate investors.

REITs

The periodic fluctuation of REITs between stock prices that value the company at premium or discount to the value of its real estate (i.e., net asset value [NAV]) is firmly in the “discount” phase. That means it is cheap to buy REIT shares, and relatively expensive for REITs to buy property, so the flow of equity capital in this sector will be directed toward corporate finance at the expense of REITs expanding their asset portfolios. It is not surprising, therefore, to see *Emerging Trends* survey respondents

expecting REITs’ equity flows into the property markets trading water in 2018.

Indeed, many of our interviewees see REITs more as sellers harvesting property gains this coming year. The COO of one trust sees the players in his space as “primarily sellers and not investing in any material way.” A senior managing director at an international development/investment company indicates that the trusts have been “net sellers, off on the sidelines.” Not everyone thinks this is a bad thing: a leading researcher believes that “REITs have actually timed this cycle pretty well, and are not out buying at this point.”

Given REITs’ dual presence in the market—as publicly traded entities as well as owners of real property—it is the action on the corporate side of things that should be dominating in 2018, and perhaps beyond. Thirty REITs are now listed on the S&P 500; that number was zero at the turn of the millennium. The market capitalization of REITs exceeds \$1 trillion. In many ways, “big is beautiful” and so observers expect entity-level transactions—merger and acquisition (M&A) deals—to prove the major capital market trend going forward. “Capital efficiency pressure” is the reason cited by one M&A specialist. This may not be simply internal to the REITs themselves, as indicated by a \$1.2 billion acquisition of an apartment REIT by a non-U.S. pension fund

and a \$377 million stock purchase for 9.8 percent of a triple-net-lease REIT by a huge investment conglomerate.

With the focus devolving toward corporate issues over and above property asset issues, greater attention is being paid to activism in corporate governance, especially since so many large REITs are S&P 500 listed. Many REIT shareholders are passive investors such as mutual funds or exchange-traded fund (ETF) participants. In this arena, recommendations narrowly focused on short-run trading tactics rather than long-run planning for vertically integrated real estate firm management may prove counterproductive. The consultants' influence could also reinforce the investor herd instinct that aggravates boom-and-bust tendencies. One longtime researcher specializing in the REIT space remarked in his interview that the inclusion of so many REITs in the S&P 500 actually dilutes the diversification benefits that publicly traded real estate firms provide for mixed-asset institutional investors.

Over the long haul, the growth of REITs from a small sliver of the real estate sector in the mid-1990s to the trillion-dollar industry of today is seen by boosters as just the first stage of growth. At a 2017 REIT conference, predictions were floated that the REIT market will double in size in the next decade—a growth rate of roughly 7 percent per year compounding annually, with globalization playing a key role and the migration of corporate real estate into the REIT structure. REITs are seen as the “natural home for stabilized income-producing properties.” Private REITs could also be playing a bigger role, especially as high-net-worth individuals seek greater market penetration. In fact, private

REITs posted a higher score for 2018 capital availability trends in our survey than did the publicly traded trusts.

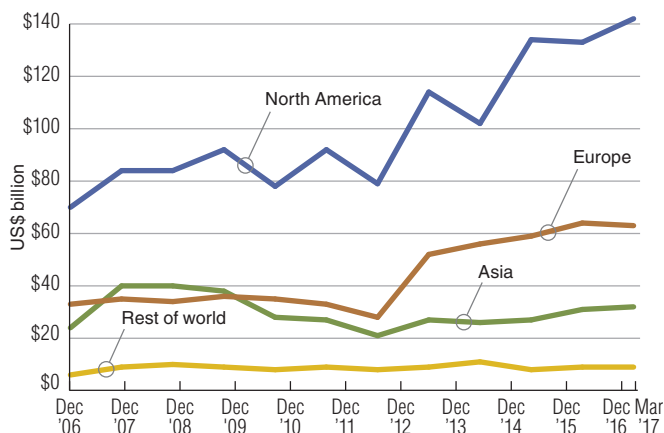
The current generation of REITs now has a cadre of battle-tested management that has navigated the most extreme of market cycles. If they are not crowing about market dominance (given the way their stock valuations have been bruised), there is still an air of confidence. As one experienced interviewee summarized, “The mood is good.”

Private Equity

Emerging Trends survey respondents remain fairly bullish about the availability of private equity capital for real estate in 2018, hitting a score of 3.30 on our 1-to-5 scale, up 0.05 from a year ago. Only international investors scored higher as a likely capital source. One REIT executive predicted, “I think we’ll see a lot more private equity investment. Capital flows into private equity [PE] are going to remain strong; they have a tremendous amount of viable capital now. I think PE will be a bigger player than [it has] been.”

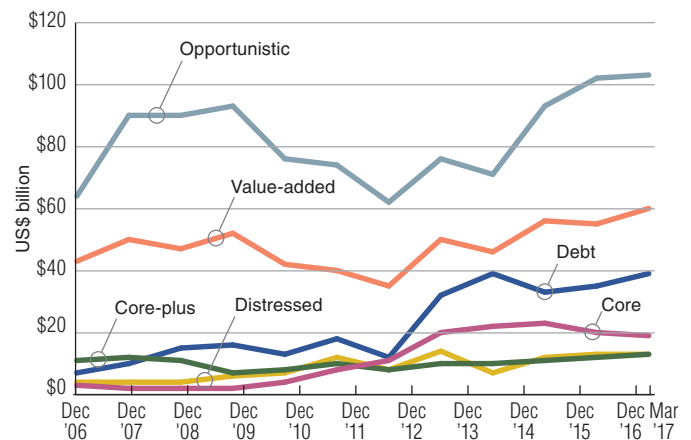
One of the major attractions of private equity capital aggregators is that they *are* private, and hence somewhat more nimble than firms in regulated sectors or having more cumbersome institutional decision processes, including boards accountable to public shareholders. Investors in these funds are typically motivated by yield, and this in large measure accounts for their anticipated competitive advantage in a yield-constrained investment environment. That places the PE firms in the value-add and opportunistic “style groups.” As one M&A specialist noted,

Exhibit 2-10 Closed-End Private Real Estate Dry Powder, by Fund Primary Geographic Focus, December 2006–March 2017



Source: Preqin.

Exhibit 2-11 Closed-End Private Real Estate Dry Powder, by Strategy, December 2006–March 2017



Source: Preqin.

“[Of the buyer groups,] private equity is the more logical buyer for assets needing active management.”

One partner in a PE enterprise indicated that turnaround situations and ground-up development are attractive to his firm. This includes suburban offices in “amenity-rich environments” (not “commodity office parks”). They will also do risk-manageable retail development on pads that can be triple-net leased to established service and/or food chains. Locations preferred include the far Main Line suburbs of Philadelphia; Charlotte, North Carolina; Scottsdale, Arizona; Santa Clara, California; Oak Brook, Illinois, and the like. It is evident that such a strategy does not go excessively out on the risk curve.

Whether the PE capital sources are organizations or individuals, foreign or domestic (and it is very difficult to unpack the sources of pooled capital, especially in the closely guarded PE world), interviewees are noting that such sources are increasingly more sophisticated. “This money is smarter than before,” a New York-based money manager remarks. “Private capital has been hiring expertise with prior fund-level experience.” Given the billions of dollars under management at the top PE firms and their alpha-seeking strategies, such experience can only be counted as a plus.

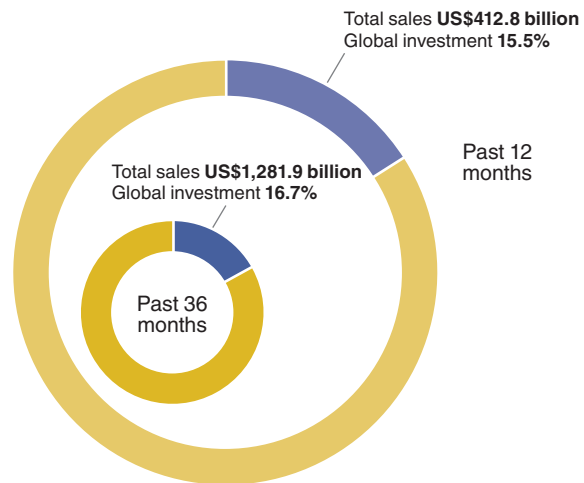
With 58 percent of the private equity “dry powder” oriented to North America, and 66 percent dedicated to value-add and opportunistic investment, the outlook for private equity real estate looks to be among the more exciting in the latter stages of this cycle.

International Investors

Of all the equity capital sources, cross-border investors are viewed the most likely to be active in the market in 2018, with a 3.54 score in our *Emerging Trends* survey, although this has ratcheted down from 3.77 a year ago. Interviewees uniformly report inflows from around the world: from Europe, from Canada, from Asia, from the Middle East. Political turmoil and currency issues in Latin America are stemming capital flow from the Southern Hemisphere right now, but that is the exception to the overall trend in international capital.

Entity-level as well as asset-level opportunities are being targeted by global investors. A Sun Belt residential developer/owner reports, as an “interesting phenomenon,” a push from Japanese money seeking to acquire operating companies. The idea is that “they want the people, not necessarily just the inventory.” South Koreans are seen as “leading offshore capital to second- and third-tier cities,” according to this same interviewee, while Canadian and Chinese pension funds and sovereign wealth funds are looking for real estate platforms as well as project-level

Exhibit 2-12 Global Real Estate Investment in United States as a Percentage of Total Sales



Source: Real Capital Analytics, as of June 2017.

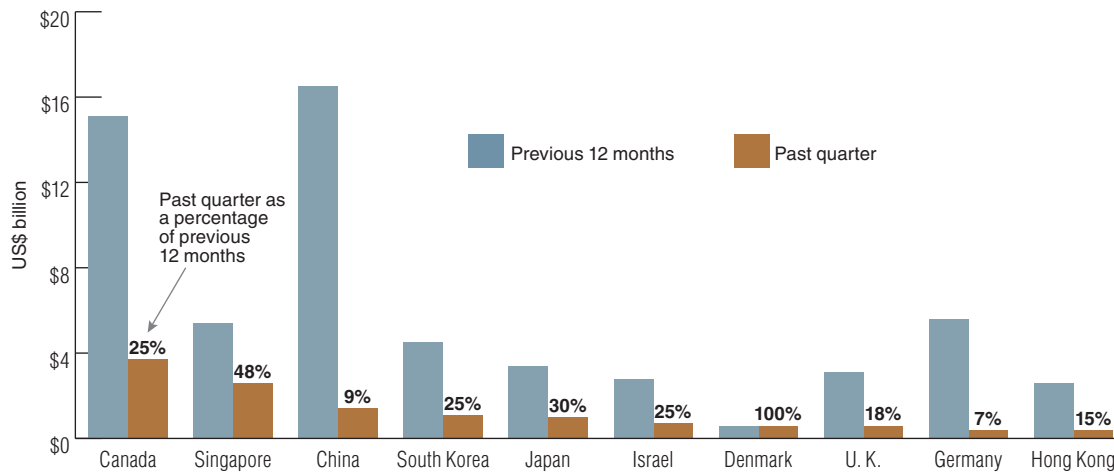
investments. This appears to be generational capital seeking wealth conservation and access to long-term market growth. The well-regarded CEO of a hotel advisory company sees the same forces at work in the hospitality industry.

The CEO of one aggregator that taps capital worldwide says of globalization, “You can’t put the genie back in the bottle. In some political circles, it has been expedient to say globalization is bad, but there has been no bigger beneficiary in my mind than the U.S. from a capital flow standpoint. The U.S. is still the number-one destination in the world.” His firm is in a good position to comment, since it intermediates American investment abroad as well as inflows into the United States.

The head of a multibillion-dollar real estate investment unit confirms this perspective. This interviewee says, “We’ve definitely seen strong interest in the U.S. and I think that [there is a] secular trend of global RE [real estate] investing. People want diversification and exposure to by far the largest RE market in the world, roughly 35 percent of the global RE industry, with its attributes of maturity and transparency.”

Cyclical timing has its impact, but it is not of overriding concern. Domestic U.S. political uncertainty is the factor more often cited as giving offshore investors pause. The notion that overt nationalism may make America less hospitable not only to the flow of people and goods, but also to business transactions recurred in our *Emerging Trends* discussions. Thus far, on the trade front, policy change is evaluated as “the bark is worse than the bite” when it comes to the North American Free Trade Agreement

Exhibit 2-13 Global Investment in U.S. Real Estate by Country



Source: Real Capital Analytics, as of March 2017.

(NAFTA), China, and even Germany. But some restiveness can still be discerned. As one developer with extensive international operations says, “China could retaliate by saying, ‘All that capital we could invest in your country is not going to be allowed to get invested.’ That worries me.”

Thus far in 2017, offshore capital—sourced from virtually all quarters of the globe—dominates the “top buyers” list in most regions of the United States. Momentum therefore seems strong. The trend, however, is not totally clear: will that momentum accelerate or decelerate under changing socioeconomic and political conditions between now and 2020?

Specialized Sources

Although this rarely makes the headlines, real estate ownership in the United States can be fairly described as a broad-based pyramid. A report from the U.S. Energy Information Agency released in 2015 estimated that there were 5.6 million commercial buildings in the nation, based on its 2012 Commercial Building Energy Consumption Survey. Though the estimates are obviously somewhat dated, they paint a dramatic—and statistically reliable—portrait of the inventory. And that portrait strikingly reveals that roughly 88 percent of the commercial properties in the country are 25,000 square feet in size or less. Fully half of the commercial buildings, in fact, measure less than 5,000 square feet. It is safe to say that investment in these properties depends upon capital sources other than those thus far discussed in this chapter.

Who are the investors? Virtually all (89 percent thus far in 2017) are categorized as “private investors” in Real Capital Analytics’

classification system, for commercial property sales of less than 5,000 square feet. The average sales price has been \$3.6 million. So, many of the buyers are individual investors, families, owner-users, or small groups pooling their capital. While an occasional institutional investor appears in the mix, we find virtually no cross-border buyers or REITs in this small-asset domain.

Looked at another way, first-half 2017 investment in the “tertiary markets” covered by RCA totaled nearly \$34 billion, or 16 percent of the aggregate national transaction volume. So, in addition to small properties representing a majority of the commercial real estate inventory (by number of buildings), small markets are also a substantial fraction of investment flows. Such markets include the Birminghams and Boises, the Tucsons and Tulsas of the nation’s urban list. As Arthur Miller wrote about Willie Loman, “Attention must be paid.”

One of the areas where the small investor is likely to face change is the potential in tax reform for alterations to the 1031 exchange market, a mechanism for tax deferral for like-kind property transactions. One of our interviewees, a CEO of a big-city commercial brokerage, warns that the velocity of such transactions supports a wide network of service jobs. “Taking this tax provision away would seriously constrain many economic actors—lending, property taxes, attorneys, brokers—a lot of people would be affected if owners just sat on their assets. Assessors look at ‘most recent deal’ as a basis for assessment.”

Crowdfunding remains a sliver of overall market activity, and industry sources indicate that virtually all participants are either individuals or noninstitutional entities (i.e., very small investors).

Although estimates of crowdfunding growth have been very high in percentage terms, if it hits the \$5 billion mark in 2017 (still optimistic), that will account for just about 1 percent of transactions. As such, crowdfunding is still a long way from having potency in the real estate capital markets.

Summary

The pool of debt and equity capital is deep and diverse, and should be expected to remain healthy through the foreseeable future. The depth of the pool, in particular, reflects both the growth in aggregate global savings and the inclination of investors to increasingly favor real estate as a vehicle for returns on and of capital. Slow growth in the economy is anticipated, and so both lenders and borrowers will be taking a conservative tack, especially if the “slow glide to a soft landing” economic scenario continues to play out.

The fungibility of capital makes it less vulnerable to cross-border restrictions than the movement of people or goods. Central banks are, politics aside, committed to a world where such capital flows are open. For real estate in the United States, this is an important feature since we see—now and in the future—tremendous demand for real property assets from both equity and debt sources abroad. This is not naïve or “hot” money, but capital allocated to U.S. markets on a strategic basis by sophisticated investors, either in funds or as high-net-worth individuals.

It seems apparent at this point that emergent trends in the capital markets have taken the lessons of the global financial crisis. Low leverage, moderate assumptions, and careful risk-pricing should be enduring features shaping real estate capital markets for the balance of this decade. Investors crave predictability, not excessive excitement now and in the near-term future.

Green Bonds

Green bonds are a new tool to fund energy efficiency projects, renewable energy projects, and the construction of green buildings. These bonds are debt instruments that pay regular coupons at a fixed amount over time. Green bonds differ from conventional bonds in that they are designed specifically to provide financing for projects with environmental and public health benefit. In 2016, green bonds became a significant and growing component of the overall bond market, with \$93 billion in new bonds issued. Investor interest in these bonds has been driven by a growing pool of investors looking for low-risk instruments that meet environmental and social criteria.

To date, these bonds have been primarily used by REITs and other developers to fund new green building–certified construction, renewable energy, and energy efficiency retrofit projects. To some extent, this is an additional capital source available to support sustainability objectives. Green bonds have typically been fully subscribed, suggesting that investor demand for this product is higher than current supply, and strong enough for future issuances. REITs have been joined by others issuing green bonds, including insurance companies, Wall Street houses, states and municipalities, and tech corporations focused in part on financing sustainable development projects.

A business case exists for using green bonds. With interest rates often in the 2 percent to 3 percent range, green bonds allow real estate firms to reach a targeted pool of debt capital, at lower interest rates than typical for development debt, and strengthen their brand reputation as sustainable developers. Green bonds also help the developers issuing the bonds to tap into new pools of capital focused exclusively on sustainable investing. At the end of 2016, the global volume of designated socially responsible investments (SRIs) measured \$22.9 trillion, of which \$8.7 trillion was in the United States. Investors use green bonds for many tactical and strategic purposes: as a proxy to hedge their investments in fossil fuel–dependent industries, or industries with significant

long-term climate risks. Developers use green bonds to respond to tenants' interest across the country in LEED and ENERGY STAR–certified buildings. LEED and ENERGY STAR are also becoming mandatory for new construction in several states and major metro areas.

At the same time, larger market forces affect the availability and utility of green bonds. For instance, they are not currently offering more favorable rates than traditional bonds of similar duration and risk. Many of the projects being financed by green bonds would likely have been completed using such traditional financing had green bonds not been available. If interest rates rise significantly in the coming years, green bond issuances (like other debt instruments) are likely to decline. If green bonds are found to have significantly higher issuing costs or verification requirements than traditional bonds without a commensurate discount in interest rates, they may find it even harder to compete in a future higher-interest-rate market.

In 2017, analysts expect the green bond market to more than double to \$200 billion. This market will be supported by institutional investors and other entities looking for triple-bottom-line investment opportunities and a potential hedge against industries with a significant climate risk. Bond issuers will likely include private developers and REITs looking to raise capital specifically targeted to finance green building and energy efficiency projects, and municipalities that want to raise capital for green infrastructure and low-income energy efficiency retrofits. Factors including rising interest rates and costs associated with tracking and verification of green bonds could slow the growth of green bonds. But if interest rates stay low, institutional investors continue to pursue SRI strategies, and green bonds continue to improve their transparency and standardization, these bonds should continue to be oversubscribed.

ULI Center for Sustainability and Economic Performance.

Markets to Watch

“We no longer think of markets in terms of absolutes, but rather how different themes interact within the market.”

As the real estate industry positions itself for the “long glide path to a soft landing,” is it changing the way it evaluates expected market performance? “At this point in the real estate cycle, I’m not seeing a lot of investor interest outside the top markets,” according to a pension fund investor analyst. “Investors still want to maximize returns, but are sensitive to taking on too much risk.” A contrary opinion was expressed by a portfolio manager for an institutional investor: “Investors may want to take a harder look at some of the top secondary markets, particularly those with the top-performing submarkets.” The difference in opinion expressed by these interviewees isn’t unique. It appears that as the real estate recovery moves into its eighth year, market opinions may well be getting more diverse.

The market outlooks included in each edition of *Emerging Trends in Real Estate*® are based on an extensive survey, multiple interviews, and individual market focus groups. This year, all these components took place between June and August. Given the timing, the current and future impacts of Hurricane Harvey and Hurricane Irma on the people, economies, and real estate sectors in a number of markets are not reflected in this year’s results.

As of the publication of this year’s report, it is impossible to precisely determine the total impact on Houston and the rest of Texas as well as the multiple markets in the state of Florida. Throughout the end of 2017 and into 2018, these markets will be deeply involved in the process of ensuring the safety and comfort of their residents. Once that has been achieved, the next step will be to assess the full extent of the damage and make plans for rebuilding.

Based on the views expressed in this year’s interviews and focus groups, a few issues will be key to watch as the

2018 Market Rankings

Emerging Trends in Real Estate® survey respondents have selected Seattle as the top-ranked market in this year’s survey. Seattle’s ascension to the top spot, up from being ranked number four last year, ends Texas’s hold on the top spot after three years. Austin, which held the top spot last year in *Emerging Trends 2017*, is down a position to number two. Dallas/Fort Worth, which topped the survey in *Emerging Trends 2016*, is number five this year. Houston, which was the number-one market in *Emerging Trends 2015*, before the disruption in the energy industry, has fallen in the survey each year and declined another 20 spots this year to number 60. It is important to note that the survey was conducted before Hurricanes Harvey and Irma.

rebuilding process begins. The first is the impact on demographics. Many of the markets affected by the hurricanes have experienced strong demographic growth. Will they be able to keep residents displaced by the storms, let alone attract the same level of new residents? Another major concern will be housing stock. Housing affordability is also viewed as a strength in these markets. With the stock of housing diminished by storm damage, will housing costs remain affordable? Which brings us to a concern of multiple markets—a shortage of qualified construction labor. What will a surge in demand for construction labor and materials do to the cost of new and replacement structures?

This is not the first time U.S. markets have faced devastation from natural disasters, and as noted in chapter 1, it isn’t likely to be the last. Going forward, these markets will likely display the resilience of the markets that have faced the challenge before them, and along the way create more opportunities for their residents, economies, and ultimately the real estate market.

Exhibit 3-1 U.S. Markets to Watch: Overall Real Estate Prospects

	Investment	Development		Investment	Development
1 Seattle (2, 1)	3.74	3.74	40 New York—other boroughs (43, 35)	3.29	3.14
2 Austin (3, 2)	3.69	3.61	41 Palm Beach (45, 36)	3.28	3.14
3 Salt Lake City (1, 10)	3.79	3.42	42 Chicago (35, 49)	3.34	3.03
4 Raleigh/Durham (4, 4)	3.65	3.56	43 Long Island (56, 33)	3.15	3.18
5 Dallas/Fort Worth (6, 5)	3.62	3.52	44 Columbus (53, 37)	3.21	3.13
6 Fort Lauderdale (16, 3)	3.54	3.57	45 Richmond (48, 41)	3.25	3.08
7 Los Angeles (8, 8)	3.61	3.45	46 New York—Manhattan (37, 55)	3.33	3.00
8 San Jose (11, 9)	3.60	3.43	47 Sacramento (42, 51)	3.29	3.01
9 Nashville (5, 13)	3.63	3.41	48 Washington, DC—MD suburbs (40, 56)	3.30	2.99
10 Boston (9, 14)	3.61	3.38	49 Birmingham (50, 42)	3.22	3.07
11 Miami (18, 6)	3.53	3.46	50 Westchester, NY/Fairfield, CT (46, 58)	3.26	2.94
12 Charlotte (12, 16)	3.59	3.37	51 Jacksonville (59, 45)	3.09	3.05
13 Portland, OR (7, 20)	3.62	3.33	52 Cape Coral/Fort Myers/Naples (60, 47)	3.07	3.05
14 Charleston (17, 12)	3.54	3.41	53 St. Louis (49, 65)	3.24	2.87
15 Washington, DC—Northern VA (10, 21)	3.61	3.32	54 Tacoma (51, 62)	3.22	2.88
16 Orlando (21, 11)	3.49	3.42	55 Louisville (54, 61)	3.19	2.91
17 Atlanta (15, 15)	3.54	3.37	56 Cleveland (47, 67)	3.26	2.82
18 San Antonio (13, 18)	3.55	3.35	57 Spokane, WA/Couder d'Alene, ID (55, 60)	3.17	2.92
19 Tampa/St. Petersburg (27, 7)	3.41	3.45	58 Baltimore (58, 57)	3.10	2.98
20 Oakland/East Bay (20, 19)	3.50	3.34	59 Portland, ME (61, 52)	3.07	3.00
21 Orange County (23, 17)	3.45	3.35	60 Houston (44, 71)	3.28	2.77
22 Greenville, SC (19, 24)	3.52	3.28	61 Virginia Beach/Norfolk (64, 54)	3.04	3.00
23 Denver (29, 22)	3.39	3.32	62 Madison (65, 53)	3.00	3.00
24 Cincinnati (25, 25)	3.43	3.27	63 Milwaukee (62, 64)	3.06	2.87
25 Minneapolis/St. Paul (14, 39)	3.55	3.13	64 Detroit (63, 66)	3.06	2.85
26 Pittsburgh (22, 31)	3.49	3.18	65 Honolulu (57, 70)	3.11	2.77
27 San Francisco (28, 26)	3.40	3.25	66 Omaha (66, 63)	3.00	2.88
28 Philadelphia (31, 27)	3.38	3.23	67 New Orleans (71, 59)	2.89	2.93
29 Kansas City, MO (41, 23)	3.29	3.31	68 Providence (74, 48)	2.76	3.05
30 New York—Brooklyn (33, 28)	3.35	3.23	69 Hartford (73, 50)	2.78	3.02
31 Boise (36, 30)	3.33	3.20	70 Knoxville (67, 68)	2.99	2.80
32 San Diego (24, 44)	3.45	3.07	71 Tucson (68, 69)	2.97	2.79
33 Northern New Jersey (32, 34)	3.35	3.16	72 Albuquerque (70, 72)	2.91	2.63
34 Phoenix (38, 32)	3.32	3.18	73 Memphis (72, 73)	2.84	2.62
35 Washington, DC—District (26, 43)	3.41	3.07	74 Oklahoma City (69, 75)	2.93	2.43
36 Las Vegas (34, 40)	3.34	3.10	75 Gainesville (75, 76)	2.46	2.43
37 Indianapolis (39, 38)	3.30	3.13	76 Tallahassee (76, 74)	2.25	2.53
38 Inland Empire (52, 29)	3.21	3.22	77 Buffalo (77, 77)	2.20	2.25
39 Des Moines (30, 46)	3.38	3.05	78 Deltona/Daytona Beach (78, 78)	2.13	2.00

Source: *Emerging Trends in Real Estate 2018* survey.

Note: Numbers in parentheses are rankings for, in order, investment and development.

Market Summaries

Readers' interest in all markets continues to increase, so the 2018 edition of *Emerging Trends in Real Estate*[®] provides a regionally based look at all 78 markets included in this year's survey. Market experts contributed their knowledge and insights to this effort during the 46 focus groups convened by ULI district councils. Their expertise is also referenced throughout the rest of the report. The following market summaries give the reader a look at the major issues expressed by each focus group.

In this chapter, we refer to each focus group by its market name.

A national office investor noted, "Traditional gateway markets have gotten so competitive that we are looking at adjacent submarkets and the top secondary markets." The investor is not the only one, as the survey results would seem to support this statement. The top 20 markets in this year's survey include four of the top secondary markets, four markets that are adjacent to primary or gateway markets, ten secondary markets, and just two primary markets.

In addition to Seattle's move to the top position, another notable move by top secondary market is Miami's jump from the 25th spot last year to the 11th spot this year. Florida markets overall

Exhibit 3-2 U.S. Markets to Watch: Homebuilding Prospects

1 Indianapolis	4.67	38 San Diego	3.80
2 Westchester, NY/Fairfield, CT	4.50	39 Palm Beach	3.78
3 Spokane, WA/Coeur d'Alene, ID	4.50	40 Orange County	3.77
4 Salt Lake City	4.46	41 Pittsburgh	3.75
5 Cincinnati	4.30	42 Philadelphia	3.75
6 Tucson	4.25	43 Sacramento	3.75
7 Dallas/Fort Worth	4.23	44 Tacoma	3.75
8 Charleston	4.22	45 Providence	3.75
9 Cape Coral/Fort Myers/Naples	4.21	46 Deltona/Daytona Beach	3.75
10 Seattle	4.13	47 Minneapolis/St. Paul	3.71
11 Nashville	4.13	48 Northern New Jersey	3.70
12 Honolulu	4.07	49 Los Angeles	3.69
13 Orlando	4.07	50 Oakland/East Bay	3.65
14 Denver	4.02	51 San Antonio	3.63
15 Raleigh/Durham	4.00	52 Richmond	3.58
16 Charlotte	4.00	53 Inland Empire	3.58
17 Greenville, SC	4.00	54 Fort Lauderdale	3.58
18 Columbus	4.00	55 San Francisco	3.55
19 St. Louis	4.00	56 Washington, DC—Northern VA	3.54
20 Louisville	4.00	57 Houston	3.54
21 Memphis	4.00	58 New York—other boroughs	3.50
22 Tallahassee	4.00	59 Knoxville	3.50
23 Portland, OR	3.96	60 New York—Manhattan	3.42
24 Tampa/St. Petersburg	3.94	61 Detroit	3.42
25 Austin	3.93	62 Kansas City, MO	3.33
26 Washington, DC—District	3.93	63 Gainesville	3.33
27 Las Vegas	3.92	64 Miami	3.32
28 Washington, DC—MD suburbs	3.92	65 Chicago	3.29
29 Boise	3.90	66 Virginia Beach/Norfolk	3.25
30 Atlanta	3.90	67 Baltimore	3.15
31 New York—Brooklyn	3.88	68 Long Island	3.00
32 San Jose	3.84	69 Madison	3.00
33 Phoenix	3.84	70 New Orleans	3.00
34 Cleveland	3.83	71 Oklahoma City	3.00
35 Boston	3.81	72 Albuquerque	2.63
36 Birmingham	3.80	73 Portland, ME	2.50
37 Jacksonville	3.80	74 Milwaukee	2.50

Source: *Emerging Trends in Real Estate 2018* survey.

Notes: Numbers in parentheses are rankings for, in order, investment and development. Des Moines, Omaha, Hartford, and Buffalo are not included due to an insufficient number of responses.

were very popular with survey respondents this year. The Miami-adjacent Fort Lauderdale market experienced the largest upward move in this year's survey, improving 29 spots to rank number six this year. Orlando and Tampa Bay/St. Petersburg join the two southeast Florida markets in the top 20 for 2018.

So, what is up with the primary markets? Los Angeles and Boston are the only primary markets in the survey's top ten, with San Francisco dropping to number 27 and Manhattan experiencing the largest year-over-year negative move to number 46. The final gateway market—Washington, D.C.—slipped to number 35, but adjacent northern Virginia rose 14 places to number 15.

To go along with the opinion that primary markets are too competitive, a real estate industry analyst noted: "I know we think the gateway markets are supply-constrained, but if you step back we have seen a lot of new development in these so-called supply-constrained places." So, are survey respondents taking a breather to see how these markets deal with the new supply and how it will affect asset pricing? The alternative is there is just so much capital looking for a home that investors have no choice but to look at additional markets that they believe offer an adequate risk/return profile.

For whichever reason, survey respondents appear to be favoring secondary markets for 2018. One thought expressed by a

real estate services firm executive is that “since it feels like [we’re] in an environment where we aren’t expecting a severe correction, we might want to spend more time looking at demand-unconstrained markets and a little less [time] looking at supply-constrained [markets].” The belief is that these markets could be positioned for more upside growth, and this looks even more attractive when one removes the fear of a cyclical bust. Only time and the dollar value of investments by market will tell whether this trend is here to stay, or whether the market will find itself reverting to the perceived safety of the gateway markets. If nothing else, the prospect of a longer expansion cycle will give everyone an opportunity to look at some alternative markets.

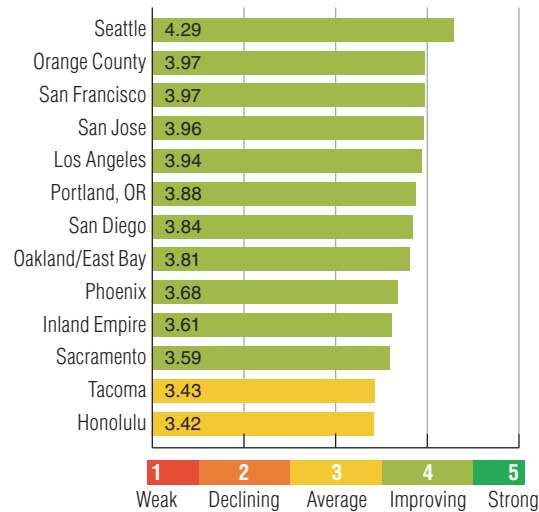
Pacific

“We are looking for ways to take advantage of the economic shift to markets from northern California to Seattle.”

The top-ranked markets from the Pacific region in this year’s *Emerging Trends in Real Estate* survey fit multiple descriptions. Topping this year’s survey, **Seattle** is one of the top 18-hour cities and emerging gateway markets in the country. **Los Angeles** is the highest ranked of the established primary cities. **Portland** is a solid 18-hour city representative, while **Oakland** and **Orange County** are both adjacent to primary markets.

What makes many of the Pacific region markets attractive has been well documented. As home to much of the U.S. technology industry, these markets have attracted significant numbers of well-educated workers. The wealth generated by the technology industry has been distributed throughout multiple market economies, spurring even more growth. In addition, many of these markets can be viewed as attractive places to live, offering an excellent quality of life. On the flip side, many of the markets in the

Exhibit 3-3 Local Outlook: Pacific Region



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Average score of local market participants’ opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Pacific region have the dubious distinction of being some of the highest-cost places to live in the country. Markets in the Pacific region that have a relatively affordable cost structure often benefit when costs are viewed as getting too high in other markets since firms will relocate operations to take advantage of the lower costs but maintain proximity to their other operations. Despite the diversity among the markets in the Pacific region, they do share some common challenges that will need to be addressed.

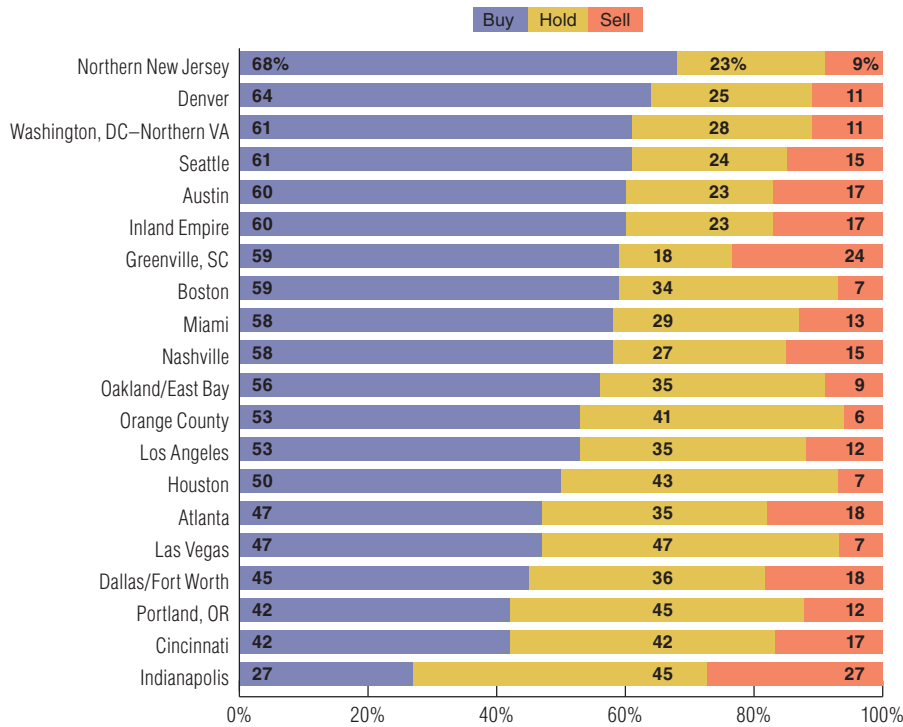
Strengths

It is sometimes too easy to categorize a group of markets together based on an assumed theme. This may now be happening to the markets that make up the Pacific region. It is often assumed that they are all tech-centered, millennial hotbeds that have been enjoying high levels of economic growth in spite of the high cost of living and doing business. While this is true in some markets, it is not true in all.

One thing that is a strength in most markets in the Pacific region is the availability of an educated workforce. **Seattle**, **San Francisco**, and **San Jose** can boast not only a highly educated workforce, but also significant density of talent. This density of talent allows for the spin-off and creation of new companies. **Los Angeles** and **Portland** are quick to point to the greater diversity of their workforce that allows them to supply trained labor to multiple industries. **San Diego** and **Sacramento** are markets that have highly trained workers, but they tend to be focused on a different set of industries, such as health sciences. The industries behind the economic growth in the Pacific region, many of them technology based, have also created a significant number of high-paying jobs. **San Francisco**, **Los Angeles**, **Seattle**, and **Portland** have seen very good economic growth due to increased wealth in the market.

It isn’t just the employment opportunities that make many markets in the

Exhibit 3-4 U.S. Industrial Property Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Cities listed are the top 20 rated for investment in the industrial sector; in this exhibit, cities are ordered according to the percentage of “buy” recommendations.

Pacific region attractive to new residents. **Portland, Seattle, Honolulu, San Diego,** and **Sacramento** all point to quality of life and attractive outdoor activities available in these markets. **San Francisco, Seattle,** and **Los Angeles** can also point to their growing prominence as global markets as keys to driving continued domestic and foreign investment.

Markets such as **Oakland, Orange County, Inland Empire, Sacramento,** and **Tacoma** also are experiencing the benefit of being able to offer a more competitive cost structure to their more expensive neighbors. **Portland** is a prime example of how this can drive an economy as it continues to see job creation from firms headquartered in other Pacific region markets. *Emerging Trends* interviewees have repeatedly mentioned

the attractiveness of looking at investments in these markets that are adjacent to major markets in a region when the primary market becomes too competitive.

Challenges

Housing affordability is easily one of the top challenges identified by nearly every market in the Pacific region. **San Francisco, San Jose, Seattle,** and **Honolulu** all cite the lack of affordable housing as an issue that could have a negative impact on future growth. Even comparatively affordable markets for the region such as **Orange County, Inland Empire,** and **Sacramento** mention concerns about the shortage of affordable housing to meet growing demand. These three markets in particular have identified stringent regulations and the difficulty in finding suitable locations as making it dif-

ficult to develop affordable housing. **Los Angeles** also mentioned the resistance of communities to higher-density development as an impediment to the delivery of more affordable housing. **Seattle, San Francisco, Orange County,** and the **Inland Empire** each mentioned a need to explore the development of more condo and/or micro units to address at least part of the affordable housing problem.

General business and living costs in general are a concern for a number of the Pacific region markets. **Portland, Seattle, San Francisco,** and **Los Angeles** feel that the cost and general availability of labor could become a headwind to future growth if solutions to this issue cannot be developed. Higher construction costs also are seen as a 2018 issue for **Seattle, Sacramento, San Francisco, Oakland,** and **Los Angeles.**

Infrastructure also has been identified as a challenge in a number of Pacific region markets. **Seattle, Portland,** and **San Francisco** point to infrastructure enhancements as necessary to support current and future growth. **Orange County, Inland Empire,** and **Honolulu** see infrastructure improvements as being needed to facilitate future growth. A number of Pacific region markets also say that strong leadership and public/private partnerships could be required to meet future infrastructure requirements.

South

“The South is again benefiting from the increase in mobility of the U.S. population.”

The South remains popular with survey respondents in 2018 despite losing the top market survey spot for the first time in three years. Seven of the top 20 ranked markets are located in the South. The reasons most often cited for the region’s attractiveness can be categorized as positive demographics supported by

very competitive living and business costs. Along with solid and, in some cases, significant economic growth, markets in the South have also identified challenges and opportunities that will need to be addressed to facilitate continued economic growth going forward.

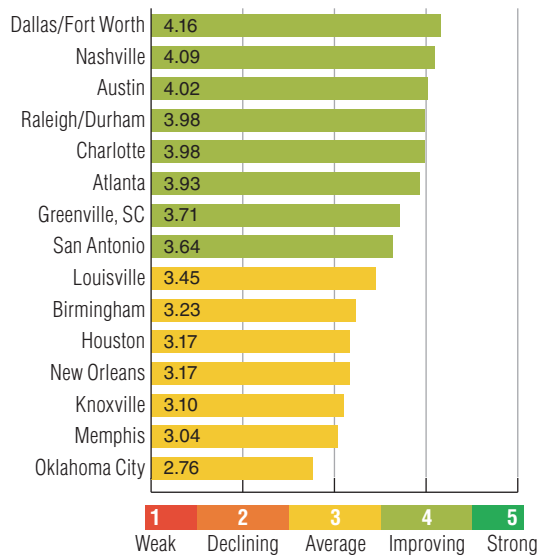
The markets in the South region are extremely diverse and categorized by interviewees as burgeoning gateway markets like **Atlanta, Dallas/Fort Worth, and Houston**, as well as the top 18-hour cities of **Austin, Nashville, Charlotte, and Raleigh/Durham**. The region also has specific industry hubs like **Oklahoma City, Greenville, Louisville, and Memphis**. Finally, **San Antonio, Birmingham, and Knoxville** are three markets that are seeing rising interest from local, regional, and select national investors.

Strengths

Austin, Atlanta, Dallas/Fort Worth, Nashville, San Antonio, and Charlotte all credit strong population growth as a key contributor to their real estate investment attractiveness. More specifically, **Austin, Nashville, and Charlotte** say that the attractiveness of the market to millennials has been key to recent economic growth. Millennial residents are believed to also be having a positive impact on markets like **Memphis, Birmingham, and San Antonio**.

Not only do many markets in the South enjoy strong demographic growth, they are also seeing benefits from being home to well-trained labor forces. **Austin, Raleigh/Durham, and Knoxville** have economies that are significantly influenced by the presence of research universities. The impact of local universities, however, is not limited to only these markets. Every market in the South region is quick to point to the benefits of having a college or university in its market. **Raleigh/Durham** has long credited its

Exhibit 3-5 Local Outlook: South Region



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

recent economic strength to the highly educated workforce there. **Birmingham** and **Knoxville** also acknowledge that their labor force is well suited to a diverse set of occupations requiring a range of skills.

Whether you believe that jobs follow people or people follow jobs, a number of markets in the South say that employment growth and the addition of new employers is having a positive impact on their economic performance. In 2018, **Dallas/Fort Worth** and **Atlanta** should continue to benefit from recent corporate relocations, and each market is likely to remain attractive to companies considering relocation. **Austin, Louisville, and Greenville** cite the growth in national and regional manufacturing firms as driving growth and diversity in their economies. **Houston, Oklahoma City, and Birmingham** believe the energy industry, despite recent volatility, will support current economic activity and will also facilitate the development of new technologies. Increased activity at the Port

of **Houston** is expected to benefit the local and regional economy. **Memphis** points to strong corporate representation supporting local economic initiatives as benefiting the market. **Raleigh/Durham** is experiencing the benefits of the National Institutes of Health's investment in local companies. Tourism remains a strong economic driver in **New Orleans**.

An affordable and high quality of life benefits residents of South region markets. Business in the region may also find lower costs and a business-friendly environment. **San Antonio, Nashville, Memphis, Birmingham, and Louisville** all express the opinion that the lower cost of living compared with other regions and markets across the United States is to their advantage. **Austin, Atlanta, Charlotte, and Raleigh/Durham** indicate that the quality of life in their markets helps them attract new residents. A business-friendly approach from local governments is felt to contribute to economic activity in **Dallas/Fort Worth, Birmingham, Atlanta, and Knoxville**.

Strong public commitment to infrastructure development in **Atlanta, Austin, Birmingham, Nashville, Charlotte,** and **San Antonio** is also mentioned as supporting local development.

Challenges

South region markets enjoy a number of strengths going into 2018, but the next few years will not be without some challenges. Not surprisingly, a number of the challenges in the South markets are related to assimilating recent growth and positioning themselves to handle the growth expected in the near future.

Like most of the country, **Atlanta, Birmingham, Dallas/Fort Worth, Charlotte,** and **San Antonio** all cite high

construction costs as a challenge for 2018. A number of markets see the higher cost of construction as being related to a shortage of qualified construction labor. In fact, **San Antonio, Houston, Charlotte,** and **Atlanta** all mentioned a shortage of labor across all sectors in general and, in the case of the construction industry, a shortage of skilled trades labor as being a problem in their market. Higher construction costs are also being attributed to stricter regulations. **Charlotte, Dallas/Fort Worth,** and **Raleigh/Durham** mentioned issues with the entitlement process for new development as a growing concern for 2018.

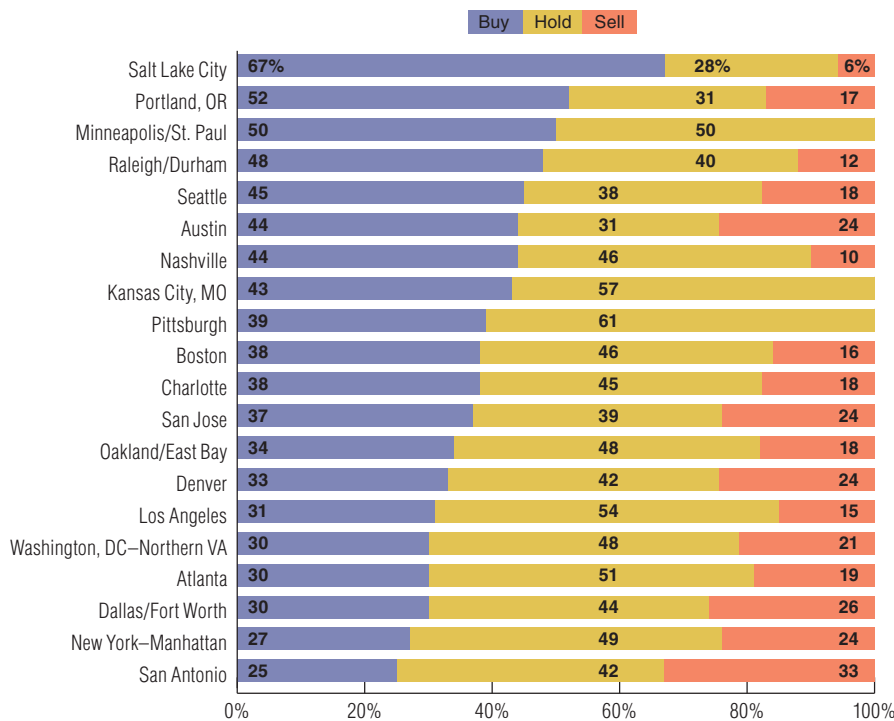
Another shared challenge for 2018 appears to be the need for expanding infrastructure in order to support

larger populations and rising business activity. **Raleigh/Durham, Houston** (pre-Hurricane Harvey), **Nashville, Memphis, Birmingham,** and **Atlanta** all note that infrastructure improvements will be vital to support the existing population and to accommodate projected future growth. Transportation infrastructure, including private roads, public transit, and airport capacity, is most likely to be mentioned as needing improvement. Parking requirements are also being debated in markets like **Birmingham** and **Nashville**. Parking issues range from not enough available in certain areas to the belief that municipalities are requiring more than is needed as shopping and living patterns evolve.

Transportation tops the list of items that a number of markets indicate they should be focusing on in 2018. **Memphis, Houston,** and **Raleigh/Durham** are markets discussing transportation issues including bike lanes, bus routes, and high-speed rail as a part of regional transportation networks.

Affordable housing is a key component of the region's lower cost of living, and a number of South region markets express concern that their housing markets may be falling victim to their own success. A number of markets including **San Antonio, Richmond,** and **Charlotte** are concerned that a shortage of affordable housing could be an issue that is on the rise in terms of importance next year. This will not be a simple issue to correct since concerns range from the rise in median prices against a backdrop of slower income growth, to the displacement of current residents as redevelopment occurs in traditionally lower-cost neighborhoods.

Exhibit 3-6 U.S. Office Property Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Cities listed are the top 20 rated for investment in the office sector; in this exhibit, cities are ordered according to the percentage of "buy" recommendations.

Mountain

“Everyone loves Denver, and is looking for other markets in the region where they can replicate that level of success.”

The markets that make up the Mountain region range from nationally recognized markets like **Denver** and **Phoenix** to more emerging markets such as **Boise** and the **Inland Northwest (Spokane and Couer d’Alene)**. **Salt Lake City** and **Las Vegas** are often viewed by interviewees as higher-profile regional markets. According to *Emerging Trends 2018* survey respondents, the Mountain region saw a mild shake-up in the outlook for the various markets. Primarily, **Salt Lake City** is now a top-ten-ranked market, while **Denver** slipped just out of the top 20.

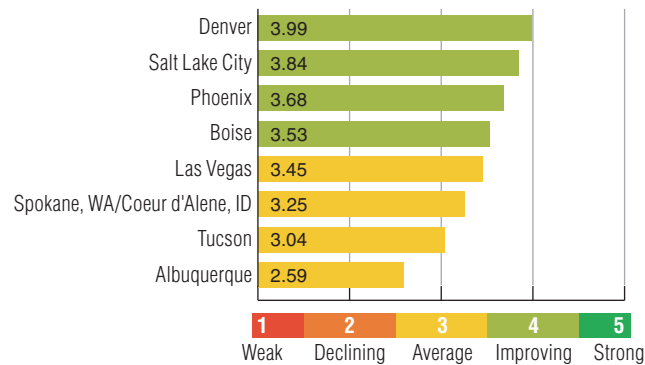
The Mountain region markets are diverse, with some seeing higher recent and projected growth rates than others. In addition, the markets in this region have recovered from the global financial crisis at different rates. While the markets are somewhat diverse, similarities in the variables make them attractive for real estate investment, and they are likely to face similar challenges in the future.

Strengths

In general, a competitive cost of living and a high quality of life are seen as advantages in many of the Mountain region markets. **Denver**, **Salt Lake City**, and **Boise** point out that the attractive quality of life has helped spur recent population growth. In addition, **Tucson**, **Albuquerque**, and **Inland Northwest** say that the lower cost of living in these markets is an advantage to their economies. **Denver**, **Salt Lake City**, and **Boise** continue to be attractive millennial destinations.

Economic diversity is another strength of the Mountain region. The **Denver** market has seen growth in technology,

Exhibit 3-7 Local Outlook: Mountain Region



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

financial services, and energy. The tourism industry has rebounded in **Las Vegas** and continues to be the primary economic driver. **Phoenix** has been the beneficiary of corporate expansions or relocations from other higher-cost states in the region. **Salt Lake City** continues to benefit from the aggregation of technology and financial services.

Historically, markets in the Mountain region have experienced strong growth when markets in the Pacific region are perceived to be too expensive. Companies have expanded or relocated operations to these markets to take advantage of the relative proximity, lower operating costs, and access to qualified labor. **Boise**, **Phoenix**, the **Inland Northwest**, and **Phoenix** all believe they could be the beneficiary of this type of movement during the current economic cycle.

Boise, **Phoenix**, and **Denver** also point to the more restrained nature of the current development cycle. While some of this can be attributed to developer discipline, **Denver**, **Boise**, and **Las Vegas** all indicate lender constraints as a reason that some development projects that

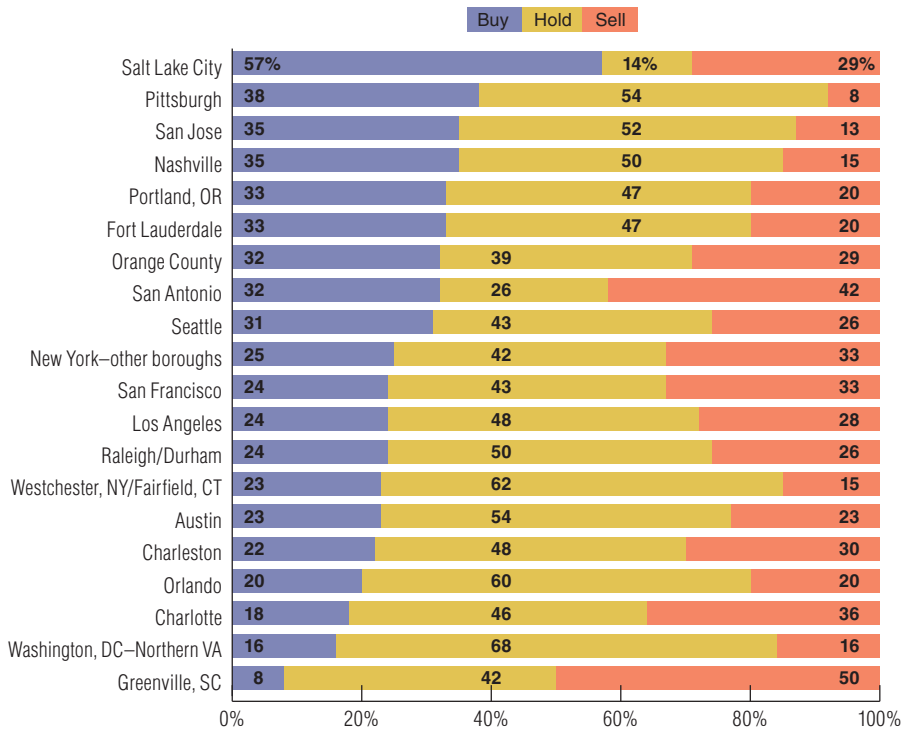
might have been built during past cycles are missing from the current environment. The perceived stability of these markets is seen as making them more attractive as national investors look for additional markets in which to place capital.

Challenges

Given that many of the markets in the Mountain region view their lower cost of living as a competitive advantage, it is natural that several are concerned that higher housing costs could be a headwind to future growth. **Boise**, **Denver**, and **Phoenix** all expressed concern that rising home prices could have a negative impact on their affordability. **Las Vegas** also expressed concern about the availability of housing that fits its more service-driven economy. A contributing factor to higher home prices is the shortage of construction labor. **Denver**, **Boise**, **Salt Lake City**, **Albuquerque**, and **Tucson** all specifically cited the shortage of construction labor as slowing down the delivery of new homes.

While the overall feeling in the Mountain region is that capital is readily available, markets such as **Las Vegas**, **Albuquerque**, and **Tucson** say capital,

Exhibit 3-8 U.S. Retail Property Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Cities listed are the top 20 rated for investment in the retail sector; in this exhibit, cities are ordered according to the percentage of “buy” recommendations.

while available, may be a little less accessible than during previous cycles. The sense in **Boise** and the **Inland Northwest** is that capital is readily available for more experienced borrowers, but can be challenging for others in the market. Access to debt and equity capital will be necessary for the emerging markets in the region to continue to recover and expand.

South-Atlantic and Florida

“The rebound in Florida is very compelling; it is appealing to multiple demographics.”

Emerging Trends 2018 survey respondents placed five South-Atlantic and Florida markets among the top 20 for the coming year. Positive demographic

themes continue to benefit markets in this region: some markets are seeing strong overall population growth, while others are specifically experiencing above-average rates of millennial population growth. New residents continue to be attracted to the quality of life, which is being driven by a variety of factors across markets. The factors include good weather, attractive living costs, and a variety of employment opportunities. Experts in these markets have also identified a number of challenges that need to be addressed in order to support future population and economic growth.

The South-Atlantic and Florida region is composed of a diverse set of markets, ranging from the primary market of **Washington, D.C.**, to more emerg-

ing Florida markets such as **Deltona/Daytona Beach, Gainesville**, and **Tallahassee**. The region is also home to the globally connected markets of **southeast Florida** and rising 18-hour cities like **Orlando** and **Tampa Bay/St. Petersburg**. Other markets in the region experiencing positive economic growth and expansion are **Charleston, Richmond, Jacksonville, Virginia Beach/Norfolk**, and **southwest Florida**.

Strengths

A market needs people to grow; and for markets in the South-Atlantic and Florida region, a lack of population growth has not been an issue. Population growth is relatively good in all the region’s markets, but where the growth is coming from and why varies somewhat among markets. The D.C. area including northern Virginia and suburban Maryland continues to see strong millennial population growth. **Richmond, Virginia Beach/Norfolk**, and **Orlando** also point to millennial population growth as contributing to the economic strength of their markets. Not surprisingly, a number of Florida markets including **southeast Florida (Miami, Fort Lauderdale, West Palm Beach)** and **southwest Florida (Fort Myers, Naples), Jacksonville**, and **Tampa Bay/St. Petersburg** attribute a portion of their attractiveness to new residents to the climate. **Jacksonville, Tallahassee, Gainesville, Richmond**, and **Washington, D.C.**, specifically cite the quality of life in their markets as a contributing factor in their population growth.

Economic growth in the markets of the South-Atlantic and Florida region is also fairly diverse. Tourism remains an obvious contributor in markets like **Charleston, Jacksonville, Orlando**, and **southeast Florida** as well as in the Florida west coast markets of **Tampa Bay/St. Petersburg** and **southwest Florida**. **Southwest Florida, southeast Florida,**

and **Deltona/Daytona Beach** also point to the personal wealth that comes to their markets from older residents who choose to relocate there due to Florida's lower personal taxes. Technology is considered a growth driver in the markets of the D.C. area, **Richmond, Orlando, and Deltona/Daytona Beach**. The diversity and reputation of **southeast Florida** as an international gateway continue to support economic growth. Port facilities in Tampa/St. Petersburg, **southeast Florida, Jacksonville, Charleston, Virginia Beach/Norfolk, and Richmond** are key contributors to the current economy and also have the potential to drive future growth. **Charleston** continues to benefit from the expansion of national and global manufacturers in the market.

A number of markets in the South-Atlantic and Florida region also see increasingly dynamic development as helping to drive economic activity. **Tampa Bay/**

St. Petersburg, southeast Florida, Richmond, and Washington, D.C., have all pointed to live/work/play-oriented developments that are making neighborhoods more dynamic and attractive to more new residents. It is expected that the D.C. area will continue to benefit from its reputation as an urban core city, which could help allay some concern about the impact of federal political instability on the market.

Challenges

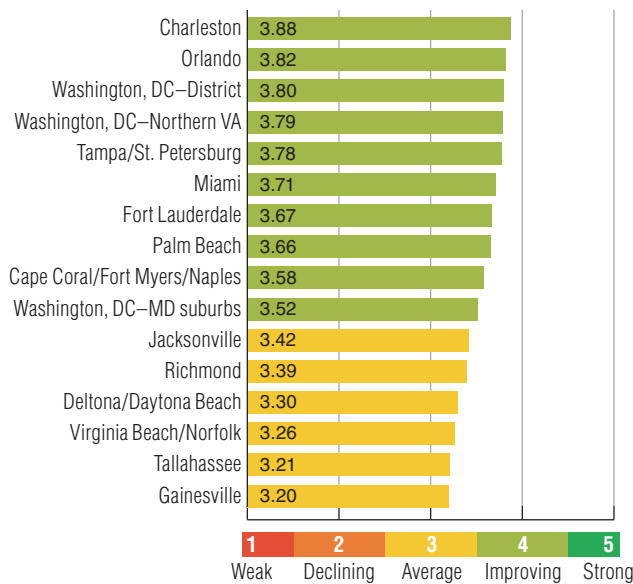
Markets in the South-Atlantic and Florida region are nearly unanimous in their belief that addressing infrastructure challenges will be imperative to ensuring future growth. The **Washington, D.C.**, and **Tampa Bay/St. Petersburg** markets say infrastructure investment will be vital to helping the areas manage recent growth, but also to connect the different cities in the region (**Richmond and Virginia Beach/Norfolk, Washington, D.C.**, and

Orlando and southwest Florida, Tampa Bay/St. Petersburg) to one another. Markets in **southeast Florida and southwest Florida** believe infrastructure investment will be vital in improving their resilience in the face of potential severe weather events. In **Charleston**, continuing to invest in infrastructure is seen as essential for economic development and to help that city maintain its recent economic success.

Many of the South-Atlantic and Florida markets currently enjoy relatively affordable housing. Despite this, concerns exist about maintaining or creating enough affordable housing for the entire population. **Virginia Beach/Norfolk** would like to see more attention given to affordable and middle-income housing. **Charleston** is concerned that some housing redevelopment may be displacing lower-income residents in a number of neighborhoods. **Southwest Florida and southeast Florida** both see a need for more affordable housing units, as economic growth continues to skew the housing stock toward wealthier individuals.

It may be a good problem to have, but many of the South-Atlantic and Florida markets expressed concern with how to manage and maintain the current level of economic growth. **Jacksonville, Gainesville, and Tallahassee** indicate they are currently on an upswing in terms of growth and would like to see more focus on how to maintain that growth. **Tampa Bay/St. Petersburg and Orlando** would like to see a comprehensive plan that helps their economies make the next step to be more self-supporting and less dependent on outside capital. **Southwest Florida, Richmond, and Charleston** would like to see leadership focus on how to take advantage of recent success. Even the **D.C. area** would like to see further diversification of

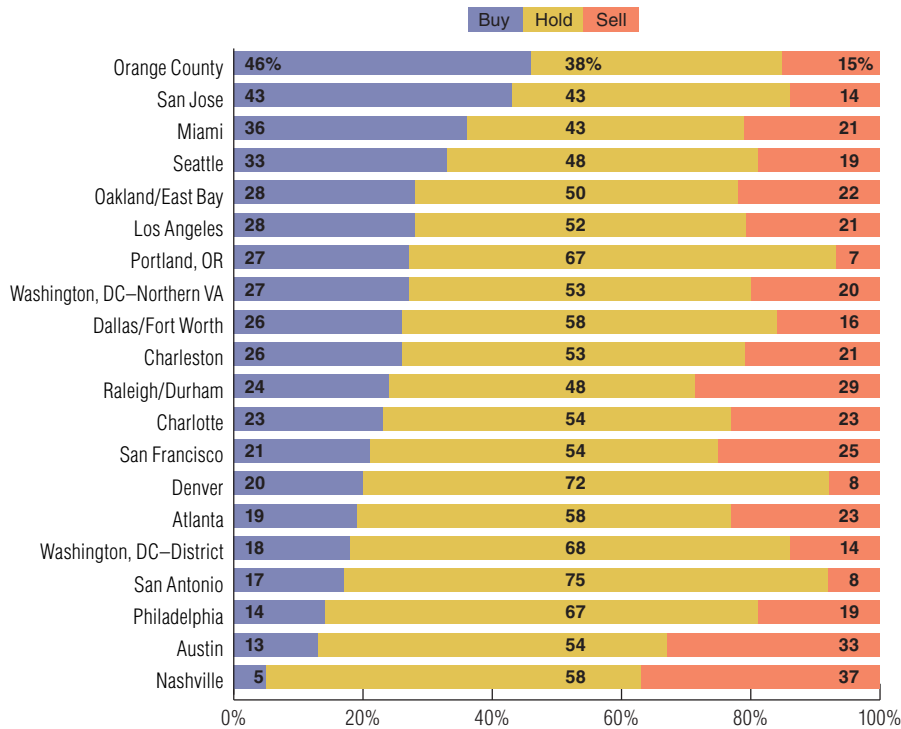
Exhibit 3-9 Local Outlook: South-Atlantic and Florida Region



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Exhibit 3-10 U.S. Hotel Property Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Cities listed are the top 20 rated for investment in the hotel sector; in this exhibit, cities are ordered according to the percentage of “buy” recommendations.

the market economies, perhaps by taking more advantage of the growing technology sector.

Northeast

“The Northeast will continue to do what it does best—take advantage of the intellectual capital in the region.”

The connectedness of the Northeast region might be its greatest strength. The economically viable region offers a number of markets that seem to fit well with what survey respondents say they are looking for: submarkets and markets that are adjacent to primary locations. The metro areas around **New York City** offer a number of these locations, including **Brooklyn**, **Jersey City**, **Westchester/**

Fairfield, and **Long Island**, while **Baltimore** could benefit from its proximity to D.C. **Boston** is one of only two primary markets in the top ten of this year’s survey, but the Northeast region is represented in the top 35 by **Pittsburgh**, **Brooklyn**, and **northern New Jersey**.

Strengths

The urbanization trend has been beneficial to the Northeast region. Markets such as the **New York City area**, **Boston**, **Pittsburgh**, and **Jersey City** all cite the influx of not just millennials, but highly educated millennials, as driving recent growth. **Westchester/Fairfield** credits an educated workforce along with a highly engaged business sector as supporting economic activity. **Pittsburgh**,

Baltimore, and **Philadelphia** also cited the availability of desirable neighborhoods as expediting urbanization. These neighborhoods have attracted both new and redevelopment opportunities and are drawing new residents and businesses.

Technology is expected to continue to drive the economies of the Northeast region. While the **New York City area**, including **Brooklyn** and **Jersey City**, remains an attractive location for technology service companies, **Boston**, **northern New Jersey**, and **Baltimore** continue to benefit from the agglomeration of medical and health technology companies in these markets. In addition, **Pittsburgh** is rapidly becoming a center for robotics due to collaborations between local educational institutions and private enterprise.

The availability of capital is seen as a benefit to a number of markets in the Northeast region. **Boston** sees the availability of capital as near an all-time high due to the strength of the market. In **Philadelphia**, capital is viewed as plentiful for larger deals, but some smaller deals will have to work harder to access capital at the right terms. **Pittsburgh** is experiencing an influx of capital from out-of-market sources, and **Westchester/Fairfield** reports that capital is readily available for good projects with excellent sponsorship. **Jersey City** reports no shortage of debt or equity capital and that developers are looking to reinvest capital from sales of stabilized multi-family assets.

Challenges

The need for infrastructure investment is seen as a significant challenge for multiple markets in the Northeast region. **Pittsburgh** points to the need to invest in schools and transportation. **Westchester/Fairfield** would like to

see infrastructure improvements aimed at improving the regional access of the area. Improving regional access is also a high priority for **northern New Jersey**. General infrastructure improvements in **Hartford** and **Providence** would also help areas identified for redevelopment.

Northern New Jersey and **Jersey City** anticipate the potential changes to taxes and regulation that may accompany the upcoming election year.

Changes to current regulations are seen as necessary to enhance economic activity in a number of markets. In **Westchester/Fairfield**, changes in zoning regulations could facilitate new development that, in turn, could increase the supply of affordable housing.

Northern New Jersey would also like to see changes in regulations viewed as being overly burdensome to developers.

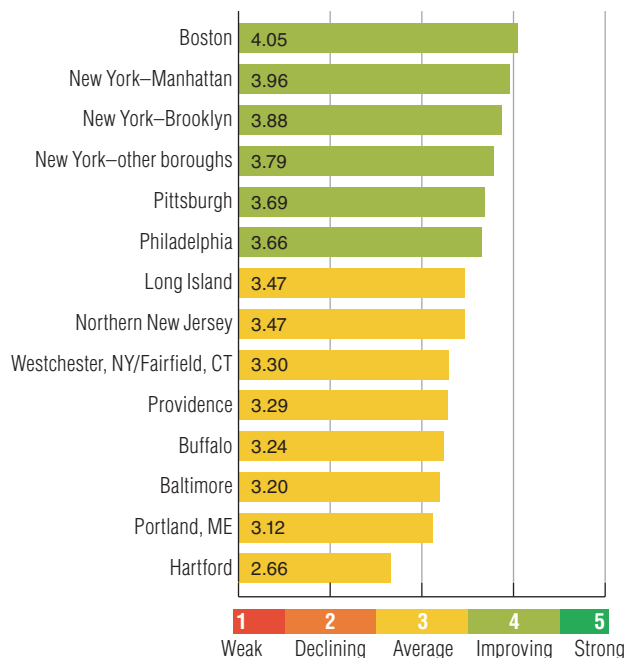
The availability of a qualified workforce is a problem in a number of Northeast markets. While the New York area is less concerned with attracting qualified workers, markets such as **Hartford**, **Providence**, and **Portland, Maine**, are looking for ways to increase in-migration and prevent the out-migration of qualified labor.

Midwest

“Markets in the Midwest are becoming more dependent on organic growth.”

The markets in the Midwest region correlate well with one of this year’s overall trends: “make the most out of what you have.” **Chicago**, the only primary market in the region, continues to benefit from the urbanization trend, with companies and residents continuing to move to the urban core. In addition to comparatively low living costs and a high quality of life, Midwest markets outside of **Chicago** also

Exhibit 3-11 Local Outlook: Northeast Region



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Average score of local market participants’ opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

are benefiting from increased interest in urbanization: **Cincinnati**, **Columbus**, **Des Moines**, and **Omaha** report increased residential and commercial development activity in the urban core. In addition, the economies in the Midwest region are diversifying, seeing growth from the technology, health services, and distribution industries.

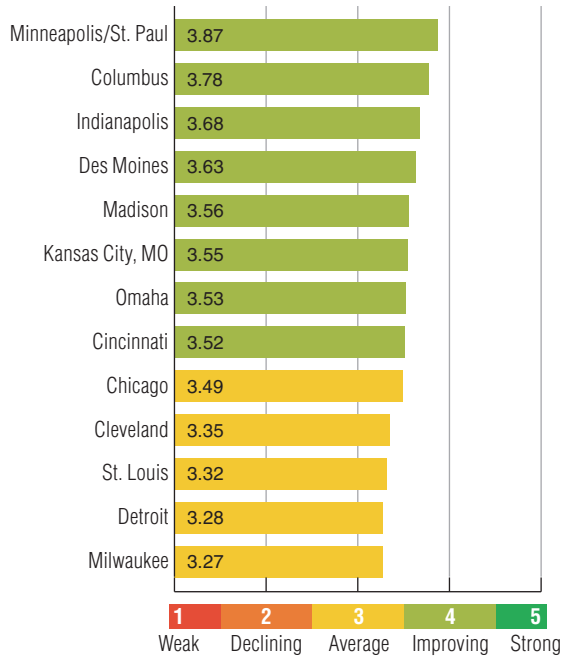
Strengths

The Midwest is often considered demographically challenged when compared with coastal and southern markets. True or not, the perception in the Midwest region may be changing. **Cleveland**, **Columbus**, **Detroit**, **Des Moines**, and **St. Louis** all mention that the influx of young people to the urban core is driving economic activity. In addition, **Indianapolis**, **Cleveland**, and **Detroit**

all indicate improving overall population growth factors as contributing to market attractiveness. If residents are looking for a higher quality of life at an affordable price, many of the Midwest markets say they can meet this demand. **Cleveland**, **Columbus**, **Des Moines**, and **Minneapolis** all indicate that the quality of life is a benefit of their markets.

Another potential strength touted by many of the Midwest markets is the quality of the labor force. **Indianapolis**, **Milwaukee**, **Madison**, **Minneapolis/St. Paul**, **Des Moines**, **Cleveland**, and **Columbus** all point out the education level of their workforce as a benefit to potential employers. This quality also comes at a lower cost than in other markets across the country. **Detroit**, **St. Louis**, **Kansas City**, **Omaha**, and

Exhibit 3-12 Local Outlook: Midwest Region



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Indianapolis point to the low cost of doing business as a competitive advantage.

Increasing economic diversity also is supporting growth in the Midwest.

Chicago and **Minneapolis/St. Paul** continue to have very diverse economies, but other markets also report expanding new industries. **Detroit, Columbus,** and **Cincinnati** mention the impact that entrepreneurial activity is having on new business creation. **Des Moines, St. Louis, Indianapolis, Madison, Kansas City,** and **Omaha** are experiencing benefits from technology hubs that are supporting existing businesses and putting in place the pieces for new business development. **Cleveland** continues to see growth around the medical and health services industry that is already established in the market.

Another key area of strength in many Midwest region markets is not only the growth in the urban core, but also the success of urbanized suburban locations. While markets like **Columbus** and **Detroit** believe the commitment to development in the core is helping drive urbanization, **Detroit, Des Moines, Kansas City, St. Louis,** and **Milwaukee** also see the success of urbanized suburban locations in offering residents and businesses viable alternatives.

Challenges

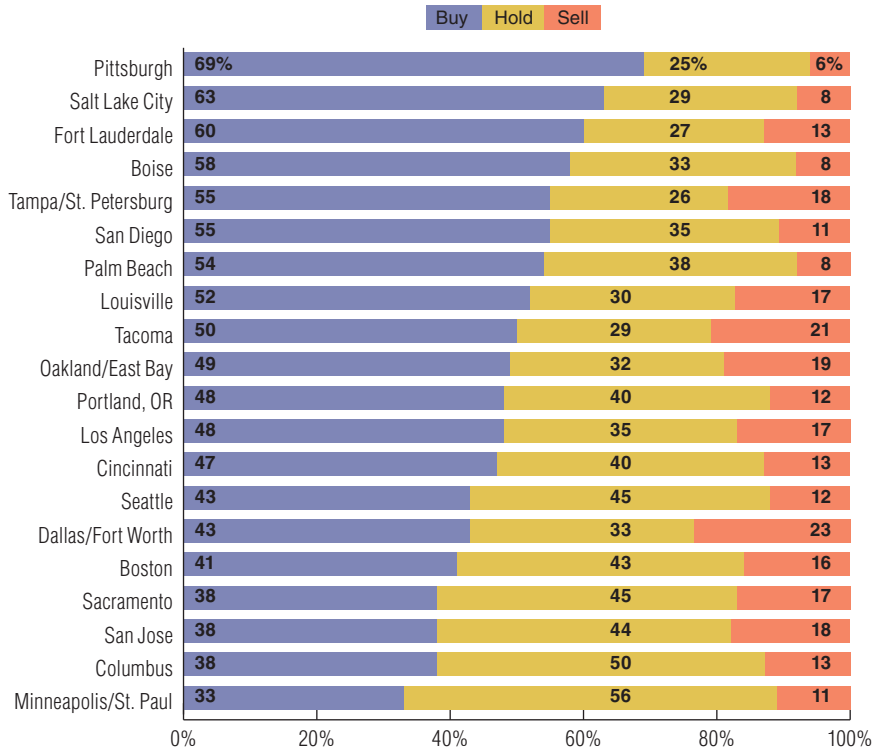
While a number of Midwest region markets are seeing improved demographics, finding enough qualified labor remains a challenge for multiple markets in the region. **Cleveland** mentions the loss of skilled labor to other markets, and **Detroit** is experiencing a shortage of construc-

tion labor. **Indianapolis** indicates there is a shortage of labor at multiple skill levels.

Identifying leadership to take many Midwest markets through periods of change is seen as something that will challenge a number of markets. **St. Louis, Minneapolis/St. Paul,** and **Chicago** all mention the importance of strong leadership in their markets for the near future. **Columbus** and **Detroit** report they have benefited from committed leadership in recent years, but want to be sure that this is a component of success that will stay in place.

Capital is generally considered readily available in most Midwest markets, but some concerns exist that the acquisition of debt and equity capital could be more challenging in 2018. Major markets such as **Chicago** and **Minneapolis/St. Paul** do not see any issues with attracting debt and equity capital in the coming year, but markets that feel they may be considered second-tier markets have more concern. **Cleveland** believes equity is more difficult to attract to the market from out-of-market sources. **St. Louis** points out the need for better public relations to educate sources of capital about opportunities in the market. **Columbus** has not seen a slowdown in capital availability, but is concerned that underwriting criteria could be more restrictive in 2018.

Exhibit 3-13 U.S. Multifamily Property Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Cities listed are the top 20 rated for investment in the multifamily sector; in this exhibit, cities are ordered according to the percentage of "buy" recommendations.

Exhibit 3-14 Economy

Market	2018 Population			Population ages 15–34		Business costs					2018 total employment			Industry location quotient****				
	Total (millions)	2017–2018 % change	5-year annual net migration (000s)	% of total population	5-year growth	2018 GMP per capita ratio*	GMP per capita 5-year projected growth	Cost of doing business**	Per capita disposable income ratio***	5-year disposable income growth	Total (millions)	2017–2018 % change	5-year annual employment change	STEM employment	Business & professional services	Education & health services	Energy	Goods producing
United States	330.76	0.8%	—	27%	2.6%	1.0	1.4%	100%	1.0	3.8%	148.37	1.3%	109.2%	1.0	1.0	1.0	1.0	1.0
Albuquerque	0.92	0.2%	1.38	26%	-0.3%	0.8	1.6%	90%	0.8	-0.2%	0.39	0.8%	102.0%	1.2	1.0	1.1	0.3	0.7
Atlanta	6.02	2.3%	102.40	28%	11.1%	1.0	1.0%	94%	0.9	4.4%	2.79	1.6%	114.5%	1.2	1.3	0.8	0.9	0.8
Austin	2.18	2.8%	42.89	31%	20.3%	1.1	1.5%	104%	1.1	7.7%	1.05	2.6%	137.0%	1.7	1.2	0.8	0.4	0.9
Baltimore	2.81	0.2%	3.72	27%	2.7%	1.1	1.5%	112%	1.2	4.1%	1.42	0.9%	108.0%	1.4	1.2	1.3	0.5	0.7
Birmingham	1.15	0.2%	1.05	26%	1.7%	0.8	1.3%	96%	0.9	1.1%	0.53	1.3%	100.3%	0.8	0.9	0.9	0.6	0.9
Boise	0.73	1.9%	6.34	26%	3.8%	0.8	2.0%	84%	0.8	7.4%	0.32	2.0%	114.9%	1.2	1.0	1.0	0.2	1.1
Boston	4.85	0.5%	10.37	29%	2.7%	1.5	1.8%	130%	1.4	4.6%	2.77	1.1%	111.6%	1.5	1.3	1.3	0.7	0.8
Buffalo	1.12	-0.4%	-5.26	27%	-4.9%	1.2	1.3%	86%	0.9	0.2%	0.57	0.4%	103.3%	0.8	0.9	1.1	1.6	0.9
Cape Coral/Fort Myers/Naples	1.17	3.7%	23.26	20%	16.3%	0.7	2.4%	98%	1.2	13.2%	0.42	2.9%	114.1%	3.4	0.9	0.8	0.1	1.0
Charleston	0.78	1.4%	7.52	29%	9.5%	0.8	0.7%	100%	0.9	5.0%	0.36	1.5%	117.7%	1.0	1.1	0.7	0.6	1.0
Charlotte	2.59	2.5%	50.69	27%	15.3%	0.9	1.3%	89%	1.0	5.3%	1.20	1.8%	115.7%	1.0	1.2	0.6	1.3	1.1
Chicago	9.55	0.1%	-32.29	28%	1.4%	1.1	1.8%	103%	1.1	3.3%	4.73	0.9%	107.2%	1.0	1.3	1.0	1.5	0.9
Cincinnati	2.19	0.5%	3.17	27%	0.7%	1.0	2.0%	94%	1.0	5.4%	1.12	1.4%	107.1%	1.0	1.1	0.9	1.5	1.1
Cleveland	2.04	-0.3%	-7.99	25%	-3.7%	1.0	2.0%	98%	1.0	4.7%	1.08	1.4%	102.3%	1.0	1.0	1.3	1.7	1.1
Columbia	0.84	1.3%	8.79	29%	2.8%	0.9	1.3%	96%	0.9	5.6%	0.40	1.6%	112.3%	0.9	0.9	0.8	1.6	0.9
Columbus	2.09	1.0%	9.61	29%	7.0%	1.1	2.0%	98%	1.0	6.3%	1.10	1.6%	117.4%	1.2	1.2	0.9	1.0	0.8
Dallas/Fort Worth	7.53	1.9%	87.92	28%	10.9%	1.1	1.7%	94%	1.1	6.9%	3.71	2.5%	125.9%	1.2	1.2	0.8	0.7	1.0
Deltona/Daytona Beach	0.67	2.6%	19.72	22%	8.6%	0.5	2.4%	88%	0.8	9.5%	0.21	2.1%	109.2%	0.5	0.9	1.2	0.3	0.9
Denver	2.93	1.3%	20.23	28%	13.2%	1.1	1.5%	96%	1.2	5.2%	1.49	1.6%	121.3%	1.5	1.3	0.8	0.4	0.8
Des Moines	0.66	1.8%	1.39	27%	9.0%	1.2	1.3%	85%	1.0	4.7%	0.37	1.2%	113.1%	1.0	1.0	0.8	0.9	0.8
Detroit	4.30	0.0%	-8.19	25%	-2.2%	1.0	1.8%	100%	1.0	3.5%	2.03	1.1%	100.2%	1.5	1.4	1.0	1.1	1.2
Fort Lauderdale	1.98	1.8%	29.28	25%	12.4%	0.9	2.3%	102%	1.0	8.6%	0.86	2.1%	110.8%	0.7	1.3	0.8	0.3	0.7
Gainesville	0.29	1.6%	3.74	38%	0.3%	0.9	2.6%	101%	0.9	10.0%	0.15	1.7%	107.6%	0.9	0.7	1.1	0.1	0.5
Greenville, SC	0.91	1.2%	8.87	27%	2.8%	0.8	1.1%	90%	0.9	5.2%	0.42	1.5%	112.6%	0.8	1.2	0.7	2.7	1.4
Hartford	1.20	0.0%	1.14	27%	-2.2%	1.5	1.4%	115%	1.2	0.0%	0.65	0.9%	102.1%	1.2	1.0	1.1	0.5	1.0
Honolulu	1.00	0.5%	-0.60	29%	6.6%	1.1	1.3%	119%	1.1	3.2%	0.49	1.2%	106.5%	0.8	1.0	0.9	0.2	0.6
Houston	7.04	1.9%	70.86	29%	11.4%	1.2	1.4%	105%	1.1	7.1%	3.13	2.6%	119.8%	1.2	1.1	0.8	1.8	1.3
Indianapolis	2.04	1.0%	9.05	27%	5.6%	1.0	1.8%	91%	1.0	5.5%	1.08	1.3%	114.6%	1.0	1.1	0.9	1.7	1.0
Inland Empire	4.55	0.2%	10.41	29%	-1.3%	0.7	1.7%	95%	0.7	0.7%	1.45	1.2%	113.4%	0.5	0.7	1.0	0.9	1.1
Jacksonville	1.53	1.9%	23.26	27%	10.7%	0.8	2.8%	96%	1.0	11.1%	0.71	2.4%	114.1%	0.8	1.1	1.0	0.3	0.8
Kansas City, MO	2.13	0.4%	-1.46	26%	3.6%	1.0	1.5%	93%	1.0	3.7%	1.10	0.9%	109.5%	1.2	1.3	0.9	0.9	0.8
Knoxville	0.88	0.8%	6.44	26%	3.1%	0.8	1.1%	89%	0.9	3.2%	0.40	1.0%	111.8%	0.9	1.1	0.9	1.0	1.0
Las Vegas	2.27	2.5%	46.63	27%	17.4%	0.8	1.5%	95%	0.9	6.4%	1.00	2.9%	108.4%	0.5	1.0	0.6	0.2	0.6
Long Island	2.86	0.1%	-3.13	25%	-2.8%	1.1	1.6%	94%	1.3	0.8%	1.36	0.7%	106.2%	0.7	0.9	1.3	1.1	0.8
Los Angeles	10.20	0.4%	-3.61	29%	4.6%	1.2	1.6%	107%	1.1	3.3%	4.50	1.2%	107.8%	0.9	1.0	1.1	0.8	0.8
Louisville	1.30	0.5%	3.20	26%	3.5%	0.9	1.1%	89%	1.0	1.5%	0.68	1.3%	113.5%	0.7	0.9	0.9	1.1	1.2
Madison	0.66	0.6%	1.07	30%	1.4%	1.2	1.3%	101%	1.1	4.9%	0.41	1.5%	112.6%	1.8	0.9	0.7	1.5	0.9
Memphis	1.35	0.6%	2.25	28%	1.6%	0.9	1.5%	86%	0.9	4.0%	0.65	1.3%	105.7%	0.5	1.1	0.9	1.0	0.8

Sources: Moody's Analytics, U.S. Census Bureau, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics.

*Metro gross metropolitan product (GMP) per capita divided by national GMP per capita.

**Cost of doing business: national average = 100

***Market per capita disposable income divided by national per capita disposable income.

****Industry location quotient measures employment concentration by market—metro industry employment as a percentage of metro total divided by national industry employment as a percentage of national total.

Exhibit 3-14 Economy

Market	2018 Population		Population ages 15–34		Business costs					2018 total employment			Industry location quotient****					
	Total (millions)	2017–2018 % change	5-year annual net migration (000s)	% of total population	5-year growth	2018 GMP per capita ratio*	GMP per capita 5-year projected growth	Cost of doing business**	Per capita disposable income ratio***	5-year disposable income growth	Total (millions)	2017–2018 % change	5-year annual employment change	STEM employment	Business & professional services	Education & health services	Energy	Goods producing
United States	330.76	0.8%	—	27%	2.6%	1.0	1.4%	100%	1.0	3.8%	148.37	1.3%	109.2%	1.0	1.0	1.0	1.0	1.0
Miami	2.79	1.4%	1.38	26%	10.9%	0.9	2.5%	115%	0.9	7.8%	1.20	1.9%	102.0%	0.6	1.0	1.0	0.4	0.6
Milwaukee	1.58	0.2%	102.40	27%	–2.4%	1.0	1.7%	104%	1.1	3.0%	0.88	1.3%	114.5%	1.0	1.0	1.2	1.1	1.2
Minneapolis/St. Paul	3.63	1.1%	42.89	27%	6.5%	1.1	1.9%	102%	1.1	–0.4%	2.03	1.6%	137.0%	1.3	1.2	1.1	1.1	1.0
Nashville	1.94	1.6%	3.72	28%	11.1%	1.0	0.9%	98%	1.1	6.1%	1.00	1.6%	108.0%	0.8	1.2	1.0	0.7	0.9
New Orleans	1.29	0.4%	1.05	27%	4.2%	1.0	1.3%	91%	1.0	4.5%	0.58	0.9%	100.3%	0.7	0.9	1.1	1.9	0.8
New York—Brooklyn	2.66	0.5%	6.34	30%	12.1%	0.6	1.3%	155%	1.0	10.6%	0.72	1.2%	114.9%	1.2	0.6	2.1	0.2	0.5
New York—Manhattan	1.65	0.3%	10.37	34%	12.6%	5.5	1.3%	164%	3.6	7.1%	2.58	1.0%	111.6%	0.9	1.7	0.9	0.0	0.2
New York—other boroughs	4.30	0.5%	–5.26	28%	6.1%	0.6	1.4%	145%	0.9	9.5%	1.14	1.1%	103.3%	1.2	0.5	1.8	0.2	0.7
Northern New Jersey	7.18	0.2%	7.52	25%	2.4%	1.2	1.9%	109%	1.5	6.4%	3.28	0.8%	117.7%	1.2	1.2	1.0	1.6	0.7
Oakland/East Bay	2.82	0.7%	50.69	27%	10.1%	1.2	2.0%	108%	1.3	3.1%	1.17	1.3%	115.7%	1.5	1.1	1.0	1.0	1.0
Oklahoma City	1.40	0.8%	–32.29	29%	4.4%	0.9	1.5%	86%	1.0	3.6%	0.64	1.1%	107.2%	0.9	0.9	0.9	0.4	0.9
Omaha	0.94	0.9%	3.17	27%	4.6%	1.0	1.7%	90%	1.1	2.0%	0.51	1.3%	107.1%	1.1	1.1	1.0	0.9	0.9
Orange County, CA	3.18	0.2%	–7.99	28%	1.4%	1.5	1.9%	93%	1.2	2.5%	1.61	1.1%	102.3%	1.2	1.3	0.8	0.9	1.2
Orlando	2.60	3.2%	8.79	29%	18.0%	1.0	2.7%	111%	0.8	12.8%	1.29	3.1%	112.3%	0.8	1.2	0.8	0.3	0.7
Palm Beach	1.52	2.8%	2.25	23%	12.5%	0.8	2.3%	98%	1.5	12.9%	0.64	2.4%	105.7%	1.0	1.3	1.0	0.2	0.7
Philadelphia	6.09	0.2%	9.61	27%	–0.5%	1.1	1.6%	103%	1.2	4.0%	2.93	0.9%	117.4%	0.7	1.1	1.4	1.3	0.7
Phoenix	4.88	2.3%	87.92	27%	10.8%	0.8	1.6%	96%	0.9	6.7%	2.07	2.6%	125.9%	1.1	1.2	1.0	0.4	0.9
Pittsburgh	2.34	0.0%	19.72	25%	–1.6%	1.2	2.0%	99%	1.1	4.3%	1.18	0.9%	109.2%	1.1	1.1	1.3	0.9	0.9
Portland, ME	0.53	0.1%	20.23	23%	–3.3%	0.9	1.7%	106%	1.0	0.5%	0.28	0.8%	121.3%	1.1	0.9	1.3	1.0	0.9
Portland, OR	2.52	1.2%	1.39	27%	12.1%	1.2	2.7%	96%	1.0	9.1%	1.19	2.2%	113.1%	1.4	1.1	0.9	0.6	1.2
Providence	1.62	0.1%	–8.19	27%	–3.6%	0.9	1.5%	114%	1.0	0.2%	0.74	0.9%	100.2%	0.9	0.8	1.4	0.9	1.0
Raleigh/Durham	2.65	2.7%	29.28	28%	15.4%	0.9	1.5%	88%	1.0	5.3%	1.21	2.0%	110.8%	0.8	1.2	1.0	1.2	0.9
Richmond	1.30	0.7%	3.74	27%	4.8%	1.1	1.4%	92%	1.1	1.9%	0.68	1.5%	107.6%	1.8	1.2	1.0	0.9	0.8
Sacramento	2.32	0.6%	8.87	27%	3.8%	1.0	1.8%	103%	1.0	3.0%	0.98	1.4%	112.6%	1.0	1.0	1.0	0.4	0.7
Salt Lake City	1.22	1.3%	1.14	30%	8.7%	1.2	1.4%	88%	1.0	6.3%	0.74	2.1%	102.1%	1.3	1.3	0.7	1.0	1.0
San Antonio	2.51	1.6%	–0.60	29%	6.6%	0.9	1.6%	88%	0.9	4.5%	1.06	2.2%	106.5%	1.0	0.9	1.0	0.3	0.8
San Diego	3.36	0.6%	70.86	30%	5.5%	1.2	1.8%	120%	1.1	3.4%	1.46	1.3%	119.8%	1.2	1.2	0.9	0.7	1.0
San Francisco	1.65	0.6%	9.05	29%	17.3%	2.2	1.6%	124%	2.1	6.9%	1.13	1.2%	114.6%	0.9	1.7	0.8	1.0	0.5
San Jose	1.99	0.5%	10.41	28%	9.4%	1.8	1.5%	123%	1.8	4.5%	1.09	1.0%	113.4%	1.5	1.5	1.0	0.3	1.4
Seattle	3.05	1.5%	5.06	28%	17.2%	1.6	1.4%	103%	1.4	6.2%	1.72	1.9%	106.7%	2.2	1.1	0.8	0.3	1.1
Spokane, WA/ Couer d'Alene, ID	0.73	1.1%	5.06	26%	3.6%	0.9	1.5%	80%	0.8	4.9%	0.31	1.5%	106.7%	0.7	0.8	1.2	0.8	1.0
St. Louis	2.81	0.1%	–1.46	26%	1.2%	0.9	1.6%	92%	1.1	4.0%	1.39	0.9%	109.5%	2.2	1.1	1.2	1.3	1.0
Tacoma	0.89	1.3%	6.44	28%	10.0%	0.8	1.4%	90%	0.9	5.6%	0.32	1.8%	111.8%	0.4	0.7	1.1	0.8	0.9
Tallahassee	0.39	1.3%	46.63	36%	–0.8%	0.8	1.9%	103%	0.8	9.0%	0.19	1.8%	108.4%	0.6	0.8	0.8	0.3	0.4
Tampa/St. Petersburg	3.14	1.8%	–3.13	24%	10.0%	0.9	2.6%	101%	0.9	10.2%	1.36	2.1%	106.2%	1.1	1.3	1.0	0.5	0.8
Tucson	1.05	1.5%	–3.61	28%	2.0%	0.7	1.5%	93%	0.8	3.7%	0.38	1.7%	107.8%	0.9	0.9	1.1	0.1	0.8
Virginia Beach/Norfolk	1.74	0.6%	3.20	30%	4.0%	1.0	1.3%	89%	1.0	1.3%	0.78	0.7%	113.5%	1.2	1.0	0.9	0.3	0.8
Washington, DC—District	0.69	0.7%	1.07	37%	19.2%	3.1	1.4%	118%	1.7	4.9%	0.80	0.7%	112.6%	1.2	1.5	1.1	0.0	0.1
Washington, DC— MD suburbs	2.32	0.8%	2.25	26%	6.9%	1.1	1.2%	107%	1.5	10.3%	0.99	1.2%	105.7%	2.0	1.3	0.9	0.5	0.7
Washington, DC— Northern VA	3.00	1.0%	2.25	27%	9.2%	1.2	1.4%	115%	1.7	9.5%	1.47	1.4%	105.7%	2.0	1.9	0.7	0.2	0.5
Westchester, NY/ Fairfield, CT	1.92	0.2%	2.25	25%	–0.8%	1.2	1.6%	131%	2.3	7.2%	0.91	0.9%	105.7%	2.1	1.1	1.2	0.5	0.7

Exhibit 3-15 Housing

Market	Households		Median home prices				2018 single-family home metrics as % of previous cycle peak					Multifamily metrics		
	2018 total (000s)	3-year projected growth	2018 price	2017-2018 % change	2018 as % of peak	Affordability index*	Permits	Starts	Completions	Sales	Walk Score	Rent/cost of ownership**	Rent as % of household income	Space under construction as % of inventory
United States	126,360	3.7%	\$254,912	3.0%	115%	153.9	76.1%	77.7%	66.2%	94.9%	53	0.7	26.6%	4.6%
Albuquerque	368,632	1.9%	\$206,301	4.1%	104%	157.7	47.9%	47.1%	37.9%	66.5%	42	0.5	17.6%	2.4%
Atlanta	2,216,023	7.2%	\$198,512	1.6%	116%	191.1	59.6%	57.2%	52.0%	98.6%	48	0.7	20.1%	4.3%
Austin	837,847	8.7%	\$294,349	0.6%	156%	148.1	107.2%	106.8%	110.9%	106.8%	39	0.5	19.9%	6.6%
Baltimore	1,098,797	2.2%	\$266,930	3.2%	94%	183.0	59.7%	57.2%	54.1%	56.8%	69	0.6	18.7%	3.5%
Birmingham	463,833	2.2%	\$199,447	2.0%	121%	167.9	47.0%	47.3%	42.8%	107.2%	35	0.6	18.9%	0.8%
Boise	269,713	7.3%	\$221,744	2.4%	108%	158.8	63.5%	65.1%	60.8%	67.8%	39	0.5	19.0%	4.8%
Boston	1,903,538	2.7%	\$466,947	4.1%	114%	121.8	94.9%	96.6%	92.9%	124.2%	81	0.6	28.9%	8.2%
Buffalo	489,540	1.0%	\$141,360	4.3%	133%	273.2	72.7%	70.8%	61.7%	63.7%	67	0.8	19.6%	5.9%
Cape Coral/Fort Myers/ Naples	495,502	14.3%	\$309,910	2.7%	87%	220.4	47.1%	47.1%	42.2%	73.5%	50	0.5	22.5%	3.9%
Charleston	313,299	5.4%	\$265,904	1.4%	124%	145.3	86.8%	87.2%	80.1%	132.6%	39	0.5	20.7%	12.0%
Charlotte	994,449	8.7%	\$224,489	0.7%	144%	163.0	94.8%	95.6%	86.6%	96.9%	26	0.6	21.1%	9.0%
Chicago	3,649,530	2.3%	\$260,672	3.3%	95%	162.2	43.4%	40.7%	35.2%	74.3%	78	0.6	21.4%	4.2%
Cincinnati	872,548	2.9%	\$160,314	2.3%	110%	248.4	56.3%	53.3%	52.6%	84.8%	50	0.7	15.3%	2.3%
Cleveland	871,443	0.8%	\$148,333	2.4%	107%	247.4	71.8%	67.0%	56.6%	97.0%	59	0.7	17.2%	2.7%
Columbia	329,517	5.3%	\$163,522	1.3%	112%	219.2	81.3%	82.4%	72.4%	119.2%	36	0.7	18.0%	2.9%
Columbus	829,858	4.5%	\$186,976	1.9%	125%	208.9	77.3%	72.6%	65.1%	108.0%	40	0.6	15.7%	4.0%
Dallas/Fort Worth	2,728,712	6.5%	\$251,414	2.0%	167%	153.7	111.3%	106.2%	107.1%	112.9%	45	0.6	19.6%	6.0%
Deltona/Daytona Beach	286,508	9.7%	\$195,347	3.9%	97%	154.8	40.3%	40.8%	34.3%	79.4%	36	0.6	23.4%	2.7%
Denver	1,159,953	5.4%	\$410,717	1.6%	165%	111.5	76.9%	75.1%	77.7%	111.7%	60	0.4	20.6%	9.5%
Des Moines	259,372	7.5%	\$193,960	0.8%	127%	203.5	102.8%	93.8%	98.8%	82.7%	44	0.6	15.9%	9.7%
Detroit	1,740,966	2.0%	\$172,165	4.3%	93%	216.8	53.9%	52.5%	46.3%	82.6%	55	0.7	17.6%	2.3%
Fort Lauderdale	799,321	7.1%	\$296,705	1.4%	80%	115.6	59.6%	53.4%	44.3%	88.5%	58	0.6	28.6%	7.6%
Gainesville	119,563	6.3%	\$193,490	2.9%	84%	186.9	49.7%	49.4%	44.9%	83.2%	34	0.7	21.1%	0.0%
Greenville, SC	356,627	5.0%	\$193,281	1.6%	125%	172.9	104.9%	100.1%	92.2%	118.0%	42	0.6	19.5%	5.7%
Hartford	486,944	1.5%	\$236,268	5.1%	90%	215.4	43.8%	42.1%	38.6%	88.0%	71	0.6	17.0%	2.4%
Honolulu	335,617	2.9%	\$759,859	1.2%	119%	66.1	68.2%	69.7%	54.5%	81.3%	63	0.3	25.2%	2.2%
Houston	2,494,510	6.3%	\$231,561	0.9%	152%	166.8	79.2%	81.1%	83.7%	93.9%	48	0.6	18.2%	2.5%
Indianapolis	808,026	4.7%	\$169,926	0.8%	138%	226.7	74.0%	69.1%	62.9%	117.3%	29	0.6	15.5%	2.9%
Inland Empire	1,434,241	2.9%	\$348,020	4.0%	87%	99.2	28.3%	28.5%	24.4%	77.8%	41	0.5	25.8%	0.9%
Jacksonville	608,950	7.2%	\$231,601	2.7%	108%	160.2	63.3%	64.9%	63.4%	98.1%	26	0.5	18.6%	4.2%
Kansas City, MO	857,327	3.2%	\$197,897	2.2%	128%	206.4	79.8%	77.0%	69.7%	93.3%	34	0.6	15.4%	5.2%
Knoxville	367,289	4.0%	\$175,424	2.1%	113%	186.2	50.1%	51.7%	53.5%	101.8%	31	0.6	18.0%	4.4%
Las Vegas	850,046	8.7%	\$251,632	2.2%	79%	132.2	57.7%	57.4%	41.8%	134.6%	40	0.5	19.9%	2.4%
Long Island	984,512	2.0%	\$476,106	3.9%	100%	126.7	46.8%	45.6%	37.6%	67.7%	95	0.6	24.2%	3.6%
Los Angeles	3,510,055	3.2%	\$563,620	7.2%	98%	65.7	64.9%	67.0%	81.7%	64.3%	66	0.4	31.5%	3.1%
Louisville	531,123	2.9%	\$171,514	2.3%	125%	208.5	75.9%	71.8%	66.4%	50.9%	33	0.6	16.9%	3.4%
Madison	279,615	3.7%	\$267,072	2.0%	118%	170.4	82.0%	79.6%	84.5%	103.7%	48	0.5	17.9%	6.2%
Memphis	517,102	3.2%	\$167,948	2.2%	118%	192.6	24.6%	24.0%	23.1%	81.3%	36	0.6	16.8%	1.9%
Miami	1,000,778	5.6%	\$350,970	1.8%	92%	77.7	48.1%	48.2%	48.7%	83.8%	78	0.5	34.2%	7.9%
Milwaukee	647,024	2.3%	\$243,314	2.3%	110%	162.7	48.9%	49.2%	42.4%	104.8%	61	0.5	18.7%	5.5%

Sources: U.S. Census Bureau, Moody's Analytics, Walk Score, U.S. Federal Reserve, Reis, CoStar, U.S. Bureau of Economic Analysis.

*Affordability is the percentage of the median home price that can be purchased with the median income for the market.

**Market apartment rent divided by median mortgage payment, taxes, insurance, maintenance.

Exhibit 3-15 Housing

Market	Households		Median home prices				2018 single-family home metrics as % of previous cycle peak					Multifamily metrics		
	2018 total (000s)	3-year projected growth	2018 price	2017–2018 % change	2018 as % of peak	Affordability index*	Permits	Starts	Completions	Sales	Walk Score	Rent/cost of ownership**	Rent as % of household income	Space under construction as % of inventory
United States	126,360	3.7%	\$254,912	3.0%	115%	153.9	76.1%	77.7%	66.2%	94.9%	53	0.7	26.6%	4.6%
Minneapolis/St. Paul	1,430,462	4.4%	\$258,521	3.1%	111%	180.4	46.8%	45.6%	49.0%	93.6%	68	0.6	18.1%	3.4%
Nashville	763,473	6.5%	\$249,706	1.9%	135%	150.2	96.0%	92.5%	97.7%	100.9%	28	0.6	20.6%	8.3%
New Orleans	522,160	2.9%	\$198,703	2.4%	115%	165.9	48.5%	53.4%	51.7%	90.7%	57	0.7	21.8%	3.2%
New York—Brooklyn	1,007,869	3.1%	\$628,206	6.0%	110%	47.6	37.0%	40.7%	100.6%	83.5%	97	0.5	44.6%	9.9%
New York—Manhattan	808,065	2.1%	\$835,935	4.5%	75%	56.6	42.9%	26.6%	59.0%	84.5%	89	0.6	52.2%	2.6%
New York—other boroughs	1,552,468	3.1%	\$452,408	5.5%	97%	73.9	57.9%	58.4%	86.0%	74.7%	78	0.5	36.8%	5.9%
Northern New Jersey	2,677,630	2.3%	\$369,906	5.0%	90%	138.3	94.4%	88.7%	85.9%	92.3%	80	0.5	20.8%	3.5%
Oakland/East Bay	1,024,047	3.4%	\$768,422	6.7%	107%	72.4	76.9%	73.1%	77.4%	62.3%	72	0.4	26.6%	4.3%
Oklahoma City	556,534	3.8%	\$151,676	1.7%	115%	226.6	93.1%	91.3%	78.0%	99.8%	32	0.6	14.3%	2.1%
Omaha	368,381	4.3%	\$176,543	2.4%	128%	221.6	99.9%	91.4%	88.4%	107.8%	45	0.6	15.7%	4.2%
Orange County, CA	1,077,016	2.7%	\$797,807	3.7%	113%	61.6	69.8%	67.1%	81.2%	60.8%	53	0.3	26.2%	4.0%
Orlando	987,739	12.3%	\$240,041	2.7%	89%	137.7	75.1%	74.8%	66.1%	94.6%	41	0.6	24.2%	10.0%
Palm Beach	645,637	10.6%	\$342,518	3.1%	91%	115.5	55.3%	53.8%	43.9%	108.0%	66	0.6	27.1%	7.3%
Philadelphia	2,372,666	2.2%	\$235,913	3.8%	101%	193.7	80.9%	81.1%	71.6%	85.9%	41	0.7	19.2%	2.6%
Phoenix	1,808,805	7.4%	\$247,763	2.1%	93%	142.6	62.6%	62.2%	50.8%	81.3%	78	0.5	17.7%	6.0%
Pittsburgh	1,036,293	1.4%	\$150,129	2.8%	116%	265.0	102.3%	102.1%	93.0%	104.4%	40	0.9	18.9%	3.6%
Portland, ME	227,924	2.0%	\$272,702	2.8%	112%	159.0	68.2%	63.4%	60.7%	78.7%	61	0.6	21.4%	1.7%
Portland, OR	995,437	5.7%	\$384,614	2.9%	131%	111.1	94.2%	94.5%	91.3%	78.9%	64	0.4	20.7%	5.2%
Providence	659,582	1.6%	\$289,846	4.8%	99%	141.3	57.9%	59.9%	58.4%	91.4%	60	0.6	24.6%	3.3%
Raleigh/Durham	1,040,689	9.2%	\$230,619	1.4%	127%	173.5	102.8%	101.0%	92.9%	90.7%	78	0.6	19.0%	4.9%
Richmond	514,794	3.5%	\$259,496	4.2%	111%	162.4	74.6%	73.5%	75.1%	86.8%	30	0.5	18.0%	4.1%
Sacramento	860,678	3.7%	\$354,795	6.7%	95%	120.4	40.8%	40.0%	36.4%	82.9%	52	0.5	21.5%	1.3%
Salt Lake City	418,137	5.2%	\$299,462	2.6%	129%	139.0	123.3%	126.1%	114.3%	79.3%	46	0.5	16.7%	7.5%
San Antonio	912,448	5.5%	\$211,683	1.1%	138%	160.9	60.0%	62.0%	59.0%	113.1%	64	0.6	18.9%	5.8%
San Diego	1,207,990	3.7%	\$611,875	5.0%	101%	70.8	38.2%	36.8%	45.0%	79.0%	56	0.4	26.7%	3.5%
San Francisco	663,818	3.7%	\$1,185,608	7.9%	133%	53.5	55.3%	51.1%	96.4%	64.8%	36	0.3	30.3%	3.7%
San Jose	674,572	2.5%	\$1,179,679	5.9%	141%	56.5	71.1%	64.1%	75.5%	69.2%	50	0.3	26.3%	5.7%
Seattle	1,223,216	6.0%	\$507,273	4.8%	123%	106.2	115.4%	112.5%	109.9%	102.1%	86	0.4	20.8%	6.6%
St. Louis	1,170,803	2.3%	\$177,142	2.3%	120%	222.3	66.9%	63.9%	56.4%	87.9%	73	0.6	16.1%	3.0%
Spokane, WA/ Couer d'Alene, ID	294,681	4.5%	\$228,999	2.6%	110%	145.7	73.8%	73.3%	70.9%	93.0%	48	0.5	19.8%	5.4%
Tacoma	339,484	5.0%	\$318,046	4.7%	105%	120.9	72.8%	74.9%	67.7%	100.2%	38	0.4	19.0%	1.0%
Tallahassee	155,846	5.1%	\$191,060	1.7%	101%	197.1	48.7%	51.5%	42.3%	79.4%	53	0.6	20.0%	4.1%
Tampa/St. Petersburg	1,313,884	6.9%	\$223,935	2.7%	100%	150.7	74.6%	72.1%	68.6%	101.4%	32	0.6	23.0%	4.5%
Tucson	429,605	5.5%	\$209,881	2.5%	86%	144.6	40.0%	40.5%	30.8%	87.2%	49	0.4	15.7%	0.5%
Virginia Beach/Norfolk	676,840	3.1%	\$228,639	3.0%	94%	166.3	67.8%	69.9%	69.7%	78.0%	41	0.6	18.2%	2.1%
Washington DC—District	304,929	3.0%	\$510,106	4.8%	113%	87.4	126.7%	140.7%	86.2%	95.2%	33	0.4	25.9%	8.5%
Washington, DC— MD suburbs	850,526	4.0%	\$354,485	3.4%	87%	157.1	59.4%	54.6%	74.5%	60.1%	77	0.6	19.3%	3.4%
Washington, DC— Northern VA	1,112,848	4.5%	\$446,136	3.0%	99%	142.6	52.9%	53.2%	57.0%	61.6%	47	0.5	17.8%	5.5%
Westchester, NY/ Fairfield, CT	715,794	1.9%	\$429,034	5.5%	83%	127.8	82.1%	76.5%	48.2%	71.8%	68	0.6	26.6%	8.6%

Exhibit 3-16 Local Market Perspective: Investor Demand

Weak	Declining	Average	Improving	Strong
Seattle	4.65	Sacramento	3.53	
Boston	4.51	Northern New Jersey	3.53	
San Francisco	4.50	Washington, DC—MD suburbs	3.51	
New York—Manhattan	4.46	San Antonio	3.50	
Nashville	4.40	Tacoma	3.50	
Austin	4.38	Las Vegas	3.48	
Dallas/Fort Worth	4.35	Deltona/Daytona Beach	3.44	
Orange County	4.34	Long Island	3.42	
Los Angeles	4.34	Louisville	3.42	
San Jose	4.28	Cincinnati	3.41	
Portland, OR	4.24	Boise	3.39	
Raleigh/Durham	4.22	Des Moines	3.38	
Charleston	4.21	Kansas City, MO	3.35	
New York—Brooklyn	4.16	Richmond	3.32	
Charlotte	4.16	Madison	3.31	
Denver	4.15	Omaha	3.30	
Oakland/East Bay	4.14	Westchester, NY/Fairfield, CT	3.29	
San Diego	4.14	Spokane, WA/Coeur d'Alene, ID	3.21	
Miami	4.13	Tallahassee	3.20	
Atlanta	4.10	St. Louis	3.17	
Washington, DC—District	4.08	Jacksonville	3.14	
Orlando	4.00	Detroit	3.13	
Tampa/St. Petersburg	3.98	Portland, ME	3.10	
Washington, DC—Northern VA	3.97	Houston	3.08	
Inland Empire	3.92	Birmingham	3.07	
Minneapolis/St. Paul	3.86	Gainesville	3.06	
Salt Lake City	3.85	Virginia Beach/Norfolk	3.05	
New York—other boroughs	3.84	Baltimore	3.00	
Palm Beach	3.83	Tucson	2.96	
Honolulu	3.82	Cleveland	2.94	
Fort Lauderdale	3.81	New Orleans	2.94	
Columbus	3.77	Milwaukee	2.91	
Phoenix	3.76	Memphis	2.84	
Greenville, SC	3.67	Knoxville	2.83	
Chicago	3.66	Providence	2.80	
Philadelphia	3.60	Buffalo	2.80	
Indianapolis	3.56	Oklahoma City	2.56	
Pittsburgh	3.56	Albuquerque	2.44	
Cape Coral/Fort Myers/Naples	3.56	Hartford	2.30	

Source: *Emerging Trends in Real Estate 2018* survey.
 Note: Ratings reflect perspective of local market participants.

Exhibit 3-17 Local Market Perspective: Development/Redevelopment Opportunities

Weak	Declining	Average	Improving	Strong
Nashville	3.94	San Diego	3.49	
Dallas/Fort Worth	3.91	New York—Brooklyn	3.48	
Denver	3.89	Charleston	3.47	
Seattle	3.85	Madison	3.45	
Minneapolis/St. Paul	3.76	Palm Beach	3.45	
Buffalo	3.75	Las Vegas	3.42	
Charlotte	3.74	Cincinnati	3.42	
Des Moines	3.71	Washington, DC—MD suburbs	3.41	
Kansas City, MO	3.70	Virginia Beach/Norfolk	3.39	
Salt Lake City	3.69	Oakland/East Bay	3.38	
Columbus	3.68	Knoxville	3.33	
Raleigh/Durham	3.68	St. Louis	3.32	
Greenville, SC	3.65	Miami	3.31	
San Jose	3.64	Boise	3.30	
Omaha	3.63	Richmond	3.30	
Providence	3.63	Louisville	3.27	
Boston	3.62	Milwaukee	3.25	
Orlando	3.62	Gainesville	3.25	
Washington, DC—District	3.61	Tacoma	3.24	
San Antonio	3.61	Northern New Jersey	3.23	
Washington, DC—Northern VA	3.61	Houston	3.23	
Los Angeles	3.59	Westchester, NY/Fairfield, CT	3.20	
Pittsburgh	3.59	Long Island	3.18	
Austin	3.58	Tallahassee	3.17	
Tampa/St. Petersburg	3.58	Detroit	3.15	
Atlanta	3.57	Baltimore	3.15	
New York—other boroughs	3.57	Inland Empire	3.14	
Cleveland	3.56	Birmingham	3.13	
Orange County	3.56	Tucson	3.10	
Indianapolis	3.55	Honolulu	3.07	
New York—Manhattan	3.54	Chicago	3.01	
Fort Lauderdale	3.53	Spokane, WA/Coeur d'Alene, ID	3.00	
Portland, OR	3.53	Memphis	3.00	
Phoenix	3.52	Hartford	3.00	
San Francisco	3.52	New Orleans	2.92	
Philadelphia	3.52	Portland, ME	2.89	
Sacramento	3.51	Deltona/Daytona Beach	2.86	
Cape Coral/Fort Myers/Naples	3.50	Oklahoma City	2.71	
Jacksonville	3.50	Albuquerque	2.56	

Source: *Emerging Trends in Real Estate 2018* survey.
 Note: Ratings reflect perspective of local market participants.

Exhibit 3-18 Local Market Perspective: Availability of Debt and Equity Capital

Weak	Declining	Average	Improving	Strong
Seattle	4.47	Honolulu	3.68	
Boston	4.43	Louisville	3.68	
New York–Manhattan	4.41	Cincinnati	3.67	
San Francisco	4.41	Madison	3.67	
Orange County	4.31	Sacramento	3.67	
Austin	4.25	Westchester, NY/Fairfield, CT	3.65	
New York–Brooklyn	4.25	Phoenix	3.64	
Los Angeles	4.24	Deltona/Daytona Beach	3.63	
San Jose	4.23	Tacoma	3.63	
Dallas/Fort Worth	4.14	Richmond	3.61	
Washington, DC–District	4.12	St. Louis	3.57	
Nashville	4.11	Kansas City, MO	3.56	
San Diego	4.11	Boise	3.52	
Charleston	4.10	Des Moines	3.50	
Charlotte	4.07	Omaha	3.50	
Atlanta	4.06	San Antonio	3.47	
Portland, OR	4.06	Cape Coral/Fort Myers/Naples	3.42	
New York–other boroughs	4.04	Las Vegas	3.41	
Oakland/East Bay	4.04	Providence	3.40	
Raleigh/Durham	4.04	Jacksonville	3.39	
Denver	4.00	Birmingham	3.37	
Minneapolis/St. Paul	3.98	Gainesville	3.36	
Washington, DC–Northern VA	3.97	Baltimore	3.33	
Northern New Jersey	3.91	Cleveland	3.33	
Orlando	3.89	Memphis	3.32	
Pittsburgh	3.88	Milwaukee	3.32	
Miami	3.86	Spokane, WA/Coeur d'Alene, ID	3.26	
Chicago	3.83	Oklahoma City	3.25	
Inland Empire	3.82	Tallahassee	3.25	
Tampa/St. Petersburg	3.80	New Orleans	3.23	
Fort Lauderdale	3.79	Virginia Beach/Norfolk	3.21	
Long Island	3.79	Knoxville	3.10	
Palm Beach	3.79	Portland, ME	3.10	
Greenville, SC	3.78	Houston	3.01	
Indianapolis	3.78	Detroit	3.00	
Philadelphia	3.78	Hartford	3.00	
Washington, DC–MD suburbs	3.78	Tucson	3.00	
Columbus	3.77	Buffalo	2.80	
Salt Lake City	3.75	Albuquerque	2.71	

Source: *Emerging Trends in Real Estate 2018* survey.

*Ratings reflect perspective of local market participants.

Exhibit 3-19 Local Market Perspective: Local Public/Private Investment

Weak	Declining	Average	Improving	Strong
Seattle	3.97	Madison	3.50	
Detroit	3.95	New York–Brooklyn	3.50	
New York–other boroughs	3.83	Palm Beach	3.50	
Salt Lake City	3.82	Miami	3.48	
Pittsburgh	3.80	San Diego	3.48	
Dallas/Fort Worth	3.78	Indianapolis	3.47	
Charlotte	3.73	Boise	3.45	
Raleigh/Durham	3.73	Providence	3.40	
Austin	3.71	Cincinnati	3.39	
Oakland/East Bay	3.71	Fort Lauderdale	3.39	
Los Angeles	3.68	Jacksonville	3.39	
Portland, OR	3.68	New York–Manhattan	3.39	
San Antonio	3.68	Westchester, NY/Fairfield, CT	3.39	
Greenville, SC	3.66	Washington, DC–District	3.38	
Columbus	3.65	Chicago	3.36	
Deltona/Daytona Beach	3.63	Cleveland	3.35	
Denver	3.63	San Francisco	3.32	
Kansas City, MO	3.63	Washington, DC–MD suburbs	3.31	
Orlando	3.63	Gainesville	3.29	
Atlanta	3.62	Tacoma	3.29	
Nashville	3.62	Spokane, WA/Coeur d'Alene, ID	3.28	
Orange County	3.61	Baltimore	3.27	
Minneapolis/St. Paul	3.60	Milwaukee	3.27	
Omaha	3.60	Honolulu	3.25	
Philadelphia	3.59	Northern New Jersey	3.24	
Cape Coral/Fort Myers/Naples	3.58	St. Louis	3.24	
New Orleans	3.58	Portland, ME	3.22	
Charleston	3.57	Richmond	3.21	
Sacramento	3.57	Virginia Beach/Norfolk	3.18	
Boston	3.55	Birmingham	3.15	
Washington, DC–Northern VA	3.54	Las Vegas	3.15	
Inland Empire	3.53	Tallahassee	3.13	
Phoenix	3.53	Knoxville	3.00	
San Jose	3.53	Houston	2.99	
Tampa/St. Petersburg	3.53	Memphis	2.93	
Buffalo	3.50	Tucson	2.91	
Des Moines	3.50	Albuquerque	2.56	
Long Island	3.50	Hartford	2.56	
Louisville	3.50	Oklahoma City	2.29	

Source: *Emerging Trends in Real Estate 2018* survey.

*Ratings reflect perspective of local market participants.

Exhibit 3-20 Local Market Perspective: Local Economy

Weak	Declining	Average	Improving	Strong
Seattle	4.69	Inland Empire	3.73	
Dallas/Fort Worth	4.46	Palm Beach	3.73	
Nashville	4.43	Omaha	3.70	
Austin	4.40	Tacoma	3.70	
San Francisco	4.38	Washington, DC–District	3.70	
Boston	4.34	Cincinnati	3.68	
Denver	4.33	Las Vegas	3.67	
Raleigh/Durham	4.33	Louisville	3.66	
San Jose	4.32	Honolulu	3.64	
Salt Lake City	4.30	Kansas City, MO	3.62	
Charleston	4.29	Jacksonville	3.59	
Orange County	4.20	Long Island	3.55	
Portland, OR	4.18	Portland, ME	3.55	
Atlanta	4.16	Tallahassee	3.55	
Charlotte	4.15	Richmond	3.53	
San Diego	4.13	Deltona/Daytona Beach	3.50	
Los Angeles	4.07	Washington, DC–MD suburbs	3.50	
Minneapolis/St. Paul	4.05	Spokane, WA/Coeur d'Alene, ID	3.47	
Orlando	4.05	Virginia Beach/Norfolk	3.43	
Tampa/St. Petersburg	4.03	Knoxville	3.42	
Oakland/East Bay	4.02	Northern New Jersey	3.39	
Boise	4.00	Chicago	3.36	
Des Moines	4.00	Milwaukee	3.35	
Madison	4.00	Buffalo	3.33	
New York–Brooklyn	4.00	Birmingham	3.31	
New York–Manhattan	4.00	Tucson	3.29	
Columbus	3.96	Providence	3.27	
Phoenix	3.96	Westchester, NY/Fairfield, CT	3.23	
San Antonio	3.96	Gainesville	3.22	
Greenville, SC	3.95	St. Louis	3.22	
Indianapolis	3.88	Cleveland	3.21	
Washington, DC–Northern VA	3.87	Baltimore	3.14	
Fort Lauderdale	3.84	Detroit	3.09	
Pittsburgh	3.81	New Orleans	3.06	
Miami	3.80	Houston	2.99	
Cape Coral/Fort Myers/Naples	3.78	Memphis	2.90	
New York–other boroughs	3.78	Oklahoma City	2.89	
Philadelphia	3.76	Albuquerque	2.67	
Sacramento	3.75	Hartford	2.27	

Source: *Emerging Trends in Real Estate 2018* survey.

*Ratings reflect perspective of local market participants.

Exhibit 3-21 In Their Own Words: Market Strengths

Market/District Council	Attractive Characteristics	Market/District Council	Attractive Characteristics
Atlanta	<ul style="list-style-type: none"> Top-tier market for job growth and projected to be one for the next couple of years Business-friendly government Universities like Georgia Tech and Emory; students are a real draw to technology tenants Transportation hub Corporate relocations Continued transportation investment Sports and entertainment destination Film industry 	Cleveland	<ul style="list-style-type: none"> Growing millennial population/population in general Institutions (universities and hospitals) Great outdoor amenities Educated workforce Affordability Growing density No oversupply of spec space Steady supply Legacy city Quality of life Good returns
Austin	<ul style="list-style-type: none"> Growing population and demand for all property types Future transportation growth plans to meet needs Continued housing growth Innovation Zone—new development with Medical Center 45 manufacturing companies looking at Austin Quality of life, access to recreation, music, culture 	Columbus	<ul style="list-style-type: none"> Young and educated workforce Strong job and population growth Commitment and focus to the Master Plan Strong public/private partnership scene Focus on technology and infrastructure Service-based economy rather than manufacturing, provides stability
Birmingham (ULI Alabama)	<ul style="list-style-type: none"> Young people moving downtown Architecture and energy Coming into its own as an emerging market Considerably cheaper than large markets City has a lot of its original buildings Development-friendly city government Comparatively undersupplied Strong infrastructure 	Detroit (ULI Michigan)	<ul style="list-style-type: none"> Influx and energy of millennials and other new residents Strong economy, good demand Affordable housing market relative to most of country Architectural quality of existing properties Value of real estate properties—Class A potential Developer and investor confidence Entrepreneurial spirit Perception of safety and security in certain areas Several new major developments Residential properties are seen as desirable to occupy, rehab, or invest Decreasing vacancy in suburbs
Boston	<ul style="list-style-type: none"> Economy continues to outperform other gateway markets Highly educated “knowledge-based” workforce 	Houston	<ul style="list-style-type: none"> Top-performing multihousing Pension solutions Suppressed cap rates Strong existing equity Upgraded downtown The Port of Houston New deals = new perception of real estate market Credit available Densification
Charlotte	<ul style="list-style-type: none"> Job growth Growth of millennial population/population in general Higher-income jobs compared with rest of Southeast Transportation improvements Resolution of HB2 New developments in old neighborhoods 		

Source: ULI District Council Focus Groups, convened June–August 2017.

Exhibit 3-21 In Their Own Words: Market Strengths

Market/District Council	Attractive Characteristics	Market/District Council	Attractive Characteristics
Des Moines (ULI Iowa)	<ul style="list-style-type: none"> Small-town feel/reasonably big-city amenities Affordability Quality-of-life amenities Family atmosphere 	Richmond (ULI Virginia)	<ul style="list-style-type: none"> Pricing for investment real estate in all asset classes remains below replacement cost CBD office is a bargain compared with that in neighboring cities of similar size Access to ports and population continue to feed industrial development and investment
Jersey City (ULI Northern New Jersey)	<ul style="list-style-type: none"> Very strong population growth Population getting younger City is old-line urban that is going through a rapid change of gentrification 	San Antonio	<ul style="list-style-type: none"> Population growth Job growth Favorable demographics Cost of living/affordability Fiscal strength of city (seventh consecutive AAA bond rating) High public investment Business-friendly environment
Memphis	<ul style="list-style-type: none"> Attractive to millennials Affordable compared with other major cities Large companies have made it their home Traffic not as much of an issue as in other cities 	San Francisco	<ul style="list-style-type: none"> Job growth Becoming global Significant yield Stability Value-add opportunities
Nashville	<ul style="list-style-type: none"> Strong population growth Low unemployment rate Positive city "brand" Good connectivity Many big projects on the horizon 	St. Louis	<ul style="list-style-type: none"> Young people in the central core Innovation hub and entrepreneurial city High yields
Albuquerque (ULI New Mexico)	<ul style="list-style-type: none"> Cap rates are more attractive than those available in California and other western and southwestern states 	Tallahassee	<ul style="list-style-type: none"> Strong and steady economic fundamentals led by the educational institutions and local and state government Private capital is comfortable with the stability provided by the educational and government institutions Government investment
Seattle (ULI Northwest)	<ul style="list-style-type: none"> Jobs Density of talent Low cost Transit Quality of life Capital for buildings available No state income tax Sustainable development Land opportunities 	Triangle	<ul style="list-style-type: none"> Educated workforce Diverse economy Good cost of living Strong institutions Investment of NIH funding Graduating from second-tier to first-tier metro area, being treated as a larger market Development on edges of universities—makes up for lack of corporate headquarters Growing density
Philadelphia	<ul style="list-style-type: none"> Pricing for investment real estate in all asset classes remains below replacement cost CBD office is a bargain compared with that in neighboring cities of similar size Access to ports and population continue to feed industrial development and investment 	Washington	<ul style="list-style-type: none"> Growing millennial population Class A transit Solid economic fundamentals Long-term stability High quality of life

Source: ULI District Council Focus Groups, convened June–August 2017.

Exhibit 3-21 In Their Own Words: Market Strengths

Market/District Council	Attractive Characteristics	Market/District Council	Attractive Characteristics
Phoenix (ULI Arizona)	Economic and population growth Housing affordability Other markets are further ahead in cycle Currently not overbuilding office	Indianapolis (ULI Indiana)	Highly educated workforce Strong fundamentals Low cost of business
Baltimore	Low entry cost compared with D.C. Close to water/Inner Harbor Situated along Northeast Corridor—close to D.C., Philadelphia, and New York City Adaptive use opportunities in CBD Institutional anchors: medical and educational Corporate headquarters for multiple large companies	Jacksonville (ULI North Florida)	On the growth curve, lots of running room for long-term growth
Boise (ULI Idaho)	Growing population Low barriers to entry Self-sustaining growth Energetic downtown Self-sustaining market Outdoor amenities Infill Good placemaking	Los Angeles	Diverse and robust development market 30–50 unique submarkets High-income jobs Investment in the light-rail system creating new opportunities Asset prices are still within reasonable range for a gateway market
Charleston	Strong economic growth driven by large-scale manufacturing investments Active and growing port that is growing twice as fast as national port market average Continued strength in tourism—often at the top of lists for best cities in the United States	Minneapolis/St. Paul (ULI Minnesota)	Stable Good fundamentals Diverse economy High income Transit Amenities Increased density Walkability Well-governed High barriers to entry ensure high-quality outcomes
Charlottesville (ULI Virginia)	Increase in retiree population will benefit area University growth Tech growth Startup friendly	Las Vegas (ULI Nevada)	Updated infrastructure Development in the urban core Reduced parking
Denver (ULI Colorado)	Millennial population growing in Denver Not overbuilding Growth in tech and energy industries Good absorption	Northern New Jersey	Talented workforce New York City is the engine driving job growth Large med/ed space
Dallas (ULI North Texas)	Strong regional growth Market embracing new urban trends around employment centers	Orange County/Inland Empire	Good job growth Highly skilled workforce matches well with high-paying jobs More affordable than nearby markets No core city prevents overdevelopment and fosters competition
Honolulu (ULI Hawaii)	Strong demand for housing, retail, and industrial uses Island dynamic constrains supply New rail line being constructed Favorable interest rates Foreign investment	Pittsburgh	Strong growth in young, educated population Strong market fundamentals in medicine, energy, finance, professional services, tech, and robotics Diverse Storybook neighborhoods Housing growth will continue for years as long as job growth continues Intellectual capital is conglomerated in technical Pittsburgh

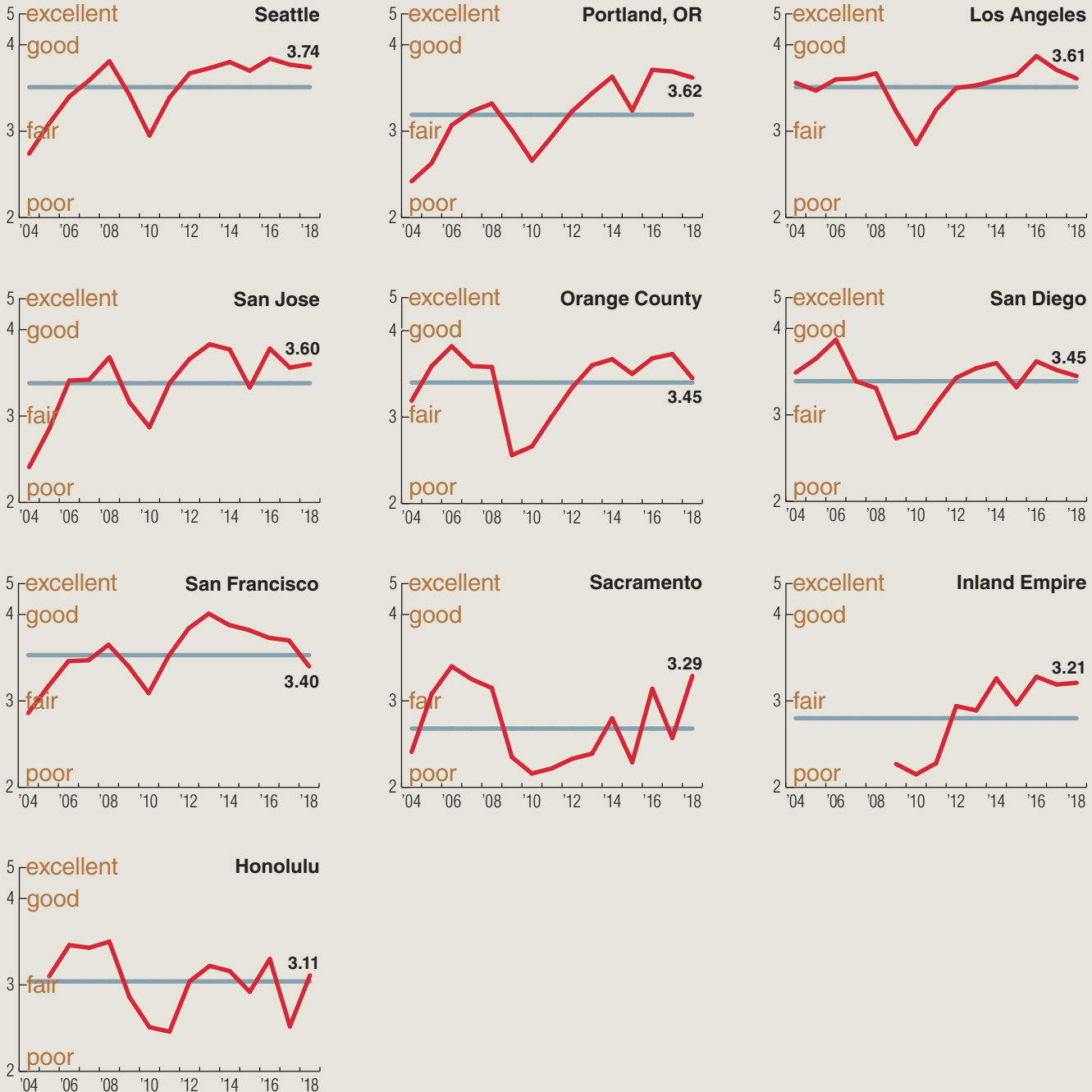
Source: ULI District Council Focus Groups, convened June–August 2017.

Exhibit 3-21 In Their Own Words: Market Strengths

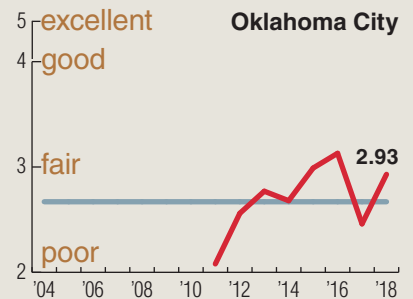
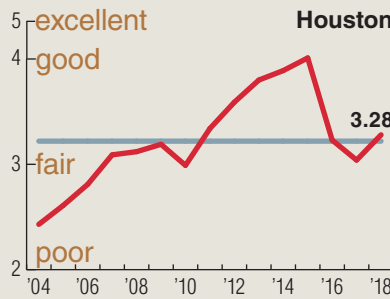
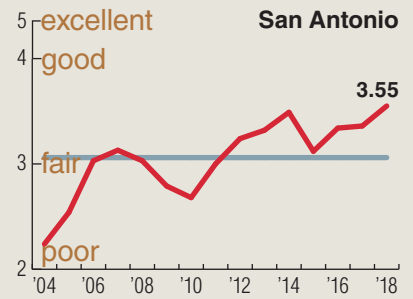
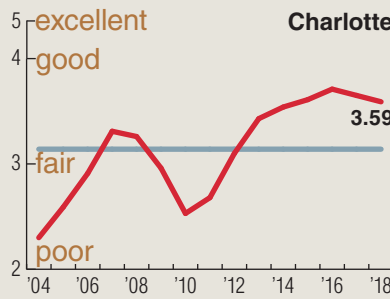
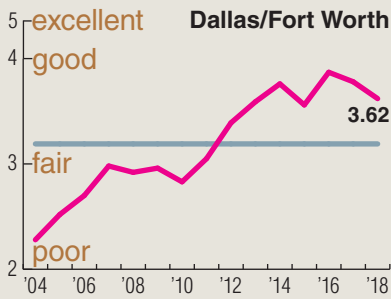
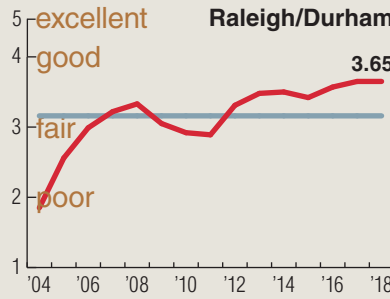
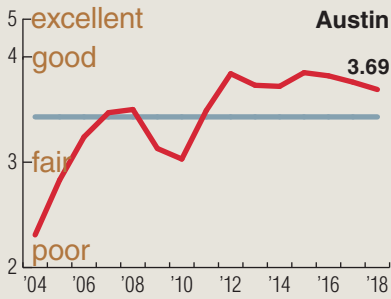
Market/District Council	Attractive Characteristics	Market/District Council	Attractive Characteristics
Sacramento	The national shift toward urban living and the synergistic growth in downtown Sacramento have created a new market for development. The lack of affordability in the Bay Area/Silicon Valley has had a significant effect on the Sacramento market, with more Bay Area transplants moving into Sacramento and increasing rents/housing costs.	Virginia Beach/ Norfolk (ULI Virginia)	Growing millennial population Port expansion Transportation improvements Federal funding increasing Commercial development in both downtown and large suburban nodes
San Diego	More stable than other western markets during last downturn Much of current development is focused on a few submarkets, so outside of those submarkets could be quite resilient during a downturn	Westchester, NY/ Fairfield, CT	Proximity to New York City Excellent demographics Highly engaged business sector
Southeast Florida	Demographics Climate Tourism Limited supply Appeals to people from all over the world Room to grow Mobility options coming Low taxes Diversity Disposable incomes Global gateway and financial hub		
Southwest Florida	Wealth Weather Retirement Proximity to hospitals, airports, retail, and universities Both beach and downtown areas		
Tampa	Population growth Quality of life Amenities Live/work/play downtown Sustained job growth Dynamic market Business friendly Accessible		

Exhibit 3-22 Investment Prospects Ratings, 2005–2018

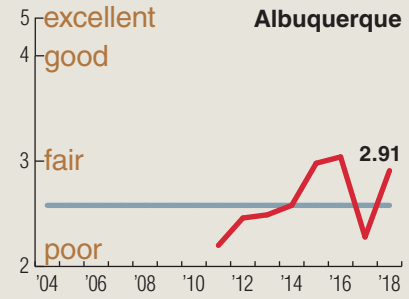
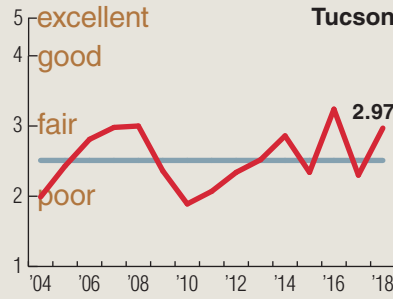
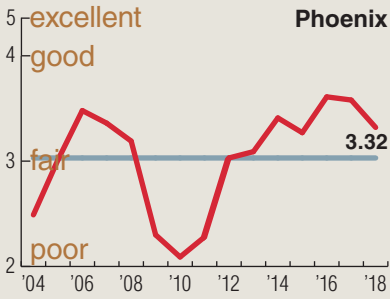
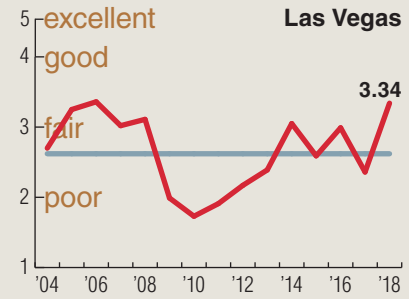
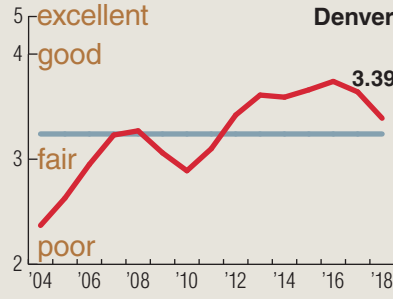
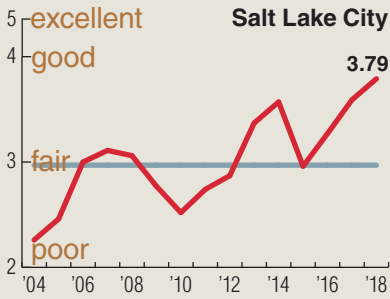
Pacific



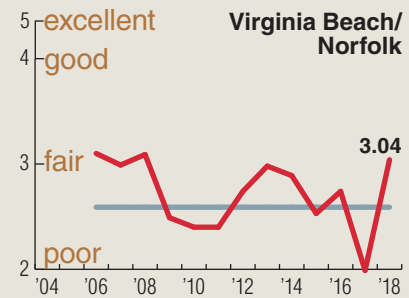
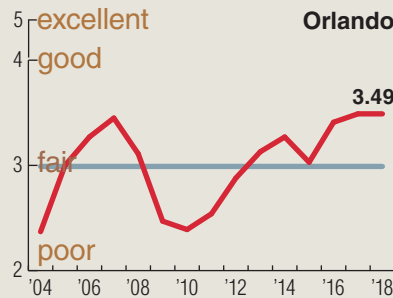
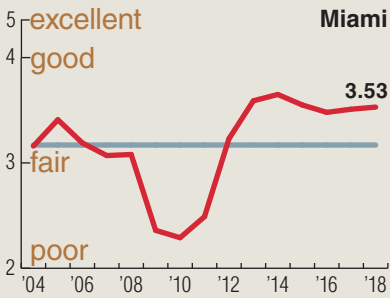
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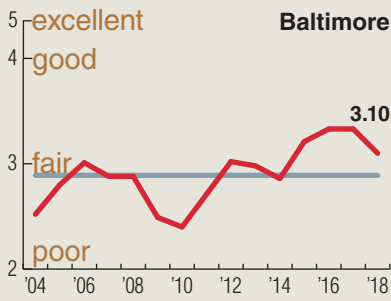
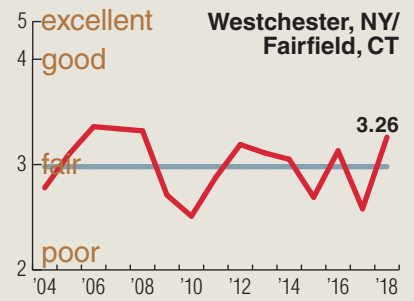
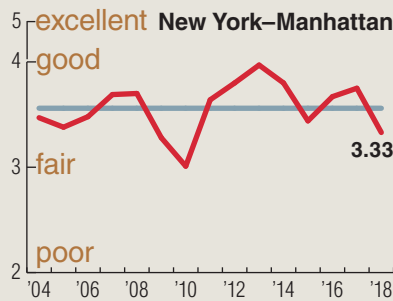
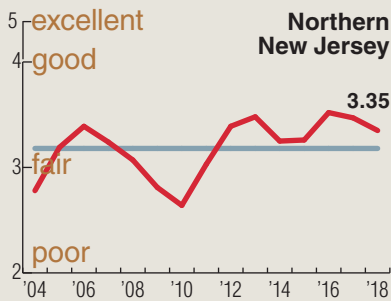
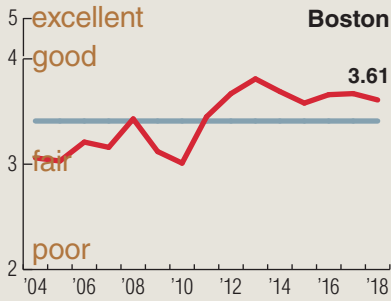
Mountain



South-Atlantic and Florida



Northeast Region



Midwest Region

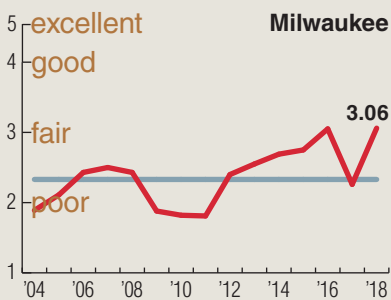
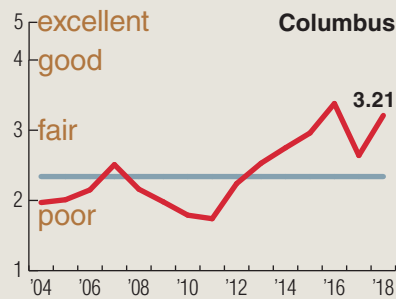
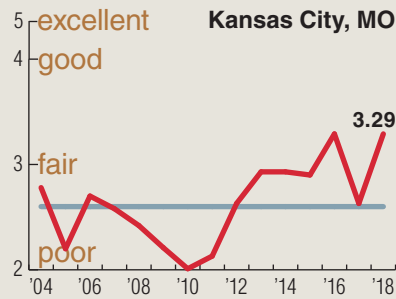
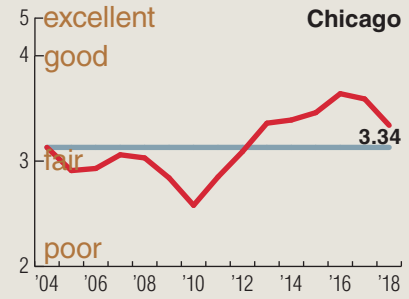
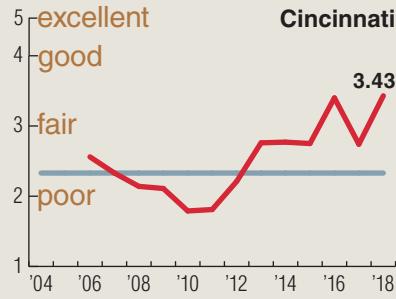
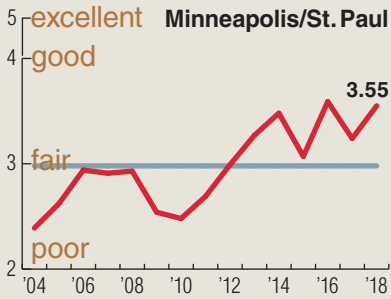


Exhibit 3-23 Pacific: Sector and Local Outlook Scores

Overall rank		Investment prospect scores, by sector					Local outlook score*	
		Office	Retail	Industrial	Multifamily	Hotel		Housing
1	Seattle	3.79	3.58	3.97	3.86	3.62	4.13	4.29
7	Los Angeles	3.62	3.41	3.92	3.81	3.65	3.68	3.94
8	San Jose	3.60	3.45	3.76	3.77	3.75	3.75	3.96
13	Portland, OR	3.60	3.46	3.84	3.80	3.43	4.00	3.88
20	Oakland/East Bay	3.52	3.20	3.91	3.78	3.35	3.73	3.81
21	Orange County	3.32	3.27	3.88	3.76	3.46	3.71	3.97
27	San Francisco	3.40	3.36	3.68	3.45	3.43	3.63	3.97
32	San Diego	3.36	3.17	3.42	3.82	3.08	3.71	3.84
38	Inland Empire	3.21	2.72	3.86	3.69	2.83	3.60	3.61
47	Sacramento	3.24	2.78	3.64	3.85	3.30	3.83	3.59
54	Tacoma	2.89	3.00	3.00	3.77	3.00	3.50	3.43
65	Honolulu	2.57	3.18	3.00	3.57	3.00	4.00	3.42
	Pacific average	3.26	3.16	3.52	3.71	3.20	3.85	3.65

Source: *Emerging Trends in Real Estate 2018* survey.

*Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Exhibit 3-24 South: Sector and Local Outlook Scores

Overall rank		Investment prospect scores, by sector					Local outlook score*	
		Office	Retail	Industrial	Multifamily	Hotel		Housing
2	Austin	3.61	3.55	3.86	3.76	3.48	4.04	4.02
4	Raleigh/Durham	3.82	3.57	3.48	3.71	3.62	4.04	3.98
5	Dallas/Fort Worth	3.58	3.11	4.00	3.80	3.44	4.23	4.16
9	Nashville	3.83	3.48	3.80	3.40	3.56	4.06	4.09
12	Charlotte	3.59	3.41	3.72	3.66	3.42	4.00	3.98
17	Atlanta	3.48	3.10	3.96	3.63	3.41	3.86	3.93
18	San Antonio	3.52	3.39	3.69	3.61	3.50	3.63	3.64
22	Greenville, SC	3.32	3.27	3.93	3.54	3.13	4.00	3.71
49	Birmingham	3.25	3.00	3.00	3.63	3.00	3.80	3.23
55	Louisville	3.00	2.83	3.00	3.91	3.00	4.00	3.45
60	Houston	2.95	3.08	3.89	3.19	2.69	3.42	3.17
67	New Orleans	2.67	3.00	2.75	3.13	3.00	3.00	3.17
70	Knoxville	3.00	2.86	2.50	3.62	3.00	3.50	3.10
73	Memphis	3.00	2.20	3.00	3.17	3.13	3.50	3.04
74	Oklahoma City	2.50	3.00	3.00	3.20	2.50	3.00	2.76
	South average	2.96	3.02	2.81	3.42	2.90	3.63	3.37

Source: *Emerging Trends in Real Estate 2018* survey.

*Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Exhibit 3-25 Mountain: Sector and Local Outlook Scores

Overall rank		Investment prospect scores, by sector						Local outlook score*
		Office	Retail	Industrial	Multifamily	Hotel	Housing	
3	Salt Lake City	3.82	3.50	3.00	4.05	3.00	4.43	3.84
23	Denver	3.47	3.19	4.00	3.52	3.48	4.00	3.99
31	Boise	3.00	3.00	3.00	4.00	3.20	4.00	3.53
34	Phoenix	3.33	2.90	3.50	3.72	3.17	3.79	3.68
36	Las Vegas	3.26	3.13	4.00	3.63	3.00	3.92	3.45
57	Spokane, WA/Coeur d'Alene, ID	3.00	3.00	3.00	3.50	3.00	4.50	3.25
71	Tucson	2.50	2.86	3.33	3.54	2.50	4.25	3.04
72	Albuquerque	2.60	3.00	2.75	3.30	2.67	2.75	2.59
	Mountain average	3.26	3.16	3.52	3.71	3.20	3.85	3.65

Source: *Emerging Trends in Real Estate 2018* survey.

*Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Exhibit 3-26 South-Atlantic and Florida: Sector and Local Outlook Scores

Overall rank		Investment prospect scores, by sector						Local outlook score*
		Office	Retail	Industrial	Multifamily	Hotel	Housing	
6	Fort Lauderdale	3.35	3.40	3.64	3.77	3.00	3.56	3.67
11	Miami	3.28	3.25	3.91	3.67	3.67	3.29	3.71
14	Charleston	3.34	3.29	3.76	3.76	3.65	4.19	3.88
15	Washington, DC—Northern VA	3.46	3.39	4.00	3.61	3.43	3.58	3.79
16	Orlando	3.35	3.40	3.56	3.67	3.00	4.07	3.82
19	Tampa/St. Petersburg	3.25	3.06	3.46	3.86	3.17	3.88	3.78
35	Washington, DC—District	3.32	3.20	3.62	3.50	3.43	3.93	3.80
41	Palm Beach	3.12	3.20	3.00	3.79	3.00	3.75	3.66
45	Richmond	3.13	3.00	3.25	3.61	3.00	3.50	3.39
48	Washington, DC—MD suburbs	2.95	3.17	3.52	3.55	3.21	3.92	3.52
51	Jacksonville	2.91	3.00	3.00	3.44	2.71	3.80	3.42
52	Cape Coral/Fort Myers/Naples	2.75	3.00	3.00	3.54	3.00	4.14	3.58
61	Virginia Beach/Norfolk	2.83	3.13	3.00	3.21	3.25	3.00	3.26
75	Gainesville	2.33	3.00	1.50	3.00	3.25	3.33	3.20
76	Tallahassee	3.00	3.00	0.00	3.00	0.00	4.00	3.21
78	Deltona/Daytona Beach	2.50	3.00	0.00	3.00	3.00	3.50	3.30
	South-Atlantic and Florida average	2.96	3.02	2.81	3.42	2.90	3.63	3.37

Source: *Emerging Trends in Real Estate 2018* survey.

*Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

Exhibit 3-27 Northeast: Sector and Local Outlook Scores

Overall rank		Investment prospect scores, by sector						Local outlook score*
		Office	Retail	Industrial	Multifamily	Hotel	Housing	
10	Boston	3.69	3.20	3.77	3.79	3.33	3.92	4.05
26	Pittsburgh	3.42	3.62	3.00	3.94	3.13	3.75	3.69
28	Philadelphia	3.16	3.14	3.66	3.55	3.41	3.83	3.66
30	New York—Brooklyn	3.27	3.17	3.55	3.40	3.33	3.75	3.88
33	Northern New Jersey	2.69	3.05	4.18	3.49	2.78	3.60	3.47
40	New York—other boroughs	3.17	3.38	3.00	3.59	2.71	3.50	3.79
44	Long Island	2.90	3.00	3.00	3.71	3.00	3.00	3.47
46	New York—Manhattan	3.43	3.07	3.44	3.36	3.15	3.33	3.96
50	Westchester, NY/Fairfield, CT	2.89	3.33	3.33	3.50	3.00	4.00	3.30
58	Baltimore	2.62	2.73	3.63	3.41	3.00	3.30	3.20
59	Portland, ME	3.00	3.00	3.00	3.29	3.33	2.50	3.12
68	Providence	2.29	2.33	3.25	3.18	3.00	4.00	3.29
69	Hartford	2.56	2.50	3.00	3.08	3.00	—	2.66
77	Buffalo	3.00	2.50	—	3.29	3.00	—	3.24
Northeast average		3.01	3.00	3.37	3.47	3.08	3.54	3.49

Source: *Emerging Trends in Real Estate 2018* survey.

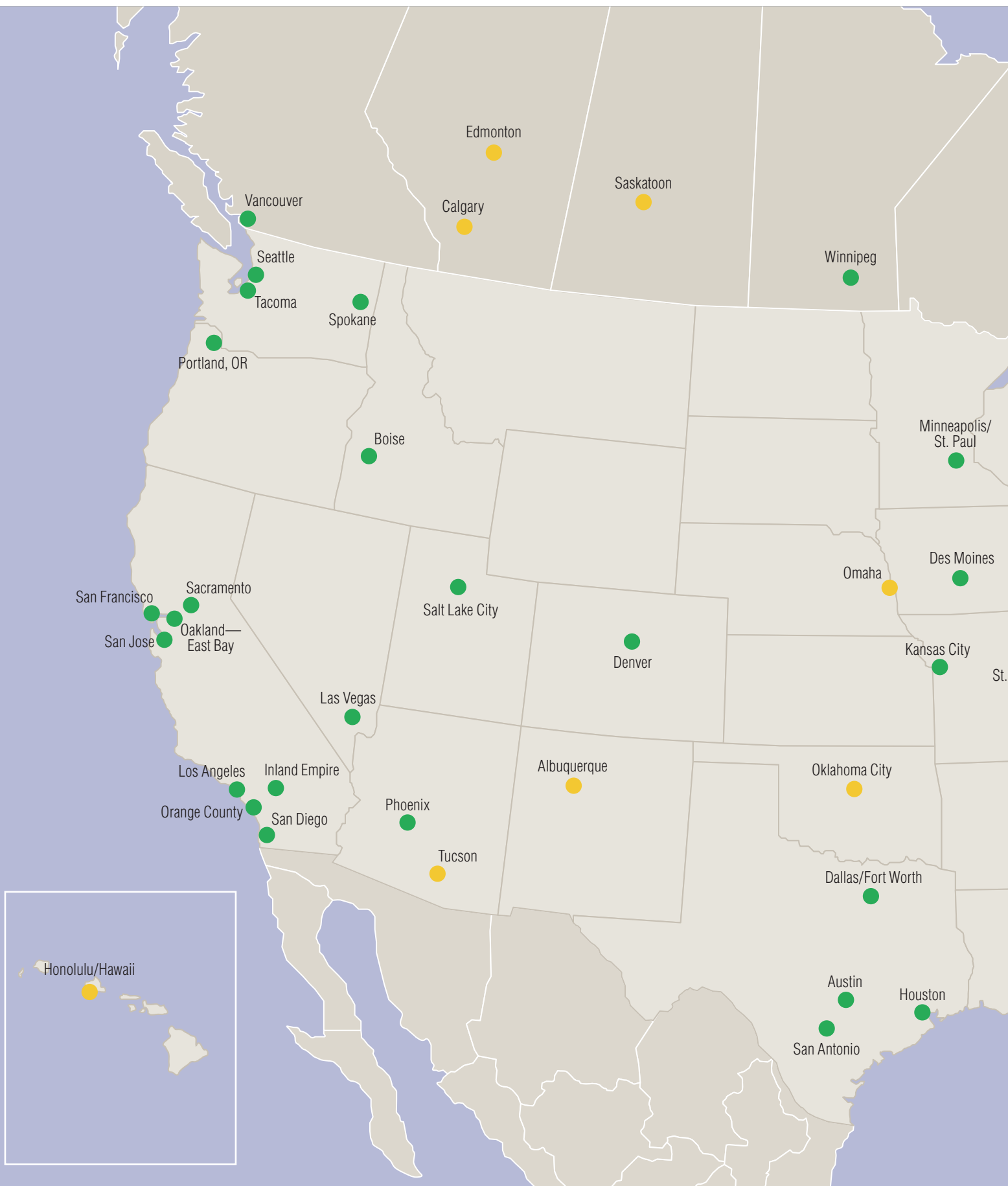
*Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.

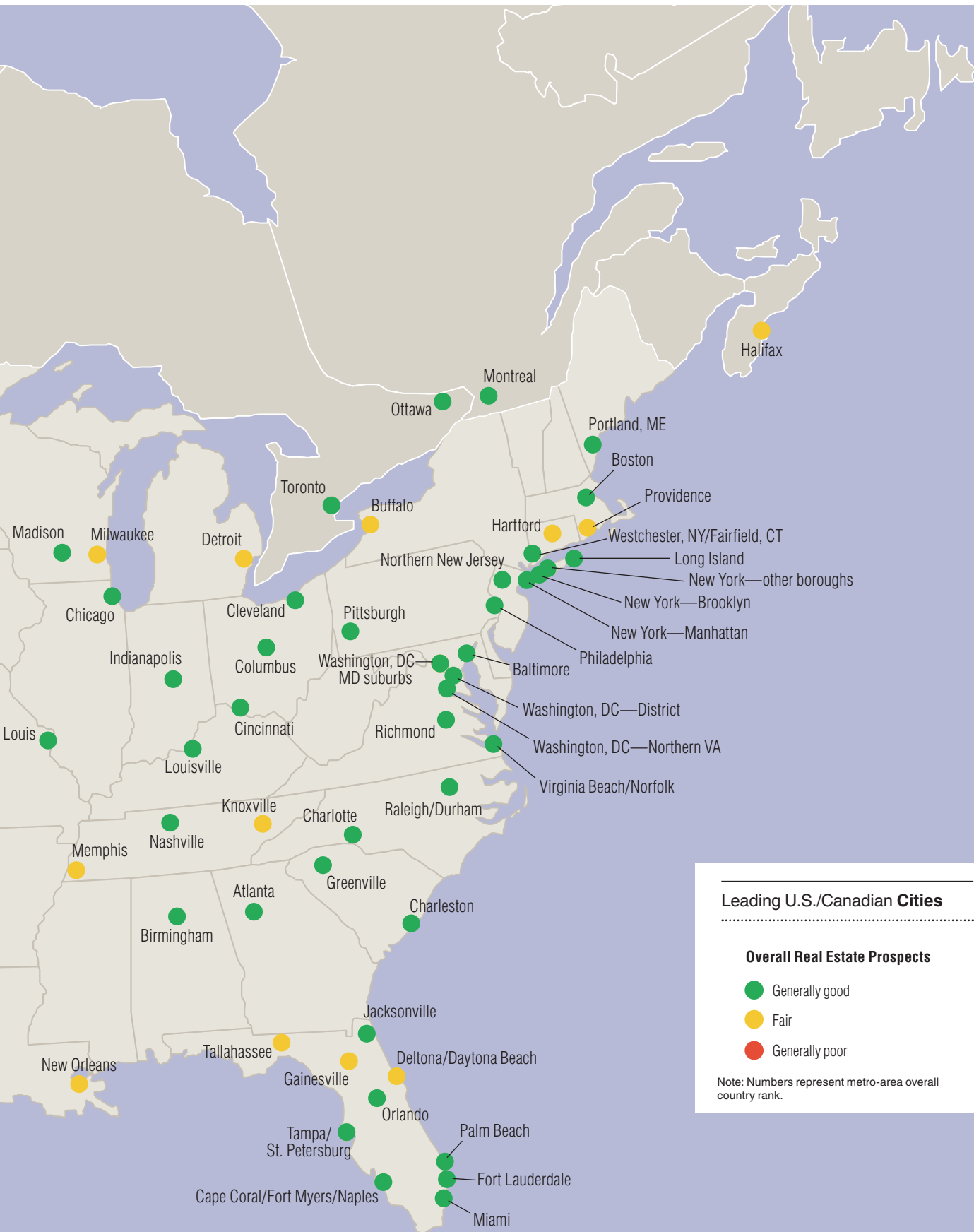
Exhibit 3-28 Midwest: Sector and Local Outlook Scores

Overall rank		Investment prospect scores, by sector						Local outlook score*
		Office	Retail	Industrial	Multifamily	Hotel	Housing	
24	Cincinnati	3.00	3.00	3.92	3.81	3.00	4.20	3.52
25	Minneapolis/St. Paul	3.40	3.23	3.53	4.03	3.00	3.71	3.87
29	Kansas City, MO	3.43	3.00	3.00	3.74	3.00	3.33	3.55
37	Indianapolis	3.00	2.67	3.92	3.63	3.14	4.33	3.68
39	Des Moines	3.25	3.00	3.67	3.60	3.00	—	3.63
42	Chicago	3.21	3.10	3.69	3.35	3.24	3.43	3.49
43	Columbus	3.00	3.00	3.00	3.82	3.00	4.00	3.78
53	St. Louis	3.14	2.75	3.50	3.58	3.00	4.00	3.32
56	Cleveland	3.00	3.00	3.60	3.44	3.00	4.00	3.35
62	Madison	3.00	3.00	3.00	3.00	3.00	3.00	3.56
63	Milwaukee	2.73	2.67	3.57	3.27	2.71	2.50	3.27
64	Detroit	2.91	2.71	3.00	3.60	3.00	3.50	3.28
66	Omaha	3.00	3.00	3.00	3.00	3.00	—	3.53
Midwest average		3.08	2.93	3.42	3.53	3.01	3.64	3.53

Source: *Emerging Trends in Real Estate 2018* survey.

*Average score of local market participants' opinions on strength of local economy, investor demand, capital availability, development and redevelopment opportunities, public/private investments, and local development community.





Leading U.S./Canadian Cities

Overall Real Estate Prospects

- Generally good
- Fair
- Generally poor

Note: Numbers represent metro-area overall country rank.

Property Type Outlook

“Technology is affecting all property types . . . in working patterns, in transportation, in finance, and in cybersecurity. There are **wide implications** to this brave new world.”

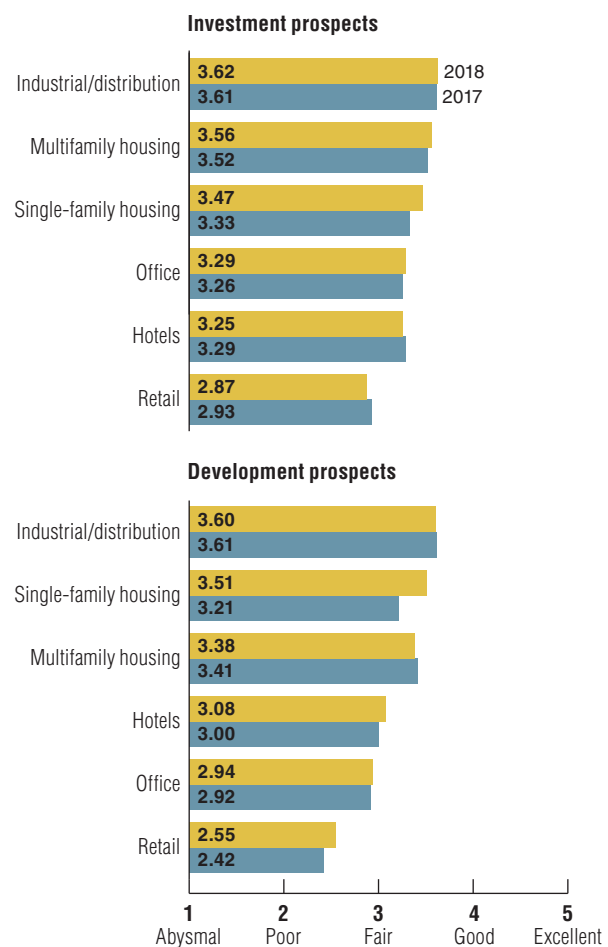
The multitrillion-dollar field of real estate poses an extremely complex mix of investment and development, demographics and economics, lineup of participants, and range of objectives (both tactical and strategic). Looking at the array of property types against that complex background may lead to a swirl of patterns that appear to defy logical clarity. However, as *Emerging Trends* sifts through the variables of user market and capital market fundamentals, as viewed in statistical data sources, in our own survey of industry experts, and in the comments elicited during interviews and in focus groups, a handful of organizing themes come to the fore.

The first theme is **maturation**. The lengthy economic and real estate cycle is often alluded to in the property type discussions as a “mature recovery.” But that is only one of the meanings that we find. The other is the idea that not only has time passed since the Great Recession, but lessons also have been learned and that the behaviors of developers, lenders, investors, and other market-makers are skirting the almost-adolescent short-sightedness that fueled the boom and bust of the first decade of this century.

That change in behavior has become increasingly visible in the industry’s discipline. Pricing, market selection, and a deep dive into the relationship between user markets and capital markets is characterizing contemporary real estate analysis. A greater humility, it might be said, is emerging in response to the potential for risk, the probability and potential severity of loss. The ghost of Mark Twain is abroad in the land, reminding us, “It ain’t what you don’t know that gets you into trouble. It’s what you know for sure that just ain’t so.”

Attention to detail means that, to an exceptional degree, “generalities” are giving way to **differentiation**. That term comes up again and again in the property type discussions in this chapter,

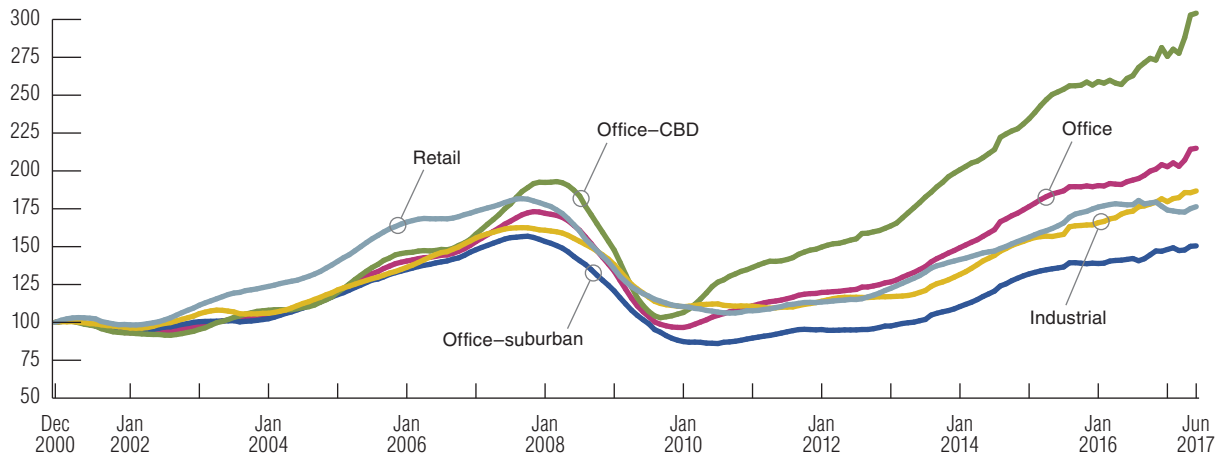
Exhibit 4-1 Prospects for Major Commercial Property Types, 2018 versus 2017



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

Exhibit 4-2 RCA Commercial Property Price Index, by Sector



Source: Real Capital Analytics.

Note: Updated August 2017; data through June 2017.

and speaks to ever-more-precise targeting by subsector, geography, user group, and investment style category. One size manifestly is not considered to fit everyone as we tally emerging trends this year.

Our research is showing another dimension of the “time-value” of real estate. The industry has a long history of understanding the time-value of money, but we are seeing a renewed appreciation of how the longevity of physical assets extends far beyond the holding periods common in the investment world. Thus, the utility of **aging assets** is weighed in the context of the real estate decision. Will McMansions fit the possible housing demand of a millennial generation as it makes the urban/suburban choice going forward? Can economically challenged “commodity” office parks be reconfigured to meet “just-in-time” fulfillment needs in the era of same-day delivery in “e-tailing”? How do traditional parking requirements adapt in the face of autonomous vehicles?

And with notable frequency, our interviewees and focus groups look at cycles and trends with keen interest in identifying **inflection points**, undoubtedly one of the most challenging of forecasting problems. As an object reaching the pinnacle of its trajectory begins to lose momentum in the fight against gravity, so do markets. A sense exists that the property markets are getting close to that point. Here is where astute decision making can make a huge difference. For, as author Malcolm Gladwell put it in his book *Tipping Point*, “The world around you may seem like an immovable, implacable place. It is not. With the slightest push—in just the right place—it can be tipped.”

With these themes as guides, let’s look at the practical world of emerging trends in the major property types.

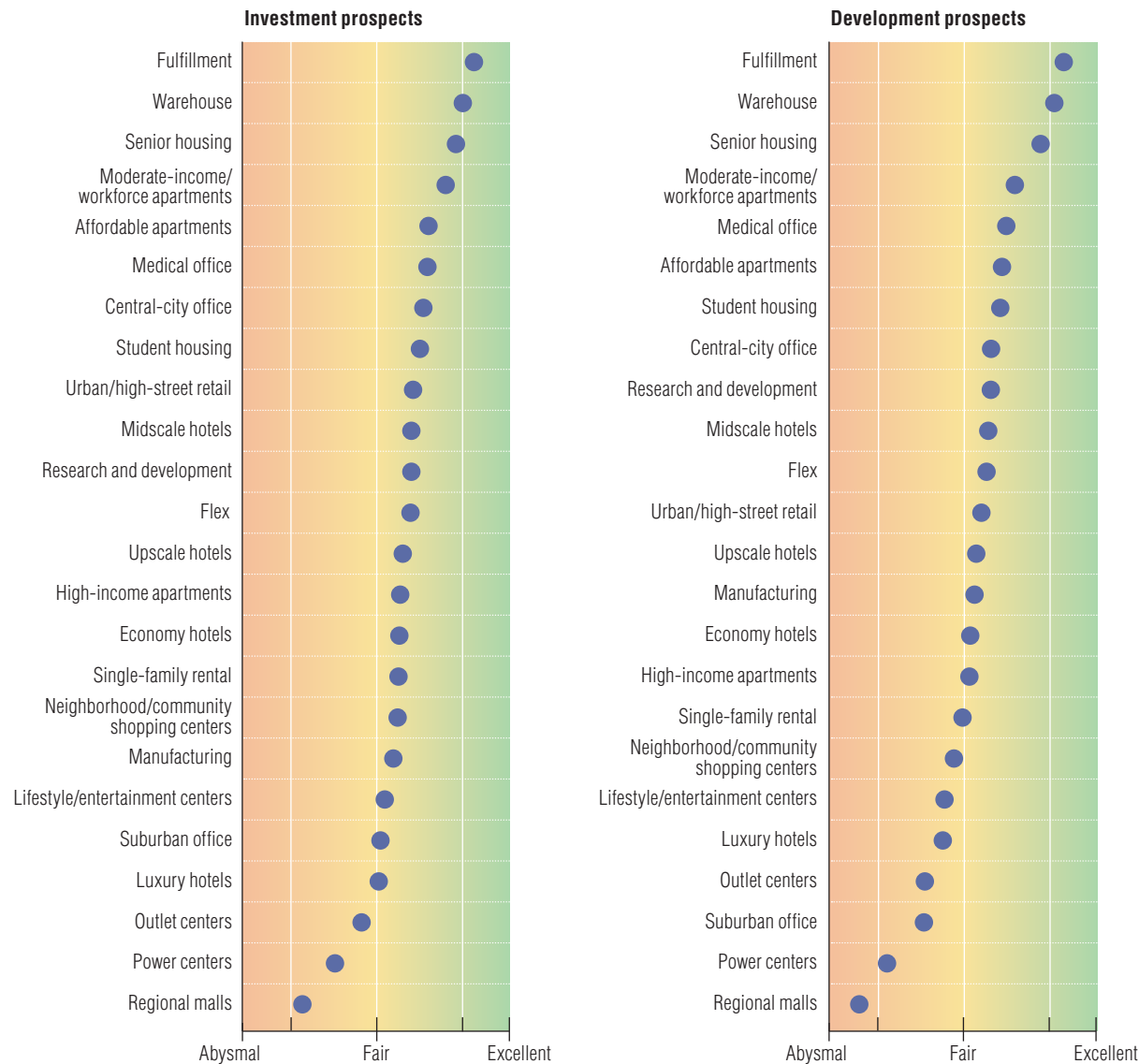
Industrial

For the past four years, industrial has been the top-ranked property sector in the *Emerging Trends* survey and it remains so for the year ahead.

Market fundamentals have only gotten better in the last year, with supply and demand in balance, market vacancies at a historically low level, and unleveraged total returns still running in the double digits. Looking ahead, the supply picture has matured and will drive more differentiation by market. Critically, users of industrial space are demonstrating a willingness to pay for space that best fits within their supply chains, leading to continued elevated rent growth. Taken together, it is no surprise that industrial still ranks as the top sector for investment and for development. Yet, there are emerging trends to monitor as investors access the space.

Operating conditions achieved another historically strong point in 2017. Fundamentals have been buoyed by a combination of factors. Demand has been better than expected; net absorption is on pace to amount to nearly 1.5 billion square feet in a five-year period—a winning streak that has not been seen in nearly 20 years. At the same time, supply has come on line slower than many expected. In both cases, the details of demand and supply are important.

Exhibit 4-3 Prospects for Commercial/Multifamily Subsectors in 2018



Source: *Emerging Trends in Real Estate 2018* survey.
 Note: Based on U.S. respondents only.

Diversity of Demand

Discussions around demand typically focus on the rise of e-commerce and the space it requires. In fact, demand is much more diverse than that:

- A notable portion of users serve consumption and basic daily needs, such as consumer goods and food companies.
- At the same time, there are categories of users where requirements emanate more directly from the economic

cycle. These users include companies in the construction, housewares, and auto parts industries. Indeed, users in the residential construction industry have become among the fastest growing in the past two years.

- Lastly, there are categories experiencing structural change—not only e-commerce retailers and transportation companies, but also health care, where demographics create a need for more medical equipment, devices, and pharmaceuticals.

Constrained Supply

Multiple operators with major portfolios pointed to continuing supply discipline, which has supercharged industrial real estate expansion. Nearly eight years in, supply is only just now catching up with demand. With the benefit of hindsight, the aftereffects of the global financial crisis moderated the pace of supply recovery:

- Today, there are far fewer noninstitutional developers than in past cycles, with many having closed shop during the Great Recession.
- The organizations that survived are more careful about the types and total risk they take. Indeed, information across the industry is more available to make investment decisions.
- Furthermore, today's projects and buildings are larger, requiring greater investment and thus rising beyond the capability of traditional local developers.
- Historically a reliable source of development funding, bank financing has been curtailed as regulations, including Basel III and Dodd-Frank, have been implemented.

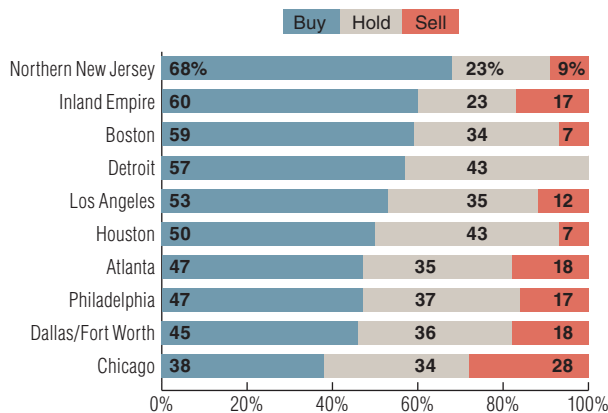
Rapidly rising replacement costs are shaping the cycle in several ways. Rising costs have the effect of delaying projects until they are financially feasible. Price increases and entitlement challenges mean that developers need to more carefully review assumptions when starting projects; negative surprises have become more commonplace. Earlier in the cycle, entitled

land price spikes led. The broader economic recovery, and in particular construction, has led to a recovery of general contractor margins. In the last few years, as unemployment fell below 6 percent and then 5 percent, labor rates have also escalated quickly. Most recently, pricing for the most important materials—concrete and steel—has also responded to higher demand and tightening supply. With the rise in replacement costs, facilities built in 2017 appear poised to be the most expensive ever built.

Notwithstanding the difficulty in bringing new buildings to market, supply and demand appear poised to be balanced in 2017 and 2018, maintaining historically tight market conditions. Big gains in rents and values have made more projects viable. However, there are vast differences in market attractiveness among *Emerging Trends* survey respondents as exhibit 3-4 in chapter 3 reveals. That exhibit shows that, for the 20 markets rated the highest by respondents for investment, buy ratings range from 27 to 68 percent and sell ratings range from 9 to 27 percent. Within the details of this group of 20, key themes include the following:

- Markets with the highest buy ratings generally have the most robust near-term outlooks. However, not all have higher barriers to supply or are major population centers, which could translate to shorter phases of outperformance.
- Markets with the lowest buy ratings generally have lower barriers to supply, are smaller markets, and have in-line or below-average near-term growth prospects.
- Notably, several major markets in this group of 20 are among those with the lower buy ratings, including Los Angeles, Houston, Atlanta, and Dallas. These opinions likely reflect a combination of views on pricing, supply, and local economic conditions. This pattern can also be seen in exhibit 4-4, which lists the largest industrial markets by size of stock.

Exhibit 4-4 Ten Largest* Industrial Markets Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

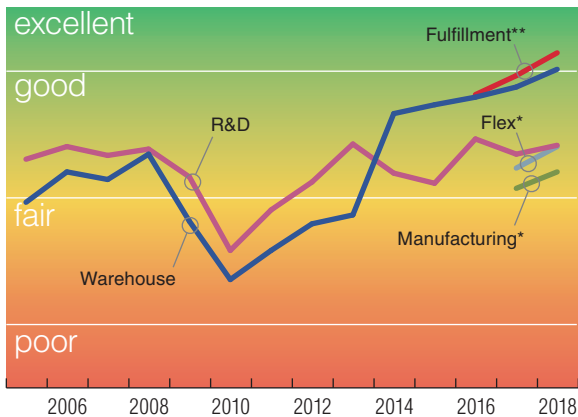
*Ten industrial markets with the largest stock in 2016, according to CBRE Econometric Advisors.

Note: These ten markets with the largest stock in 2016 are ordered accordingly to the percentage of "buy" recommendations.

Impact on Fundamentals

Taken together, the scarcity of space has become acute, spurring considerable rent growth. Vacancy rates fell farther below 5 percent in 2017. Aside from simple competition, there are submarkets where users simply cannot secure new space. Competition among users bids up market rental rates. Indeed, cumulative rental rate growth in this cycle has been considerable. In the wake of the global financial crisis, industrial real estate investment trusts (REITs) rolled rents down by more than 10 percent when setting rates on new leases. Today, they roll them up by 15 to 30 percent, an increase of more than 30 percent. Strong market rent growth seems to be continuing in 2017, especially in submarkets with high barriers to supply (e.g., major coastal markets). With such strong and recent rent growth, in-place lease rates are farther below market rent than at any other

Exhibit 4-5 Industrial/Distribution Investment Prospect Trends

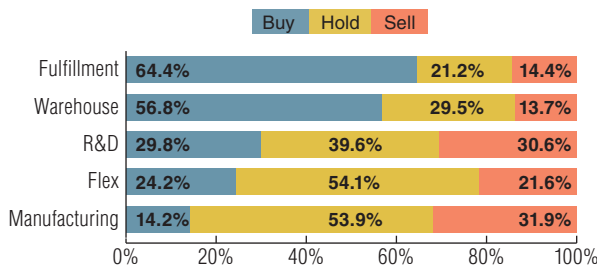


Source: *Emerging Trends in Real Estate* surveys.

*Second year in survey.

**Third year in survey.

Industrial/Distribution Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

point in history, principally in major coastal markets where recent rent growth has been the most pronounced.

Naturally, investment performance has been excellent and an industry leader. Total returns in 2016 were 12.3 percent and annualize to a comparable level during the first half of 2017 per NCREIF. Each was the highest of all other property sectors. Excellent property fundamentals have been a main factor. Those conditions, notes a plugged-in investment sales broker, have made industrial real estate globally popular, attracting capital from Asia, Europe, and elsewhere. Investors are focused not only on core markets, but also on “first-tier supply chain” markets, such as Columbus, Louisville, and Memphis.

What the Future Holds

Looking ahead, several trends that will shape the market environment are emerging:

- **Strong and continuing demand.** Industry growth follows from demographic trends, the economic cycle, and structural trends (like e-commerce). Each appears poised to continue generating consistent, healthy demand in the year ahead.
- **A historically wide gap between in-place and market rents.** Capturing recent and continuing market rent growth is owners’ and operators’ primary challenge. Considerable rent growth so far in the expansion has translated to a record-wide gap between in-place and market rents. NOI growth is as visible as ever, occurring as in-place leases roll to market rates.
- **Greater willingness among users to pay for high-quality space.** Gradually over the past decade, although now more clearly than ever before, supply chains have emerged as a competitive advantage for retailers and wholesalers. There is a greater appreciation within C-suites of the value that industrial real estate can bring to the overall supply chain, even if the rent bill represents less than 10 percent of total supply chain cost. Consequently, real estate teams are increasingly staffed by supply chain experts with an interest and a desire to identify, secure, and pay for the proper space.
- **Capital deployment via development.** Much as in other sectors, there is a dearth of high-quality acquisition opportunities. Instead, development is becoming a principal avenue through which to deploy capital. With more than 200 million square feet to be built each year in 2017 and 2018 in the United States, capital deployment for development exceeds the amount of transactions for existing institutional-grade properties. However, as with any growth category, mistakes will be made. Common examples include determining the proper size and features demanded within a market or submarket or around the proper pricing of risk and achieving an economic return.
- **Differentiation by market.** The length of the current cycle is illustrating the importance of market and location selection. Gaps between major population centers and secondary locations have emerged. Or, for markets with high and low barriers to supply. Within cities, site selection, including access to labor, is critical. As the cycle continues to age, these differences will only widen.
- **Differentiation within markets.** Aside from the typical considerations of site access and proximity to consumers and transportation networks, access to labor is becoming a much bigger issue. Earlier in the economic recovery, when unemployment was higher than 6 and 7 percent, ensuring the depth of the labor pool was not a consideration. Today’s economy, however, is different. Securing talent and at reasonable rates is becoming an important success factor, one that is influencing site and location choice within

markets. For example, fast-growing logistics clusters located in sparsely populated submarkets tend to generate greater competition for labor than those closer to city centers.

One industry vet emphasized the **potential long-term changes that technology could bring, even if they won't affect the near term.** Generally, those changes seem likely to be evolutionary rather than revolutionary. Autonomous vehicles have the power to change where users locate, although the anticipation and introduction of partially autonomous vehicles over the next decade have not yet led to (and may not lead to) materially different real estate needs. Fully autonomous vehicles might drive change, but the barriers to adoption make timing much farther in the future. Within industrial buildings, the use of automation and robots has grown. Adoption will continue to rise as technology improves, although the nature of distribution—with its picking complexity, variability, and seasonality—limits the investment return for robotics deployments for most users. Lastly, artificial intelligence and predictive analytics help retailers optimally deploy inventories, and the technology can continue to improve.

Taken together, the last few years in industrial real estate have been the best in the history of the *Emerging Trends* publication. And while the cycle continues to evolve and mature, growth factors still appear poised to continue to lift the sector higher. Notwithstanding new uncertainties that are emerging, rent and value growth appear poised to continue to outperform.

Apartments

The apartments juggernaut has been steaming along for eight-plus years, and 2017 may go down in the books as the post-Great Recession recovery's high-water mark in newly

constructed units started, with reliable estimates somewhere in the 400,000-unit range, and completions of about 375,000. The multiyear run certainly made up for the years that preceded it, which left a vacuum of unmet need. Some markets are continuing to stand out as opportunity, even as other areas try to deal effectively with a sudden surfeit of high-end units. In the *Emerging Trends* survey, multifamily housing retains its multi-year lock on the number-two position among property types for investment prospects, but gave up a spot to single-family housing for 2018 development prospects.

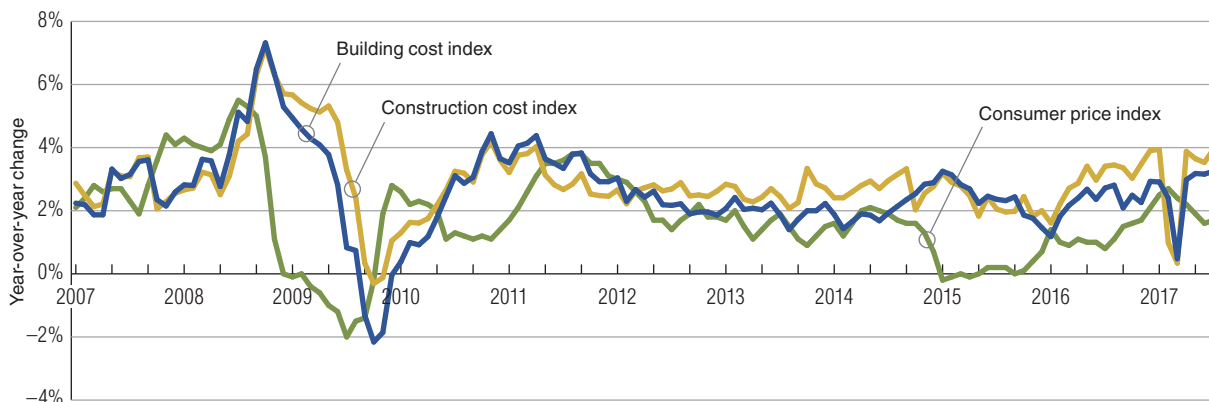
We will explore here at least some of the reasons for this shift in sentiment, as well as fairly persuasive reasons not to worry that the multifamily for-rent business—despite some current dislocation around vacancy rates, revenues, and rent power; jitters related to the impact on investment of a rising interest rate monetary policy environment; as well as a few cyclical hiccups—may be headed for a reversal of its long run of good fortune.

While the above-trend-return era in multifamily may have come to an end, one of our senior-level investment advisers notes that “we’re not in for Armageddon.”

From an investor's perspective looking ahead, it is important to understand multifamily's trajectory in terms of the sector's optics, its mechanics, and its real-versus-perceived secular risks and opportunities as new development and construction activity tapers in 2018, and regroups for the future.

A finite handful of about 12 high-marqu e-value core urban markets have been exerting a disproportionate impact on optics, distorting an otherwise sound, sane, and solid set of dynamics in a majority of U.S. markets. Three distinct time horizons of demand—pent-up, present, and projected—factor into the

Exhibit 4-6 Change in Cost of Building Labor and Materials Compared with Consumer Prices



Sources: *Engineering News-Record*; Bureau of Labor Statistics.

mechanics of meeting that demand with new development, value-add renovation, and management of existing properties and portfolios. Finally, a couple of big questions are critical in addressing long-term challenges that will accompany key performance indicators as assumptions for future investment.

Challenges: Known, Unknown, and Unknown Unknown

Even in a period of potent and growing positive fundamental drivers, it is worth mentioning material sources of uncertainty and volatility ahead.

Investors face both “known unknowns” and “unknown unknowns” that can weigh on both psychology and ultimate performance in long-haul multifamily investment in a big way. Interest rates are going up, but with uncertainty as to how much and when ranks as a known unknown. The broader economy—in its ninth consecutive year of economic expansion, and its ability to keep up a healthy pace of job growth, household wage growth, and household formation growth—might be considered another known unknown. The impact of moving-target immigration policy, plans for tax reform, proposals for massive new infrastructure spending, intentions to dismantle regulatory constraints, new global trade agreements and surcharges on imported goods, and a backdrop of political risk figure into the unknown-unknown bucket that could dramatically affect capital put in place in future multifamily development.

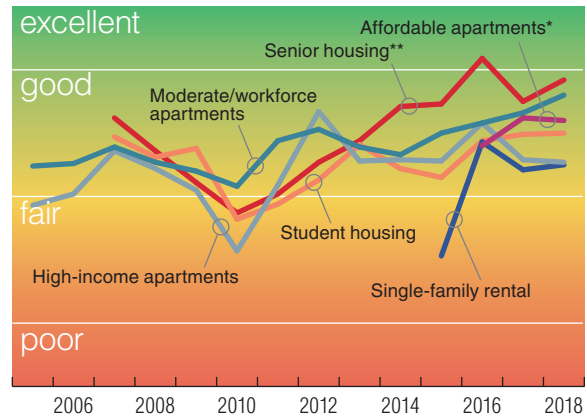
Each of these possibilities comes with a different scenario for multifamily capital investment strategy and outcomes, and each with its own quotient of appeal to either fear or greed.

“There’s what I can control, and the many things I have no control over,” an executive-level strategist for one of the multifamily sector’s leading REITs notes. “I’m going to keep focus on the challenges I can have impact on.”

Near term, those challenges for the sector’s biggest players have to do with absorbing all the new inventory that has come on line in the past 24 to 36 months, as the market waits for ambitious high-end development programs, cool amenities, and enormous price tags to begin paying off. Also, the opportunity for developers to soft-pivot into technology and the new economy’s second tier of metro areas, as well as the nondowntown inner suburban ring, is attracting strategic focus. In other words, placing new supply where there currently is no oversupply.

“We don’t think anything bad is going to happen even though there’s a lot of new Class A development still coming on line in New York, San Francisco, San Diego, Orange County, and San Jose, California, Denver, Boston, etc.,” says the economist at a major federal housing finance agency. “The air is being let out

Exhibit 4-7 Apartment Investment Prospect Trends

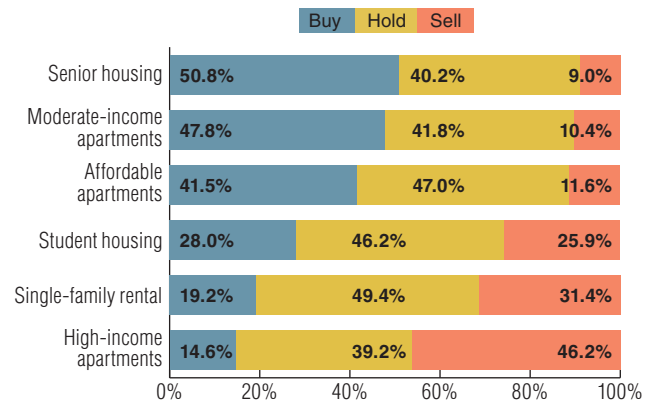


Source: *Emerging Trends in Real Estate* surveys.

*Third year in survey.

**2017 data reflect the one-time category of “age-restricted housing.”

Apartment Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

of the balloon slowly enough that these markets will be able to catch up, even with slowing job growth.”

Secular Focus: Are Apartments America’s Affordable Housing?

Real-world challenges—two squarely within investors’, developers’, and property managers’ realm of control and two outside that realm—fall into several structural, topical pillar areas.

One, can current investment, development, and management business models adapt or evolve to reverse the effect of land and construction cost trends rapidly decoupling from household wage and income trends in a number of the economically vibrant markets right now?

Two, is there a secondary and tertiary market investment and development template for new development, and, further, could there also be a Class B and Class C business and investment model for new construction as well, on both the property valuation and net operating income side?

Three, will both national housing finance policy and local land use regulatory policy play a constructive or a constraining role in multifamily rental's would-be position as America's affordable housing, as well as its preferred housing choice for those who opt for more connected, nimbler, and walkable communities?

A fourth challenge takes the form of conjecture still open to question: Is "rentership"—after all is said and done—reflective of a secular shift in housing need and preference, or not? Will millennials, whom data now indicate are flowing in greater numbers into the "move out to buy" stream, start to veer in a big way into homeownership now that, in their mid-30s, they have paid down at least a portion of their student debt and are starting families?

"There's enough population to go around so that everybody can win," a multifamily investment adviser says.

The questions all have to do with a sizable mismatch between institutional capital's craving for yield—which has a narrow field of options open to it—and new multifamily construction and development's ability to predictably deliver investment returns.

Is Oversupply a Temporary Phenomenon?

An evolving narrative might helpfully suggest that 2018 may well serve the business community's stakeholders as a needed time-out moment to learn from a ferocious building binge. We now require a focus on digestion and creation of smart new strategies and tactics for owners to absorb, sustain occupancy levels, compete on management excellence and community differentiation, and improve their operations day to day.

Then, as some of the dozen or so overbuilt major urban cores begin to absorb the almost-instantaneous phenomenon of abundant new high-end inventory with backlogs still due to come on line, vacancy rates normalize, and area rents retrace a path of equilibrium, the business of penciling valuations and development investment can resume in good order.

So, near-term spotty areas of dislocation on rent power, revenue growth, and vacancy rates amount mostly to optics of timing. Developing for both pent-up demand and currently forming demand, as well as some projected demand, can put supply out in front, which it has done in the overbuilt markets.

"They've gotten out over their skis," notes one of the investment advisers involved in multifamily valuation and property transac-

tions. In 2018, they are likely to dip into their box of concession tools and tactics to shore up their lease-up efforts and get occupancy levels where they need to be. Meanwhile, the fact that some of the non-shovel-ready projects permitted have been put on hold through the balance of 2017 will allow for absorption rates to catch up with projects that have recently come on line.

A senior-level financial services executive with extensive experience in transactions and property valuations notes how this dynamic plays out. "The national apartment vacancy rate increased in the first quarter due to a combination of high Class A construction deliveries and historic fourth-quarter absorption weakness being pushed into the first quarter. However, a 4.1 percent rise in the overall average rent and 242,000 units absorbed over the past year point to the underlying strong demand drivers for multifamily."

Thematically, on the positive side, multifamily momentum continues to feed off the firehose of fundamental demand for rental apartments, which shows signs of only strengthening. Despite questions raised earlier, a major share of the 77 million-strong millennial generation squares up in a big, sustainable way with renting as a housing preference, because it is the more affordable way to form a household, it allows for greater flexibility, and, frequently, it provides greater on-demand access to community connectivity. What's more, renting by choice is trending among other age groups, including the 55-plus households who want to downsize to a more maintenance-free, connected lifestyle, with easy access to health care, culture, entertainment, and food.

Bank regulatory policy also has been a contributor to the multifamily sector's demand pool. By reining in mortgage availability—a policy environment not likely to change dramatically in the near future—lenders have effectively elongated the prime period for young adults to remain renters. Student debt, high home prices, and limited for-sale inventory in the lower price tiers also are constraints that are supporting rental demand.

Fundamental demand for raw materials projects in such a way that the National Multifamily Housing Council quantifies development need as follows:

"Based on 43 percent of the total rental demand being satisfied with traditional 5+ multifamily units, we will need an average of 328,000 units per year from now through 2030 and cumulatively 4.6 million units of 5+ unit housing. New supply will also need to match requirements for all income levels, not just the top tier of the market. Anything short of this will simply drive up rents faster, far exceeding expected household income growth and requiring more doubling up and house sharing."

Senior Housing: An Update

The senior housing and care sector continues to garner growing attention from institutional investors. Private equity funds, pension funds, public and private REITs, banks, the government-sponsored enterprises (GSEs), life insurance companies, high-net-worth individuals, and others now provide debt and equity to the sector. As of the second quarter of 2017, more than \$14 billion of transactions occurred on a rolling four-quarter total.

The mix of players is changing, and large institutional investors are now replacing some of the larger public REITs as buyers. Pricing remains favorable for sellers, with the average price per unit remaining near record highs, while cap rates remain relatively low. Private sector returns continue to outpace broader property returns, with the ten-year senior housing total investment return beating the NCREIF NPI by more than 400 basis points as of the first quarter of 2017.

Investors are attracted to the sector for a number of reasons.

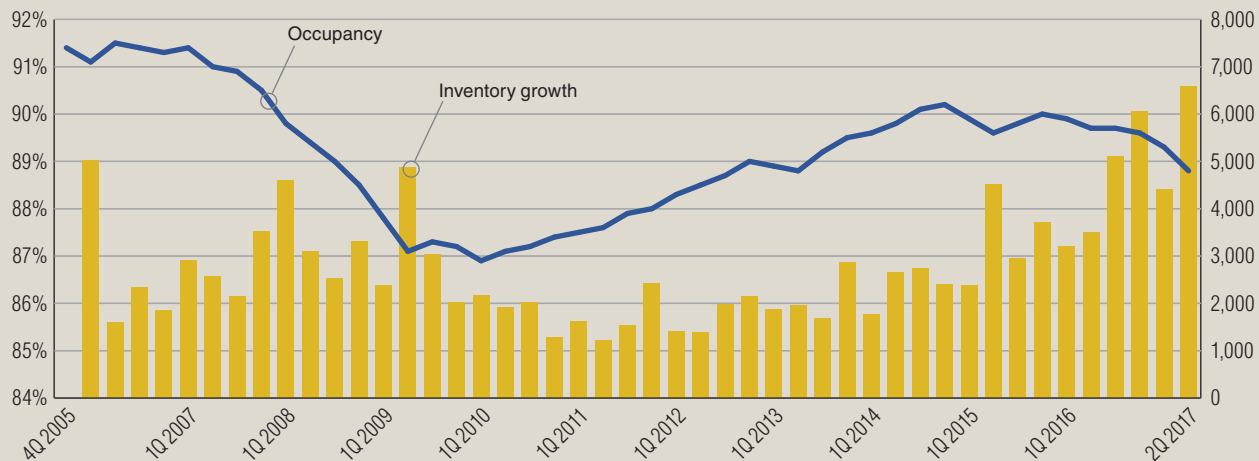
- **Enticing demographics.** While the baby boomers will not reach 80 until 2026, demographic tailwinds are quickly advancing. Growth in the 82-to-86 cohort (the cohort that dominates assisted living and independent living properties) starts to accelerate this year and will generally continue to do so until 2025, providing a nice demographic driver for senior housing. Between 2017 and 2025, this cohort will increase in size by 1.5 million persons, or 29 percent, from 5.1 million to 6.6 million.
- **Compelling investment returns.** Institutional-quality private-pay senior housing has consistently produced steady income and strong appreciation returns for more than ten years, consistently beating total returns for apartments, retail space, offices, industrial properties, and hotels.

- **Greater liquidity.** As transaction volumes increase, investors have become more comfortable knowing that multiple exit strategies are likely.
- **Rising transparency and understanding.** Information about market fundamentals and capital market conditions from sources such as NIC MAP and Real Capital Analytics (RCA), as well as active REIT participation in the sector and increasing Wall Street analysts' coverage, allows investors, lenders, and borrowers to better understand current conditions, providing for a more disciplined capital market.
- **Emerging post-acute-care coordination opportunities.** The Affordable Care Act and changes in Medicare's payment structure have changed the payor landscape. Alternative payment plans and networks, such as accountable care organizations (ACOs), managed care organizations (MCOs), and bundled payments, are displacing fee-for-service payment plans in both Medicare and private health plans. Senior housing operators, as well as skilled nursing and post-acute providers, have new opportunities to become part of the emerging care continuum.
- **Mounting understanding of the benefits for residents.** Anecdotal evidence suggests that the hospitality and social aspects of living in a senior housing setting offers physical and psychological benefits that can extend and expand a person's quality and length of life.

Rarely does an opportunity occur where there are no challenges. For senior housing, two challenges currently dominate: unit supply and labor shortages.

First are inventory supply concerns. As debt and equity capital have become more available in the years since the Great Recession, development activity

Inventory Growth and Occupancy Rates: 31 Primary Senior Housing Markets, 4Q 2005–2Q 2017



Source: National Investment Center for Seniors Housing & Care (NIC).

has ramped up. Since early 2010, when occupancies reached a cyclical low of 86.9 percent, 79,000 units have come on line within the NIC MAP 31 Primary Markets, a 16 percent increase in supply. More recently, in the year ending in the second quarter of 2017, 22,000 units have come on line.

However, it is notable that not all markets have seen significant development activity. Nearly half (i.e., 48 percent) of this growth occurred in seven metropolitan markets: Dallas, Chicago, Minneapolis, Atlanta, Houston, Miami, and Boston. Dallas and Chicago alone accounted for nearly one of every five new senior housing units of new inventory in the past 12 months.

The second challenge is the labor market. Increasingly, operators are reporting labor shortages in all occupations across their operating platforms, ranging from care managers to executive directors. With the national

unemployment rate falling to a 16-year low of 4.3 percent in July 2017, the challenge of recruiting and retaining employees is expected to only grow. Shortages in the health care professions as well as in other industry sectors, such as the construction trades, are slowly putting upward pressure on wage rates. In the 12 months ending in July, average hourly earnings rose 2.5 percent—down slightly from 2.6 percent in 2016, but up from 2.3 percent in 2015 and 2.1 percent 2014.

In this environment, operators will need to boost their operational efficiency and staff productivity through technology, training, and mentoring in order to grow their net operating incomes (NOIs) and maintain their bottom lines.

National Investment Center for Seniors Housing & Care (NIC).

Single-Family Homes

In the housing market's upward climb out of crisis, experts are trying to get a firm handle on the inflection point. In the U.S. Census Bureau's *Residential Vacancies and Homeownership* July report for the second quarter of 2017, a pivot point emerged: homeownership rates had inched up consistently from a 50-year low of 62.9 percent in the second quarter of 2016 to 63.7 percent in the second quarter of 2017.

What the data point may signify, in the long run, is uncertain. If Yogi Berra were around, he might say that homeownership in the United States and its role in American dreams of opportunity are 90 percent mental, and the other half based in statistical reality. After all that has happened in housing, a rising homeownership rate is a psychological bright-line moment.

For strategic or financial investors in residential development, two immediate important sub-themes stand out anew within this tiny quantitative blip. One is that homeownership rates among the young adult part of the ownership spectrum are stabilizing after an extended period of decline. That said, the change here is that ages 35 to 39 have usurped the role that ages 30 to 34 once had as the dominant age-range for people entering homeownership for the first time, with homeownership rates of 55.8 percent and 45.2 percent, respectively. As the leading edge of the 77 million-strong millennial generation crosses that 35-year-old benchmark—with a starting line of January 2016—one may look back at July 2017's year-over-year increase of 0.8 percentage point in homeownership rates as a turning point.

Also, homeownership rates among 65-plus-year-olds—where baby boomers are swelling the ranks by the minute—are also

holding strong versus historical patterns, according to data from Gallup. Gallup analyst Jeffrey M. Jones notes, "Senior citizens have been immune from the trend of declining homeownership. Between 2001 and 2009, an average of 81 percent owned a home. Since then, 82 percent report owning their home."

Looking in a bigger-picture way at housing's mountain of moving-target indices and indicators, the measure's directional shift from decline, to flattening, to ever so slight an increase provides a fresh context for looking at otherwise well-established and familiar trends. If the homeownership rate continues to inch back from here toward its 65 percent historical level, one might look at this as one more emancipating event from the long-tail gravity of the Great Recession.

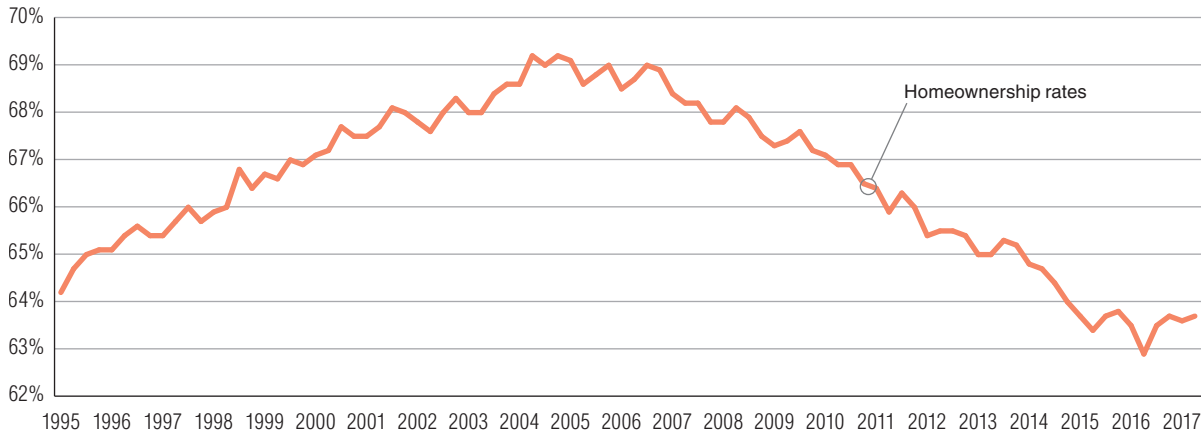
Housing's Goldilocks Recovery

Within this freshly defined framework, the housing business community's thought and practice leaders gut-check their assumptions and recheck their strategic priorities around a constructive, steady-as-she-goes fundamentals environment heading into 2018.

An executive-level lender in the builder acquisition, construction, and development space describes that environment this way: "Demographics, jobs and wage growth, moderately low interest rates, still-affordable prices, and pent-up demand—layered on top of this very low for-sale inventory situation."

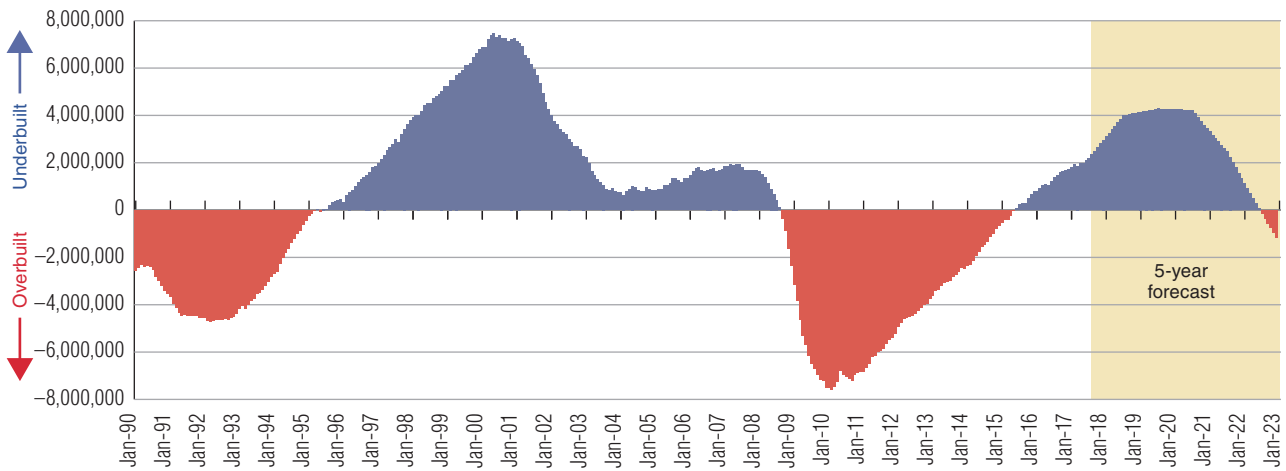
Demand trends—particularly among the barbell generational cohorts of young adults and aging baby boomers—are solid and sustainable through the next decade or so, but not without the noise, mess, unevenness, and elusiveness of the real world to make profitably serving those unmet needs an ongoing chal-

Exhibit 4-8 Homeownership Rates: 1995–Q2 2017



Source: Current Population Survey/Housing Vacancy Survey, Series H-111, U.S. Census.

Exhibit 4-9 Housing Over/Under Supply Patterns, 1990–2023



Sources: Bureau of Labor Statistics; Moody's Analytics; Real Estate Economics.

Note: Over/Under supply measures based on current jobs-to-housing relationship relative to long-term relationship between jobs and housing.

lenge. College loan debt, ever-tight mortgage lending criteria, less policy support, scant choice among attainable house price ranges, even some level of secular shift toward renting by choice are real and potential suppressors of demand today. At the same time, supply capacity barriers—land, labor, lending, and “lumber”—have by turns and collectively metered the pace of new construction to a most-gradual of upward trajectories. One well-regarded residential investment adviser on the equity side has his own nickname for housing’s Goldilocks, just-good-enough recovery.

“We like to call it ‘the CFO’s recovery.’ It’s not as fast, flashy, or dramatic as a CEO would want the recovery cycle to be, but it’s manageable, predictable, and it allows for prudent planning for the future the way good finance people prefer.”

This same executive characterizes housing’s supply and demand factors as two separate hoses feeding into the same bucket, which is the current housing market. Both hoses have a relatively consistent flow, but each of them has kinks that can interrupt or reduce the flow.

Housing observers mostly focus on “kinks” in the supply-side hose—the disruptive shortages of subcontractors, the cost and difficulty of bringing new lots on line, the ongoing scarcity of debt financing for land acquisition and development, and the more recent inflationary spike in building materials.

Demand, too, has its share of challenges. Pricing has surfaced as a point of worry around momentum, especially in supply-constrained, mostly coastal markets like California, Seattle, Maryland, and New Jersey, but also in Denver.

One worry that nobody in single-family housing has—with new-home inventory levels at a 5.4 months’ supply nationally—is about overbuilding. “We couldn’t build an excessive number of single-family houses if we tried to right now,” one investment adviser notes, suggesting that the market may be under-delivering single-family demand by as much as 25 percent on a continuous basis, creating more pent-up demand as time passes.

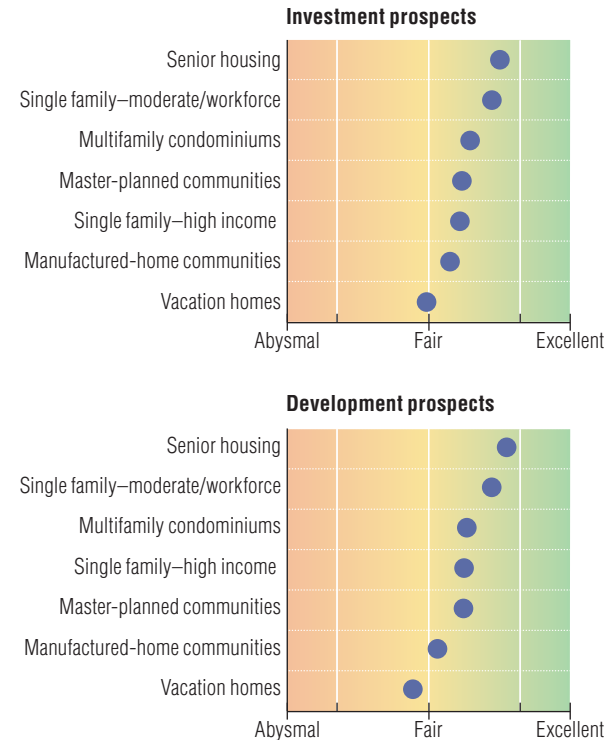
Lower Prices: Risk or Opportunity?

That said, demand is not homogeneous, evenly distributed, or constant. It is always in flux, and right now the biggest wave is coming from households who want attainable pricing. While higher-end, first- and second-time move-up, and luxury customer segments have been where most of the action concentrated during the first six-plus years of the recovery, a distinct shift has occurred. Most builders are now activating rebooted scalable, value-engineered, limited-option entry-level programs, and are busy looking to open new neighborhoods in the drive-until-you-qualify path of growth tracts accessible to job centers.

Meanwhile, the new variations on age-targeted and age-integrated 55-plus communities are where strong and deep demand exists for an alternative to “the Del Webb model” that put active-adult communities on the map a generation of retirees ago. Entry-level homes in lower-cost-base peripheries and strategically connected, attainable 55-plus communities are essential programs on strategic roadmaps through and beyond 2018.

One top-ten public homebuilding enterprise CEO, who has guided his firm to double-digit volume growth in 2016 and through the first nine months of 2017, notes strong growth in most of the company’s geographical footprint, but sees a distinct shift in price points that are working best. “The bottom end of the price spectrum in the market is absorbing at a higher pace than other segments, but we still have demand in our move-up and second-time move-up segments, especially in California.”

Exhibit 4-10 Prospects for Residential Property Types in 2018



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

Still, broad consensus supports a coherent climb in most of housing’s key performance indicators through 2019, with total starts stepping up from 1.26 million in 2017, to 1.36 million in 2018, to 1.44 million in 2019—jumps of almost 8 percent and 6 percent, respectively. Single-family starts, most forecasts assert, represent about three out of four total housing starts during that period.

The homeownership rate tipping point, and its two accompanying demand trends—millennials have now emerged as a homebuyer group, and 55-plus adults are kicking in to a greater degree as well—set up a scenario of equally critical parallel realities for residential real estate investors and operators.

One reality is a present set of conditions taking more pronounced shape around customer segmentation, with a fully activated millennial market clamoring for homeownership as well as a nascent move among aging baby boom generation buyers for a new and improved, more attainably priced, more connected, age-integrated via proximity, lower-maintenance-life-style 55-plus community. The other is a housing market whose

recovery run may be in its final stage before a cyclical downturn, perhaps linked with a recession.

The hard part of people's job in the volume homebuilding and residential development and investment world, says the chief executive officer of one of the public homebuilders, is "timing the market. I'm not a market-timer, so I've got to be ready, either way, for what comes."

This is a challenge, given that many land strategies are sized for a 24-to-36-month sell-through, and many of those programs now need a reload. The question is what to pay for those lots, knowing that both overbuilding and overvaluation are clearly in the crosshairs of some forecasts in the 2020 and 2021 scenario.

"The thought on many of our parts is that since the recovery trajectory has been so moderate and gradual, it's likely that any kind of dislocation or pullback would also likely be very mild," notes one homebuilding company equity-side analyst.

What Does a Trans-Cyclical Plan Look Like?

Larger enterprises with flexible access to capital are putting structures into place that are intended to bridge those two realities, from the present cycle to the next one. For example, one top-ten homebuilder has made a strategic investment in a publicly held land developer, which creates a win/win way for a builder to lock in access to raw and developed lots across the cyclical gap, and at the same time mitigates its risk of having to impair those future lots if prices and valuation metrics change. Another of the largest publicly traded homebuilders has a similar structure in its investment in a California-based land developer, also a separately owned public company, and a third public homebuilder's recent investment in a Seattle market developer is motivated by what observers regard as a canny bridge from the present cycle, past a downturn, to the next recovery where fundamentals should pick up where they are today.

Merger and acquisition (M&A) activity among higher-volume players in the market has been relatively robust for the past couple of years, and may be expected to continue that way into 2018, driven by the same motivations that have been in play for sellers and buyers. Buyers include typical public and private strategic companies, but also strategic buyers from Japan, and a very active site-builder acquisition program by one of the nation's well-known manufactured home construction units.

An investment adviser involved in a number of transactions and financial projects for builders and developers notes that "the M&A market continues to be strong, with sellers interested in profit growth, expansion into new markets, deeper share in

existing markets, and new product lines. Seller companies too are motivated, either for growth capital, or an exit strategy, or, in the case of the companies selling several of the Japan-based acquirers, both."

The year 2018 may well serve as unarguable affirmation that the homeownership rate tipping point became clear in early to mid-2017. Questions remain as to whether rates will revert to their historic mean, or fall short of 65 percent. What is clear is that both operators and investors need to look at rapid change and growth among industry sectors that have been disrupted by technological computer- and data-driven innovation as examples of a path forward. For although the demographics playing field is tilting in favor of an expanding demand pool, it is equally clear that economics can hold that expansion back. Capital—in financial, human, and raw materials terms—needs to avail itself of precise leverage points to overcome those constraints, introduce new efficiencies and greater value offerings, and grow the homeownership universe.

Office

Prospects for office investments, as rated by the *Emerging Trends* survey, remain relatively unchanged from last year. Office development prospects are, once again, ranked second to last. Among subsectors, ratings of investment in central business district (CBD) office remain strong, placing it close to the highest-ranked industrial and multifamily subsectors. Suburban office ratings, though still relatively low, are up two places in ranking from last year.

National occupancy remains high, and absorption has sustained a positive trend, bolstering both CBD as well as suburban markets.

High-Growth Locations

Geography still matters. Half of new office jobs over the past year occurred in just 13 metro markets, mostly tech and high-growth coastal and southern markets. Some surprises showed up in the rankings: Detroit was one of the 13 markets creating the most office employment in the past year, generating 15,000 new office jobs. This trend is reflected in the mix of cities with the highest recent gross absorption: Dallas, Boston, D.C., Chicago, Phoenix, Atlanta, Seattle, Kansas City, Salt Lake City, and Austin. Suburban Class B net absorption of 1.7 percent of stock in the past year was the highest of the four Class A/B CBD/suburban sectors.

In the past year, half of all CBD completions occurred in just three markets—New York, Chicago, and Seattle. Eight markets

accounted for half of new suburban completions—Houston, Dallas, Phoenix, Baltimore, San Francisco, San Jose, Los Angeles, and Seattle. New supply is expected to continue to be concentrated: seven markets account for half of current construction.

Price appreciation slowed in 2016, causing total returns as measured by the NCREIF total office index to plummet from 12.5 percent at the end of 2015 to 5.6 percent by the second quarter of 2017. Cross-border investors dominated CBD net purchases in the past year while the suburban market was led by private buyers. Survey respondents ranked central city office as a hold,

Student Housing: A Maturing Sector

Student housing is likely one of this economic cycle's fastest-growing sectors in commercial real estate. More than 330,000 off-campus, purpose-built beds have entered the market since 2011, and institutional investors have started to see the attractiveness of this emerging asset class. Some \$9.7 billion worth of transactions closed in 2016, and though volume is down to \$1.9 billion over the first quarter of 2017, the percentage of decline mimics that of the conventional apartment market, since there are fewer deals on the market and fewer portfolio transactions.

In addition to the two publicly traded student-housing REITs and investment firms focused solely on the sector, recent investors have included apartment developers, regulated investment companies (RICs), high-net-worth individuals, and banks. Prices per unit are still high and cap rates have fallen over the past two years, though a slight premium for conventional assets remains.

Several factors make student housing an attractive investment:

- **Sustained demand growth and revenue during economic downturns:** Student housing has a reputation for its resilience to recessions. Enrollment—the primary driver of student housing demand—tends to increase during recessionary periods, as people who lost their jobs return to school to retrain for the new

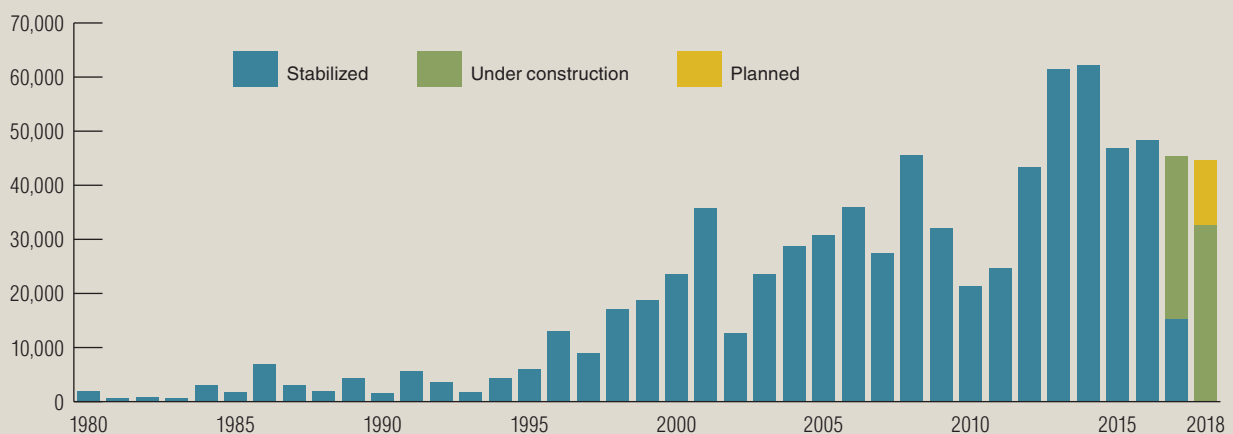
employment market. With more enrollment comes more need for student accommodations.

- **Rising transparency and understanding:** Similar to that of the senior housing sector, the increasing number of investors and burgeoning new supply levels have brought much more real estate media attention to student housing. This, in tandem with information about property and market performance and capital market conditions, gives players in the sector a better understanding of the state of student housing and improves investment decisions and operational efficiencies.
- **The maturation of the asset class:** As the inventory of student housing has increased and word of continued positive return on investment (ROI) has spread, the sector has matured into an institutional-grade asset class. And while student housing development had been highly concentrated in the past, the concept is spreading and there is still a significant amount of opportunity since many university markets have yet to be tapped.

Of course, student housing faces several challenges as it continues to grow.

- **Cost of college attendance:** Tuition and fees have been rising, as is the rate of student-loan debt. Cost is a determinant in the decision to

National Off-Campus Student New Housing Supply by Year: Stabilized, Under Construction, Planned



Source: Axiometrics, a RealPage company.

with equal numbers of respondents ranking suburban office as a hold or a sell.

Our survey investment outlook is highest in secondary markets, many of which have a significant tech presence. Salt Lake City, Portland, Minneapolis, Raleigh, Seattle, Austin, and Nashville topped the buy rankings in the survey.

Influences

Interviewees noted several themes that will have an impact on offices:

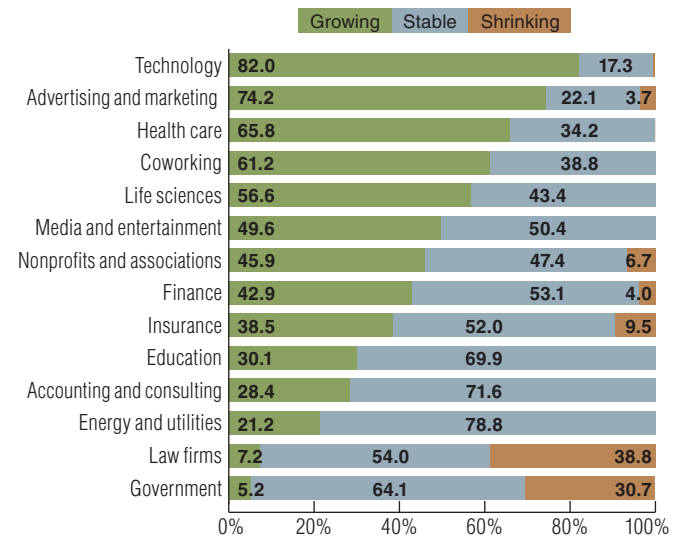
- **A Changing Demand Base**

The office sector houses a large and growing part of the U.S. economy. Office job growth is strong—expanding by 2.2 percent on average in this recovery as compared with 1.6 percent total job growth. In a race for talent, office space is now a key tool for tenants to attract and retain employees. One investor noted, “Corporations are ultimately going to follow their workers.”

Millennials, now representing nearly a third of the office-using employment base, are reaching their marriage, first-time home-buying, and child-bearing years, and are thought to be a major driver of suburban demand. Suburban office investors believe that this demographic trend, combined with lower rents, could drive office demand going forward.

Suburban markets accounted for 81 percent of net office absorption in the past year. Nevertheless, a CBD investor cautions that “people like to talk about job growth and strong growth markets, but if you don’t have supply constraints you’ll never see strong income growth.” In fact, CBD office prices are 58 percent

Exhibit 4-11 Profile of Office Leasing Activity by Industry, Q2 2017



Source: Office Outlook|United States|Q2 2017, JLL Americas Research.

above their 2008 peak while suburban prices still lag their 2007 peak by 4 percent.

- **Demand for Close-in Suburbs That Provide CBD-Like Amenities**

Favored suburban locations will be different going forward. In a search for the best of both worlds, transportation lines, walkability, good schools, high-quality real estate, and live/work amenities will be important. Brooklyn in New York City and Bellevue in Seattle are examples of the “new suburbs.” These submarkets provide access to the CBD and have urban

attend college, and students—and their parents—look to minimize the amount they will owe after graduation. That affects enrollment, which, in turn, affects student housing. However, the cost and volume of potential debt vary according to the cost of attending the university. Despite the rising costs, the potential for higher wages still tilt the attendance decision in favor of earning a degree.

- **Supply concentration and development constraints:** Despite the spread of the off-campus student housing concept to smaller schools and even community and technical colleges, much of the supply remains concentrated at some of the large main state-school campuses in the South and Southwest. The increased competition resulting from the influx of new supply forces existing properties to operate more efficiently and create new leasing tactics to attract residents. In addition, fewer prime

development sites are available, and volatile construction costs and lending constraints have created a more challenging development environment.

- **University-owned housing:** Some 40,000 or more new on-campus beds are on their way, many with the same level of amenities as privately owned properties. However, some of these include public/private partnerships with REITs and other off-campus housing developers as universities look for other ways to fulfill and improve housing needs.

Student housing has become a very attractive investment target, with less volatility and improved liquidity. As the sector continues to mature, growth opportunities will continue to arise, enhancing the attractiveness of the sector.

Axiometrics, a RealPage company.

amenities, but are not in the main CBD. One investment manager said of these submarkets, “We own really nice product and we’re able to get better returns. We think that we’re getting better demand for the product given that all these companies are chasing employees. A developer added, “It is important for employment centers to have good access to affordable residential neighborhoods.”

- **Blurring Live/Work/Play Lines**

As lines between live, work, and play environments blur, space use and finishes are changing. An investment manager notes, “People need to move offices not only for geography, but to the right building that has the right amenities and the right character to attract their tenant.” “Transformational” office amenities now include finishes that rival those seen in hotel lobbies, large public spaces to relax and plug in, multiple food options, high-end fitness facilities, event space, roof decks, and outdoor spaces. A survey of 2,000 millennials indicated further need for amenities such as rest areas, wellness facilities, green space, game rooms, convenience stores, and daycare facilities.

This is not limited to CBD locations. Suburban owners are upping “fitness, food, and fun” through activities such as bringing in food trucks and offering more on-site fitness options and outdoor meeting areas. Larger common spaces also allow tenants to save costs by minimizing open space in their leased area.

- **Evolution of Coworking Space**

It has been almost two years since coworking firms took the market by storm. WeWork is now the 11th-largest tenant in New York City, leasing 2.12 million square feet and surpassing Goldman Sachs at 1.99 million square feet.

Building owners have mixed views. Some view the mismatch between coworking tenant long-term leases and the underlying short-term leases of coworking space users to be a significant credit risk. Owners also note that where cowork space has a casual environment, the casual dress code, noise, and dogs don’t mix well with other “suits” tenants, and their longer office hours and abundant amenities create higher cap-ex needs. Some use coworking tenants to fill difficult-to-lease spaces such as first floors and older buildings, bringing the building “to life.”

Coworking firms are increasingly becoming more than just overflow and small business space. Large tenants cite a variety of reasons: cost reductions compared with new space; flexibility of space use; accounting issues; and employee needs for flexibility, communicating, and remote working. Under such

influences, the line between coworking spaces and traditional office is gradually beginning to blur.

- **While Still the Standard, Open Office Space Faces Pushback**

While open office spaces are still the standard, not all firms and not all functions within one firm successfully operate in an open office environment. A global study of more than 1,200 employees from different industries found that the ability to focus without interruptions is a top priority for employees, and over half reported that ambient noise reduces their satisfaction at work. More attention is needed to create the right balance of open space and private office space. Substantial capital improvement costs are mentioned frequently by office owners as an office investment drawback as compared with other property types.

- **Transformational Technology Affecting Processes and Structures**

Technology will significantly change the office leasing, operating, and structural environment going forward. Large real estate companies are more commonly providing venture capital to an increasing number of real estate tech startups. The “internet of things” will provide more efficient operating environments as well as new building structures. For example, one investor noted that they are building a Class A office building in Denver. It will have a significant change in curtain wall technology, with energy-efficient glass that can tint to adjust for factors such as heat, glare, and available daylight.

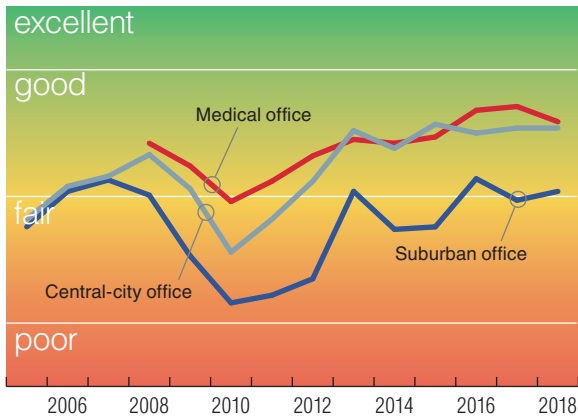
Opportunities Going Forward

Investors remain positive but cautious about the upcoming year. Unlevered core office returns are expected to be in the single digits, a reflection of the mature market. While it is becoming harder to find attractive risk-adjusted returns, one global investor notes that “markets are at very different points of their cycle. There are markets that [just] started recovering 18 months ago.”

Investors are optimistic that this cycle is moderating as appropriate. In the United States, the volume of projects under construction has already slowed. In addition, investors are remaining true to their strategies, instead of chasing high-cap-rate markets.

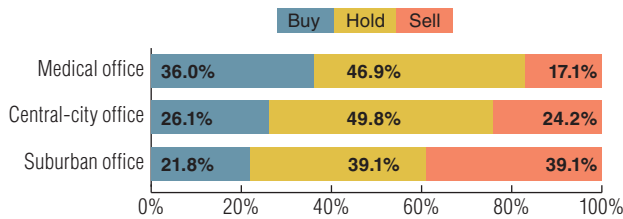
Transaction volumes have been slowed by widening bid-ask spreads in some markets. Volume may improve as sellers recognize that slower rental growth created by supply/demand balance supports higher cap rates. Investors are particularly cautious about low cap rates in prime markets, although at least one CBD investor noted that pricing is already starting to

Exhibit 4-12 Office Investment Prospect Trends



Source: *Emerging Trends in Real Estate* surveys.

Office Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

improve. “What we’re seeing today is much more compelling than what we saw 12 or 18 months ago.”

Investors are targeting build-to-suits, edge cities, and select submarkets, which are viewed as having high demand and attractive pricing. Some of these strategies have low to mid-teen targeted returns. Some contrarian strategies are evolving. Experienced suburban investors note the cap rate spread between CBD and suburban markets, high suburban yields, less construction in some markets, and better prices as compared with replacement costs.

Locational and building obsolescence is a key consideration. “Commodity” office built 30 years ago is on few institutional investors’ investment radars. In fact, institutional investors were large net sellers of suburban office product in the past year. One investor mentioned replacing obsolete suburban office parks with infill urban warehouses for last-mile deliveries.

With the prospect of driverless cars, parking is becoming more of a consideration in underwriting. One innovative reaction is to build flat parking decks on new garages so that the property

can be more easily repurposed. Buildings mentioned as difficult to retrofit include those with low ceiling heights, and remote, large corporate campuses with unusual components such as massive auditoriums, cafeterias, and fitness centers. In New York, for example, some buildings may be difficult to retrofit, but because they are overbuilt by 20 to 30 percent as compared with current zoning standards, the loss in floor area to rebuild them is difficult to underwrite in the current pricing environment.

Investors also see creative space redevelopment opportunities (e.g., Class B/C buildings to tech space in key markets). Users are looking for an urban setting outside the big cities, in secondary CBD markets. Trends advantage smaller-scale developments in mid-rise buildings that have a mixed-use campus feel and that “bring the outside in.”

Hotels

After strong post-recession recovery and performance, the hotel sector has started to lose its favored position among real estate investors for the year ahead, although this varies by market. Driven by a combination of factors, including considerations on timing the cyclical peak and the impact from ongoing political and economic uncertainty, real estate investors across the risk spectrum sounded a cautious note for hotels. Market fundamentals are expected to shift in 2018—U.S. supply growth is expected to overtake demand growth in 2018 for the first time since 2009. This cycle represents the longest period (eight years) of sustained demand-over-supply growth in the last three cycles.

Discussions with hotel investors on the current cycle turn toward comparisons to prior cycles, and typically tend to focus on the pace of supply increase, as well as the trajectory of growth in revenue per available room (RevPAR). The pace of supply growth during the current cycle has been comparatively low since the end of the Great Recession, with supply growth expected to exceed the long-term average in 2018, for the first time since 2009. During the current cycle, the trajectory of hotel room construction starts has been similar to the 1991 lodging cycle. The level of new hotel rooms being added, however, has been much lower compared with prior cycles. This has been driven largely by capital market conditions, with generally tightened underwriting criteria and lower risk tolerance, particularly among debt providers, the majority of which are operating in an environment of increased regulatory scrutiny.

On the other hand, demand growth in the current cycle has continued, driving peak occupancy levels. U.S. hotel occupancy levels in 2017 are expected to be approximately 65.6 percent, the highest level of occupancy since 1981. Part of

Exhibit 4-13 U.S. Lodging Outlook

	2016	2017f	2018f
Occupancy	65.4%	65.6%	65.5%
Average daily rate*	3.1%	2.1%	2.1%
RevPAR*	3.2%	2.3%	2.0%
Average demand*	1.6%	2.1%	1.8%
Average supply*	1.5%	1.9%	1.9%

Source: Bureau of Economic Analysis; IHS Markit (July 2017 forecast); STR; PwC (forecast released August 28, 2017).

*Reflects year-over-year percentage change.

f = forecast.

the continued growth in demand in the current cycle has been driven by the increase in online distribution channels, particularly online travel agencies (OTAs), and the increased and constantly evolving suite of products and services they offer the consumer. As a result of tepid supply growth and continued increases in demand, the current RevPAR cycle has lasted as long as the 1991 cycle. The strength of RevPAR recovery in the current cycle is illustrated by the extent of recovery—after 30 quarters from a recessionary trough, while real RevPAR in the 1991 cycle increased by 20 percent, in the current cycle, real RevPAR has increased by 39 percent. Overall, during the 1991 cycle, inflation-adjusted (real) RevPAR increased for 40 consecutive quarters (until the first quarter of 2001), before starting to decline.

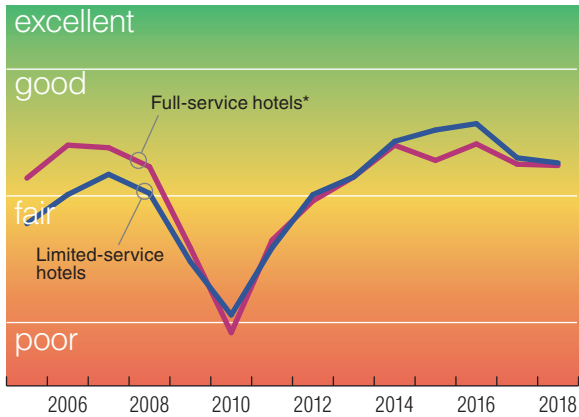
As a result of the prolonged cycle that appears to have peaked, investment performance has been tepid. Total annualized returns for hotels in the first half of 2017 were 3.65 percent, according to NCREIF, the lowest among all property sectors. Despite low returns and the cyclical peak, cross-border investment in U.S. hotels remains popular, attracting capital from Asia, Europe, and other global markets, in part due to the perceived relative safety of investment in U.S. hard assets. These investors are not solely focused on core gateway markets, but there have been signs of increasing diversification among cross-border investors, due in part to a lack of available assets in gateway markets, which has driven up pricing and prompted the resultant search for yield by these international investors. As a result, cross-border investors are increasingly seeking investments in noncore assets, including development projects and hotels that require repositioning, in gateway as well as secondary and tertiary markets.

So, what does the future hold? Looking ahead, several trends are expected to shape the hotel sector:

- From a supply perspective, lodging companies are expected to continue to increase their brand diversification. An unprecedented number of hotel brands have been launched in recent years, driven by the intent of lodging companies to create further demand segmentation, drive differentiation, and expand their footprints in a mature U.S. market by capturing previously independent properties through soft branding. In addition, hotel owners and developers are expected to continue to increasingly leverage brand diversity by developing assets or campuses featuring two or more brands with distinct products and price segments, which share back-of-the-house facilities.
- Alternative accommodation products, including sharing economy–based options, are expected to continue to increase, as the companies providing alternative accommodation options seek to create further segmentation within their own product portfolios. Response to this somewhat secular trend is expected to be a combination of increased collaboration with local authorities, on a market-by-market basis, to create formal foundations for future growth and potentially increased investment by lodging companies in these home-sharing enterprises. Lodging companies can seek to further segment their brand portfolios, while integrating home-sharing enterprises into their commercial engines and loyalty programs.
- From a demand perspective, OTAs are expected to continue to be a driving force of change in hotel distribution. With the increased proliferation of OTAs and their foray into direct customer marketing, acquisition, and loyalty, the relationship between lodging companies and OTAs will continue to evolve from being somewhat purely economic (i.e., commission rates) to more strategic, with an increased focus on customer acquisition. Lodging companies will continue to invest in mobile and hotel technology as a means to pull customer relationships back from OTAs.
- Other technological improvements, such as blockchain, internet of things, and big data/data analytics, are expected to be on the periphery of technology investments at lodging companies as they gauge owner interest in such investments and articulate the value proposition.

Going forward, with the current cycle moving past the cyclical peak, hotel investors need to be cognizant of several shifts in the lodging industry. Brands will likely continue to target an increasingly fragmented consumer base, potentially acting as a tailwind for sustained supply growth. Investors' relationships with alternative accommodation and distribution platform companies

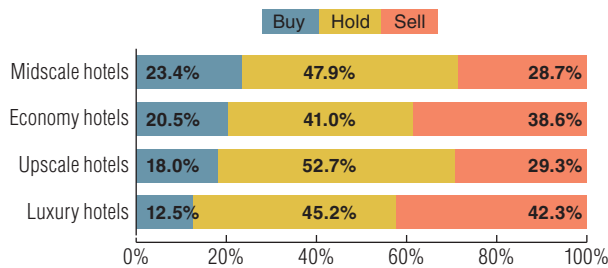
Exhibit 4-14 Hotel Investment Prospect Trends



Source: *Emerging Trends in Real Estate* surveys.

*2018 and 2017 results are the average of investment prospects for three categories—luxury, upscale, and midscale hotels; previous years' results are based on investment prospects for a single category—full-service hotels.

Hotel Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

are expected to continue to evolve, placing increased emphasis on savvy revenue management. Perhaps the mathematician John Allen Paulos said it best: “Uncertainty is the only certainty there is.”

Retail

While U.S. retail sales continue a long-term annual growth rate in excess of 4 percent, retail real estate is at its most significant inflection point since the introduction of the enclosed mall more than 60 years ago. Most reports place the reason for this on the impact of internet retail sales. However, SiteWorks research indicates that e-commerce is perhaps the smallest of several factors at work.

Recent interviews with merchants, retail real estate executives, developers, REIT officers, researchers, and banking professionals indicate that five major trends are converging to reshape this sector as it faces truly generational change.

Those trends are:

- Department store deconstruction and obsolescence;
- Retail industry maturity;
- Historic changes in apparel spending;
- Changing consumer demographics; and
- E-commerce and other changes in retail technology.

Retail overcapacity is the result, as opposed to a primary cause, of these significant transformations. Nevertheless—and despite the obvious stresses that have drawn public attention—retail property is considered by interviewees to be relatively healthy, with abundant capital available to owners and investors.

Background

In an echo of a distinction noted in the office sector, retail specialists compare “commodity” to “specialty” properties. Here, “commodity” refers to shopping for primary household purchases, where factors of price and convenience are of paramount importance. “Specialty” retail focuses on the selective choices made in deploying household discretionary income.

Commodity retail real estate represents the vast majority of brick-and-mortar retail and ranges from unanchored convenience centers and single to larger neighborhood centers and large-format power centers. Commodity retail is functionally divided into six major retail delivery categories, including convenience and service retail; drugstores; grocery stores; large-format general merchandise discounters; and big-box category killers and warehouse stores. Each category features a unique price-versus-convenience offering, but shares an emphasis on efficiency, convenience, and functionality in the delivery of regularly consumed consumer goods.

Specialty retail represents a much smaller percentage of brick-and-mortar retail square footage and comprises a range of formats including traditional malls, open-air “lifestyle” centers, “high streets,” mixed-use centers, and entertainment centers. Specialty retail shopping centers are designed to offer emotionally pleasing shopping experiences in the delivery of aspirational goods and services. Efficiency and convenience play much smaller roles, if any, in these centers.

The Key Factors

Both commodity and specialty brick-and-mortar retail are subject to the five fundamental influences listed above. Each can be

discussed individually, but it is their interaction that is fundamentally changing the performance of retail real estate today and into the future.

Full-line department stores. The single most significant factor affecting U.S. retail is the final phase of a multidecade process of deconstructing the department store business model. The full-line department store of 1975 housed as many as 50 to 75 departments offering everything from auto parts to baby bottles. The number of departments within the store began to decrease during the late 1970s as adept merchants began to construct big-box alternatives to department store offerings.

The basic formula of greater selection and lower pricing appealed to consumers, and more convenient drive-up parking increased efficiency and lowered building costs. As this process continued into the 1980s and 1990s, the number of big-box product offerings increased, resulting in the exiting of department stores from many product categories. Today, after more than 40 years of this slow and deliberate process, former full-line department stores have reduced product offerings to three primary product categories—apparel, housewares, and cosmetics and fragrances.

Big-box retailers added hundreds of stores annually, and continue to do so today, contributing to the widely perceived glut of space. Department stores, meanwhile, close operations at an increasing pace, threatening all but the best malls with extinction. Annual department store sales—once counted in the hundreds of billions of dollars—today total less than \$70 billion annually, about half the annual volume of the largest warehouse retailer alone.

It seems to be just a matter of time before most remaining full-line department stores exit the market, leaving only super-regional malls anchored by a few elite department stores while erasing hundreds of B- and C-level malls from the U.S. retail landscape. One of the industry's top department store research executives suggested that even though top-level fashion department stores will be able to elude most of the effects of the changes taking place, even high-end retailers will almost certainly shrink the number of units they operate. The desire to gain and hold market share is yielding to a greater desire to establish greater market exclusivity and bolster profit margins.

Some industry veterans demur, of course. The CEO of a multinational retailing business points out, "This is the third time in my career that I have heard that 'the department store is dead.' There will be fewer department stores and fewer malls, but the downward trend will level off. Brick-and-mortar productivity can't be stressed strongly enough." How does that happen? That CEO affirms, "Retail has to customize to customers. Stores can

no longer say, 'This is who we are and this is what we do as you come to us.'"

Retail industry maturity. While annual retail sales continue to grow at historic levels, the industry has seen a rapid reduction in store and square footage growth as most commodity retailers—with the notable exceptions of apparel, housewares, and cosmetics retailers—have reached full buildout, leaving a slow-growth mature industry in its wake.

Today, the United States, with more than 24.5 square feet of retail space per capita (more than five times Europe's average of 4.5 square feet), includes over 8.5 billion square feet of retail, with perhaps 3 billion square feet underused in terms of sales volumes supported and vacancy rising. This excess, however, is being liquidated in an orderly process, with public REITs shedding noncore assets and financial markets systemically pricing the excess into the market.

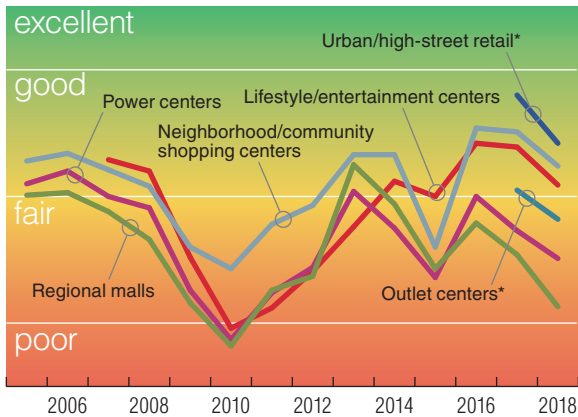
A longtime executive in the sector says, "Retail is more difficult than ever, and it's always been difficult. The pace of change is fast and furious. You used to have time to fix your mistakes; now you don't have that luxury." Still, the industry's leaders haven't given up. One REIT CEO is confident in his port-portfolio of assets, saying, "We are now in every market we want to be [in]. These are typically gateway markets plus STEM [science, technology, engineering, and mathematics] cities, 18-hour cities, and some select growth markets. We will look to expand our presence."

Apparel industry evolution. Rapid advances in apparel manufacturing such as short-run fashion production lines and a move away from traditional seasonal introduction have reduced both product development cycles and apparel pricing. One of our interviewees, an executive at a midsized retail REIT, observed that fast discount fashion is now the dominating force in apparel, with apparel manufacturers shifted to a more market-responsive off-the-rack model, resulting in shorter design time, faster production, and lower manufacturing costs.

Another retail executive, responsible for acquisitions for a highly regarded retail REIT, commented in our interview that even the outlet segment of the industry has not escaped the impact of these changes as consumers no longer need to travel 50 to 100 miles to find discounted brands.

The proliferation of specialty retail fast-fashion concepts has eaten away at both department store and many midpriced apparel chain sales, and the result has been bankruptcy filings for many mid-market retailers.

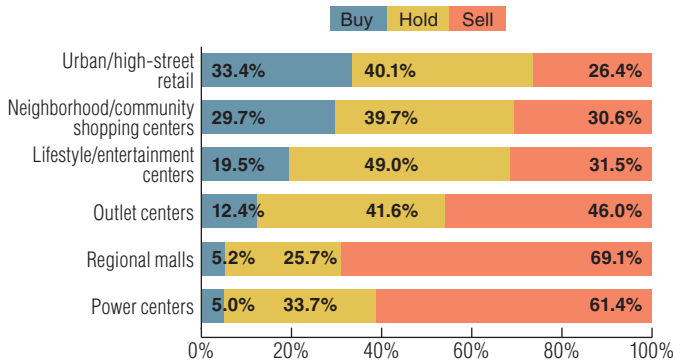
Exhibit 4-15 Retail Investment Prospect Trends



Source: *Emerging Trends in Real Estate* surveys.

*Second year in survey.

Retail Buy/Hold/Sell Recommendations



Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on U.S. respondents only.

Changing consumer demographics and preferences. While the long-term growth rate for brick-and-mortar retail remains over 4 percent, the mix of consumers is changing drastically. Baby boomers still represent the largest single U.S. consumer group and have entered a new life stage: consuming less, shedding assets, and spending a higher percentage of income on dining out, entertainment, and travel. Millennials, too, appear to be spending less on apparel and housewares, and a greater percentage of their incomes on entertainment and dining out. Even automobile ownership is trending lower among millennials. A veteran of several retail cycles recommends focusing on what consumers are seeking, rather than what they are shedding: “Retailers focused on delivering value to shoppers. Shopping centers where a vibrant experience attracts traffic. Retail areas where the social dimension of human interaction adds to the mere exchange of cash for goods.”

As a practical matter, among the many changes in retail perhaps none is more significant than the proliferation of new dining options, and personal-service facilities—including health, fitness, and grooming facilities—that cannot be replicated in an online format.

E-commerce and retail “technology.” The steep upward trajectory of internet sales, and the drumbeat of media heralding the march of e-commerce, might seem to suggest that it has suddenly become the norm for America’s shoppers. The numbers, however, say otherwise. U.S. Census Bureau data indicate that e-commerce accounts for 8.5 percent of total retail and food service sales and perhaps 11 percent of sales, with sales of cars and auto parts excluded. The total size of the U.S. retail market in 2017, as estimated by SiteWorks, is \$4.65 trillion, and the largest online retailer has less than a 1 percent share of the market.

Two important points should be stressed, even as e-commerce is expanding at 10 percent or more annually. First, delivery costs represent a major drag on e-commerce. The largest online retailer spends more than \$4 billion quarterly on shipping costs while reporting almost no profit from retail sales. Second, there is a well-documented growth pattern known as the S-curve, which is common in newly introduced formats. After a period of rapid growth, the curve levels off as it hits a point of saturation in its market segment. E-commerce may not be at that point yet, but some analysts see the ultimate market share for e-commerce at 15 to 20 percent, and growth levels off as it approaches that range.

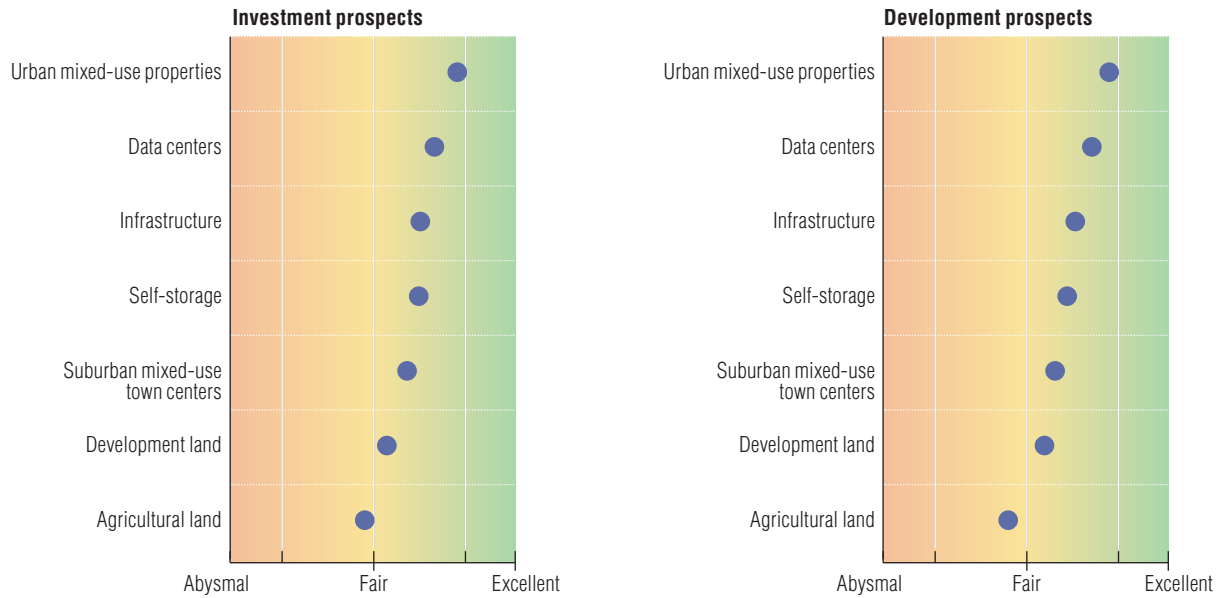
Omni-channel retailing, which *Emerging Trends* has discussed for several years, has increasingly become the norm, and even the largest online retailers are now acquiring brick-and-mortar locations, moving away from pure-play internet distribution.

The Outlook

With so many forces influencing U.S. retail, it is not surprising that the industry finds itself searching for sources of stability. While consumers now expect multiple channels of distribution for many products, the industry will need to rationalize the mix of delivery mediums and the role and profitability of each in delivering consumers the best mix in the future. No one size will fit all.

Still, most industry observers acknowledge change—and the need for further change—but consider it unlikely that brick-and-mortar stores will fade as the preferred venue for consumer activity. Physical stores have evolved as the most efficient—and profitable—distribution channel in both the commodity and specialty segments. Natural selection is often viewed as ruthlessly Darwinian, but even in this scenario the fittest do survive.

Exhibit 4-16 Prospects for Niche and Multiuse Property Types in 2018



Source: *Emerging Trends in Real Estate 2018* survey.
 Note: Based on U.S. respondents only.

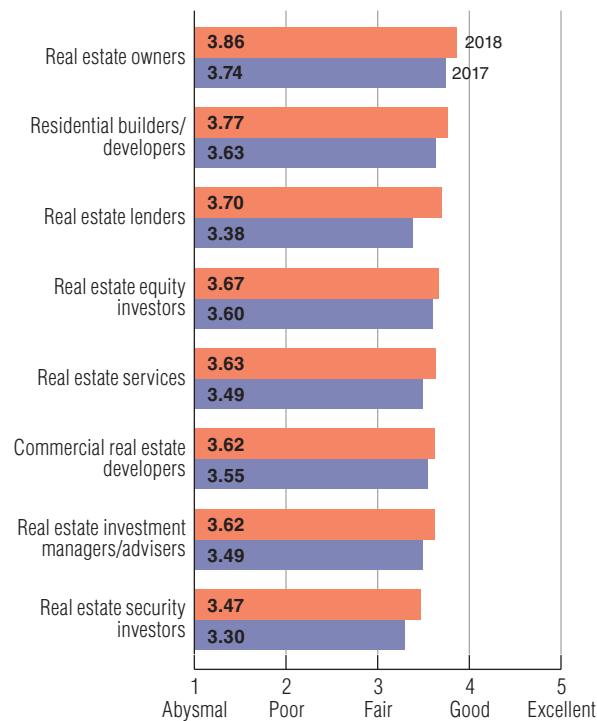
Emerging Trends in Canadian Real Estate

“Looking forward, it’s not a clear blue sky—but there are **no storm clouds** coming, either.”

Rebalancing Portfolios to Create Advantage

“Having capital is no longer an advantage. Advantage comes from being able to move quickly, deal with more complexity, and leverage strategic partners.”

Exhibit 5-1 Real Estate Business Prospects, 2018 versus 2017

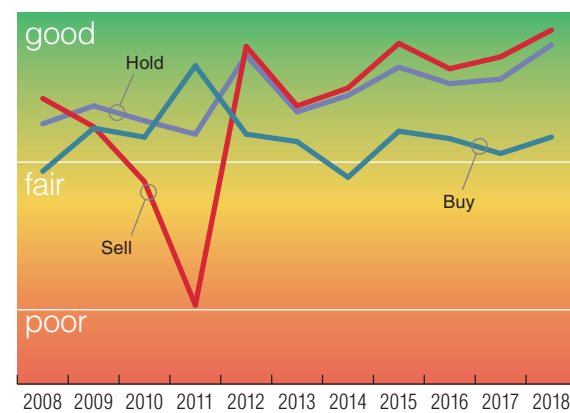


Source: *Emerging Trends in Real Estate* surveys.
Note: Based on Canadian respondents only.

As high-quality commercial property grows more scarce and prices continue to rise, some investors are beginning to look elsewhere for opportunities that could offer superior returns. As one interviewee put it, “During each economic cycle, there are opportunities to seize. You must know how to spot them.”

The industry’s search for better returns manifests itself in various ways. Major pension funds have largely acquired what the Canadian market has to offer and, consequently, are looking overseas for prime investment opportunities. These large institutional investors have also turned to developing Class A properties in Canada and around the world in response to the lack of availability, which is resulting in increased prices for institutional-grade properties and better returns. “There’s only so much institutional-quality real estate available,” one interviewee said. “So, the industry will either build more institutional-quality

Exhibit 5-2 Emerging Trends Barometer 2018



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on Canadian investors only.

Exhibit 5-3 2018 Forecast Economic Indicators by City

	Real GDP growth	Total employment growth	Unemployment rate	Personal income per capita growth	Population growth	Total housing starts	Retail sales growth
Toronto	2.5%	2.3%	6.5%	3.2%	1.4%	39,270	2.6%
Vancouver	2.5%	1.7%	5.2%	3.2%	1.3%	22,477	2.5%
Saskatoon	2.3%	1.1%	6.7%	2.0%	1.9%	1,762	2.2%
Winnipeg	2.3%	1.5%	6.2%	2.4%	1.7%	4,050	2.2%
Calgary	2.2%	1.2%	8.0%	1.9%	1.9%	10,108	1.6%
Edmonton	2.2%	1.1%	7.7%	2.0%	1.8%	10,723	1.6%
Halifax	1.9%	1.1%	5.9%	2.5%	1.4%	2,365	2.2%
Montreal	1.9%	0.7%	7.1%	2.7%	0.9%	17,438	2.0%
Ottawa	1.9%	1.2%	6.0%	2.3%	1.2%	7,350	2.0%
Quebec City	1.9%	0.8%	4.4%	2.3%	0.8%	4,153	2.0%

Source: Conference Board of Canada, *Metropolitan Outlook 1: Economic Insights into 13 Canadian Metropolitan Economies—Spring 2017*, accessed May 26, 2017.

real estate than we need, or it will drift into noninstitutional-quality real estate. Both are a concern.”

Others, especially those lacking the size and scale to go after higher-grade real estate, are getting innovative in their hunt for stronger yields in Canada. For some, this means being more creative when optimizing their portfolios. The trend of recycling capital will likely continue to improve the quality of cash flows and to redeploy capital in intensification and redevelopment opportunities. One interviewee remarked that midsize players may try to improve their portfolios by selling lower-quality properties to make room for higher-quality ones.

Real estate investment trusts (REITs) are likely to make some strategic adjustments in the year ahead. They generally continue to focus on reducing leverage and payout ratios to more conservative levels; indeed, a number of observers suspect that REITs will have trouble generating the kind of returns needed to guarantee their distributions. This pressure may compel some to sell assets in order to generate funds, and investors are watching closely and are ready to buy when those properties are put up for sale. Others have noted that REITs are shifting away from acquisitions in favor of development and redevelopment opportunities in search of better returns.

Rethinking How to Address Affordability

“Government regulations will have a meaningful impact on affordability—they just won’t solve the problems. In fact, they’ll go a long way to creating new problems.”

Exhibit 5-4 Housing Price Change Year over Year

	2016	2017 (forecast)	2018 (forecast)
Toronto	17.4%	10.4%	-5.8%
Vancouver	10.2%	2.8%	4.9%
Winnipeg	2.6%	3.4%	2.0%
Montreal	3.9%	4.1%	2.7%
Ottawa	1.8%	5.2%	2.1%
Calgary	2.3%	0.4%	1.5%
Halifax	1.3%	2.6%	1.9%
Quebec City	-0.2%	-1.7%	0.4%
Edmonton	-0.4%	4.1%	1.5%
Saskatoon	-1.4%	-2.5%	-3.8%
Canada	10.6%	3.0%	-1.6%

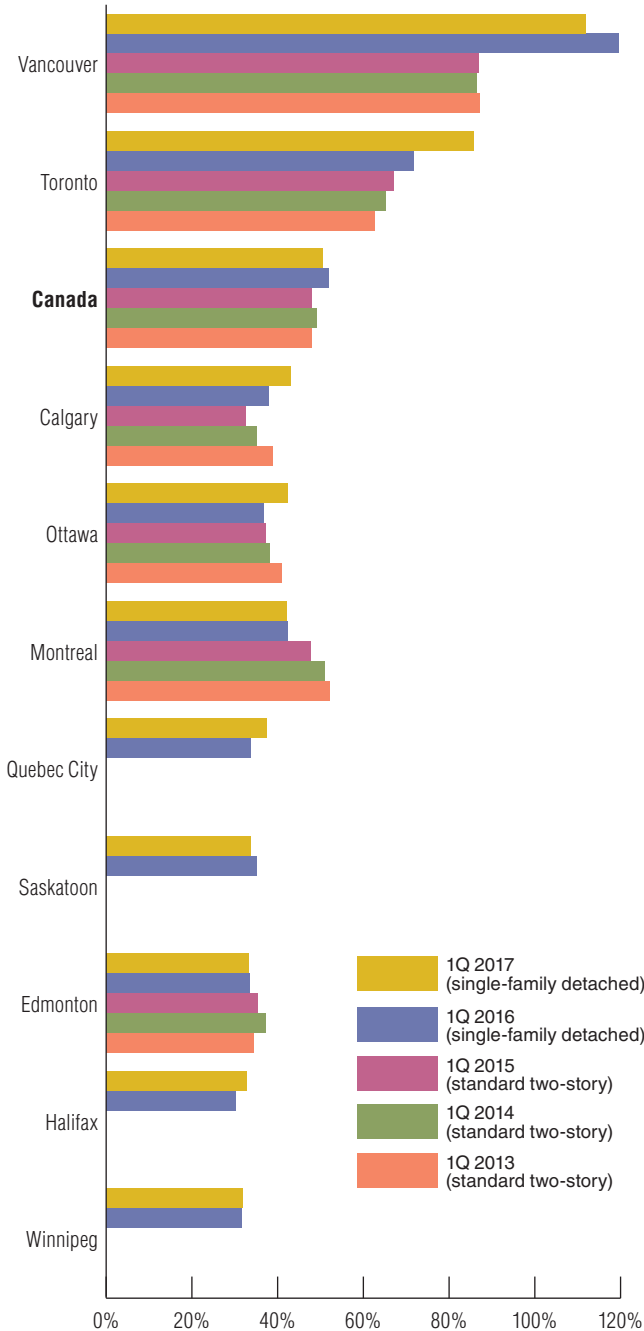
Source: TD Economics, *Canadian Regional Housing Outlook*, August 2017.

Supply, Demand, and the Government’s Role

Industry players are skeptical that recent tax moves by the Ontario government, following last year’s move by British Columbia, to curtail foreign investment will have a long-term cooling impact on housing affordability in Toronto and Vancouver (see exhibits 5-4 and 5-5). “Growth will continue to drive needs,” one interviewee said. “No regulation will stop that.”

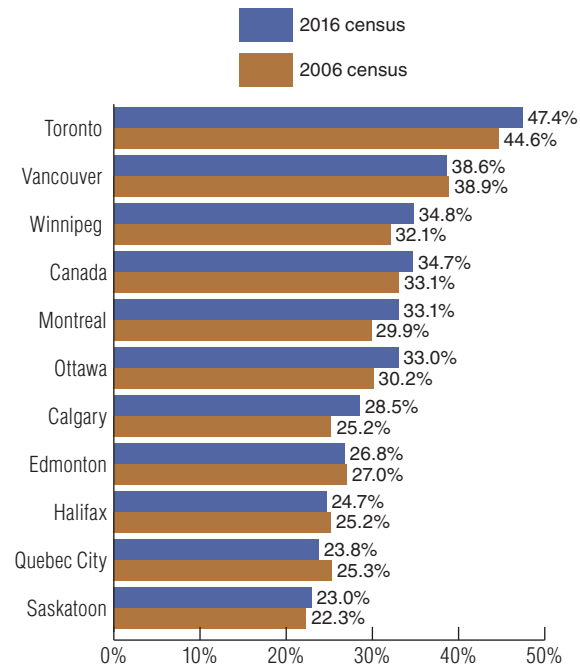
In August 2016, British Columbia implemented a 15 percent foreign buyers’ tax on the Vancouver metro-area housing market. In the short term, the Canada Mortgage and Housing Corp. reported that the tax pushed monthly sales to foreign buyers from around 10 percent of sales to 0.9 percent, with a

Exhibit 5-5 Housing Affordability



Source: RBC Economics—Housing Trends and Affordability reports, accessed August 30, 2017.
 Note: The RBC Housing Affordability Measure shows the proportion of median pre-tax household income that would be required to service the cost of mortgage payments (principal and interest), property taxes, and utilities based on the average market price.

Exhibit 5-6 Young Adults Living with Parents in Canada

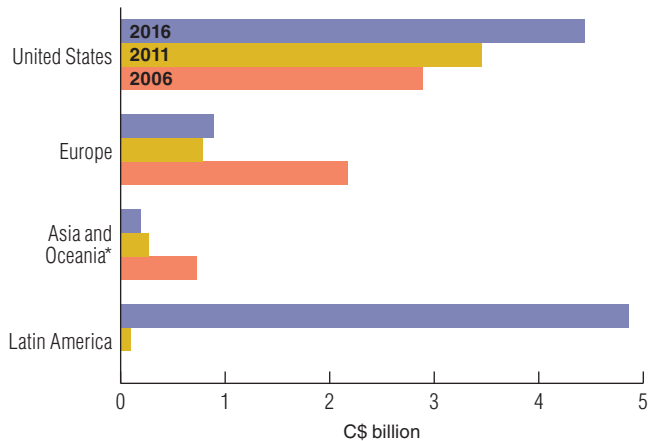


Source: Statistics Canada, Census of Population, 2016 and Families, Households, and Marital Status Highlight Tables, 2016 Census, accessed August 30, 2017.
 Note: Percentage of adults aged 20 to 34 living with their parent.

marked decrease in average prices. But after a year, prices rebounded to pre-foreign buyers' tax levels and are now pushing new heights, especially in the condo market. In April 2017, Ontario announced its own 15 percent tax on foreign buyers and expanded rent-control rules to buildings constructed after 1991. Most interviewees feel that foreign buyers' overall influence on housing prices has been greatly overstated. The impact on some Greater Toronto Area (GTA) submarkets may have been greater, but most interviewees think that overseas buyers still see Canada as a safe haven and an attractive place to live, so they will continue to buy in the Canadian market regardless of new taxes.

For those in the industry, it is a matter of supply and demand. A common refrain from interviewees is that governments should stop trying to interfere in the market and turn their attention to other more important issues, such as the impact of regulations and processes that are limiting land supplies. This echoes our findings from last year's report, in which many stated their belief that provincial land use policies and local government approvals are factors holding back the supply of available land for development. Building on that, one interviewee stated that government policy "is the largest issue impacting real estate."

Exhibit 5-7 Foreign Direct Investment in Canada, Real Estate and Rental and Leasing



Source: Statistics Canada, CANSIM table 376-0052, accessed June 22, 2017.

Note: Includes firms under the North American Industry Classification System (NAICS) 53 – real estate and rental and leasing.

*Due to data unavailability, blue (first bar) and yellow (second bar) refer to 2015 and 2010, respectively.

For example, many are worried about how proposed changes to the Ontario Municipal Board will give local governments more say when it comes to development decisions. This could restrict supply if residents push back against high-density projects in their neighborhoods. And in Halifax, some believe that the government’s approach to city planning is limiting development.

A Mind-set Reset

“With more single people living in expensive markets, watch the emergence of co-living.”

While there isn’t much concern about housing affordability in most of Canada, it is driving profound change in the lives of urban Torontonians and Vancouverites—particularly millennials. As it stands, more than one in three young adults in Canada live with at least one parent, a share that has grown since 2001 according to 2016 census data (see exhibit 5-6). Younger Canadians in centers like Toronto and Vancouver will need to rethink their living expectations. While many millennial families will move farther away from major urban cores—even to new cities—in search of affordable homes, others will choose to stay and raise their families in condo units (in some cases, larger units in family-oriented buildings). Others will simply opt out of homeownership and embrace a permanent-renter lifestyle.

In major centers, we may continue to see a rise in multigenerational and multifamily homes as a means for people to overcome affordability challenges. Census data show that 6.3 percent of Canada’s population lives in multigenerational households,

which have grown the fastest of all household types since 2001. These affordability concerns are, in turn, creating opportunities for real estate developers in Ontario and British Columbia. One Vancouver-based developer has even launched a prize to find a paradigm-shifting technology in the construction of high-density housing.

Transit to Transform Cities

“Transit is a key link between people and where they work and play. Smart developers buy around transit nodes—and future transit nodes.”

In recent years, Canada’s federal, provincial, and municipal governments have joined forces to invest billions of dollars in transit infrastructure in cities across the country, and this is poised to shape real estate opportunities for years to come. The new transit lines will let more Canadians find homes they can afford while offering a reasonable commute to work in urban cores or intensively developed nodes along the lines.

Indeed, investors and developers in Montreal foresee the Réseau électrique métropolitain (REM) network turning Dorval and the South Shore into a sizable employment hub, with opportunities in multiuse developments. In Ottawa, city planners are championing increased density along the new light-rail transit (LRT) lines. In fact, the closer a project is to the LRT, the more favorably it’s viewed in approvals. Similarly, Edmonton’s Valley Line LRT will increase density around the corridor. In Vancouver,

Major Canadian Transit Investments Underway

- **Toronto:** Eglinton Crosstown LRT (C\$9.1 billion), Scarborough subway extension (C\$3.6 billion).
- **GTA:** Hurontario LRT (C\$1.4 billion), York Viva Bus Rapid Transit expansion (C\$1.5 billion).
- **Calgary:** Green Line LRT (C\$4.5 billion).
- **Montreal:** REM automated transportation network (C\$5.9 billion).
- **Ottawa:** Confederation Line LRT (C\$2.1 billion), LRT Stage 2 (C\$3.3 billion).
- **Edmonton:** Valley Line LRT—Stage 1 (C\$1.8 billion).

Source: Top100 Projects (top100projects.ca), accessed August 18, 2017.

TransLink plans to help finance its transit network by leasing space at its rapid transit stations to retailers. Toronto is seeing much interest at key transit hubs, such as the Union-Pearson express rail, the Spadina subway extension, and the Eglinton Crosstown LRT. As one interviewee observed, transit-oriented retail and mixed-use properties offer a stable cash flow, making them strong prospects.

The link between transit infrastructure and real estate development is expected to grow stronger in the years to come. Governments and agencies are increasingly looking to emphasize transit projects that can demonstrate wider public benefit—such as creating hubs or places where people want to spend time and money, whether through work, play, or both. And as the sharing economy evolves with ride sharing and autonomous vehicles, transportation planners will need to examine “last mile” travel between transit hubs and commuters’ destinations. Transit proposals that integrate plans for further real estate development are likely to have a stronger case for funding going forward.

The Rise of Placemaking

As new transit lines prove to be a nearly irresistible magnet for real estate developers and investors, the industry is paying more attention to the idea of placemaking. In many ways, it is an evolution of the industry’s recent focus on mixed-use properties and creating communities—fusing residential, commercial, retail, and service properties. What makes placemaking different is that it’s more than a collection of different types of property. As one interviewee put it, place-based development is bigger than the sum of its parts: it’s about creating a unique experience and culture, an engaging environment that provides people with things to do throughout the day and into the night.

And now, new transit spending is creating opportunities to establish unique places along new and future lines. Large, dense, transit-centered developments in Ontario like Transit City in Vaughan or M City in Mississauga are examples of placemaking in action. They’re also attractive to investors because the appetite for new product is almost insatiable.

Making the 18-Hour City a Canadian Reality

The 18-hour city—sometimes known as the “long day/seven day” city—has been described as a less intense version of so-called 24-hour cities like London, Paris, Madrid, Berlin, Tokyo, New York, and Toronto. While this concept isn’t new, it is relatively new to Canada. The prototypical 18-hour city is a major center with an international character that has managed to retain a vibrant urban core. These cities also tend to have robust and integrated resi-

dential, commercial, retail, services, entertainment, and cultural amenities that allow people to enjoy themselves well into the night. Currently, Vancouver and Montreal fit this idea of the 18-hour city—though Calgary also is making a solid claim to this status.

But other centers could also evolve into 18-hour cities in the years to come. Some will be dynamic regional centers that are busy establishing their reputation as diverse, exciting cities in their own right—often with the advantage of better housing affordability or a lower cost of doing business. And then there are edge cities—the former suburbs eager to achieve more balanced development and establish their own unique urban identity. Montreal, Vancouver, and Calgary may gradually develop into true 24-hour cities, buzzing with activity around the clock. But many more, ranging from Quebec City to Ottawa and Kitchener-Waterloo to Edmonton, could evolve into 18-hour cities.

Not that reaching 18-hour status comes without challenges. Transit infrastructure needs to support daytime commutes and late-night service. Disputes among residents, businesses, and patrons over noise levels and nighttime activity will need to be negotiated. Urban densities and even urban form will need to be reexamined as the need for evening public and pedestrian spaces grows. Public services and private businesses will need to figure out how to serve customers throughout the day and into the night—or around the clock. The 18-hour city may be exciting, but making it work won’t always be easy.

Reinventing Real Estate through Technology

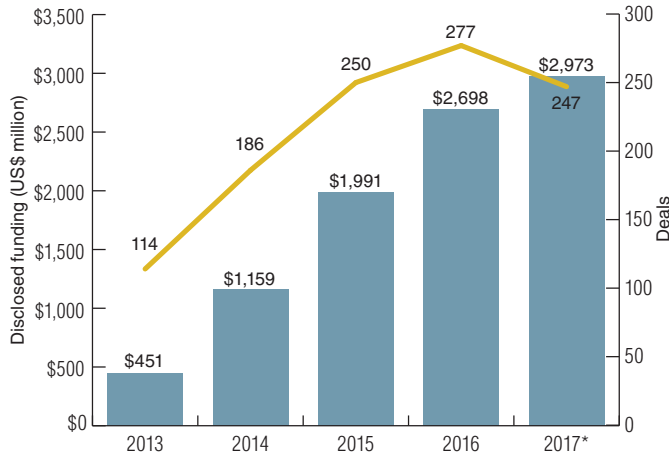
“This is one of the first times in our history that all of these disruptive technologies will have a significant impact on where and how we live, work, and play.”

Using Data to Make Better Decisions

Time and again, interviewees said it’s critical that the industry embrace the use of technology and analytics in order to enhance strategies that will be supported by better, faster decisions. With 2017 projected to have been the best year yet for global real estate tech funding (see exhibit 5-8), one interviewee noted, “Technology’s impact is everywhere in real estate—and we can’t ignore it.”

Harnessing the power of data and business insights is an imperative for real estate companies. It will play an essential role in helping companies improve deals and investments, mitigate risk, better understand tenants and their needs, and open up new profitable possibilities. Real estate industry leaders tell us they’re eager to be able to benchmark and run analytics on their

Exhibit 5-8 Real Estate Tech Global Financing History



Source: CB Insights, Real Estate Tech Research Briefing—Funding Update through Q1'17.
*Full-year projection.

property portfolios. They want to make decisions based on a far more detailed, nuanced understanding of what drives their business.

To achieve this, real estate companies will need to invest in modernizing their IT and data infrastructure, from new data management tools and information portals to artificial intelligence, machine learning, and automation systems. They should also make sure they hire people with the skills, knowledge, and expertise needed not only to make sense of the data, but also to

make sure that companies ask the right questions. It will also be critical to make sure that data and essential business systems are protected against cyber attack. The cost of the investment will vary depending on the approach taken, but companies should start planning for it now, if they haven't already. One interviewee told us that they're quadrupling their IT budget.

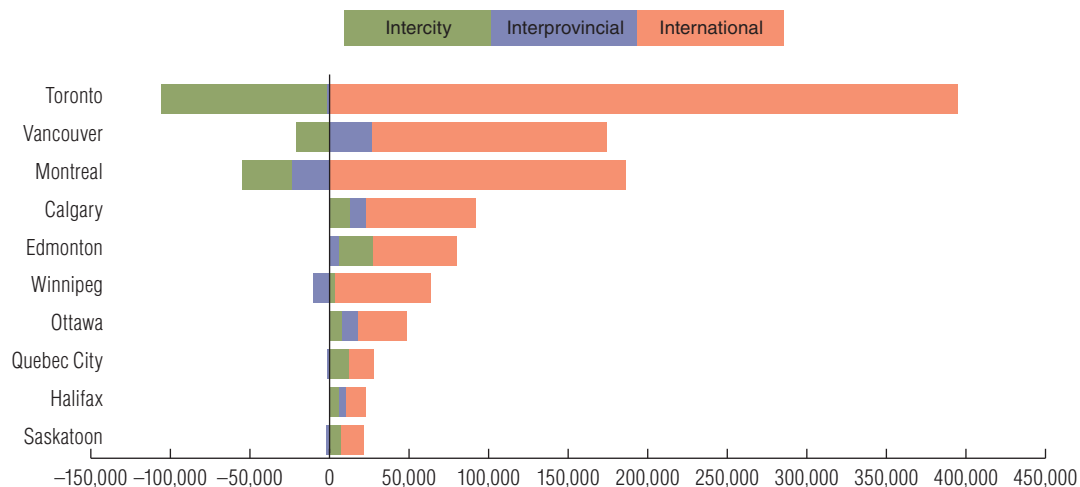
How Will Emerging Technologies Shape the Market?

Autonomous vehicles (AVs) may not be a regular sight on roads yet, but technology and automotive giants are racing to get AVs on streets and highways—and it's a change that could radically transform cities and future developments. With AVs comes the need for fewer personal cars and surface parking spaces. What does it mean when residential, commercial, and retail properties and projects no longer need the parking spots they once did? It's likely that many companies will capitalize on their existing assets and redevelop excess space into new properties, generating new value and increasing urban density along the way.

What's more, Canada is looking to take the wheel when it comes to AV development. Edmonton has expressed that it would like to be at the forefront of AV research in Canada, exploring setting up a test track at the University of Alberta. And a major auto manufacturer is establishing a research and development center in Ottawa to work on developing AVs and connected vehicles.

It's not just autonomous vehicles that are making waves in real estate. Drones are slowly but steadily gaining in prominence within real estate and changing how companies work. They're

Exhibit 5-9 Forecast Net Migration, 2017–2021



Source: Conference Board of Canada, accessed June 21, 2017.

being deployed by developers and owners to inspect construction progress, assess potential damage, and help produce visuals for marketing materials. And with the rise of faster e-commerce delivery efforts across North America, they are another variable in the retail landscape. Virtual reality also lets real estate professionals showcase properties to clients through 3-D virtual tours, preventing potentially costly missteps on the construction site and allowing home purchasers and tenants to see spaces in 3-D rather than just as plans on paper. And the evolution of blockchain is expected to have a significant impact on real estate transactions and the whole industry.

Tenant Expectations Continue to Evolve

Technology has swiftly reshaped what employees expect of their employers and workplaces. In last year's report, interviewees told us that a "smart," connected building that was energy efficient and constructed using sustainable materials was seen as a unique project. Today, that same building is a necessity because tenants and their employees will settle for nothing less. Builders have responded, building the highly connected, green-as-possible offices their tenants want. And they've been rewarded: Class A new builds are quickly leased, while older buildings empty out and stand in desperate need of retrofitting and refurbishment. To stay relevant, real estate players must anticipate and meet the needs and expectations of these influential companies and their equally demanding employees.

The Global War for Talent

The real estate industry is also emerging as a pivotal player in the war for talent. Real estate investors, developers, and owners will need to drive their businesses with the right people strategy. It's important to attract, develop, and incentivize talent to retain and gain a more competitive position in the market. Forward-thinking firms have already started to recruit local teams in key, emerging markets. What's more, there will be a need for more specialized roles, including in the fields of sustainability, technology, and analytics.

Canadian builders and developers are also concerned about the impact of labor shortages. A number observed that even if governments were to ease restrictions on land supply, the industry would be hard-pressed to find enough skilled talent to build additional homes. And in Alberta, concern exists that there won't be enough resources available as activity levels start to return. At the heart of the issue is the fact that younger Canadians are not entering the skilled trades at the rate needed to meet demand.

Property Type Outlook

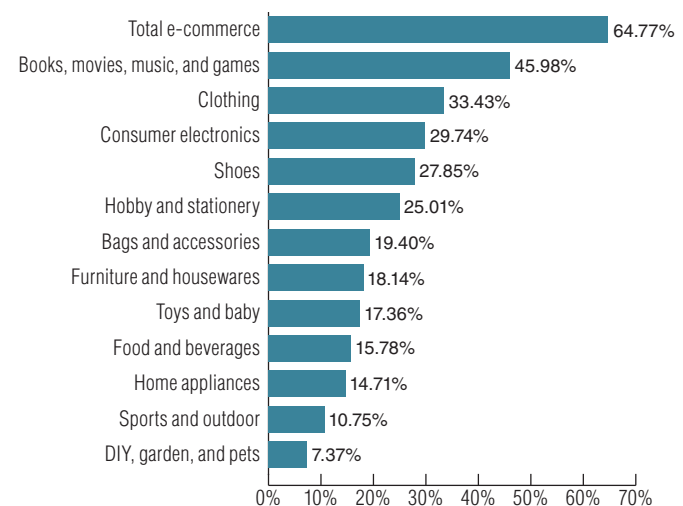
Retail

"We're in the middle of a major evolution in retail. You have to give someone a reason to go to a mall."

Canada's retail sector continues to be affected by the rapid, relentless growth of online shopping and consumers' changing needs and expectations. As a result, the outlook for retail property across the country presents a varied picture. In Toronto and Vancouver, the battle for space downtown is fierce, "because that's where the people are and where population growth will be." In Quebec, the outlook for retail is relatively positive: high street fashion is strong along Montreal's Rue Ste. Catherine, and several Quebec City shopping centers have recently undergone renovations. Ottawa's higher-end centers are performing well while lower-tier centers continue to struggle. In Halifax, business favors updated properties, as one mall is having trouble filling space while another is on the rebound after renovations.

For retail property owners and investors, creativity and flexibility will be important success factors. Interviewees noted that everyone in retail needs to rethink what they're doing. The hollowing out of the big-box and national department store retailers in Canada has continued, and traditional retail must give way to more experiential offerings that combine shopping with restaurants and entertainment in new ways. Retail centers must be transformed into destinations that people want to visit for more than shopping, and that means incorporating public spaces, a wider range of services, cultural programming, events, and more.

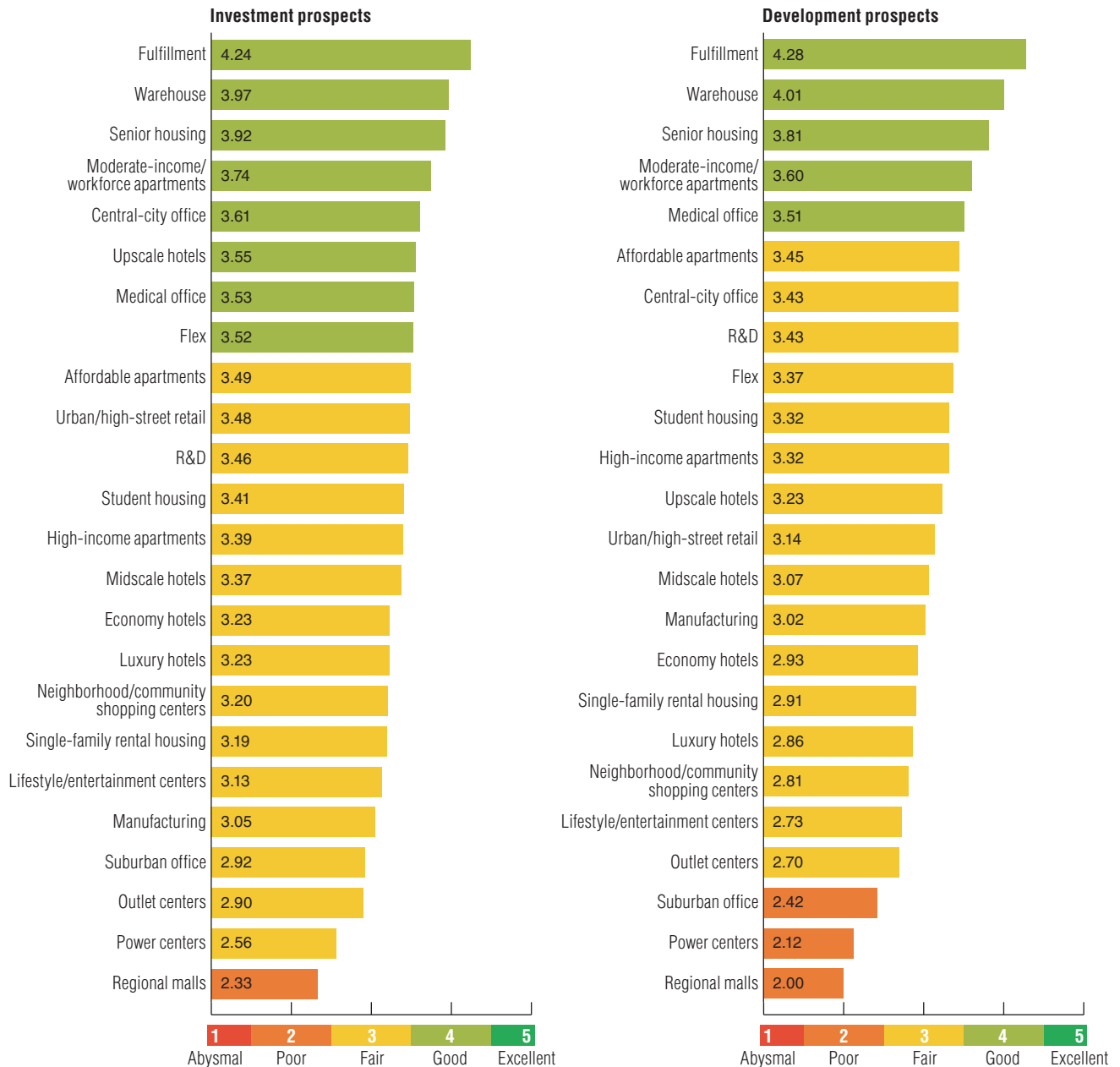
Exhibit 5-10 E-Commerce Penetration Rates in Canada



Source: Statista e-Commerce Market Report, January 2017.

Note: The penetration rate corresponds to the share of active paying customers (or accounts) as part of the total population (adults age 16 and older).

Exhibit 5-11 Prospects for Commercial/Multifamily Subsectors in 2018



Source: *Emerging Trends in Real Estate 2018* survey.
 Note: Based on Canadian respondents only.

As retailers' space needs shrink, property owners are starting to respond by redeveloping store footprints to provide more storage space to accommodate the growth of "click and collect" shopping. Successful online retailers have also started leasing brick-and-mortar spaces to respond to the demand for faster delivery times. In 2013, e-commerce was responsible for 4.5

percent of total Canadian retail sales, according to Statista; by 2018, it is forecast to reach 8 percent. To keep up with this growing trend, property owners are embracing new ways of filling vacant space, even temporarily, by allocating space to pop-up stores and other short-term tenants. This change in retail is yielding different opportunities in more central distribution and niche

warehousing. Other owners are welcoming tenants rarely seen in malls and other shopping centers, such as gyms, medical labs, and other community service tenants.

Interviewees are relatively confident that Class A malls and luxury retail will manage to evolve and perform well despite the retail sector's challenges. Given Canada's cold climate, well-positioned destination-based malls will always have a place for shoppers, and retail in downtown cores will remain attractive as a key element in the live/work/play lifestyle that Canadians crave and for which developers are building.

Only 16 percent of food and beverage customers in Canada are forecast to shop for those products online in 2018 (see exhibit 5-10), but the penetration rate is growing. Some have wondered whether Amazon's purchase of Whole Foods foreshadows an e-commerce arms race in the usually stable grocery sector. Ontario's primary alcohol retailers have also started to offer home delivery in some markets, and observers see this as another signal of change in grocery retailing.

Single-Family Residential

"I think we're at a peak in residential for now. We're good longer term unless interest rates move up significantly."

The overall outlook for single-family residential is modest, according to the Conference Board of Canada. As well, the country's economy is forecast to grow only 2 percent in 2018, and it is expected that this will inhibit Canadians' ability to buy new homes. The industry has also made a permanent shift toward multifamily construction: two out of three new homes built today are multifamily, up from less than half in the mid-2000s.

Uncertainty over interest rates isn't helping, though it will likely be a few months before it becomes clearer how this trend will develop. Some think that rate hikes could cause some prospective buyers to pause before making a purchase—particularly those considering homes at the edge of affordability.

The landscape across Canada varies. In Quebec City, for example, there is simply too much supply, since locals are eager to trade their homes for condos or rental apartments. There is very little single-family development in Montreal's core and a lack of amenities for what does exist. As a result, young families are moving out to the suburbs to find a home. Ottawa's housing market is benefiting from an influx of technology companies, resurgent government hiring, and a migration of former GTA residents searching for more affordable homes. Edmonton foresees a slight uptick in the number of single-family homes under construction, as does Halifax—at least in the suburbs.

One Halifax interviewee commented that, when it comes to suburban homes, "price is the ultimate amenity." The city is also finding that as the population ages, people are moving from single-family homes to condos and purpose-built rentals.

In Toronto, industry players expect the near-term demand for single-family homes to fall owing to high prices, rising demand for multiunit developments, and shifting investor focus in answer to the government's response to housing affordability. In the city's core, price-increase fatigue is leading some buyers to simply stop looking, though the impact is different in each submarket. Affordability concerns are also leading prospective homeowners to embrace both old-fashioned and unconventional ideas, including a continued rise in multigenerational and multifamily homes. Canada's other red-hot residential market, Vancouver, has seen sales volumes drop year over year, but they continue to trend upward compared with historical averages. Prices continue to rise, despite measures to deter foreign buyers, and some feel that the market will remain on this stable track.

Condominiums

"The size of condo units is increasing after years of smaller and smaller units. We need more diversity in offerings to be successful."

By and large, the condominium sector is poised to perform steadily in the near term, with steady demand in most markets. Condo units in downtown cores remain attractive to young professionals, whose appetite for the live/work/play lifestyle shows little sign of abating. They are joined by retiring baby boomers who are selling their single-family residences to enjoy smaller, more carefree condo living close to urban amenities.

But the condo industry is evolving in response to new needs and pressures. In Vancouver, builders say there isn't enough supply to meet demand. Ottawa, on the other hand, is just now starting to see new condo projects begin as years' worth of oversupply is finally absorbed. Calgary continues to face an abundance of supply, though there is still a small number of new projects going into the core, part of a push to drive more density in the city center.

In downtown Montreal, the condo market is performing well, as sales and prices have steadily increased and several multiuse projects are under construction. Quebec City's condos continue to perform well in terms of sales and rentals, keeping pace with the previous year. Notably, one new development will offer the very first condo agreement that specifically permits peer-to-peer property rentals.

Exhibit 5-12 Investment Recommendations for Commercial/Multifamily Subsectors in 2018

	Buy	Hold	Sell
Fulfillment	71.2%	22.7%	6.1%
Warehouse	58.8%	33.8%	7.4%
Senior housing	55.4%	36.6%	8.0%
Moderate-income apartments	46.3%	47.2%	6.5%
Affordable apartments	43.3%	45.8%	10.8%
Medical office	42.3%	47.4%	10.3%
Flex	36.9%	38.5%	24.6%
Urban/high-street retail	36.5%	44.7%	18.8%
Central-city office	35.6%	46.2%	18.3%
Student housing	33.0%	45.5%	21.4%
Neighborhood/community shopping centers	32.5%	37.3%	30.1%
High-income apartments	29.5%	40.2%	30.3%
Midscale hotels	28.3%	52.2%	19.6%
R&D	25.4%	57.1%	17.5%
Suburban office	25.2%	35.9%	38.8%
Upscale hotels	25.0%	56.8%	18.2%
Luxury hotels	22.2%	42.2%	35.6%
Economy hotels	20.0%	37.8%	42.2%
Single-family rental housing	19.1%	59.1%	21.7%
Outlet centers	15.9%	40.2%	43.9%
Lifestyle/entertainment centers	11.0%	59.8%	29.3%
Manufacturing	10.8%	58.5%	30.8%
Regional malls	7.1%	36.9%	56.0%
Power centers	4.9%	29.3%	65.9%

Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on Canadian investors only.

In Toronto, developers are embracing a wider concept of building condo-focused communities that combine a mix of condo units, retail, services, and commercial space. More than just mixed use, these “developments-as-neighborhoods” are perhaps a belated recognition of the need to make sure that condominium-intensive areas have the necessary infrastructure—everything from parks and schools to shopping and medical services—to support not just young professionals but young families and older residents, too. As well, the age of the shrinking condo may be coming to an end: units are starting to get bigger, reflecting the needs of families and move-up buyers.

Office

“You need to have a building to be flexible enough to accommodate what’s next—when you don’t know what’s next.”

The outlook for Canada’s office market is positive. According to JLL Research, the national vacancy rate dropped to 12 percent in the first quarter of 2017—the first decline in four and a half years. Over that period, new office construction outpaced demand, but the market will see less new office product coming on stream over the next couple of years, which should keep vacancy rates from going back up.

Exhibit 5-13 Downtown Class A Office Space, Second Quarter 2017

	Class A space under construction (sq ft)	Class A vacancy rate	All-class vacancy rate
Toronto	4,007,239	8.1%	7.3%
Calgary	1,838,900	19.0%	21.7%
Montreal	901,200	9.0%	9.5%
Vancouver	631,436	6.6%	6.8%
Edmonton	578,000	19.4%	16.9%
Ottawa	0	7.4%	10.9%

Source: JLL Office Insight—Edmonton, Downtown Calgary, Downtown Toronto, Montreal, Ottawa-Gatineau, Vancouver, Q2 2017.

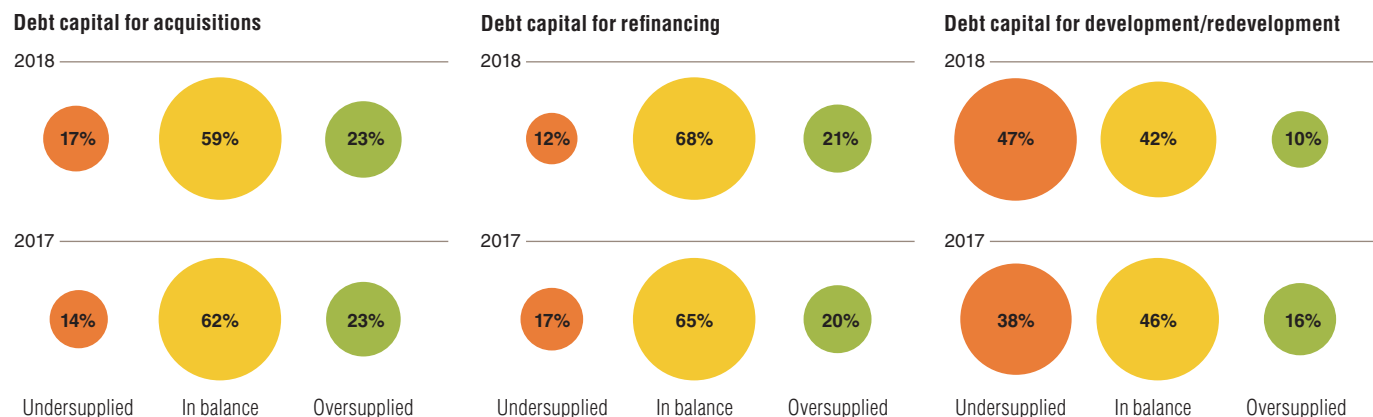
Occupancy growth is being led by Toronto and Vancouver and driven by a fast-growing tech sector. As of the second quarter of 2017, Toronto’s 7.3 percent downtown vacancy rate (exhibit 5-13) masks the fact that much of that space is awaiting occupancy, suggesting the rate will fall further. Toronto’s office boom shows no sign of stopping, and the downtown core is expanding east and west as office inventory rises to 74.3 million square feet, according to NKF Devencore’s *Toronto Downtown Winter 2016–2017 Office Market Report*. One interviewee commented that demand will exceed supply for the next 24 to 36 months. In Vancouver, the downtown vacancy rate has fallen to 6.8 percent, but a limited supply of high-quality space is available. Industry players also find it challenging to attract anchor tenants in a market that is home to few head offices.

Other cities’ office markets also are performing well. In Montreal, the downtown vacancy rate sits at 9.5 percent—reaching 12.4 percent when including midtown and suburb figures.

Developers continue to convert old industrial properties into new office space attractive to technology companies; some interviewees report that they have tenants asking for more space. Major players are still on the hunt for high-profile tenants for their AAA buildings, offering leases and market or better-than-market rates to lure them and improve the building’s value overall. The federal government, now in hiring mode again, has absorbed Ottawa’s Class A space and is even taking upgraded Class B space. Those with older space are having to get more creative to attract tenants and come to terms with the fact that they’re going to need to invest in significant upgrades.

The office markets in Calgary and Edmonton are still feeling the repercussions of Alberta’s downturn. Calgary will see ongoing high vacancy rates as oil and gas firms continue to consolidate and bide their time in hopes of higher commodity prices. JLL Research also reported another 2 million square feet of space would come on stream in 2017. Some interviewees see

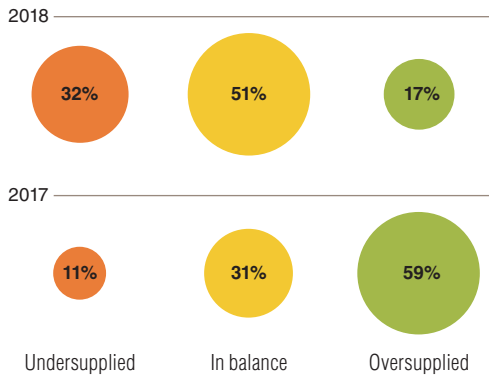
Exhibit 5-14 Real Estate Capital Market Balance Forecast, 2018 versus 2017



Source: *Emerging Trends in Real Estate* surveys.
 Note: Based on Canadian respondents only.

Exhibit 5-15 Real Estate Capital Market Balance Forecast, 2018 versus 2017

Equity capital for investing



Source: *Emerging Trends in Real Estate surveys*.
 Note: Based on Canadian respondents only.

Calgary’s and Edmonton’s office markets as “oversupplied and under-demolished,” and others in Edmonton are bullish on redeveloping Class B and C spaces. This oversupply is also reflected in Halifax and elsewhere, where an influx of Class A buildings is attracting tenants but leaving a lot of Class B and C properties unleashed.

Industrial

“Online retail and logistics are playing a big part in the industrial space.”

The rapid growth of e-commerce in Canada has sparked a tremendous expansion in the country’s logistics and distribution sector—and this is creating unprecedented demand for industrial space. Across Canada, interviewees shared that high-ceilinged, large-bay, and multilevel industrial property is keenly sought after. Highly wired facilities also are in demand to support increasingly automated warehouses and distribution centers. With demand high and supply low, net effective rents are finally rising after some time.

Looking ahead, it’s certain that major markets will see more industrial space developed to meet the needs of an e-commerce-driven world. In Montreal, for example, there is much discussion about several “mega” industrial projects coming on line in the next few years, putting a massive amount of industrial space in the pipeline. Interestingly, as logistics technology improves, companies are discovering how to maximize their use of space—so while demand for industrial space is rising fast, the footprints needed are growing more compact with increased

interest in multilevel product. Real estate companies will need to stay on top of logistics trends to ensure they build new industrial properties that will meet today’s as well as tomorrow’s needs.

E-commerce distribution centers may get most of the press around industrial property, but real estate companies are discovering that a market for smaller, lower-height, small-bay industrial space remains, especially if it is well located and can assist with last-mile e-commerce delivery efforts. In addition, smaller entrepreneurial companies, especially those involved in the building trades, are eager for space scaled to their needs. Supplies of such properties are shrinking in some markets, thanks to redevelopment, and this is creating an opportunity for companies that still have some in their portfolios.

Purpose-Built Rentals

“People need to be dragged into the future.”

Rental properties in Montreal, Quebec City, and Halifax are performing well, for a variety of reasons. Quebecers have long looked on rentals favorably (see exhibit 5-16), and they’re eager to move into units centrally located in search of the live/work/play lifestyle. In fact, interest in Montreal rental property is so strong and vibrant that mid-sized players and even industrial and commercial developers are considering moving into the market. In Halifax, a lot of the rental stock coming on line is condo-quality, and renting offers a significant cost advantage over owning a condo in that market. In Vancouver, one interviewee said that more rental product is being built but that they face challenges with emerging taxes and regulation.

In Ontario, worries over new rent-control legislation have cooled many developers’ interest in building new rental units, despite rising demand. Toronto interviewees questioned the Ontario government’s plan to expand rent controls to newer (post-1991) units, citing unfavorable economics and cost pressures. A number of planned rental projects have been shelved or converted to condominiums instead. Rather than improving renters’ lot, industry leaders argue, rent controls will worsen it by further reducing supply and driving vacancy rates even lower.

Looking to Alberta, the rental outlook is more positive. In downtown Edmonton, there is an upward trend on purpose-built rentals due to an improved entertainment scene and the emergence of the ICE District. And outside the core, transit-oriented properties are strong, especially along the new Valley Line LRT. Calgary has noticed a shift from ownership to rental alternatives “as long as there’s financing to support it.” But without new builds, supply will stay low: one interviewee says that a lack of

Exhibit 5-16 Prime Multiresidential Rental Market, by Year of Construction (Square Feet)

	Total	Before 1960	1960–1979	1980–1999	2000 or later
Quebec	838,810	337,396	307,410	125,181	68,823
Ontario	672,837	134,968	430,730	71,409	35,730
British Columbia	180,265	24,506	112,296	28,208	15,255
Alberta	141,564	8,118	83,887	25,264	24,295
Manitoba	65,015	13,653	35,344	7,738	8,280
Nova Scotia	54,733	7,473	19,890	13,536	13,834
Saskatchewan	36,533	4,371	20,354	7,211	4,597
New Brunswick	33,858	8,242	11,280	6,204	8,132
Prince Edward Island	6,808	1,531	1,012	2,220	2,045
Newfoundland and Labrador	6,005	1,240	2,702	1,223	840
Northwest Territories	1,994	23	702	799	470
Yukon Territory	28	—	—	—	28
Canada	2,038,450	541,521	1,025,607	288,993	182,329

Source: Canada Mortgage and Housing Corporation (CMHC), *Rental Market Survey*, accessed June 22, 2017.

rental units will leave few options for young Canadians faced with affordability concerns.

Markets to Watch in 2018

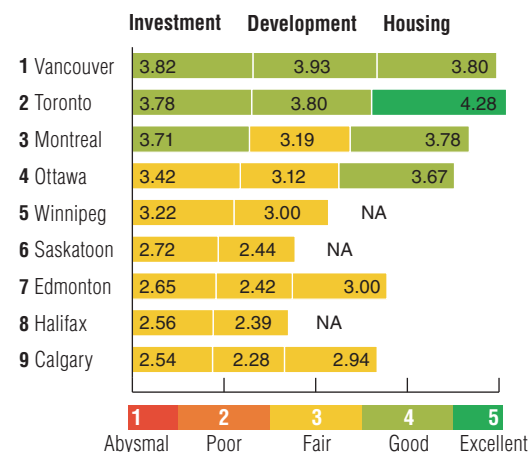
Vancouver

“It’s more and more a seller’s market, and speed is increasingly important—which will be challenging for finding good deals and executing.”

According to the Conference Board of Canada (CBoC), Vancouver’s economy is forecast to grow 2.5 percent in 2018, continuing a steady upward trend seen in recent years. The CBoC cautions that federal and provincial governments’ respective measures to cool the housing market and the drop in the Vancouver resale market in spring 2017 may contribute to a weaker outlook in the near term. But there also are signs that the market is shrugging off the foreign buyers’ tax: the benchmark price for condos rose 19.4 percent between August 2016 and August 2017, according to the Real Estate Board of Greater Vancouver—though detached home prices rose only 2.2 percent over the same period.

According to the survey, investor demand and redevelopment opportunities in Vancouver are the highest in Canada (see exhibit 5-18). But regional developers and investors anticipate that they’ll be more conservative in 2018 due to the impact of policy changes and interest rate hikes. As a result, industry players are preparing for an “eventual downturn” by focusing on operational efficiency, maintaining the status quo by holding off on acquisitions, and being more selective and patient when building their portfolios. Vancouver is a seller’s market,

Exhibit 5-17 Canada Markets to Watch: Overall Real Estate Prospects



Source: *Emerging Trends in Real Estate 2018* survey.

observed one interviewee, and that is driving companies that won’t stay still to move fast to avoid missing opportunities. Overall, interviewees were bullish on industrial and commercial property, since those types “require less management than residential,” as well as mixed-use and residential in “second-core” areas.

In Vancouver, people are split over solutions to the region’s spiraling real estate prices and rents. Some in the region advocate that the provincial government needs to embrace more radical thinking. Housing

Exhibit 5-18 Survey Respondents' Views of Their Local Markets

		Poor	Fair	Good	Excellent		
	Average	Strength of local economy	Investor demand	Capital availability	Development/redevelopment opportunities	Public/private investment	Local development community
Vancouver	4.27	4.36	4.76	4.24	4.12	4.00	4.14
Toronto	4.25	4.44	4.56	4.38	4.09	3.91	4.14
Ottawa	3.53	3.50	3.72	3.56	3.28	3.65	3.47
Montreal	3.49	3.60	3.50	3.60	3.20	3.63	3.44
Winnipeg	3.38	3.29	2.86	3.71	3.43	3.50	3.50
Saskatoon	3.22	3.00	3.00	4.00	3.00	3.33	3.00
Edmonton	3.06	2.75	2.75	3.10	3.15	3.25	3.35
Calgary	2.77	2.15	2.46	2.85	2.92	2.85	3.38
Halifax	2.33	3.00	2.33	2.67	1.67	2.33	2.00

Source: *Emerging Trends in Real Estate 2018* survey.

Note: Based on Canadian respondents only.

affordability was a top issue in British Columbia's 2017 election. During the campaign, the New Democratic Party (NDP) even promised to build more than 100,000 affordable rental, nonprofit, and co-op housing units over ten years. Others think that the approvals process for new projects, including condo projects, takes too long and is too expensive—and that housing supply could increase significantly over the short term if municipalities sped up the process and reduced fees.

Toronto

"Years from now, we may look back at this as a golden era for Toronto—the moment that sparked the city's ascendance to the world-class short list."

Toronto's real gross domestic product (GDP) was expected to grow 2.7 percent in 2017 and 2.5 percent in 2018, according to the CBoC. Despite this slight dip in the economic growth rate, there are few signs of problems on the horizon for the region, and the real estate sector will continue to benefit from this robust economic performance. People, particularly millennial singles and couples, still crave the live/work/play lifestyle in the core; companies, eager to be close to talent, are keen to move into new office spaces nearby to fill the new tech and research jobs they're creating.

Demand will stay high for the best assets, as institutional capital and other investors continue to seek stable long-term plays. But these same investors will be careful about their decisions, because they're not about to pay too much for new property—not when they could potentially find better yields at better prices elsewhere. Access to capital certainly is not an issue, but finding a good place to use that capital is.

Prospective homeowners may disagree, but industry players don't feel Toronto is too expensive—certainly not in comparison with current world-class markets, including Vancouver. Most foresee continued immigration and investment, foreign and domestic, contributing to upward pressure on prices overall. And while temporary price dips may occur, no one should expect a major pullback on prices—barring an unexpected event that upsets the global economy or a major change in government policy.

Urban intensification will continue, especially in Toronto, where most interviewees noted that the GTA will see significant densification efforts this year and beyond. With land supplies tight, companies that want to grow are looking for great locations with "not so great" real estate on them. "The biggest thing is to get governments to focus on increasing supply," one interviewee added, noting that the city needs to coordinate on density and make more supply available to address growth and affordability.

With intensification happening all around Toronto, several waterfront brownfield projects are generating buzz and freeing up land previously closed off to redevelopment. One is the long-term redevelopment of the Port Lands, an 800-hectare parcel of waterfront property east of the downtown core. Further west, developers in Port Credit recently revealed a draft plan for a mixed-use redevelopment of an expanse of vacant waterfront land.

Montreal

The Montreal economy is expected to gain momentum after 2016's better-than-expected growth. The local GDP was forecast to grow 1.9 percent in 2017 and 2018, according to the CBoC.

Exhibit 5-19 Employment, Job Vacancy, and Average Weekly Earnings Growth by Province, Year-over-Year Change

	Total employment change	Job vacancy change	Average change in weekly earnings
British Columbia	3.1%	0.7%	1.0%
Ontario	1.1%	-3.9%	1.1%
Quebec	0.9%	-17.9%	1.2%
New Brunswick	-0.1%	10.6%	2.3%
Nova Scotia	-0.4%	-8.6%	1.5%
Manitoba	-0.5%	1.4%	1.0%
Saskatchewan	-0.9%	-12.2%	0.8%
Newfoundland and Labrador	-1.4%	-29.3%	-0.4%
Alberta	-1.6%	-23.4%	-2.4%
Prince Edward Island	-2.3%	—	2.3%
Canada	0.7%	-9.6%	0.4%

Source: Statistics Canada, accessed June 23, 2017.

As in other major urban centers, young Montrealers crave living in the core of the city where they can truly enjoy the benefits of the live/work/play lifestyle: new condo projects are starting to incorporate new amenities to appeal to a new generation, including car-sharing facilities, services to accept e-commerce deliveries, and more. Many institutional players have begun divesting older-stock properties to focus on new developments aimed at attracting millennials and seniors. This is putting some pressure on owners of older buildings to compete and contributing to a growing divergence between new and old.

The Montreal office market also is performing well—at least for Class A properties with the technology that tenants need. One factor that will help commercial property developers deliver the technology tenants demand is Bell Canada's C\$854 million investment to expand its broadband fiber network across Montreal—the province's largest-ever communications infrastructure project. Owners of older, Class B and C commercial properties currently find themselves in a bit of a bind. While the need to refit and redevelop these older properties to suit modern needs is clear, few investors or owners are ready to spend the money needed for the essential upgrades or construction.

Ottawa

The Ottawa market is on the upswing. According to the CBoC, after posting 1.6 percent GDP growth in 2016, the region was forecast to hit 2.3 percent growth in 2017 and post an average of 1.8 percent annual growth between 2018 and 2021. The driving force for much of this growth is the fact that Canada's public service sector has started hiring again after years of staff cuts and hiring freezes. A strong feeling exists among industry players and observers that the city has turned a corner and is on the cusp of a mini-boom.

The relative affordability of the Ottawa market is luring people to the city from other areas, particularly high-priced Toronto, as millennials and young families search for a better, less expensive lifestyle. Technology companies are expanding or moving into the market as well, eager to capitalize on the influx of talent—and doing their best to attract more people to the city. "Ottawa is a great place to live, work, and raise a family," notes one interviewee. "It sells itself."

As we're seeing in other markets, transit investments are shaping development in Ottawa. The C\$2.1 billion first phase of Ottawa's LRT is expected to be completed in 2018. Phase II is planned to start shortly afterward and to be finished by 2023. The new transit network is already sparking more intense development at key locations along the line.

Winnipeg

Winnipeg continues to perform well economically: after achieving 2.6 percent growth in 2016, local real GDP was forecast to expand 2.2 percent in 2017 and 2.3 percent in 2018, according to the CBoC.

Though weakness in the residential sector remains, it is offset by an abundance of nonresidential activity. The C\$467 million Southwest Transitway will link the University of Manitoba campus to the downtown, and it's reasonable to assume that this transitway will come to be a focus of development in the years to come. Work on the C\$400 million True North Square, a four-tower mixed-use project in the downtown core, continues as well. On top of this, construction is expected to start on the 45-story SkyCity Centre mixed-use tower development and a new C\$165 million, 40-story apartment building at the corner of Portage and Main. This latter development, slated for completion in 2020, will house retail and office space in addition to rental units.

Saskatoon

After two years of slumping performance, Saskatoon's economy is expected to rise 1.7 percent in 2017 and 2.3 percent in 2018, according to the CBoC. That's good news for the local real estate and construction sector, which experienced a sharp downturn through 2015 and 2016 thanks to sagging residential activity and weak commodity prices.

Not that residential activity is picking up anytime soon. Unsold inventory of single-family homes is easing but still large, and there is little sign the situation will improve in the near term. Housing starts are expected to fall to 1,600 in 2017 (the lowest since the Great Recession) before rising ever so slightly in 2018. Apartment inventories are particularly high as product started in better times has come on stream. There's some brighter news on the commercial front, with plans to build World Trade Centre Saskatoon, a C\$50 million office tower in the downtown core. It should be finished in 2019.

Edmonton

Rising oil prices have helped Edmonton pull out of its economic slump and return to growth. According to the CBoC, the city's economy was poised to grow 2.4 percent in 2017 and forecast to expand another 2.2 percent in 2018.

In the core, the city is still grappling with an abundance of Class A office space—vacancy rates are near 20 percent by some estimates, and property owners are pulling out all the stops to attract tenants with a variety of incentives. Expectations are that it will take seven to ten years for the market to absorb all the new office space. In the meantime, pressure is growing on owners of Class B and C buildings to either redevelop or simply demolish and rebuild. There also is opportunity in residential, with several condo complexes under construction and the entertainment scene improving.

The Edmonton market is still working through an oversupply of new homes, which will keep new starts down in 2017 before they rebound slightly in 2018. Edmonton builders started construction of 17,000 new homes in 2015, at the start of the downturn. That figure dropped sharply to 10,000 new homes in 2016. For now, builders are largely waiting until their inventories of new and unsold homes shrink before embarking on new builds. In 2017, housing starts were expected to slip to 9,800 before edging up next year as the recovery takes hold.

Halifax

Halifax is set to deliver steady performance in the near term, with forecast growth of 1.8 percent in 2017 and 1.9 percent in 2018, according to the CBoC. Yet thriving in the local real estate market takes a skillful hand. As one interviewee put it, "The golden rule of Atlantic real estate is that appreciation doesn't exist. You have to be a good operator to make money."

Halifax's downtown core is booming, and not only because of the 1 million-square-foot Nova Centre convention center, hotel, shops, and office towers. There is a lot of demand in the core for multiresidential, where high-quality, condo-style rental units are proving very attractive. In fact, there's little appetite for actual condos, as some claimed the combination of condo fees, property taxes, and mortgage payments means that buyers pay quite a premium over renting a similar property.

Class A industrial property also is performing very well, as the Halifax market adjusts itself to the needs of modern, technology-enabled companies. Of course, as businesses move into Class A space, property owners and investors find themselves holding a lot of Class B and C space in need of redevelopment.

Despite these bright spots, a degree of caution is beginning to creep into the market, as some in the industry grow wary that after 15 years of solid performance, the local market is poised for a slight downturn. Class A office space is leasing well despite much higher prices. Concern is growing about the oversupply of old office space in the downtown core, but low demand means there is no incentive to redevelop. While Ikea's arrival is a boost for the local retail sector, retail remains in the doldrums, though there are hopes that embracing pop-up stores, temporary tenants, and more experiential retail can help offset some of the ongoing challenges.

Calgary

The CBoC expects Calgary's economy to grow for the first time in three years: GDP was forecast to grow 2.3 percent in 2017 and 2.2 percent in 2018. Certainly, the federal and Alberta governments have been spending billions to try to jump-start the local economy, including two new schools, the Calgary Cancer Centre, and the Green Line LRT.

The return of growth is welcome news to real estate industry players, who have been biding their time. "We slowed down our development efforts and are more focused on getting current projects completed before we invest in others," remarked one interviewee, who added that their company has remained on the lookout for potential opportunities.

But it will take some time for construction activity, which has suffered mightily in the past two years, to pick up beyond the work already underway. Residential building in Alberta—and Saskatchewan and Newfoundland and Labrador—ebbs and flows in close sync with oil prices. The CBoC anticipates that oil prices will rise from US\$53 to US\$70 per barrel over the next five years, which suggests that residential construction may take a while to hit its stride again. Looking ahead, some have suggested that there will be opportunities in addressing the lack of supply in retirement housing in and around Calgary.

To date, foreign ownership of real estate has not been an issue in Calgary—or Alberta more widely. But there are hints of frustration about the unwillingness of Toronto's lenders and investors to support Alberta

projects. Luckily, western Canadian players have been able to step in to keep funds available.

Quebec City

According to the CBoC, Quebec City's economy is expected to grow 1.9 percent in 2018, in line with 2017 and up from 1.6 percent in 2016. Several major nonresidential real estate projects are—or will be—contributing to the city's economic growth. Chief among these is Quebec City's three-year infrastructure plan, which brought C\$587 million in investment in 2017 alone. Le Phare de Québec, a four-tower mixed-use project including a hotel, a concert hall, and public space, is anticipated to begin in late 2017. Finally, pharmaceutical firm Medicago has announced a C\$245 million facility for vaccine production.

With a history stretching back more than 350 years, Quebec City has long been a tourism hot spot, and the city has welcomed two new hotels recently. With residential, housing inventories remain high, which has convinced some homebuilders to pull back on new projects. Quebec City is undergoing a transformation with regard to densification in office and residential properties. One interviewee said that supply is up as “whole blocks of houses” are being demolished to build low-rise buildings. And in the office space, one trend will be trying to absorb the new construction.

Expected Best Bets for 2018

This year's Canadian real estate trends are about creating possibility. So, where should developers and investors look for these possibilities in 2018? Our conversations and survey suggest that the following areas may offer the best potential for the coming year.

Building Communities

With an increasing focus on a work/play/live lifestyle, appetite for placemaking remains. And while it's a major focus in rapidly intensifying cities like Toronto and Vancouver, other regions also have big plans. Edmonton's ICE District, for example, has brought new energy to the downtown core and is drawing interest from buyers and investors. Developers have moved away from viewing projects as one-offs in favor of planning complete neighborhoods that include wellness, retail, entertainment, office, and more. Observers say the real estate market also needs to look at providing lifestyle services, including better integrating health and wellness services into the cities' urban fabric.

Fulfillment and Warehousing

With online commerce showing no signs of stopping, the demand for warehouses and distribution centers continues to grow (see exhibit 5-11). Rents are good, and they're rising after a long period of flat rates—which is good news, as industrial land prices will continue to rise, especially around major transportation hubs. Large bays with room for plenty of trucks, high ceilings, and computerized rack systems are what is in demand to facilitate logistics, distribution, and fulfillment.

Senior Housing

An aging population means rising demand for senior housing and high-quality senior living facilities. More than half of all survey interviewees recommended buying into the “age-restricted housing” subsector (see exhibit 5-11). The main challenge with this sector is that it typically involves a mix of private and public investment—and a tricky business model. So, developers that can get the right talent with enough experience to navigate the upfront regulatory hurdles and identify strategic locations could put themselves at the forefront of an area poised for growth.

Urban Infill

With land becoming more scarce in major urban centers, industry players see opportunity in redeveloping existing, underused space for new mixed-use real estate developments. Multifamily residential in major cities is seen as a promising opportunity, since demand is projected to stay strong thanks to immigration and affordability concerns about single-family housing.

Toronto Office

Toronto's office development boom shows no sign of stopping, and new supply can't reach the market quickly enough. Toronto's downtown vacancy rate is the lowest among major Canadian cities—and the rate masks the fact that half of that space is awaiting occupancy. According to some interviewees, demand will exceed supply for the next 24 to 36 months.

Interviewees

Ackman-Ziff Real Estate Group LLC

Gerald S. Cohen
Pat Hanlon
Jason Krane
David Robinov
Marc J. Warren

Advance Realty
Alex Coccoziello**AEW Capital Management**

Michael J. Acton
Marc L. Davidson
Jeffrey D. Furber
Pamela J. Herbst
Jonathan E. Martin
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Michael Emory

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Rosemarie Thurston

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Brian Briody

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Eileen Dahlstedt

Amicus Investors LLC

Steve Utley

Angelo, Gordon & Co.

Reid Liffmann
Adam Schwartz
Gordon Whiting

APG Asset Management

Steven Hason

Apollo Global Management

Coburn Packard

Arcadia Realty Trust

Kenneth F. Bernstein
John Gottfried

AREA Real Estate

David Adelman

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Argyle Residential

Josh Pollock

The Armour Group

Scott McCrea

Ashton Woods

Kenneth Balogh

Aspen Properties

Greg Guatto
Scott Hutcheson

Associated Bank

Greg Ward

Atalaya Capital

Young Kwon

Atkins

David Wilson

AV Homes

Roger Cregg

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John Williams

B.F. Saul Company

John Collich

Bader Development

Robb Bader

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Tess Gruenstein
Dipika Patel
James Pinkerton
Preston Sargent

Bank of America

Leland Bunch
Jack Wiser

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Kenneth Cohen
Matthew Kirsch
Christopher Rogalski
Jeff Titherington

Barclays Capital

Daniel Vinson

Bard Consulting LLC

Chris Miers

Barings Real Estate Advisers

Jim Clayton

Basis Investment Group LLC

Mark K. Bhasin

BCT Architects

Bryce A. Turner

Beacon Capital Partners

Jeff Brown
Kevin Whelan

Beck Group

Brian Jones

Bell State Bank and Trust

Judy Jandro

Bentall Kennedy

David Levy
Thomas Pedulla
Alena Tverskoy
Gary Whitelaw
Paul Zemla

Berkshire Group

Chuck Leitner
Gleb Nechayev

Better Housing Coalition

Greta Harris

Blackstone

Steven Cornet
Jacob Warner

Blue Vista

Peter Stelian

BMO Harris Bank

Imran Javaid
Kim Liautaud
John Petrovski

Boston Properties Inc.

Michael LaBelle
Doug Linde

Brandywine Realty Trust

Gerard H. Sweeney

Bristol Development Group

Charles T. Carlisle

The Bristol Group

James Curtis

Brivia Group

Irene Peng

Brixmor Property Group

Steve Gallagher

Broadway Bank

Laurie Logue

Brookdale Senior Living Inc.

Lucinda Baier

Brookfield Property Group

Ben Brown
Kevin Danehy
Dan Teper

Browning Investments

Angela Wethington

BTIG

Carl Reinhardt

Buchanan

Robert Dougherty

Bucksbaum Retail Properties

John Bucksbaum

Build Toronto

Bill Bryck

Builders Institute of Westchester

Albert Annunziata

Cadence Bank

Tim Williamson

Cadillac Fairview

Cathal O'Connor

CalAtlantic Homes

Barry Karpay

Caliber Companies

Chris Loeffler

Calstrs

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Camden Property Trust

Ric Campo

Campus Partners

Amanda Hoffsis

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Kevin Salsberg

Canadian Urban

Jay Hamilton
Dave Lopatka

Canderel

Daniel Peritz

Cantor Commercial Real Estate Company LP

Michael Brown
Ari Schwartzbard

Canyon Partners Real Estate LLC

Robin Potts
Maria Stamolis

Capital Crossing

Julie Melander

Capital Project Management

David Stauch

Capitol Broadcasting Company

Mark Stanford

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Mark Kenney

Capri Capital

Sam Chandan

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Carmel Partners

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CCMC

Andy Babbitt

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CenterSquare Investment Management

Rob Holuba

CentreCourt Developments

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