



Megatrends

Seven powerful forces that are changing the direction of the institutional real estate business

by Mike Consol

Even during the most settled and least complicated of times, commercial real estate has been subject to a broad constellation of dynamics and variables. But these are far from settled or uncomplicated times. The world is changing and, in some cases, it is changing in ways most of us could not have fathomed a mere decade or two ago.

Today, there are mighty forces at play in the real estate business — a confluence of forces arrayed in favor and against the future prosperity of the real estate community, forces

more powerful than anything real estate investment professionals have previously confronted. They are being driven by changing demographics, technology, business practices and human sensibilities, each of which have unleashed new trends that are changing the direction of the institutional real estate business; trends so big and immutable they are referred to here as “megatrends.”

These are trends so pervasive and inexorable they are fundamentally changing the business. Some of them hold the promise of



enormously expanding and enriching the real estate community. Others are countervailing forces that threaten to mitigate the impact of the positive forces.

One could assert that real estate used to be above the fray, that buildings and property were not subject to the same outside influences of less physically ponderous entities. What could be more solid, more fixed in its place, more immovable than real estate? It is the very ground we walk on, and the structures that shelter us from all but the most extreme acts of nature.

Now the immovable object meets the irresistible force. Or, more accurately stated, the irresistible *forces* — seismic forces large enough to shake the foundations of real estate in ways that could, by turns, endow and deplete the industry.

The real estate business appears to be tilting on its axis. Commercial real estate is in flux. A multitude of changes are afoot.

- Retailing is yielding to e-tailing; we shop in places other than stores
- Farms, which used to be strictly about cattle and crops, are now also about servers and solar installations

- People the world over are abandoning rural living and becoming urbanites
- Young societies are becoming old
- Pension plans have become 401(k)s
- The office has become ephemeral
- Geopolitical wealth and influence are shifting from one hemisphere to another

At stake are trillions of dollars in real estate investments, paychecks to pension beneficiaries, the prospects for comfortable retirements, as well as the ability of foundations, endowments and sovereign wealth funds to fulfill their charters.

In this month's cover story we explore seven of these forces, though we are not suggesting there are not other equally powerful trends pertinent to the real estate industry also gathering steam. Take global climate change, as an example. It is a force so debatable and unpredictable that it would be folly to even attempt to summarize and forecast its eventual impact.

So we stick with what industry experts and researchers know, or at least believe they can discuss with some degree of certainty. On the ensuing pages we spotlight seven megatrends that will challenge institutional real estate for years to come.

1 Global urbanization



Futurist and environmentalist Stewart Brand says the dominant demographic event of our time is the “screamingly rapid” urbanization of the planet. Consider what is happening in the world’s two most populous nations. The Global Agenda Council on Urbanization reports that China estimates 400 million more people will relocate to its cities during the next three decades. India took nearly 40 years to add 230 million urban residents, but it will take only half that time to add another 250 million.

Multiple forecasts say that by mid-century 70 percent to 80 percent of the world’s population will be urbanites, which would put the world on par with the United States, where 80 percent of the populace is already concentrated in urban settings.

The size and scale of the movement from rural to urban areas is unprecedented in human history, according to a major research study by McKinsey & Co. titled *Urban World: Cities and the rise of the consuming class*. This migration to the world’s cities is lifting the incomes of people on every continent. Consider that average urban incomes in China and India are roughly three times higher than rural incomes.

One billion new city dwellers will enter the “consuming class” by 2025, says the McKinsey report, and they are expected to contribute an addition \$20 trillion per year to the global economy. There are also efficiencies that come with urbanization. In countries such as India it costs 30 percent to 50 percent less money to deliver services such as water, housing and education to urban areas than to sparsely populated rural areas.

The implications for the real estate business and its investors are enormous.

“Demand for residential and commercial buildings will soar as the populations of merging market cities increase and their incomes rise,” says the McKinsey report. “We expect overall demand for building floor space ... to increase by more than 80,000 square kilometers, an area equivalent to the national territory of Austria.”

Total estimated investment required to accomplish this feat: \$80 trillion over the next 15 years.

Brand points out that the developing world now has all of the biggest cities, and they are growing three times faster than cities in developed countries. Leading the urbanization charge are cities such as Khartoum, Sudan; Lagos, Nigeria; Mumbai, India; Nairobi, Kenya; Shanghai, China; and São Paulo, Brazil.

As some of the cities on that list suggest, the areas where humanity is urbanizing most rapidly is the world’s slums. Journalist Robert Neuwirth spent two years living in villages on the outskirts of Rio de Janeiro, Istanbul, Mumbai and Nairobi, an experience he documented in his book *Shadow Cities: A Billion Squatters, a New Urban World*. These massive slums represent the urban neighborhoods of the future, he writes, and they are not disordered and lawless as so many believe them to be.

“They form their own organizations,” says Neuwirth. “Every squatter community has residents’ associations. In fact, many of the communities were built by a kind of cooperative or mutuality, where 10 families would get together and build 10 homes.”

Brand concurs: “The main event is these are not people crushed by poverty; these are people busy getting out of poverty just as fast as they can.”

One of the huge surprises Neuwirth found was how much commerce was being transacted in Kibera, a slum in Nairobi and the largest mud-hut settlement in sub-Saharan Africa. Neuwirth found Kibera’s main drags loaded with stores run by the squatters themselves — bars, health clinics, grocery stores, drug stores and so on. In short, Kibera has a thriving economy where individual stores did very little business but where the aggregate of stores transacted a huge amount of commerce.

Speaking to the economic impact of squatter cities around the world, Neuwirth told National Public Radio: “We’re talking about a massive part of the economy. I ran the numbers that the economists and statisticians give out about this economy, and if you do the math you come up with ... small bits of exchange that in aggregate are worth \$10 trillion.”

Gradually these things change over time, Brand says, and Paris stops being a huge slum and becomes Paris.

One of the drivers that turn slums into cities is infrastructure, starting with water, sewage, roads and electrical systems, and eventually graduating to ports, airports and communication systems. McKinsey estimates annual infrastructure spending will zoom from \$10 trillion today to \$20 trillion by 2025.

That constitutes a major opportunity for real estate construction and investing, as well as setting the table for a housing, retail, office, industrial and hospitality building boom of a scale the world has never seen.

②

The power shift from West to East



It is not hyperbole to say that we are observing the most significant economic transformation the world has seen. That was one of the conclusions of the McKinsey *Urban World* report.

The so-called Asian Century has fully commenced, and McKinsey & Co. is only one of many organizations that have made the pronouncement — whether implicitly or explicitly. The indisputable tip of the Asian century spear is China, a nation that has transformed itself from a stagnant, hermetically sealed society into an economic juggernaut in a mere few decades. It is now urbanizing at 100 times the scale of Britain in the 18th century and at more than 10 times the speed, according to McKinsey's calculations.

But China has plenty of powerhouse companionship in the region's trajectory toward global economic supremacy. The Asian Development Bank says the region's march to prosperity will be led by six economies in addition to China's: India, Indonesia, Japan, South Korea, Thailand and Malaysia. Add China back into the equation, and the seven Asian tigers boast a combined total population of 3.1 billion (78 percent of total Asia) and GDP of \$15.1 trillion (87 percent of Asia).

As a result of these nations' rapid economic growth, the global balance of economic power is shifting back to Asia and at a speed never before witnessed. Assuming its leading economies continue to develop unimpeded by disaster, Asia will regain its position as the world's dominant economic region — a position it relinquished 300 years ago when it was displaced by the industrial revolution that took place in the western hemisphere.

If the Asian Century is fully realized, the region's GDP will increase from \$17 trillion in 2010 to \$174 trillion in 2050, or half of global

GDP, matching its share of the global population. The International Monetary Fund is forecasting that China alone will represent one-third of all global growth by 2015. The mammoth Chinese economy, currently the world's second largest, is racking up economic growth metrics that are three to four times higher than western economic powers. At this rate, China is expected to wrest the title of the world's largest economy out of U.S. hands as early as 2020.

All of this portends massive real estate and infrastructure development, as well as very deep pools of capital formation. Consider that Asia's middle class is expected to grow by 2.6 billion by 2030, according to the Organization for Economic Cooperation and Development (OECD). By 2050, Asia will be transformed, as its urban population will nearly double from 1.6 billion to 3 billion.

The emerging countries of Asia are also buttressed by strong demographics that feature a young population with fewer dependents to support than previous generations. They have also strengthened their hand by creating good education systems, attractive business environments, and major investments in research and development.

The eastward migration of economic power is not lost on real estate investors. Already, there is a steady stream of adventurous foreign investors making tentative steps into markets such as Indonesia, Malaysia, Thailand and China's second-tier cities, according to research from the *2013 Emerging Trends in Real Estate Asia Pacific* report produced by the Urban Land Institute and PricewaterhouseCoopers.

Nor has Asia's rise been lost on the U.S. government. Pierre Buhler, a French diplomat and author of *Power in the 21st Century*, observes in a *New York Times* op-ed column that President Obama hosted the Asia-Pacific Economic Community meeting in Hawaii, where he was born, then attended the East Asia Summit in Indonesia, where he lived part of his youth. The days of the G-7 forum of the world's seven most industrialized economies running the world are long gone, as many more strong nations play a hand in directing the global economy, particularly those located in the eastern hemisphere.

"Investors continue to be interested in allocating additional capital in Asia," says Bill Thompson, managing director and head of Greenhill & Co.'s real estate capital advisory business. "Longer term, the trend is clear: Investors outside of Asia will be putting more of their wallet in Asia."



③ Aging populations

When *MarketWatch* compiled a list of the 10 biggest threats to the real estate business, it ranked an *aging population* as threat number one. It is a problem highlighted in research conducted by the United Nations, whose report on the world's aging population underscored four major findings, one of which stated: "The world's aging population comes with major consequences for all facets of human life. Economically, an aging population will dampen economic growth, savings, investment, consumption, labor markets, pensions, tax policies and intergenerational transfers of wealth."

It is that point that delivers a belly-blow to the real estate business. While aging populations create opportunities in senior housing, medical facilities and the like, the demand for other categories of real estate are almost certain to decline.

In part, the aging population is one of the paradoxes of prosperity. As nations' living standards rise they tend to have fewer children and to live longer lives. The problem: These trends gradually turn a society from youthful to elderly, and elderly populations are less dynamic than youthful ones, and the former group starts depleting a nation's resources.

While graying baby boomers have put a drag on some aspects of the U.S. economy, the situation is far more acute in other economically advanced countries such as Germany, Italy and Japan. Thirteen percent of the U.S. population is age 65 or older. By way of comparison, the percentage of those aged 65 and older is far higher in several other industrialized democracies:

- Greece, 19.6 percent
- Sweden, 19.7 percent
- Italy, 20.3 percent
- Germany, 20.6 percent
- Japan, 22.9 percent

The relationship between youthful populations and dynamic economies is illustrated by the low

percentage of the age 65-plus populations in some of the world's fastest-growing economies:

- India, 5.5 percent
- Indonesia, 6.0 percent
- Peru, 6.4 percent
- Brazil, 6.7 percent
- China, 8.9 percent

Still, U.N. researchers found that, although the highest proportions of older persons are found in industrialized countries, the 60-plus age group is growing considerably faster in less developed countries. In time, the oldest populations will be increasingly concentrated in the less developed regions, the very places real estate interests are counting on for vigorous property development.

The Urban Land Institute warns that the retirement of baby boomers and the increasing share of elderly citizens will create economic and fiscal stresses beginning in the second decade of the 21st century. These demographic developments, if not offset by changes in household behavior and government fiscal policy, will result in slower income growth and consumption.

Take Japan, a country dogged by slow growth for two decades. One-third of Japanese are age 60 and older. Italy, which has one of the world's worst performing economies, is among the world's oldest nations.

A global outlook report issued by RREEF points out that some of the countries with the oldest populations are host to large core real estate markets. Japan, Germany, Italy and Hong Kong all have median ages older than 40, and most of Europe is not far behind.

Perhaps more alarming is that the world's most populous nation with the fastest-growing economy, China, has 178 million people age 60 or older, a rise of 3 percent since 2000. This represents 13.3 percent of the population, a figure predicted to reach 16.7 percent in just five years, and 30 percent by 2050. Combined with a significant slowdown in the birth rate, the result is that China is confronting a rapidly aging population.

"Asia's population is aging at a speed unprecedented in human history," says Changyong Rhee, chief economist at the Asian Development Bank. The drag an aging population and shrinking labor pool inflict on economic growth has been observed already in places including Hong Kong, Japan, Singapore and South Korea, where the graying of populations is already well under way.

Current projections indicate that in just 10 years there will be 1 billion people age 60 and older, while by 2050 that figure will double to 2 billion.

④ Intelligent and sustainable buildings



Computer image of Hines' experimental LPL Financial at La Jolla Commons project

While technology seems to have flooded almost every aspect of our business and personal lives, the edifice stands as a giant testimonial as to how notoriously slow the real estate business has been to adopting technological innovation. Most buildings are low-tech, inefficient and belching greenhouse gases.

Nils Kok, co-founder of the Global Real Estate Sustainability Benchmark (GRESB), points out that it has been well documented that the real estate sector is responsible for 40 percent of global greenhouse gas emissions and about 75 percent of U.S. electricity consumption.

Change has supposedly been riding up the elevator shaft for an awful lot of years. Now, it is finally arriving for reasons having more to do with accounting than altruism, and earnings than ecology.

Two irrepressible dynamics are changing the game. First, the days of cheap fossil-fuel energy are gone, and the inefficient use of energy resources is burning up the bottom line. Second, "sustainability" is a fixture in the lexicon of prospective tenants and the employees they — and real estate organizations — are trying to hire.

A 2011 survey by Johnson Controls of 4,000 global executives and building owners found that 70 percent of respondents considered energy management *very* or *extremely* important.

Gary Holtzer, a senior managing director at Hines, says his company's recruiting department reports that the majority of young people interviewed ask direct or related questions about the organization's sustainability policies and practices.

"Our tenants see this as an important recruitment tool for them to attract and retain a quality workforce," Holtzer says.

On the financial ledger the numbers are just as compelling. Energy costs represent roughly 30 percent of a building's annual operating costs. HVAC

systems alone gobble up about 40 percent of a building's energy usage, and lighting another 35 percent, according to the U.S. Department of Energy and the U.S. Energy Information Administration. The Rocky Mountain Institute estimates that 40 percent to 50 percent of a building's overall energy consumption is wasted as a result of excessive lighting, inefficient equipment and profligate usage habits.

The problem is prevalent. Less than 1 percent of U.S. buildings qualify as *intelligent* or *sustainable*. Rather, they are structures whose systems lack any semblance of integration. The average commercial or residential building has inherent inefficiencies because it is laden with 20 to 30 discrete systems (HVAC, lighting, water, etc.), each with proprietary networks and wiring. Without integration and sensors, they cannot respond to changes in the environment or supply building managers with actionable data.

That hints at the definition of an intelligent building — integrated systems distributing information, automated functions reacting to environmental factors, and connection to a smart grid that allows electrical power and data to flow in both directions.

The operative question is, *why go to the trouble?*

GRESB's Kok says he and fellow researchers at UC Berkeley have conducted multiple studies of commercial office buildings that found "persistent and significant" advantages garnered by more efficient buildings, including higher occupancy rates (7 percent), lease fees (3 percent) and sale prices (13 percent) than their daft brethren.

RREEF produced a 61-page *Real Estate 2012 Sustainability Report* that outlines why the company is making the push toward greater sustainability.

Another company making a similar push is Hines, which is in the midst of an experimental project in La Jolla, Calif., with construction of the 13-story, 415,000-square-foot LPL Financial building. Holtzer says the next logical step beyond LEED and Energy Star certifications is engineering and constructing "net-zero" buildings — structures that annually produce at least as much power as they consume. In other words, a building whose footprint is carbon neutral.

LPL Financial at La Jolla Commons will be powered by fuel cells running on biogas 24 hours a day, 365 days per year to produce more energy than the building consumes. If successful, Holtzer says net-zero buildings likely will become the standard for all new Hines construction, and at least some of that technology will be used to retrofit many of its existing properties in ways that make them more technologically advanced and energy efficient.

The competitive imperatives of the real estate business will certainly mean that Hines and RREEF are just two of many industry leaders who will drive the trend toward intelligent and sustainable buildings.



It is not as though online retailing is a particularly recent phenomenon. The issue is that online retailing just keeps growing — *fast* — and is infiltrating more and more segments of consumer activity.

Despite all the inroads e-commerce has made to date, it still represents a relatively paltry 5 percent of all retail sales, yet it is already forcing dramatic changes in how traditional retail outlets are constructed and operated. And with good reason when you take into account U.S. Census Bureau data that show domestic e-commerce sales totaled more than \$193 billion in 2011, and that online sales have increased by a blistering 40 percent just since 2007.

RREEF Real Estate did its own startling computation regarding the possible impact of e-commerce sales on brick-and-mortar stores. It took the \$157 billion in 2011 e-commerce sales (a figure that excludes auto sales) and calculated that sales volume would be equivalent to between 350 million and 500 million square feet of retail floor space, based on typical sales volumes.

Data collected by CoStar Group finds that about 11 percent of U.S. shopping centers have vacancies of between 20 percent and 40 percent, and 4 percent of centers had vacancies of 40 percent to 60 percent. Empty storefronts offer no rewards to retail real estate investors, nor do they create pressure for new retail construction.

Already on the endangered list, according to industry observers including PricewaterhouseCoopers and Kantar Retail, are supercenters, big-box retailers, drugstores and even some malls. E-commerce giant Amazon has already, arguably, bankrupted Borders and, by some accounts, has Barnes & Noble on the ropes after its lethargic 2012 holiday season.

Many traditional retailers already have changed their strategy to fewer and smaller stores built closer to customers (not exactly a formula that will enrich

the construction wing of the real estate industry, though technology-based shopping has ramped up the need for server farms and warehouses).

The stress on traditional stores is only going to intensify. Online retailing is poised for even more rapid growth than witnessed thus far. By all accounts e-commerce and mobile commerce (or m-commerce) are on the cusp of explosive growth. Consider that almost half of all U.S. adults own a smartphone, according to the Pew Research Center, meaning they are carrying the world's largest shopping mall in their pockets. Smartphone ownership rates are greatest among the young, including more than two-thirds of people aged 18 to 34. This new generation of tech-ready consumers is sure to be followed by generations of consumers even more steeped in cyberspace and sporting more advanced technology. As smartphones, tablet computers and other devices continue declining in price, they will be adopted by less affluent demographics and are expected to begin taking strips out of the discount retailers that have largely managed to avoid being pillaged by online competitors.

The first thing brick-and-mortar retailers and developers of retail space would do well to understand is why consumers shop online. Those surveyed by organizations including Nielsen cite advantages such as convenience, the flexibility to shop 24/7, time and fuel savings, enhanced ability to comparison shop, lower prices, and so on. Many shoppers also like to avoid crowds, especially during the crush of holiday season — a potential catastrophe for traditional retailers who count on the holiday season for up to one-third of their annual sales, according to the National Retail Federation.

Online shoppers are especially drawn to electronics and appliances (accounting for 21 percent of all e-commerce sales), apparel and accessories (18 percent), recreation-oriented items such as books and music (17 percent), and automobiles and auto parts (11 percent).

RREEF Real Estate summarized the situation faced by traditional retailers this way in its *Bricks and Clicks* report: "The rising tide of Internet shopping will have profound impacts on the shopping center industry, reinforcing trends toward greater emphasis on store productivity over growth. ... The winners will be the best-located malls, main-street shopping districts and grocery-anchored centers, while big-box retailers will begin a long period of decline."

No one is suggesting traditional retailing will ever go away, but it will never be the same. The real estate industry will have to adjust, and fast, because an entirely new retail frontier has been opened and is expanding and evolving at a furious tempo.



⑥ Shrinking demand for office space

The office used to be an indispensable venue. We reported to the office without fail because it was only place we had access to the expensive equipment required to get work done.

How things have changed. Technology has become inexpensive and mobile. Flexible work arrangements allow many of us to work from home or other remote locations. Advances in ergonomic office systems have made us comfortable in smaller and smaller work areas. Productivity has spiraled. And today's corporate culture is all about wringing costs out of the system.

All of those factors have conspired to put pressure on office space requirements, and the trend is likely to be unrelenting.

The UCLA Ziman Center for Real Estate called the situation "discouraging" for builders and managers of office space. More than three years after the devastating 2008 economic downturn, there is still almost no new office construction and the national vacancy rate remains high at 17 percent.

Many office-intensive industries have stopped growing, in part because productivity gains are allowing companies to do more with fewer people and less space. Meanwhile, the people who are employed and reporting to offices are being stuffed into smaller spaces. CoreNet Global, a consortium of office users and workplace professionals, forecasts that per-worker space will decline from 225 square feet in 2010 to 151 square feet in 2017. The footprint is shrinking, in part, because cloud computing is eliminating the need for file cabinets, physical libraries and other space eaters.

Craig Tagen, a managing director at Clarion Partners, points out that his company had a backup technology facility in New York City for many years that it has since discontinued because cloud computing has eliminated the need. Even a disaster at the headquarters building would not necessarily cripple the company because, on any given day, 25

percent or more of Clarion's workforce is operating from the road and capable of keeping the organization running. Tagen, for example, spends only half his working hours at the office.

The Urban Land Institute and PricewaterhouseCoopers highlighted the issue in their report *2012 Emerging Real Estate Trends*: "Mobile communications devices and wireless Internet links eliminate old-line, bedrock office jobs — from secretaries and travel agents to file clerks and messengers. More employees can work from home or in the field, reducing the need for leased office space, and even computers take up less room. Hulking mainframes and workstations get replaced by microchips and tablets."

There are also generational sensibilities at play. The *Emerging Trends* report points to the younger generation of professionals who insist on interconnectedness and mobile communication devices that permit them to operate from just about anywhere. When young professionals are in the office, they are far less concerned about or demanding of privacy than previous generations.

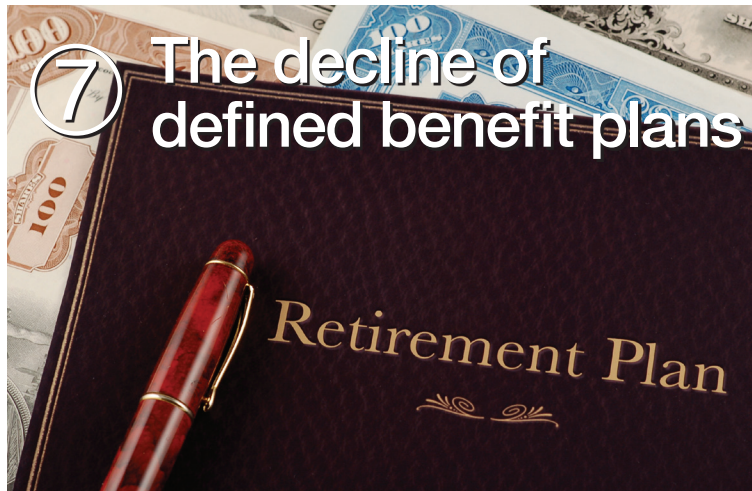
Tagen is a bit of a contrarian on the subject. It is that generational shift that he emphasizes when saying that demand for office space is not so much *shrinking* as *changing*. The new generation of professionals is comfortable working in open collaborative spaces. A law firm might not need as much space for a law library, Tagen says, but it may decide to create larger break areas and collaborative space.

So while less formal space is being used in many office settings, the 24-hour live/work/play trend in places such as New York City and Silicon Valley is bringing about more widespread use of break and recreation areas, exercise rooms, expanded company cafeterias, and even compartments for napping and meditation.

Tagen also argues that we have no idea where the new demand for the next generation of tenants will come from. An economic boom that creates scads of new companies will fill space, and perhaps lots of it. Tagen points to the fact that the ongoing U.S. economic recovery has been driven by high-tech, energy and healthcare.

"We have seen robust demand for office space in markets such as San Francisco, San Jose, Seattle and Houston as well as from medical-related tenants nationwide," he says. "Prime office buildings in major central business district locations are always in good demand."

Still, it is indisputable that technology has triggered a diaspora. Large office spaces with captive workforces just are not necessary, practical or desirable anymore. The office is not what it used to be and — given changing attitudes about work styles and the inevitability of even more powerful and mobile technologies to come — it never will be again.



7 The decline of defined benefit plans

The story of defined benefit (DB) pension plans and defined contribution (DC) pension plans is one of decline and rise, respectively.

That is the blunt assessment of David Bauer, a founding partner at Casey Quirk, a firm that advises investment managers. There is really no such thing as creation of new corporate defined benefit plans. A lot of them are being closed or frozen or both. Many corporate DB plans are shifting to a liability-driven framework, says Bauer. In other words, focusing more on meeting liabilities and controlling volatility, and less on actually growing their assets.

The implications for institutional real estate are profound. DB plans have long been a rich vein of real estate capital because they were professionally managed by investment experts seeking a diversity of assets, and that usually included stakes in real estate funds. On average, DB plans allocate 6.6 percent of assets to real estate. But as employers have shifted from DB to DC plans, investments in real estate have been evaporating because the latter's level of real estate investment is trifling.

Part of the issue is that in DC plans — the vast majority of them being 401(k) plans — the responsibility for investment selection is shifted to employees. DC plans have become a popular alternative for employers because they allow them to shift the liability and responsibility (legal and financial) to the participants, says Bauer. With the DC plan, employers give their employees some matching funds and some tools and options. Those options tend to skew to stock and bond funds. That type of DC plan is simple, clean and cheap for the employer, and has the added bonus of helping keep the employer out of fiduciary trouble.

The problem for the employee is a lack of diversification as exists in corporate DB plans, along with the oversight provided by the company executives. Studies have found that DC plans produced inferior performance to DB plans, by as much as 100 basis points per year, or about \$50 billion per year.

The problem for the real estate investment community is less access to those DC plans. That is a shame, Bauer says, because real estate is an asset class familiar to participants and one they are likely to feel comfortable with.

Meanwhile, DC plans are accumulating far more assets than traditional DB plans. With \$3.5 trillion of total assets currently under management, corporate and other private DC plans have already outstripped DB plans and are expected to grow to \$5.5 trillion by 2020, according to Casey Quirk research. Put in more dire language, most real estate investment firms are haplessly watching trillions in inaccessible dollars go hurtling past their reach.

There are a growing number of firms, however, that are fighting back by developing tools of their own, such as target-date funds (TDFs) — mutual funds with a protective mix of assets that includes real estate. The daunting challenge facing the commercial real estate industry is to educate DC plan sponsors about the viability of including real estate products in their menu of offerings. (See related story, page 41.)

Fortunately, the message does appear to be hitting home in some instances. Bauer says there are DC plan sponsors who are trying to re-create the DB plan experience, and that is opening up opportunities for real estate. Increasingly, DC plans are offering participants securitized forms of real estate, such as REITs.

"I think there will be opportunities even for direct investment in real estate through TDFs," Bauer says.

Indeed, it is the nonsecuritized, less liquid types of direct real estate investment the TDF is bringing into play. Firms ranging from TIAA-CREF and Prudential Real Estate Investors to J.P. Morgan Asset Management have created and are marketing TDFs to DC-plan sponsors. The opportunities are evident when one considers that J.P. Morgan Asset Management, which dominates the DC direct real estate space, has more than \$1 billion in DC assets under its management.

Casey Quirk research indicates that customized TDFs — ones that give plan sponsors control over the asset allocation and underlying investment strategies — are emerging as the cornerstones of target-date innovation. The firm estimates that customized target-date options will balloon to nearly \$1.5 trillion by 2020, from about \$150 billion today, led by funds exceeding \$1 billion in size.

Still, the trend of assets migrating from DB plans to DC plans — like the other megatrends cited in this article — can only be overcome by some adept and innovative management on the part of the institutional real estate community.

Whether leaders in the field are up to the tasks at hand remains to be seen. ♦

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