

Playing for Advantage, Guarding the Flank

“Big assets, big cities, big capital, and big competition. The U.S. is more in favor than the rest of the world right now.”

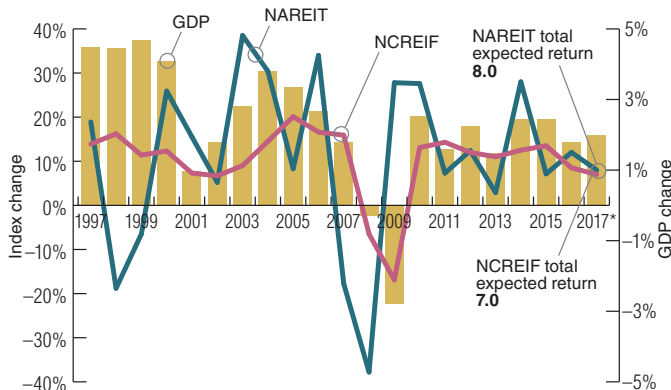
The game of chess is not a game of chance, but requires mastery of a complex set of skills that are both art and science. A player needs to be alert, equally aware of the strengths and weaknesses of his own position and that of his opponent. A plan is needed, most assuredly. The number of possible games that can develop, however, exceeds the number of atoms in the universe. Hence, flexibility within the plan is critical. Each move has a short-term impact and is also a step in positioning for a victorious endgame.

Like chess, the real estate playing field requires an artful mix of skills, tactics, and strategies. A chessboard is limited to just 64 squares and is two-dimensional. Real estate's domain covers a lot more space, and requires thinking across economic, social, political, and technological dimensions.

Beginners may often extend themselves swiftly and aggressively into the fray, seeking quick advantage but overlooking the impact of countermeasures that are obvious to more experienced players. Strategic thinkers see beyond the “next move” and anticipate the development of a series of moves that, taken together, create a more powerful control of the board.

As we consider the emerging trends going into 2017, we try to look two or three moves ahead in the fascinating and competitive field that is the real estate industry. And, since no single move can be considered in isolation, it will be important to see the pattern linking several trends as they evolve interactively.

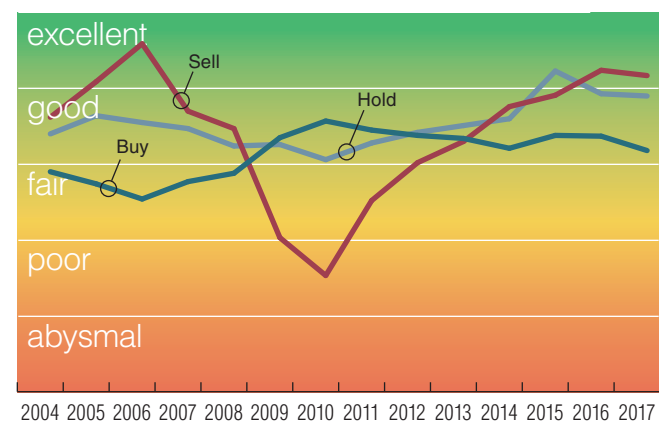
Exhibit 1-1 U.S. Real Estate Returns and Economic Growth



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

*NCREIF/NAREIT and GDP data for 2016 and 2017 are based on forecasts for these indicators in the *ULI Real Estate Consensus Forecast*, October 2016.

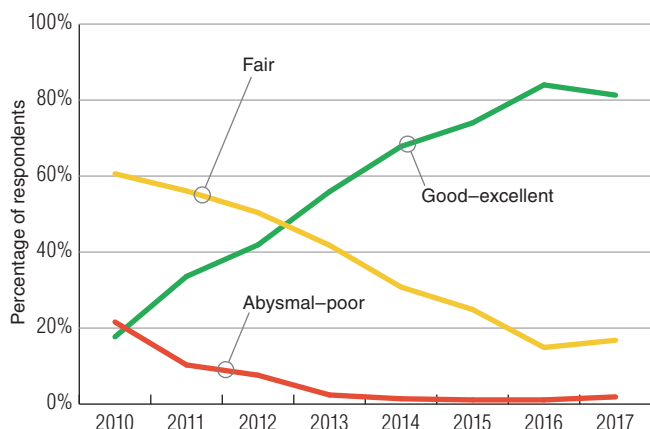
Exhibit 1-2 Emerging Trends Barometer 2017



Source: *Emerging Trends in Real Estate* survey.

Note: Based on U.S. respondents only.

Exhibit 1-3 Firm Profitability Prospects for 2017



Source: *Emerging Trends in Real Estate* surveys.

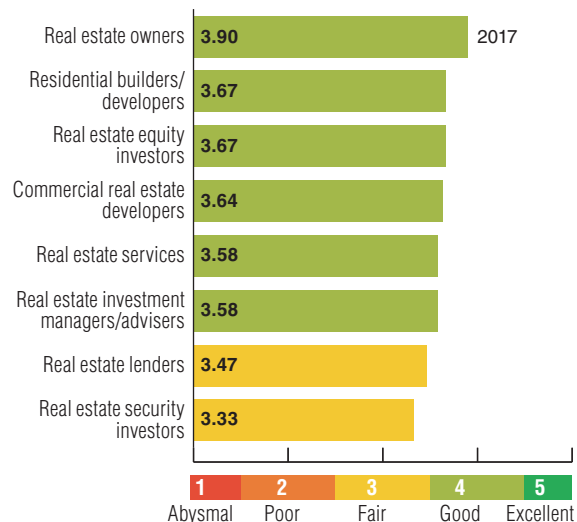
1. Context: A Kinder, Gentler Real Estate Cycle?

The disruption wrought by the global financial crisis violently upended financial markets around the world and hammered real estate markets in the United States. In a real sense, the reverberations continue. Real estate transaction volume across the country rebounded, but development remains below historical norms for most property types. A major publisher of real estate news and commentary says, “We have never been in a real estate cycle like this.” Overall, there is a sense that real estate has learned painful but valuable lessons. This time, real estate will not likely be the trigger for a business cycle recession. And, as far as the number of “innings” remaining, here is what one chief executive officer (CEO) with multiple international investment partnerships said: “Don’t worry about innings. This is a doubleheader.”

At 85 months’ duration (as of August 2016), this business cycle was already the fourth longest in U.S. history, far longer than the average 58-month upturns since World War II. Many concurred with an institutional equity investor describing this as “a mature phase of the cycle.” As is so often the case, averages are of little help in understanding business cycle duration. Cycles have been lengthening over the past half-century, and both the 1980s and 1990s saw growth phases of 92 and 120 months, respectively. In a word, cycles do not die of old age.

Little in the U.S. macroeconomic data suggests overheating, the primary symptom of trouble ahead for the cycle. Real gross domestic product (GDP) growth has settled in at about 2 percent per year, and job growth—monthly aberrations notwith-

Exhibit 1-4 Real Estate Business Prospects



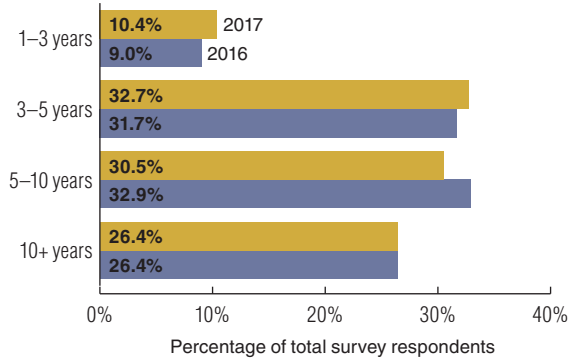
Source: *Emerging Trends in Real Estate* 2017 survey.

standing—is running at about a 1.7 percent pace, approximately 2.5 million annually. The Federal Reserve has been exceptionally cautious about raising interest rates, due to volatility in the data, in financial markets, and in the geopolitical climate. The Fed has shown little inclination to “take away the punchbowl.”

A major factor in seeing the real estate cycle extending even deeper into the future is the difficulty of securing construction financing. This is effectively keeping the oversupply that is typical of a late cycle from emerging this time around. An international investment executive notes that bank regulators and new risk rules have enforced discipline on lending, a primary factor in the development slowdown.

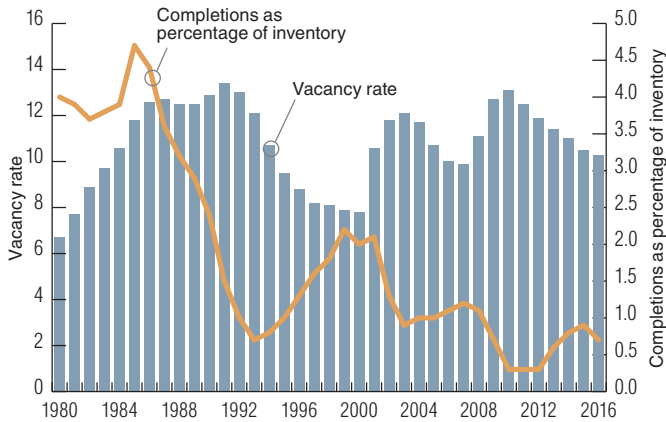
The volume of available capital that is seeking “core properties” has pushed pricing past prior peaks in many markets, making some moves on the chess board costly. Reduced leverage ratios have shifted more risk toward the equity investor. As one longtime observer of institutional investors put it, “We are in the ‘white knuckle’ phase of the cycle. Champagne is not flowing at closings.”

Traditional sources of capital are favoring a “risk-off” approach. Acquisitions are extremely selective, with cap-rate compression having spread into secondary markets over the last two years. “Risk is on the demand side,” in the view of a West Coast-based investment manager.

Exhibit 1-5 Time Horizon for Investing

Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

Exhibit 1-6 New Commercial Square Footage as Percentage of Inventory

Source: REIS Inc.

Note: Includes industrial, office, and neighborhood and community retail space.

Where many felt a year or two ago that real estate cap rates had no direction to go but up, an emerging consensus believes that such a move is not likely in the near term and that the current level of risk premiums could sustain a modest further decline in going-in cap rates. This alone is a sign of how unusual the current cycle has become.

2. Optionality

Both on the investor side and the user side of the market, optionality—not just one use, not just one user, not just one user profile—may be gaining favor as a way to navigate the cross-currents of volatile markets. The potential extent of such optionality is as wide as the industry itself. Says one interviewee,

the principal of a boutique investment holding company, “The developer/financier that understands optionality in their projects is the winner. Optionality will be of great value over the next generation.”

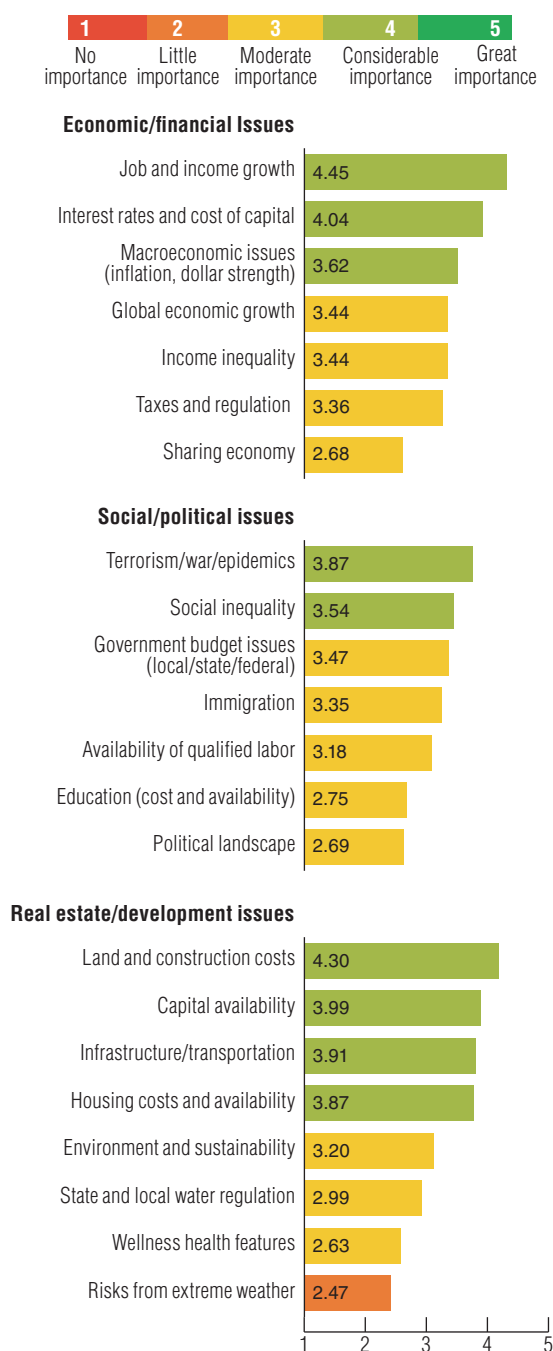
Optionality from a user standpoint allows for the adjustment of space needs to vary in terms of size, location, and use on an as-needed basis. This has already been the attraction of gig workers, sole proprietors, and perhaps very small firms to cowork space, where the provider of that space is most definitely pursuing more than “just one user.” The ultimate optionality would eliminate the need for even large firms to lock into a lease that is tied to a set amount of space in a predetermined location. And this has now happened. A Fortune 500 communications company recently entered into a deal with an international provider of shared-office space. The tenant in this case proposes to cut its occupancy costs in half within five years. In addition to the cost savings, the tenant touts the strategy to employees as promoting productivity, collaboration, and community in its noncampus administrative centers. The office provider gains a set amount of cash flow from the user, but also maintains the option of backfilling any unused space that may not be used by the core tenant that month.

Optionality gives property owners the ability to maximize highest and best use, based on immediate tenant demand. Pursuing “not just one use,” a Washington, D.C., investor/developer has launched a prototype operation in Alexandria, Virginia, where 1,000-square-foot units can be, at the tenant’s discretion, either housing, office space, or both. Common-area amenities abound, including a pet spa, sports and recreational facilities (indoor and outdoor), and even a soundproof music studio. The property is a suburban 39,000-square-foot office building that was empty at acquisition and was bought at a 65 percent discount to its original valuation. The promoter believes that dozens of such opportunities can be found across the United States, provided that zoning is flexible.

The opportunities are real, but the execution could be complicated. There are so many moving parts, as a large institutional investment manager pointed out: “We look at technology and the inroads of the sharing economy. Take office sharing: what is the cyclical risk for an office-sharing lease in a downturn? Take retail space that is shifting from chain stores to restaurants—restaurants require higher TIs [tenant improvements], as do service tenants like gyms, spas, medical uses—but what is the credit behind those leases?”

Optionality can have an impact on what could be appropriate for a market. Consider the multifamily sector, in rental apartments

Exhibit 1-7 Importance of Issues for Real Estate in 2017



Source: *Emerging Trends in Real Estate 2017* survey.

and condominiums, and the pursuit of “not for just one user profile.” The head of a REIT sees an emerging millennial market for ownership units, but one whose growth is bounded by a “keeping our options open” attitude: “Jobs are no longer careers, and millennials are not yet looking for the commitment of owning a home. They are footloose in the job market, and footloose as to roots in the community.” Developers hedge their bets by building condo quality into rentals—an option that makes sense at today’s ultra-low cap rates—knowing that market demand can shift swiftly between the two forms of product. Another multifamily option being discussed in the market is the development of projects that appeal to multiple generations—millennials and baby boomers, for example. The two groups are looking for similar amenity packages but differ on the desired size and price point of the units

Keeping your options open has never seemed to be a wiser approach.

3. Transformation through Location Choice

A new breed of CEOs has been turning a widespread economic development approach on its head, transforming some cities in the process. Instead of negotiating for the most generous package of public incentives possible, these business leaders take the tack that private employers can catalyze civic revivals and, in benefiting communities, can benefit their enterprise as well.

CEOs speak of the “triple bottom line” of financial, social, and environmental success. A recent study counted nearly 500 companies whose downtown location choices have been a potent factor in urban revitalization. Corporate leaders understand the impact, but also stress the self-interested economic case: attracting talent, penetrating urban markets, and the superior returns obtainable in live/work/play locations. Diverse cities, ranging from Cleveland and Oakland to San Diego and Raleigh, have benefited.

The first wave shows us what this is really about.

The two most prominent efforts with track records under their belts have been in Las Vegas and Detroit. With several years of history, we can see that successes and struggles have occurred in both ventures. Not every gambit proves fruitful and the measure of decades is more appropriate for evaluating results in revitalizing cities. Even now, however, we can see what trends are more promising and what we can learn from stumbles.

The downtown Las Vegas efforts have displayed the kind of trial-and-error experimentation that epitomizes the venture capital approach. About \$150 million has been spent on Las Vegas’s

Climate Change and Real Estate

The *Emerging Trends in Real Estate*® survey asks respondents about the importance to their business over the next year of risks emanating from environmental issues (including climate change). For the second straight year, the response was tepid. While the importance of general sustainability did increase very slightly, specific climate change implications—including water regulations, or risks from extreme weather—continue to be ranked very low compared with job growth, land costs, and capital availability (see exhibit 1-7).

Climate impacts, in creeping forms such as drought or sea-level rise, or acute forms like severe storms, can destabilize entire regions. The U.S. National Security Strategy “is clear that climate change is an urgent and growing threat . . . contributing to increased natural disasters, refugee flows, and conflicts over basic resources such as food and water.” Interestingly, immigration and conflicts (war/terrorism) ranked more highly by *Emerging Trends* respondents than climate impacts themselves.

E.T. respondents’ low ranking of most climate-related topics may be attributed, at least in part, to the questions’ one-year time frame. Nevertheless, there is growing alarm among leading investors, insurers, business leaders, and policy makers and increasing evidence of the potential impacts of climate change (or actions to address it) on real estate:

- Lloyd’s City Risk Index illuminates the financial risks of flooding in some top U.S. real estate markets:

US Cities’ GDP at Risk from Flooding

Global rank	City	GDP at risk (\$B)
3	Los Angeles	13.3
4	New York	13.1
12	Houston	7.8
16	Chicago	6.2
20	San Francisco	5.5
Total		45.9

- Zillow, looking at the impact of sea-level rise on homes across the United States, concluded that 1.9 million homes—worth a combined \$882 billion—are at risk of being physically underwater by 2100, with some markets being severely affected:

Homes at Risk from Sea-Level Rise

State	Homes potentially underwater (no.)	Housing stock affected (%)	Value at risk (\$B)
Florida	934,411	12.56	413.0
New Jersey	190,429	7.35	93.1
New York	96,708	2.1	71.0
Massachusetts	62,069	3.1	51.2
California	42,353	0.44	49.2
South Carolina	83,833	4.42	45.0
Hawaii	37,556	9.07	25.3
Washington	31,235	1.32	13.7
Texas	46,804	0.61	12.0

- These losses are not all insured or insurable. SwissRe says that there is a widening “protection gap”: “On average, only about 30 percent of catastrophe losses have been covered by insurance over the last ten years. That means that about 70 percent of catastrophe losses—or \$1.3 trillion—have been borne by individuals, firms, and governments.”
- In 2015, 195 nations signed the U.N. Paris Agreement on climate change, which sets out bold policy plans to reduce climate-change-causing carbon emissions. Real estate is a prime target for these reductions, since energy used in buildings is the largest source of carbon pollution worldwide (nearly one-third).
- Access to capital is increasingly likely to be affected by investor and lender perceptions of climate risk, too. Four hundred investors, representing \$24 trillion in assets, have pledged to “ensure that they are minimizing and disclosing the risks and maximizing the opportunities presented by climate change.”
- ULI’s *Greenprint Vol. 7 Performance Report*, *Tenant Energy Optimization Program*, and *Returns on Resilience* show how real estate leaders are taking action to address climate change and achieving bottom-line success.

ULI.org/sustainability.

old City Hall; the development of a retail store, restaurant, and entertainment venue called “the Downtown Container Park”; and the Airstream Village, where residents live in the classic trailers or in distinctive RVs called Tumbleweed Tiny Houses. Another \$150 million was dedicated to interest-free loans for startups, which have had a range of success. On the whole, the trajectory is upward. Las Vegas’s downtown is no longer given up for dead, but stands as a much more vibrant—and safer—district.

These days, it seems as though everybody wants to see what’s happening in downtown Detroit. The relocation of a company’s headquarters from suburban Livonia, Michigan, to downtown first placed 1,700 employees into Detroit’s depressed central business district (CBD). That number now stands at 12,500. With one company controlling an entire district, attention is paid to how all the pieces fit together so that great synergies are created

These were bold and inspiring moves and impactful investments; big businesses can be catalytic. What’s left to do to and by whom? A complete 21st-century urban transformation into a live/work/play environment requires special attention to “live”—that is, to housing density, since the “work/play” components depend upon a residential base for expansion and growth. These, of course, are the same key ingredients of success that are transforming 18-hour cities across the United States.

For those places still struggling, in the meantime, there is great opportunity in the existing inventory of vacant land, much of which is held “in rem” by the city. A portion of this could be placed in a land trust for future development, which would enable future affordable housing to be developed without future land price inflation. Developer-investors could hold shares in the

trust, and local banks with Community Reinvestment Act obligations might be able to provide financing.

Collaboration with city government and the experienced development community can promote a more unified and long-lasting successful approach. The longer-term test will be the degree to which the initial corporate/government collaboration acts as a catalyst for other investment. The object is not to create a 21st-century “company town.” It is to redevelop a diverse and vibrant urban center.

Here is where leadership supplies what impersonal market forces may neglect or where they may go more slowly. The genius of leadership is, in the words of George Bernard Shaw, “to dream things that never were, and ask, ‘Why not?’”

4. Recognizing the Role of the Small Entrepreneurial Developer

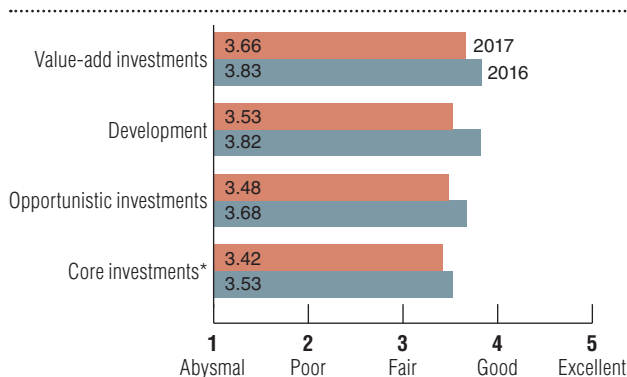
Tall buildings, “starchitect” projects, the upper-echelon market. It is human nature to focus on the properties that capture the glamour of development. It is likely that the headlines and prizes will always gravitate to the biggest and brightest new buildings. At some point, however, we will probably look back and find that problem-solving innovation emerges from the small-scale project developer.

Today’s environment seems to conspire against the small developer, with risk-averse capital favoring the most expensive locations and lenders timid about advancing project funds lest their regulators pounce. As one southeastern developer put it, “There aren’t 30-year-old developers anymore because capital is too hard to come by.”

Bigger is not always better. Nimbleness and local knowledge are not commodities, and several factors suggest that small and midsized developers have an increasingly significant role in the industry.

First of all, consider the structure of the building construction industry. In 2015 (the most recent year for which figures are available), there were 46,843 firms in the commercial property building industry whose employee count was less than 20 per firm. That is 86.5 percent of all the firms in the industry. For firms focused on the multifamily segment, the numbers are even more skewed to small companies, at 91 percent of firms. When it comes to total jobs, however, employment is well distributed in all establishment sizes up to and including the 100-to-249-employee category. That distribution—share of total development industry jobs by size of firm—has stayed remarkably

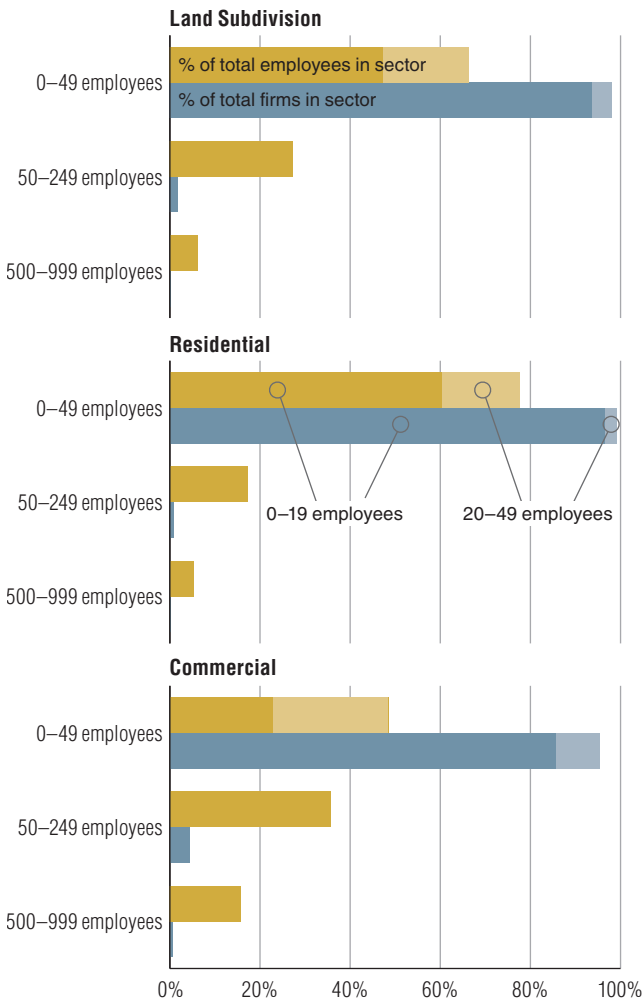
Exhibit 1-8 Prospects by Investment Category/Strategy, 2017



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

Exhibit 1-9 Profile of U.S. Development Firms, by Size of Firm and Sector, 2015



Source: U.S. Bureau of Labor Statistics.

stable since 1990. Bottom line: commercial and multifamily building in the United States has a broad and very solid base of small and midsized providers.

These smaller firms are capable of addressing a range of current needs: affordability for users across the property types, infill in older neighborhoods, and attention to smaller markets of lesser interest to the larger firms.

With construction costs a crucial issue, smaller developers who build product on sites outside the core CBD can create new offices, stores, and housing less burdened by extreme land cost inflation. "Contextual zoning" encourages flexibility of use and compatibility with existing neighborhoods, and the small

developer is likely to be alert to manageable infill opportunities with more modest project size, both in the cities and in older mixed-use suburbs.

While money center banks are finding it difficult to add new development loans to their books, some of the void is being filled by regional and community banks. These are the institutions that smaller developers have long depended upon, banks that are experienced in local market conditions and that have the capacity to underwrite smaller deals skillfully. As one developer remarked, "They like the fact that it's small scale, which mitigates the lease absorption risk."

In *Emerging Trends*, we often bring our spotlight to the large-scale trends. But much change is incremental, the sum of many contributors whose efforts, taken together, can make a huge difference. The enormous number of firms composed of 20, 50, and 100 employees provides the industry with an ideal laboratory for entrepreneurial innovation.

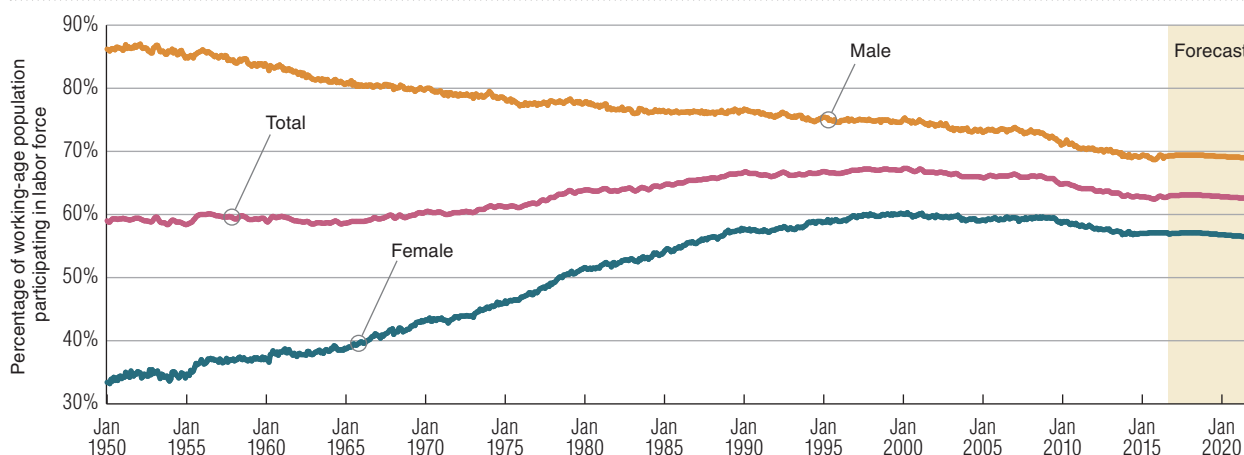
5. Labor Scarcity in Construction Costs

The crossover point where more baby boomers are retiring than millennials entering the labor force is upon us. A Bureau of Labor Statistics (BLS) analysis released in December 2015 projected labor force change for the ten years ending 2024 as being only 0.5 percent per year. *Emerging Trends* has sketched the big picture in previous editions. The key change in the population cohorts from 2014 to 2024 looks like this: the number of Americans in the 25-to-34-years-old age group, the prime early-career working years, will be up by 3.2 million; meanwhile, the 65-to-74-years-old age group, those most likely to exit the labor force in retirement, will be up by 9.4 million. Between the boomers and the millennials, gen Xers are solidly in their mid-career years, but this is a smaller cohort—another reason the labor pool is somewhat shallower.

The driving factors are age demographics and the labor force participation rate, and the two are related.

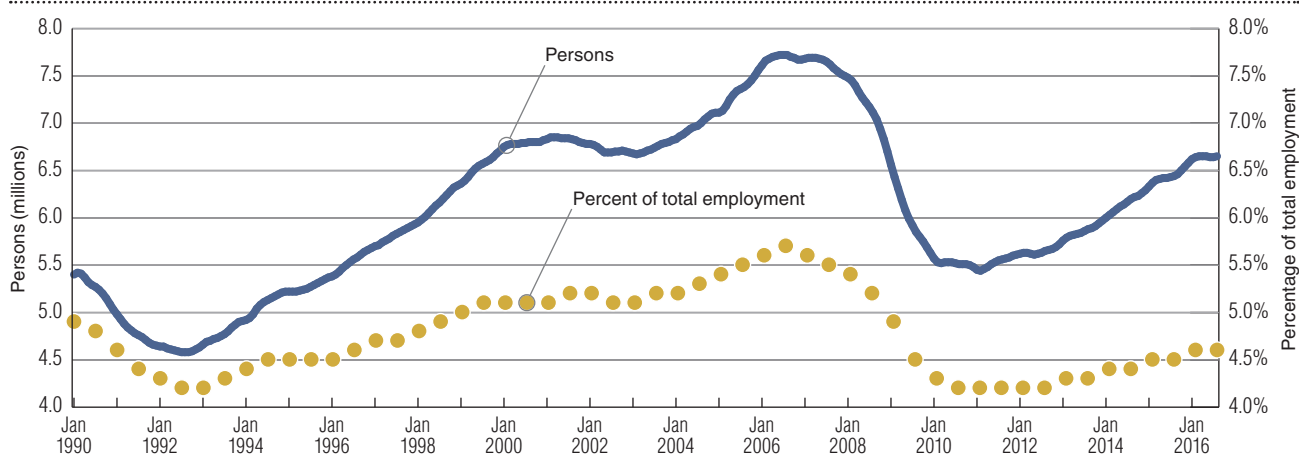
Many believe that the labor force participation rate—the percentage of the civilian population 16 years or older who are working or are actively looking for work—has dropped as one of the consequences of the global financial crisis. However, the participation rate peaked in 1997 at 67.1 percent and has been falling since 2000. As of July 2016, it stood at 62.8 percent. For men, the rate has been in steady decline since the late 1940s. Female labor force participation peaked at 60.0 percent in 1999 and has been declining for a decade and a half. Obviously, a lot more is happening than just displacement stemming from the Great Recession.

Exhibit 1-10 Percentage of U.S. Working-Age Population Participating in Labor Force, 1950–2020



Sources: U.S. Bureau of Labor Statistics, "Current Population Survey"; Moody's Analytics forecasts.

Exhibit 1-11 U.S. Construction Employment, 1990–2016



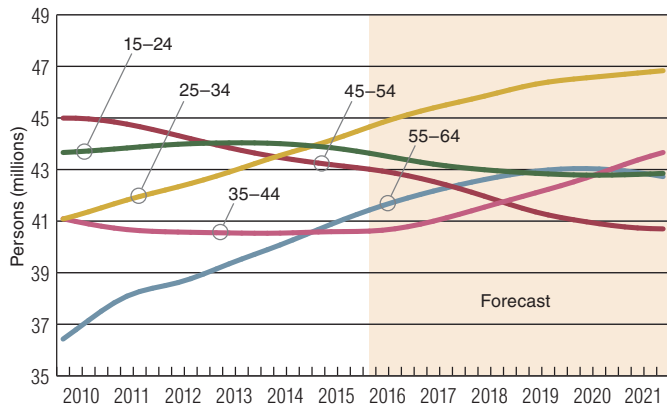
Source: U.S. Bureau of Labor Statistics, "Current Employment Statistics."

As more young people seek higher education, they remain out of the workforce for a longer period, putting downward pressure on labor force figures. As more of the baby boom generation moves into the age-65-plus cohort, its participation rate also drops. BLS projections call for the overall participation rate to dip to 60.9 percent by 2024.

We do not have to wait to feel the effects on real estate. Our interviewees are telling us that they feel the pinch right now, and they expect it will get tighter over time. A multifamily housing specialist says, "Labor availability and shortage will continue to have a significant impact on the market. The shortage ranges from laborers to more skilled labor. This is pushing up the development time on projects and is cutting into returns."

The shortage of labor has slowed the number of units being delivered to markets and may have helped prevent overbuilding in 2016."

Executives for a firm intermediating offshore wealth into the U.S. real estate market note that they see "five-to-seven-month construction delays due to labor shortages, while costs are inflating." An institutional investor from the Midwest adds that rising costs push apartment development toward luxury units: "We can't afford not to develop apartments at the high end due to a run-up in construction hard costs. The run-up in labor outpaces construction materials' costs, though, especially in the locations we find attractive, where the land basis has also gone up considerably."

Exhibit 1-12 Age of U.S. Working Population, by Cohort and Year

Source: U.S. Census Bureau.

ULI district council focus groups convened for *Emerging Trends® 2017* (see chapter 3) identified labor shortages as an issue in markets as diverse as Atlanta, central Florida, Cleveland, and Nashville. Large metropolitan areas such as Denver, Phoenix, and Orange County, California, have seen double-digit construction job gains in the past year, depleting the remaining pool of workers.

The causes of the labor shortage are many. One West Coast consultant suggested that the clampdown on Mexican immigration alone reduced the labor pool by several hundred thousand construction workers. As development seized up after 2008, others pointed out, workers moved to the booming opportunities in the oil and gas industries. (Reports from the energy industry indicate that workers let go in the oil and gas slump are typically migrating to fields like alternative energy, or are enrolling in community college for retraining.) Skilled craft workers are retiring more quickly than they can be replaced. Project managers are also in short supply. As of April 2016, there were over 200,000 unfilled job openings in building construction, according to the Bureau of Labor Statistics Job Openings and Labor Turnover Survey (JOLTS).

So we have an “emerging trend” identified in past editions now biting business in a painful way. What are the next moves on the chess board?

In a way, this is a real opportunity for the real estate industry to lead a way toward solutions. Real estate in all its guises—construction, property management, brokerage, and even finance—offers ample opportunities to create entry-level jobs that are not “dead-end jobs,” but the first step on a career path.

Given the exceptionally high cost of a college degree, many young people might opt for a blue-collar occupation in the trades if an upward path to greater responsibility and commensurately greater income were foreseeable.

While the first moves might seem counterintuitive to many—increased public funding for vocational/technical education, support for apprenticeship programs that are typically administered by labor unions, funding for public infrastructure projects that develop entry-level skills—taken together they make a starting point for attracting younger workers of all stripes to the business. In addition, immigration reform that would encourage, not discourage, blue-collar workers is vital. America’s labor force needs replenishment at all levels, not just the high-tech programmers and software engineers who now get the plum H1-B visas almost the day they become available.

6. Housing Affordability: Local Governments Step Up

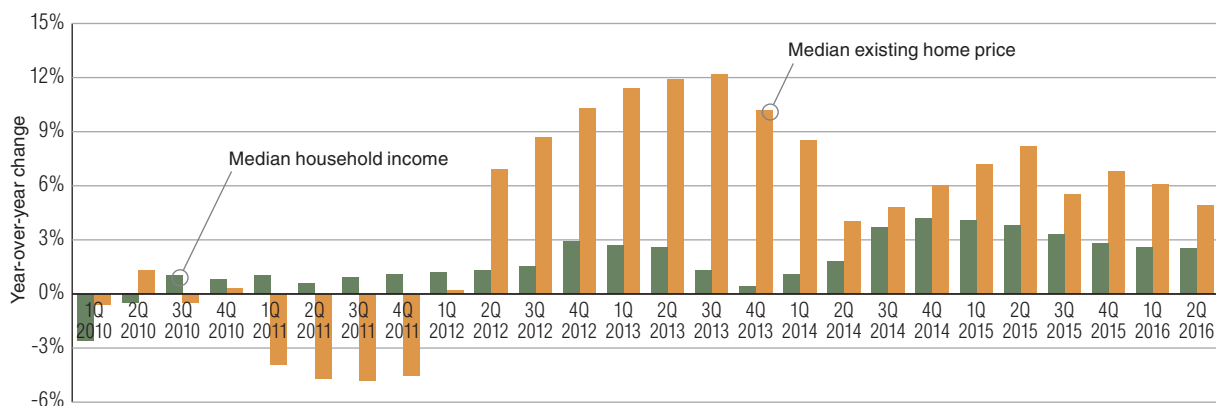
Nowadays, the affordable housing conversation makes a distinction between “big-A” and “small-A” affordability. Big-A affordability refers to housing for low-income households and looks at familiar subsidy programs such as Section 8, the low-income housing tax credit, and a panoply of state and local programs seeking to address 12 million households paying more than 50 percent of their income for housing.

Small-A affordability concerns recognize that, in many markets, middle-income households—those in the second to fourth quintile nationally, averaging between \$31,000 and \$87,000 in yearly income—are “housing stressed,” spending more than a third of their income on housing costs. An August 2016 report from the Washington, D.C.-based National Association of Home Builders (NAHB) indicated that just 62 percent of all new and existing homes sold in the second quarter were “affordable” to the median U.S. household. With home prices rising at a 5 percent annual rate—more than twice as fast as incomes in recent years—and apartment rents on pace to grow 4.5 percent in 2016, the level of stress will likely increase in the near future.

Housing costs and availability were rated by *Emerging Trends* survey participants as being “considerably important” issues for real estate, increasing in importance this year when compared with the “moderate importance” given to future home prices and affordable/workforce housing in our survey a year ago.

The related strain on the social fabric is getting high-level attention. As one longtime CEO of a publicly traded company said, “We’re not paying enough attention to affordable housing, and I

Exhibit 1-13 Change in Median Existing Home Price vs. Change in Median Household Income



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

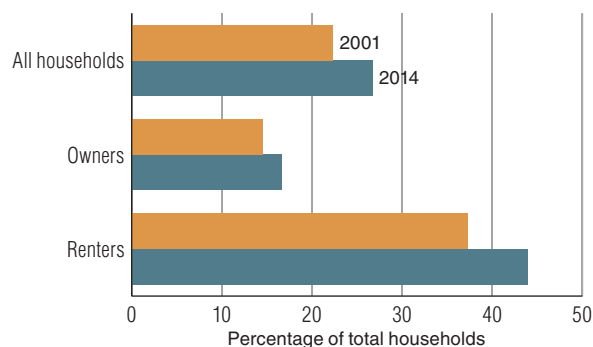
don't mean low-income or government-subsidized. Just regular rents. No new buildings are providing that kind of product. Time will tell if that's going to come back to haunt us. Not everybody makes \$75,000 to \$100,000 a year."

Affordable housing may be the real estate industry's vulnerable flank on the chessboard. Or it might be a strategic opportunity to move creatively toward a large and growing market, with incremental profits rather than large windfalls.

Local governments are not waiting on the sidelines; they are moving more aggressively than at any time in memory to incentivize—or compel—the private sector to meet worsening housing affordability needs. A handful are pushing development impact fees and even considering rent control. The most widely used approach by far, though, is an old idea (dating to the early 1970s) that has roared back to life: inclusionary zoning. Through such zoning, cities require or encourage developers to create below-market-rate rental apartments or for-sale homes in connection with the local approval of a proposed market-rate development project.

New York City has the nation's most far-reaching policy. The mayoral administrations of Michael Bloomberg (2002–2013) and Bill de Blasio (2014–present) have used inclusionary zoning to meet affordability targets, recognizing that the sharply upward movement of land prices compromise affordable housing feasibility without some form of public incentive. San Francisco, another booming economy, passed a ballot initiative to expand its requirements for affordable units in new developments from the previous 12 percent to 25 percent of the project. However, feasibility studies have suggested an 18 percent requirement, which is likely to be implemented.

Exhibit 1-14 Moderate and Severe Housing Cost Burden on Households with Annual Incomes below \$50,000



Source: Joint Center for Housing Studies of Harvard University tabulations of U.S. Census Bureau "American Community Survey" data.

Note: Moderate burden is defined as housing costs of 30 to 50 percent of household income; severe burden is housing costs of more than 50 percent of household income. Households with zero or negative income are assumed to be severely burdened; renters paying no cash rent are assumed to be unbursed. Income cutoffs are adjusted to 2014 dollars by the Consumer Price Index for urban consumers for all items.

Proposals to put inclusionary zoning in place or strengthen existing policies are advancing in Atlanta, Baltimore, Detroit, Los Angeles, Nashville, Pittsburgh, Portland, Seattle, and Washington, D.C., among other cities. Recent research by the ULI Terwilliger Center for Housing found that the most effective inclusionary zoning policies provide developers with flexibility and an array of incentives to mitigate the policies' potential negative impacts.

Redevelopment efforts also are affected by affordability issues. Jurisdictions frequently frame their objectives as "creating and preserving" affordable housing. Montgomery County, Maryland, is trying to develop a program for downtown Bethesda whereby

older apartment buildings could sell excess zoning capacity (unused floor/area ratio [FAR]) as “priority sending sites” in exchange for committing to retain 30 percent of their units at targeted affordability rents. California legislation permits communities to allow higher densities in exchange for meeting affordable housing objectives.

Similarly, in cities of lesser density and in older suburbs, planning officials can work with a new breed of players pursuing strategies to maintain or only modestly increase current rent levels in the existing rental housing stock. By making only the most necessary improvements and having laser focus on property management, these firms deliver 100 percent occupancy and competitive current income returns, while helping meet a pressing social and economic development need. The strategy is especially effective in markets where the spread between Class A and Class B/C apartment rents is fairly wide.

Population increase, upward pressure on land and building costs, and persistent wage stagnation challenge government and the private sector to devise a menu of solutions. The trend to meet that challenge is gathering momentum. This is a “long-game” conundrum whose immediate difficulties are prompting an array of responses now.

7. Gaining Entry beyond the Velvet Rope

Trends do not always go hand in glove with each other; there can be cross-currents. When one is dealing with such fundamental issues as jobs, housing, and public policies, it is not surprising that disparities and disagreements come with the territory. But at a time when a number of markets are struggling with a shortage of affordable housing, opposition to potential solutions may be on the rise. And it may seem that there has rarely been a time when divisions have been more in evidence. Politics has brought this into sharp relief, but the fault lines were there already. Some *Emerging Trends* interviewees see this as the further progress of “NIMBYism,” now often more easily broadcast and perpetuated via social media campaigns. But where the “not in my backyard” phenomenon largely represented a resistance to specific development, it appears that we now must recognize a trend that might be called “the velvet rope.”

At the entrance to fashionable nightclubs or red-carpet opening nights, access is controlled through use of velvet ropes on brass stanchions. Bouncers let only select individuals gain entry—the others have to stand and look in from the outside. Two points should be made about this velvet rope in the context of urban economies and real estate.

The State of the Suburbs: Residential Development Opportunities and Challenges

In the coming decades, U.S. suburban housing markets are poised to maintain their relevance and predominance. A new analytic framework for classifying suburbs reveals significant differentiation between cities and suburbs and wide variety among different types of suburbs in terms of housing characteristics and conditions. These differences could substantially affect future residential demand and development in every major market in the United States. Key insights include the following:

- The United States remains a largely suburban nation.** In America’s 50 largest (and most urbanized) metropolitan areas, suburbs account for 79 percent of the population, 78 percent of households, 32 percent of land area, and—despite popular and media perception—75 percent of 25- to 35-year-olds.
- Suburban growth has driven recent metropolitan growth.** From 2000 to 2015, suburban areas accounted for 91 percent of population growth and 84 percent of household growth in the top 50 U.S. metro areas.
- The large majority of Americans work in suburbs, although job growth has been more balanced recently.** As of 2014, 67.5 percent of employment in the 50 largest metro areas was in the suburbs. Between 2005 and 2010, employment in suburban areas remained stagnant with 0 percent growth, while it increased by 8.2 percent in urban areas. But between 2010 and 2014, jobs increased by 9 percent in suburbs versus 6 percent in urban areas.
- American suburbs as a whole are racially and ethnically diverse.** Fully 76 percent of the minority population in the top 50 metro areas lives in the suburbs—not much lower than the 79 percent of the total population in these metro areas.
- The variety of types of suburbs creates a wide range of development opportunities.** The report identifies development trends, issues, and innovative product examples in five distinct types of suburb within the 50 largest metro areas: “Established High-End,” “Stable Middle-Income,” “Economically Challenged,” “Greenfield Lifestyle,” and “Greenfield Value.”

Housing in the Evolving American Suburb, RCLCO and the ULI Terwilliger Center for Housing, November 2016.

The first point has to do with the widening income gap. Just as the downtowns of cities “hollowed out” in the second half of the last century, so too the middle class has been hollowing out. Income inequality is high for cities like New York, Los Angeles, and San Francisco. However, the level of inequality is high and *increasing* in other metro areas, including Miami, Charlotte, Boston, and Atlanta. For these areas and many others, the velvet rope means increasing income segregation.

Secondly, exclusionary forces are equally alive in suburbs and cities.

Suburbs grapple with their own velvet rope dilemma. Analyses of millennials’ preferences have identified density, diversity, walkability, and transit accessibility as factors in location choice for this 83 million–person demographic cohort. And, as we have pointed out in previous editions of *Emerging Trends*, these factors are equally attractive in the suburbs as in the densest urban core. The issue is that to create these amenities and keep neighborhoods affordable often requires changes to traditional suburban development. Yet the increase in demand for land use attorneys and consultants by communities resisting change, the ease of assembling opposition to planning changes in the era of social media, and other forms of opposition to development indicate the degree to which some suburbs are flat out resisting the very attributes demanded by potential new residents.

This not only hobbles attempts to restore the residential attractiveness of suburbs, but also impedes the ability to keep neighborhoods affordable.

In cities themselves, the very characteristic of density magnifies the impact of change. Most often, the debate is not between what’s good and what’s bad. It is a question of how the new connects with the old. The urban velvet rope would freeze time in favor of the status quo. Real estate development encounters this directly. New building design can ignore neighborhood history and context, or it can seek to bring that history forward organically while meeting the changes in the city’s makeup. It is not only real estate, though. Community organizations can seek to keep local demographics static, or can find ways to make diversity work in the neighborhood’s favor by discovering the vibrancy in multiculturalism—in the food experience, in ethnic festivals, in the upward striving that has been the hallmark of new, opportunity-seeking residents. Government, business, and the not-for-profit sector can go either way: rallying to keep things “as they have always been,” or helping shape a future that is really continuous with the past, recognizing that cities have never been stuck in time, but have always been organisms that have grown and prospered by adaptation.

There is, therefore, a significant cultural change that requires careful attention. Where “exclusivity” was often seen as a critical selling point for communities in the past, it is now being eclipsed by “inclusiveness” as a social value. The velvet rope is already an anachronism. Communities seeking to retain economic, ethnic, racial, or other barriers as a “de facto” matter are engaged in a rear-guard action, contrary to their own self-interest.

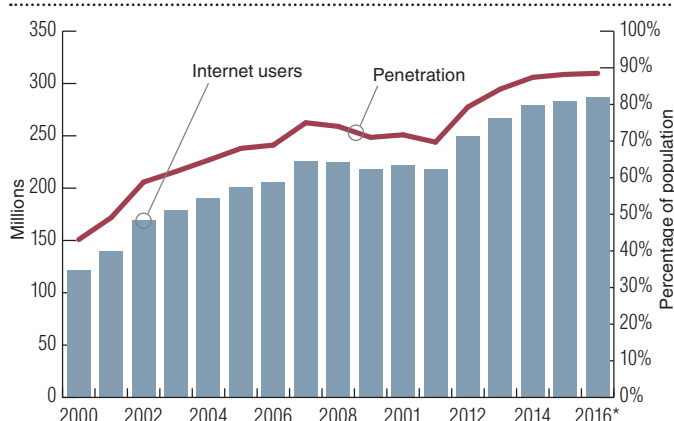
8. The Connectedness of Cities

There are now more objects than people connected to the internet, a phenomenon known as “the internet of things.” Point-of-sale registers communicate with warehouses. Smart phones have apps to search stores for the best prices. Sensors embedded in roadways reroute logistics paths. HVAC systems are automatically controlled in real time.

Known by the shorthand “IoT,” the estimate for internet-connected devices hit 10 billion in 2015 and is projected to more than triple to 34 billion by 2020. As always, the relationship between advancing technology and the real estate industry is a complicated one. But the evidence suggests that a market’s trend toward technological advantage is correlated with superior real estate performance.

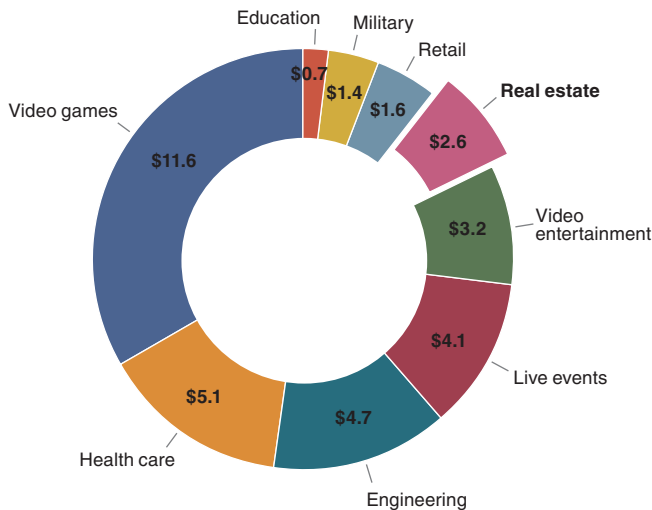
The seven “smartest cities” in the United States are listed as Seattle, San Francisco, Boston, New York, D.C., Portland, and Chicago in a ranking from Co.Exist, an online publication of the magazine *Fast Company*. Smart cities are defined as those gathering data from devices and sensors embedded in roadways, power grids, buildings, and other assets. They use

Exhibit 1-15 U.S. Internet Penetration



Source: International Telecommunication Union (ITU), World Bank, and United Nations Population Division.

*Data for 2015 and 2016 are estimates.

Exhibit 1-16 Potential 2025 Revenue from Virtual and Augmented Reality (\$ billions)

Source: Goldman Sachs Global Investment Research

an integrated communication system to share this information instantaneously. Software extracts information and discerns relevant patterns for users.

Smart cities match well with the list that *Emerging Trends* identifies as top markets for investment and development (see chapter 3). A 2016 Verizon report on IoT highlights tech applications such as street lighting and parking patterns analysis being put in place by cities including San Diego, Jacksonville, and Charlotte. Taking another approach, IoT Analytics has praised Los Angeles, San Diego, and Denver for innovations ranging from wearable devices for health and security to widely distributed wi-fi accessibility.

The key link between technological advances and real estate investment performance is productivity. IoT can upgrade efficiency in several ways. Deploying sensors throughout the city helps save time and money by targeting capacity use of transportation systems, lighting, overall energy demand, parking availability, and even necessary pothole repairs. Moreover, IoT infrastructure can help buildings control operating expenses for basic services like power, water, and life safety. Density, in the form of a concentrated market with limited “last mile” requirements, favors 24-hour and 18-hour locations in IoT adoption.

That doesn't mean that smaller places need be left behind. Cities with the highest internet adoption rates correlate with advanced educational attainment. The Denver suburb of Centennial, for instance, has the highest rate of internet con-

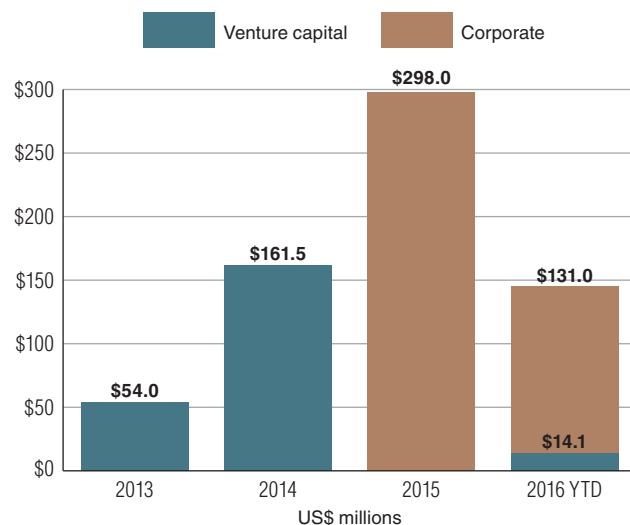
nection of any U.S. municipality, at over 96 percent. Cary, North Carolina, in the Research Triangle area, had a similarly high rate. Colleges promote high connectivity rates, as seen by top-ten scores for College Station, Texas, and Tempe, Arizona. Among larger jurisdictions, San Jose, San Diego, and Seattle approach the 90 percent mark for household internet use. However, Detroit, Hartford, and other cities struggling with poorer urban neighborhoods have low technology adoption rates, a digital divide that mirrors the income divide for such places.

9. Ready for Augmented Reality?

Who would have thought that a 1990s video game like Pokémon would grab headlines, prompting nearly 10 million people to get out and search for imaginary video characters in 2016? Furthermore, who would have thought that this would set the imagination of serious real estate owners and operators afire?

“Augmented reality” (AR) is not a brand-new phenomenon: the technology has been available since 2012. AR projects or overlays a digital image on the physical world itself. More than that, the image can be modified by the instruction of the users. Day and night views, for example, can be generated, as well as interior or exterior simulations.

Brokers have been able to use virtual tours for quite some time now, but AR brings the quality to a much higher level. Prospective purchasers or tenants can customize the experi-

Exhibit 1-17 Venture Capital and Corporate Investment in Blockchain

Source: CBInsights.

ence by visual “what if” alterations. As a marketing tool, it is a definite enhancement.

But what “Pokémon Go” has demonstrated is that AR can motivate people to actually get out and visit locations, even properties they had not planned in advance to visit. Since real estate, both residential and commercial, relies upon the consumer experiencing a property—almost always in a site visit—before committing to a transaction, stimulating such a visit by a technological lure can be extremely powerful.

Many observers anticipate that AR will meld the “clicks” experience with the “bricks” of the stores themselves. Customized “lures” can bring shoppers to the stores, using smart phones

with activated Global Positioning System (GPS) technology. If retail real estate is trending more and more toward “experience” and “entertainment,” AR would seem to be a natural fit.

Other now-feasible AR applications range from closer collaboration of developers with architects and designers to property operation disciplines aimed at reducing error rates. This is very much a “big data” technology that will require the development of new data centers, well situated in relation to end-user markets, together with the storage and infrastructure supports needed to sustain the applications.

This is starting now, not in the far-off future. Experts expect \$2.6 billion in real estate applications by the year 2025. The opti-

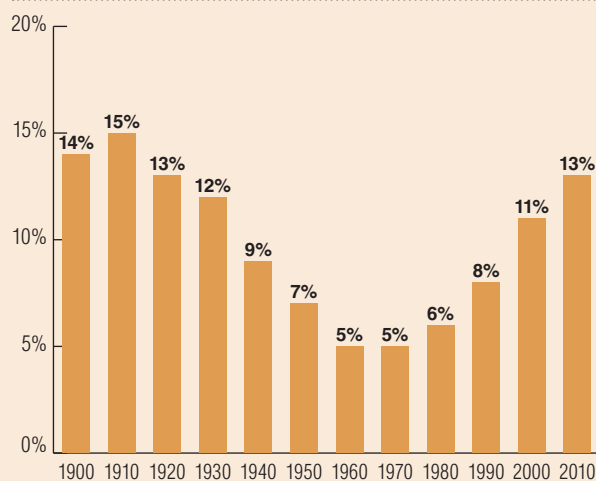
Women, Immigrants, Younger and Older Workers, Retirees: Reshaping Community Building for the Next Ten Years

Rising numbers of female executives, affluent immigrants, younger and older workers, and retirees will have a profound influence on community building in the United States over the next ten years.

Key trends related to demographics and household formation that will affect real estate investment and development through 2025 are as follows:

- **The continued rise of working women:** Women now earn 58 percent of all college degrees in the United States, and they earn more than their spouses 38 percent of the time. By 2025, the number of women in the workforce will rise to 78 million, 8 million above the level in 2015.
- **A rising number of affluent immigrants:** Immigration will account for more than half the U.S. population growth by 2025. Contrary to some perceptions, many immigrants coming to the United States are highly educated middle- and upper-class families with substantial purchasing power.
- **The graying of America:** By 2025, 66 million Americans will be over age 65—which is 38 percent more than in 2015. This will create lucrative opportunities for customer segmentation, given the widely varied needs and lifestyles of younger retirees versus older ones.
- **Young adults driving household formation:** 18- to 27-year-olds will lead the majority of new household growth over the next decade, despite forming households more slowly than their predecessors. They are expected to create 14 million households by 2025.

Foreign-Born Share of U.S. Population



Source: John Burns Real Estate Consulting LLC calculations of U.S. Census Bureau Decennial Census.

Grouping the U.S. population by decade born, rather than by generation, provides insights into behaviors shaping trends, with the most influential (and largest) groups being the following:

- **Innovators**, born 1950–1959, who led a technology revolution;
- **Equalers**, born 1960–1969, who achieved more equality between women and men in the workplace;
- **Balancers**, born 1970–1979, who led a shift toward a better work/life balance;

mists see unlimited opportunity, of course. Others may worry about how AR, as well as the internet of things, will deal with a world where cybersecurity is of increasing concern and where “security” often is only developed once hackers have exposed vulnerabilities in very nasty ways. The probability: accelerating change, despite increased risks.

10. Blockchain for 21st-Century Real Estate

If a sense of immediacy about augmented reality exists, the impacts of blockchain technology are more about the long game for real estate. Blockchain record keeping is perhaps best known from the financial industry and the digital currency, Bitcoin. Bitcoin was introduced in 2009, and about 15.8 million

Bitcoins are now in circulation (of a capped total of 21 million that can be issued).

Blockchain is the record-keeping technology functioning as the encrypted register of digital data, a record that is extremely difficult to alter once a transaction has been logged. Proponents argue that this makes it ideal for tracking high-value assets, creating an “unerasable history.” Some large banks and exchanges have been experimenting with blockchain, and an argument exists that once financial firms deploy a technology, others must follow if they want to maximize the usefulness of financial services.

- **Sharers**, born 1980–1989, who led the transition to the sharing economy;
- **Connectors**, born 1990–1999, who led 24/7 wireless connectivity; and
- **Globals**, born 2000–2009, who effortlessly think and interact globally.

Among the trends shaped by these groups:

“Surban” developments will replace shopping centers.

More retail stores will be transformed into places that sell experiences, rather than goods, and more development will combine housing and retail to satisfy consumer demand for places that offer convenient, car-free shopping. An 86 percent surge in household formations in the coming decade will drive retail activity, particularly purchases by renters, who will represent 58 percent of the net new number of households.

“Surban” refers to communities that combine the best of urban and suburban living.

Suburban office demand will return. As Sharers move into more senior management roles and start families, many will move from urban cores to the suburbs to live in areas with good schools, but which are also near employment hubs and entertainment and recreational amenities. They will be willing to share space and work remotely. Women earned more than half of the college degrees obtained by Sharers; as a result, female executives will play a stronger role in office space selection.

Housing rental rates will surge over the long term. The sharing economy’s de-emphasis on ownership will be reflected in soaring demand for rental units. Well over half of the 12.5 million net new households created over the next decade will rent, including those who have never owned, and those making the switch from owning to renting as they age. Homeownership will decline, with the national rate anticipated to be 60.8 percent by 2025, the lowest point since the 1950s. As more Innovators join the already large number of retirees, competition for workers will push up wages, contributing to a favorable environment for rent increases.

Southern suburban migration to continue. The southern regions where 42 percent of Americans currently live will receive 62 percent of the household growth in the United States over the next decade. Demand will continue to rise for affordable rental housing, townhomes, and small-lot detached housing, as Connectors join Sharers in raising families.

Municipalities will take a stronger role in encouraging successful growth. Local government redevelopment investments have revitalized urban and suburban areas, and the most astute suburban—or surban—municipal leaders will continue changing zoning regulations to encourage pedestrian-friendly mixed-use development that accommodates the preferences and needs of new households.

Demographic Strategies for Real Estate, John Burns Real Estate Consulting.

Adoption of blockchain is in its infancy. Visionaries suggest it has the potential to be a powerfully disrupting technology for real estate. Real estate is a document-intensive business, and the distributed blockchain ledger could consolidate mortgage, escrow, or deed transfer record-keeping, and even allow for automated accommodation of contingent events in the terms of contracts. Blockchain records could be used as a basis for the creation of derivatives as well. Some see blockchain records and “cryptocurrencies” as creating greater crowdfunding liquidity, and expanding the reach of the sharing economy.

How much of this is hype, and how much of it is a hint of a future already on the way?

It is impossible to know at this point. It does seem safe to expect that the overthrow of the range of real estate services, record-keeping, and payment protocols will proceed at least as slowly as the advent of the paperless office. However, who can deny the impact that other technologies have already had on the way the real estate industry does business? And who would have thought that 10 million people would have taken to the highways and byways in 2016 to track down immaterial images of Pokémon characters like Squirtle, Charizard, and Wigglytuff by following instructions streamed to smart phones?

Expected Best Bets

1. Be a problem solver in the middle of the capital stack.

How do you bridge the obvious disconnect between operating in a risk-off environment and seeking to optimize yield? The deleveraging witnessed in the post-global financial crisis era has opened opportunities in the middle of the capital stack, and a variety of players—institutional money managers, private equity, REITs—are moving toward that opportunity. Between lenders keeping LTVs low and senior equity seeking to manage the amount of capital they have at risk, a need exists to secure either subordinated debt or preferred equity to make deals fly.

By far, the choice right now is preferred equity. Lenders’ regulators strongly tilt toward more equity, and capital sources think it’s better to hold the equity position in case of future trouble, rather than find themselves members of a creditors’ committee and subordinate to a senior lender.

The real estate niche where such capital is most needed is in development, since high-volatility real estate lending most often means land and construction financing. With the generally low levels of building activity, preferred equity providers can be

pretty selective about the market and property type risks they choose to take on.

Condo construction is underfunded nationally, except in a few markets like Manhattan. Preferred equity players may see some cycle protection for condos in their potential to shift to the rental market—where demand looks to be substantial for several years—if the ownership market is hobbled by rising mortgage rates or a sudden surge in development. Even a market as troubled as Miami condominiums made it through the last cycle by accessing the renter pool.

2. Take advantage of changes in construction technology.

The building industry has a reputation for resistance to change. By and large, we still erect structures using materials—concrete, lumber, steel—as we have for centuries. The deployment of those materials also takes readily recognizable forms. Concrete may be precast or poured in place. Low-rise development may use block-and-plank construction that is little different from 19th-century techniques. High-rise steel frame and curtain wall buildings have been around since the first generation of skyscrapers.

With costs soaring, however, efficiency imperatives are accelerating technological change. The learning curve gives advantage to early adapters, and construction workers are as likely to be consulting computer tablets as they are stretching out tape measures. Building information management is already the norm; drones are, too. Technology is evolving rapidly and will advance further, even in small shops, with job sites featuring integrated software systems, data mobility, and real-time communications. With delay costly, keeping the project timeline is ever more valuable.

Off-site construction—prefabricated or modular building—is working through its growing pains. Factory-built housing has been around for quite a while, but adapting the concept to high-rise projects is now on the docket. Fabricating whole segments of buildings and trucking the completed units to sites has advantages in cost and speed, in part because weather is less of a factor and workforce supervision is easier. As three-dimensional printing becomes more sophisticated, this technology will no doubt be deployed largely in controlled environments as well.

Quality control and the ability to scale up modular construction remain issues. One high-rise apartment tower in Brooklyn was sharply criticized for water damage, misalignment, and tolerance errors in assembling factory-built modules on a site just a mile or so away. Of course, no new technology debuts perfectly,

and real estate development is an especially public event. First-generation missteps are not likely to deter further use of integrated components. Watch such development closely.

Medical facilities are particularly expected to go modular because the “built-in” components are so specialized and technically complex. One case study in the Denver area showed a 72-day acceleration in scheduling. While there was a 6 percent premium in direct costs, millions in indirect costs were saved. From the community’s perspective, too, the reduction in congestion, noise, and dust at the site was important—a not-insignificant advantage for project sponsors.

3. Securing the “last mile” advantage in the era of e-commerce.

Logistics systems have been thinking big for the last decade or more: Panamax container ships. Tandem trailers behind semis. Monster distribution hubs with ten acres or more under one roof. And a constant push to be the dominant provider of goods and services, with the expectation that oligopoly will be the way that e-commerce shakes out before too long.

But what about the customers?

Getting goods to the warehouse does not make much difference to the consumer. It is getting the goods to the doorstep that counts. That floods the streets with panel trucks. From a real estate standpoint, having an in-city distribution facility is the very antithesis of the land-hungry exurban warehouse. Promise next-day delivery and you might be able to get away with an out-of-town fulfillment center. Promise *same*-day delivery and you had better be a lot closer.

Customers care about cost, transparency, speed, and frictionless transactions. If you are committed to delivery within a few hours, you need to have inventory in places with high densities. Fortunately, that is the very description of the most profitable markets for e-commerce, so there is a real alignment of interests within a ten- to 30-minute drive of city centers. But that also indicates multistory facilities with between 20,000 and 70,000 square feet. Fortunately, that is what the “old” industrial configuration was like. For many years, such buildings were considered irretrievably obsolete. Now they have found new life.

The rest of the logistics chain still counts. Mega-warehouses will continue to play an important role. We might also see some interesting transformations of underused B and C shopping centers into last-mile distribution points. E-commerce, long

viewed as a “disrupter” for real estate, is gradually emerging with a symbiotic relationship beyond the first clicks-and-bricks rapprochement. Stay tuned for further changes ahead.

4. Figuring out the next “adjacencies” in paths of growth.

For most alert observers, the submarkets in any metropolitan area that are “hot” today are usually easily identified. But once a location is hot, so are prices. Competition is fierce and returns get driven down.

What is an opportunistic investor to do?

Some have suggested that looking for the next neighborhood or suburb in the established path of growth is the key to getting ahead of the market. The question is whether the path ahead is a linear extension of past changes. It is probably not; otherwise, everyone could figure out the treasure map. Identifying the key factors influencing market demand is trickier than laying down a ruler.

Advanced geographic information systems can surely help. The real estate sector now benefits from databases with geo-coded sales information. Instead of relying on decennial U.S. Census Bureau data, the American Community Survey tracks trends annually. Major changes in transportation systems are known well in advance and can help identify when accessibility characteristics will shift. Traffic maps are now updated almost to the minute, and so patterns of congestion are readily identifiable. Even crime data are becoming more transparent at the neighborhood precinct level as tools like CompStat become part of the policing process.

Generically, consider non-TOD suburbs a short drive from a rail station or an as-yet-undiscovered urban neighborhood with walk-to-work housing potential near major employers like hospitals or colleges. Ride-sharing apps can support a capillary system for transportation, with the advantage of not requiring heavy capital investments such as those needed for traditional mass transit. “Minibus” service has been popping up as well, even in places like Brooklyn where commutation patterns do not always follow fixed-rail lines. Paratransit has long been used for seniors and the disabled, but can also be effective in places described as “transit deserts.” Perhaps we don’t need revolutionary solutions as much as we need meaningful accessibility improvements to bring more people from where they are to where they want to go. With GPS on every smart phone, we should be able to figure this out.