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2016 PERSPECTIVE

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On the cover: 757 Third Avenue, New York, NY

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Contents

Chapter 1	Executive Overview	5
Chapter 2	Economic Outlook	11
	Technology Drivers & Disruptors	22
Chapter 3	Capital Markets	27
Chapter 4	Property Sector Fundamentals	33
	Apartment	34
	Office	38
	Medical Office	43
	Retail	46
	Industrial	50
About Bentall Kennedy Group		55

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Seattle, WA

Strong Fundamentals Help Drive Stellar Performance

The headwinds facing the global economy and catalysts for volatility in financial markets were different in 2015, but in many ways the year felt like 2014. Over the past year, tumbling commodity prices hit the developed economies of Canada and Australia hard, while policy makers in China worked to navigate a soft landing for their slowing economy. Growth in Europe remained sluggish, with central bankers maintaining aggressive monetary actions, including quantitative easing (QE), and Japan floundered with its persistent demographic woes. The U.S., and in many respects the U.K., have fared better.

> "Following employment and population growth is more likely to prove a winning strategy than reacting to ever-changing headlines."

Our concern that the U.S. would have to go it alone in 2015 largely bore out. In fact, even with the U.S. consumer representing the vast majority of the economy, global headwinds had an impact on domestic growth. The value of the dollar rose versus the currencies of major U.S. trading partners and oil prices plunged. A long anticipated interest rate hike by the U.S. Federal Reserve became a reality in December, albeit just a 25 basis point increase. In keeping with modest, but steady, economic growth and significant global risks, our expectation is that the Fed will move rates slowly.

The persistent interjections of the 24-hour news cycle are undoubtedly weighing on consumers and investors, many of whom seem to be tracking the economy in real-time. They are reacting to headlines and market fluctuations rather than taking a long-term view on the economy and operating their households or investing with that view in mind. Improvement in consumer confidence late in 2015, after deterioration through the middle of the year, may be erased, at least temporarily, as stock market declines and ominous headlines are once again inciting feverish panic as we step into the New Year.

This is not a time, if there ever is such a time, for private direct equity real estate investors to be looking short or even medium term, we must be looking long term. Investors must find the strength and focus to look past the news cycle and volatile public markets. For our part, we are focused on trends in "known" data – albeit subject to

revision – including GDP, employment, the housing market, demographics and consumer spending over meaningful periods of time.

Our analysis concludes that the U.S. economy is fundamentally healthy, with many strong underlying trends. Further, the dramatic pace of technological innovation and adoption by both firms and consumers bodes well for the future. This is particularly true in the hubs giving birth to much of this innovation, with well-educated populations supporting new ideas and business formations.

Locations such as Boston, Austin, Seattle, the Bay Area, and parts of New York and Chicago, among others, are benefiting from concentrations of employment in education, healthcare and technology. Supported by world class institutions and leading companies in these fields, these markets are positioned for long-term growth. These locations draw employers seeking access to high caliber talent, and workers wanting to live among their peers in proximity to employment opportunities. This is creating a reciprocal growth cycle that is perpetuating an expansion we believe still has some room to run.

The 1980s and 1990s employment cycles each lasted about 24 months longer than the present cycle. Further, each of those came to an end when employment expanded by about 20% above its prerecession peak. Despite healthy growth of near 2.0%, or almost 2.7 million jobs, over the past year, the U.S. is only about 3.5% above its January 2008 employment peak. Well-paying jobs in healthcare and professional and business services (which includes the vast majority of technology jobs), are growing at an annual rate north of 3.0% per year, spurring growth in ancillary services, leisure and hospitality and retail trade. Even the long-struggling financial activities sector has exhibited some momentum of late, although layoff announcements continue to periodically crop up.

Job openings foreshadow additional hiring and wage growth, which has, contrary to widely held views, significantly outpaced inflation in many of the stronger metropolitan economies across the U.S. Consumers have deleveraged, fuel costs have plummeted, the personal savings rate has trended up, access to credit is improving and unemployment is falling. Housing market trends are positive. Barring significant deterioration abroad, or perhaps a protracted period of deep losses in the stock market that stifles consumer confidence, the U.S. is positioned for another year of solid economic growth in 2016.

“The percentage of U.S. population that is foreign born has reached levels not seen since the 1920s.”

Demographics remain a driver we feel has been undervalued in its transformative impact on the economy and its potential to propel a more extended cycle of expansion. The Baby Boom generation remains highly influential as its members approach retirement. Interestingly, we see that older households have had a very prominent role in the surge in rental housing demand following the recession.

Millennials, many of whom have yet to reach an age where they would form new households and many others who have delayed striking out on their own due to economic conditions, have been an important, but not dominant piece of the demand story. This generation should remain an impactful demand driver in 2016 and the years that follow, as age and improved economic prospects encourage them to form new households.

Immigration was a political lighting rod in 2015, and the percentage of U.S. population that is foreign born has reached levels not seen since the 1920s. Illegal immigration is a meaningful piece of this, but

by almost any estimate, undocumented immigrants make up less than 30% of the total U.S. foreign born population. The remaining 70% or more have immigrated legally through the U.S. quota system, are students, past students seeking green card status with their employer sponsors, H-1B skilled worker visa holders, or fall into other smaller categories.

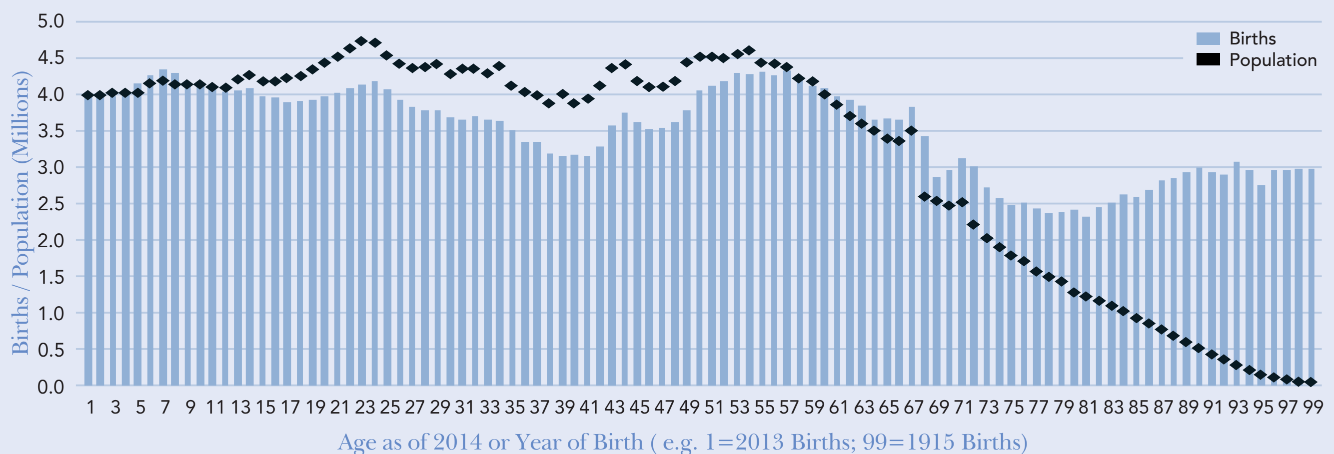
Figure 1.1 shows U.S. population by age (diamonds) as of 2014 and the corresponding number of births in the U.S. at each age (bars). In 2014 there were 4.3 million 18 year-olds in the U.S., much higher than the 3.9 million children born 18 years earlier (1996). Immigration drives the increase in population beyond birth levels and eventually mortality brings the population below birth levels.

The gap between births and population begins to widen around age 18 due to the arrival of students from abroad seeking education in the U.S. At age 23, Figure 1.1 shows population is nearly 588,000 higher than the corresponding number of births. Not by coincidence, annual student visa issuance in the U.S. has topped 500,000.

Clearly immigration is not an inconsequential force in the U.S. economy. Immigrants represent demand for education, consumer goods and housing. They also provide labor, which has been a boon to innovation markets where expanding payrolls have led to very low unemployment. Foreign students taking advantage of the optional practical training provision of their visa and skilled foreign workers here on H-1B visas have been an important source of labor for employers in science, technology, engineering and math (STEM) related fields.

Many economic researchers feel the U.S. is poised to experience weak long-term employment growth due to a scarcity of labor as Baby Boomers exit the workforce in greater numbers. While we see a variety of mitigants to this stall, including delayed retirement and a rebound in labor force participation, we also emphatically highlight the power of immigration. Barring a significant tightening of immigration policy, foreign workers should meaningfully supplement population levels in the younger age-cohorts that will be replacing retiring workers in the years ahead.

Fig. 1.1
U.S. Population By Age Relative to Births



Sources: U.S. Census Bureau, U.S. National Center For Health Statistics

Capital markets remain favorable for real estate investment, as the flow of domestic and foreign capital seeking high quality, well-located properties remains substantial. Transaction volume continued to rise over the past year and values by some measures pushed above the highs set prior to the recession. Global volatility and uncertainty in financial markets should continue driving capital to safe haven countries, such as the U.S., and to cash flowing assets, such as private real estate, in 2016.

These flows should only be enhanced with recent changes to the Foreign Investment In Real Property Tax Act (FIRPTA). The most notable of these changes is an exemption from the tax for certain qualified foreign pension funds. Further, among other changes, the ownership threshold before a foreign investor in a public REIT becomes subject to FIRPTA was increased from 5.0% to 10.0%.

Investment performance remained impressive in 2015 with the NCREIF Property Index (NPI) total return reaching double-digit territory for the fifth straight year. At 13.5%, the NPI total return for the year-ending in the third quarter of 2015 was more than 200 basis points higher than the average over the prior three years. Net operating income (NOI) growth was a big part of this strong return, as we expected, but it is noteworthy that the valuation effect created by falling cap rates remained a positive driver of returns.

Property fundamentals continue to improve, with healthy job growth driving significant increases in demand for space. Year-over-year as of the third quarter of 2015, vacancy declined in all four property types. The length and consistency of the vacancy recovery has been impressive. In fact, apartment vacancy and industrial availability are as low as they have been since before the 2001 recession. Office vacancy and retail availability are back to 2008 levels.

Construction activity accelerated in 2015. Still, demand growth outpaced supply growth in all four property types, and with construction costs surging and construction labor increasingly scarce, we do not anticipate construction activity will spiral higher in the near term. These conditions will undoubtedly allow landlords in all property types to push rents higher again in 2016. Apartment rent growth should cool from the near 5.0% rate achieved over the past year, but demand growth will very likely remain stellar.

> "These conditions will allow landlords to push rents higher again in 2016."

We increasingly expect to hear calls for the next U.S. recession in the year ahead. Risks to growth are certainly present, as they have been throughout the recovery and expansion to date, but, as you will read in this report, we find ample evidence for solid U.S. growth in 2016. Further, we would note that growth cycles do not always move forward. At times there are periods of "pause and refresh."

It is likely true that we are now closer to the next recession than we are to the end of the previous one, but we should have ample room to run. Economic cycles are difficult to predict, however, and even more difficult to time as an investor. In an environment where volatility seems high and uncertainty even higher, investors are best served by taking a long-term view and selecting high-quality investments in locations with strong prospects for growth through cycles. Following employment and population growth is more likely to prove a winning strategy than reacting to ever-changing headlines. •

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Global Economy: Déjà vu?

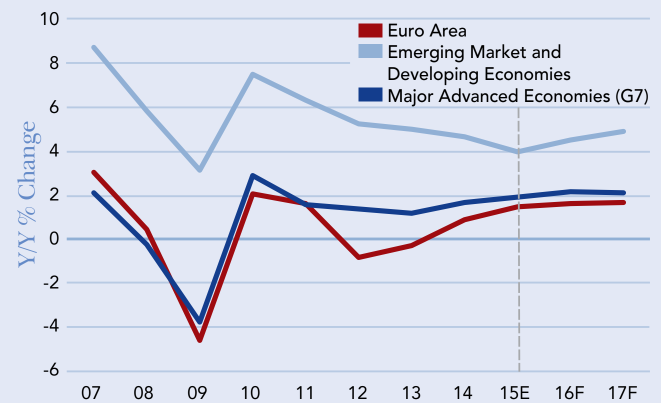
In last year's Perspective we discussed how the "New Normal" of sluggish growth, lack of inflation, persistently low interest rates and intense financial market volatility, would be recurring themes for investors. This proved quite prescient. Just as Greece-related economic concerns were essentially put to rest in 2015, financial markets began to reel as attention shifted to the challenging slowdown and policy missteps in China; tumbling commodity prices; the direction of the Federal Reserve and ultimately, the sustainability of global growth. It's almost like déjà vu.

> "In an inversion of the events leading to the Financial Crisis, larger advanced economies are expected to support global growth in the near term as emerging and developing economies now deal with their structural issues."

Although China's slowdown was not unexpected, the speed and pace of its deceleration remains highly uncertain, especially since so much depends on the policies implemented by authorities in a centrally-planned economy. Financial markets are most concerned that recent stimulus measures in China are addressing internal imbalances such as financial sector vulnerabilities and a high debt overhang, created in part by previous stimulus programs. This calls into question whether Chinese officials can successfully rebalance their economy away from public investment into private consumption without incurring a "hard landing."

Whether one believes recent Chinese official statistics of 7% growth, China's transition will take time and will mean considerably lower growth than the 10%+ rates seen over the last decade. Since the Chinese economy accounts for the second largest share of global GDP, its transition is ultimately weighing on the world economy. Indeed, global GDP growth this past year was estimated to be the weakest since the Great Recession, largely due to the slowdown in China.

Fig. 2.1
Annual Real GDP Growth Outlook



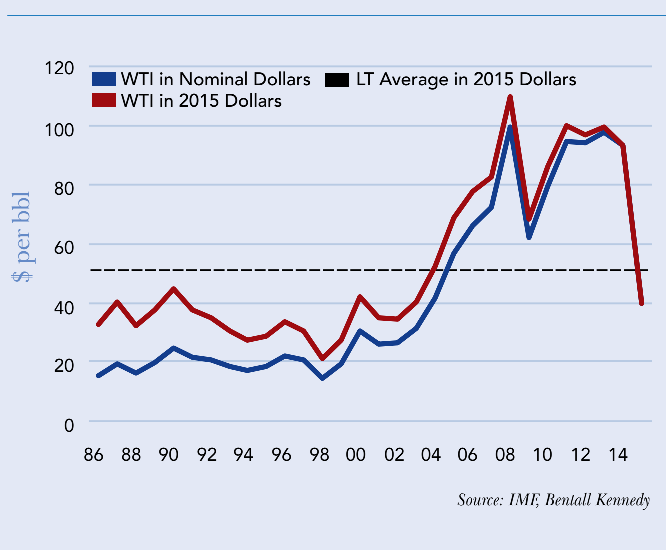
Source: IMF; October 2015 Forecast

Commodity prices tumble

Fears surrounding the health of the Chinese economy, as well as other emerging markets like Russia and Brazil have contributed to a major rout in commodity prices with lows in 2015 not seen since the Global Financial Crisis. Both base metals and agricultural commodity prices have been hit hard over the past year but it has been the 50%+ plunge in crude oil prices since the summer of 2014, that has been most surprising to financial markets.

While slower global demand has certainly contributed to oil's massive fall, we highlighted in last year's Perspective that a major factor has been a growing glut of supply. Thanks to OPEC's reluctance to cut production quotas and the shale revolution in North America which has significantly increased supplies of non-traditional product, the world has simply become awash in oil. Although U.S. shale production has eased, many forecasters believe that supply and demand forces will keep the real level of oil prices below its long term average of $50/bbl over the next few years (see Fig. 2.2) – a surprising turn of events considering that it was just eight years ago when "peak oil" theories and prognostications of $200/bbl were at their zenith.

Fig. 2.2
WTI Oil Price



Source: IMF, Bentall Kennedy

Two notable casualties of the commodity price downturn have been the resource-dependent advanced economies of Canada and Australia. Coming out of the financial crisis several years ago, both countries were among the strongest performers in the advanced world, benefitting in part from a rebound in commodity prices on the back of a stimulus-driven Chinese economy. But with commodity prices sinking, both Canada and Australia have suffered significant "terms of trade" shocks[1], slumping currencies and a sharp reduction in investment intentions. This sudden deterioration in economic conditions prompted central banks in both countries to cut interest rates in 2015, moves which have placed additional downward pressure on their currencies but also inadvertently provided further support to their already very robust housing markets.

The main intent of these looser monetary conditions is to support a transition of growth drivers to other sectors of each economy. In particular, Canada's large non-commodity export sector is expected to reap the benefits of both a lower exchange rate and growing demand in its largest trading partner, the U.S. (see next section).

Larger advanced economies lead the way

With much of the global economy struggling, larger advanced economies have been holding up comparatively better, supported mainly by strengthening domestic fundamentals. In fact, robust job gains and tightening labour markets have led to rising wage growth in both the U.K. and U.S. In an inversion of the events surrounding the Financial Crisis eight years ago, these advanced economies will likely be the pillars of global growth in the near term

[1] "Terms of Trade" is the ratio of export prices to import prices. When export prices fall sharply relative to import prices, this shock results in a significant loss of capital for a country.

as emerging and developing economies now deal with their internal structural issues.

While by no means out of the woods yet, conditions in other advanced economies such as the euro area are also gradually improving. With a new Greek bailout deal in place, there is some optimism that the euro area is finally moving out from under the shadow of the sovereign debt crisis. Recent increases in bank lending within the region may be evidence of this while progress is also being made on bringing euro area unemployment down from double-digit levels.

Unemployment is already very low in Japan but that country's main economic concern has been the threat of deflation. Japan's poor demographics are arguably a major contributor to this risk and their recent experiment with Abenomics (a combination of stimulative monetary and fiscal policies) has yet to help, with overall Japanese economic growth contracting once again in 3Q 2015. As a result, aggressive stimulative policies in Japan appear to have no end in sight. Similar deflation risks are also still very much apparent in the euro area despite the progress it has made over the past year. As such, EU policy officials are equally committed to maintaining aggressive monetary actions, including quantitative easing (QE).

A diverging world

The stimulative monetary actions of these key central banks, as well as in China, Australia and Canada, stand in sharp contrast to the Federal Reserve in the U.S. With the U.S. economy gaining traction (see next section), the Fed was able to deliver its first rate hike in almost a decade in December. Together with the termination of QE a year earlier, markets and investors have received confirmation that the Fed is finally beginning down the long road of normalizing

757 Third Avenue (office interior)
New York, NY

monetary conditions in the U.S. Although this tightening cycle is starting from essentially zero with monetary conditions still highly accommodative, the divergence in policy direction between the U.S. (and possibly the U.K.) with the rest of the world is a key economic theme for investors.

One major implication of this theme (and one we briefly touched on in last year's Perspective) is that the flood of excess liquidity in the rest of the world would find its way to the U.S. in search of not only a safe haven, but comparatively better returns. The ensuing surge in demand for U.S. assets over the past year, particularly commercial property, is certainly a reflection of what some have called the "exceptionalism" of the U.S. economy. But there are major economic consequences to this. In particular, strong capital flows into the U.S. have caused a sharp rise in the USD against its trading partners, which is creating a very difficult environment for U.S. exporters. It has also raised the broad possibility that the U.S. is importing disinflation from the rest of the world.

These risks, along with the slowdown in emerging markets, the commodity price rout, and the constant potential for geopolitical flare-ups have the capacity to continue spooking global financial markets just as they have done over the past year. As such, we believe that the Fed will tread on a very cautious path with its tightening cycle going forward. This is also ultimately why we expect that the "New Normal" theme of low growth, low inflation, heightened volatility and low interest rates to persist for several more years.

U.S. Economy: Goldilocks growth

Not unlike the rest of the globe, U.S. economic trends in 2015 felt much the way they did in 2014. Growth continued, but was unimpressive, and somewhat disappointing relative to our expectations. In a global context the U.S. remains a solid performer; however, in many respects therein lies its challenges. Global growth is slow. China's deceleration reverberated throughout the global economy, and its currency resets were unexpected and disruptive to financial markets. Geopolitical turmoil and domestic politics also remain troublesome.

> "We see the all-important U.S. consumer making a positive contribution to growth and also clear indications that the housing market is improving and helping to spur economic activity."

In the increasingly integrated global economy, policy makers, central bankers and CEOs have had difficulty charting the best course ahead. The Fed, for example, must no longer be simply concerned with U.S. inflation and unemployment as it makes decisions on interest rates, it must also consider the impact on U.S. trading partners (many of whom are still trying to keep rates low) and the value of the dollar, which should rise even higher as rates are increased. The risk of importing disinflation from abroad is significant and may even be a reality as some weaker monthly retail sales reports have been blamed at least in part on lower prices.

For those watching the economy in real-time, the constant interjections of the 24-hour news cycle and frequent – if not subsequent – gyrations in financial markets have been troubling. But prudent real estate investors analyze the hard economic data and understand that not every daily headline corresponds to actual trends in the business cycle. For our part, we are focused on trends in "known" data – albeit subject to revision – including GDP, employment, the housing market, demographics and consumer spending over meaningful periods of time.

GDP growth was not as strong as we expected through the first three quarters of 2015, but a growth rate that is not too hot and not too cold may be just right for a prolonged expansion. The quarterly average of 2.2% annualized growth during the first three quarters of 2015 was on a par with the average over the past five years. Further, weather-related issues and suspected methodological issues at the Bureau of Labor Statistics may both have had a lot to do with the tepid first quarter gain of less than 1.0% on an annualized basis. Even in these somewhat lackluster reports, however, we see the all-important U.S. consumer making a positive contribution to growth (see Fig. 2.3) and also clear indications that the housing market is improving and helping to spur economic activity.

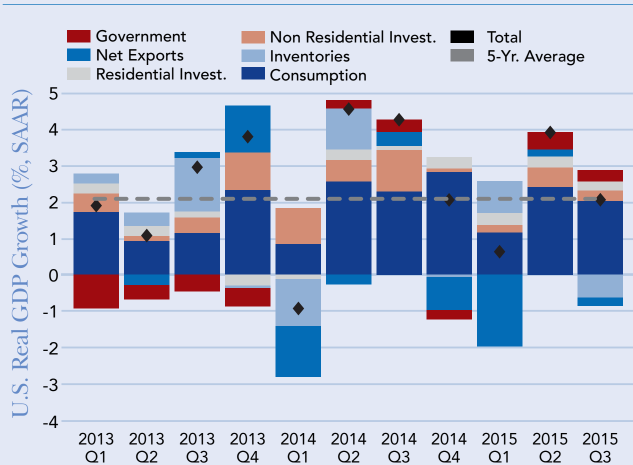
Indices from the Institute of Supply Management (ISM) portray an increasing divergence between trends in the service side of the economy and those on the manufacturing side (see Fig. 2.4). A year ago we observed strengthening manufacturing employment and signs of improving production, but the stronger dollar and weaker growth abroad have certainly taken their toll. Net exports have been a drag on growth this year and inventory growth has been less of a tailwind. Domestically, the sharp plunge in oil prices has dried up demand for a variety of equipment related to exploration and extraction, creating an additional headwind for manufacturing activity. The ISM manufacturing index has plummeted to its lowest level since 2009, putting it in recessionary territory.

Conversely, the services side of the economy has been trending higher with the nonmanufacturing index comfortably in expansionary territory. Since services account for the vast majority of U.S. gross domestic product, a deceleration or even modest contraction in manufacturing should not be too disruptive as long as services continue to grow.

Employment keeps rising

As in past years, much of our economic analysis is centered on job creation, which ties in a direct way to demand for real estate space. It gives us a relatively reliable and high-frequency read on economic conditions. Year-over-year employment growth as of November 2015 modestly slowed, but was still healthy at 1.9%, or more than 2.6 million jobs. Fundamental slowing in some areas of the economy,

Fig. 2.3
Real GDP Growth & Drivers



Source: U.S. Bureau of Economic Analysis

Fig. 2.4
Institute for Supply Management Indices

Source: Institute for Supply Management

particularly in goods-producing sectors (see Fig. 2.5), certainly had a role in holding back the pace of job growth versus a year ago. But tightening labor market conditions are an obstacle to higher growth as well, with headline unemployment at just 5.0%.

> "The last time initial unemployment claims were near this level was late 1999 and you would need to go back to the 1970s to find a lower level."

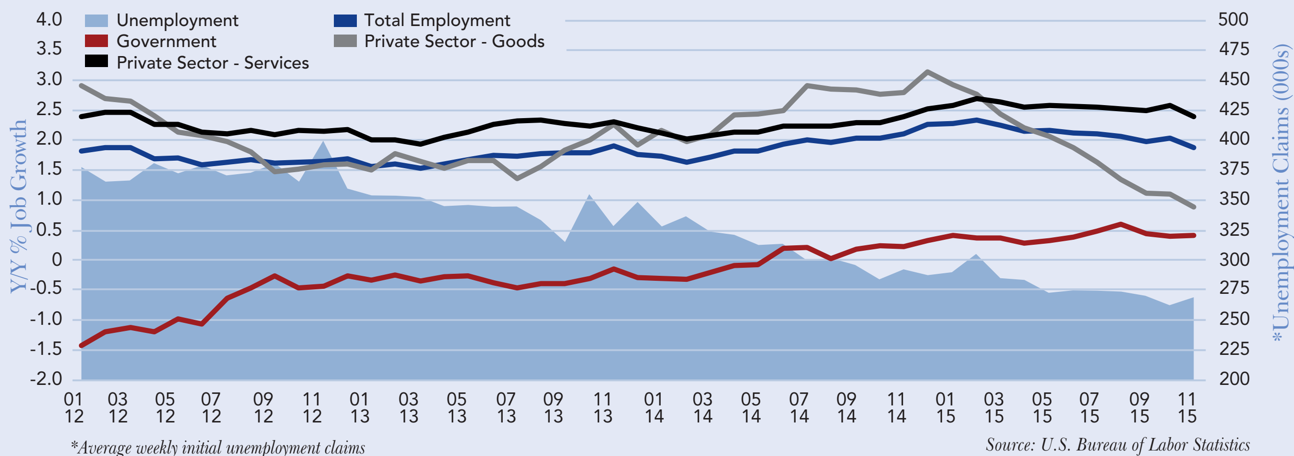
Figure 2.5 shows initial unemployment claims trending to extremely low levels. In fact, the last time claims were near this level was late 1999 and you would need to go back to the 1970s to find a lower level. The U.S. is at, or near, a level most economists would call full employment, a condition that is having positive implications for wage growth, household formation and consumer spending.

Clearly not all sectors are created equal in terms of their performance over the past year, or even through the recovery and expansion for that matter. Greater detail on employment performance is provided in Figure 2.6. The U.S. economy still employs 13.2% fewer construction workers than it did prior to the Great Recession, while healthcare employment has expanded by 18.1% from its prerecession level and education is not far behind, at 16.9%. Education and healthcare have been the stalwarts of the U.S. economy throughout this cycle and collectively they have shown a modest increase in momentum versus a year ago. Healthcare in particular has been among the fastest-growing sectors in the U.S. over the past year.

From a real estate investment perspective, it has been prudent to target locations that have high exposure to major education and healthcare institutions. We believe this is a strategy that will hold true through cycles, given the stability of these jobs and the ancillary benefits they provide to other areas of the economy.

Education is big business in metros such as Boston, New York and San Francisco, which "export"

Fig. 2.5
Labor Market Trends



education with increasing frequency. The U.S. issued nearly 596,000 F-1 student visas in 2014, compared to just 219,000 in 2004. We highlighted the meteoric rise of foreign born population in the U.S. in last-year's issue of Perspective and the surge in student population has been a key component of that growth. Beyond their consumption of education services, these foreign students are also a meaningful generator of housing demand and retail sales.

Perhaps more importantly, however, these students become a significant source of labor, primarily in the metros where they attended school, but on occasion they migrate to other parts of the country. The aforementioned markets have experienced strong growth in innovative technology industries and available labor to fuel these gains has become scarce. Through the optional practical training (OPT) allowed for in the student visa program, metros can leverage the steady flow of graduates from their schools as local employers sponsor these students as temporary employees.

In particular, students graduating with science, technology, engineering and math (STEM) degrees have been encouraged to remain in the U.S. after graduation by an extension of the OPT program that allows them to work for 29 months after graduation (compared to 12 months in non-STEM fields; additional extensions are currently being considered for STEM students). About 38% of active foreign students are in STEM fields and the top three majors of foreign STEM students are engineering, computer and information science, and biological and biomedical research. Unlike the H-1B visa program there is no formal limit on the number of student visas that can be issued or the number of students that can be authorized to remain in the U.S. under the OPT program.

Fig. 2.6
Employment Growth by Sector

	Nov. 2014 Y/Y Change	Nov. 2015 Y/Y Change	Current vs. Prior Peak
Growth accelerating versus a year ago			
Federal Government	-0.5%	0.6%	0.3%
Healthcare	2.1%	3.2%	18.1%
Financial Activities	1.6%	1.8%	-1.1%
State & Local Government	0.3%	0.4%	-2.1%
Education	1.6%	1.7%	16.9%
Information	1.2%	1.2%	-7.6%
Growth decelerating versus a year ago			
Retail Trade	1.8%	1.8%	1.4%
Leisure & Hospitality	3.1%	2.9%	13.2%
Total	**2.1%**	**1.9%**	**3.3%**
Professional & Business Services	3.4%	3.1%	10.7%
Wholesale Trade	1.8%	1.3%	-1.6%
Construction	4.7%	4.2%	-13.2%
Other Services	1.7%	1.0%	2.5%
Transportation & Utilities	3.3%	1.9%	4.8%
Manufacturing	1.7%	0.3%	-10.3%
Natural Resources & Mining	4.7%	-13.5%	5.8%

Source: U.S. Bureau of Labor Statistics

> "Professional and business services employment is now almost 11.0% greater than it was prior to the recession."

Growth trends in education and healthcare certainly correlate to the rise in foreign students in the U.S., but the impact of foreign students, including those in the OPT program, is undoubtedly felt in a variety of sectors. In particular a range of subsectors within professional and business services have leveraged both OPT labor and the H-1B visa program to perpetuate their very healthy growth. We provide more detail on trends in these subcomponents in the office market section of this report, but at a high level it is clear that professional and business services is still a significant source of growth in the overall economy. Although the pace of growth in this sector has eased somewhat from a year ago, it is still quite strong at 3.1% year-over-year as of November 2015. Professional and business services employment is now almost 11.0% greater than it was prior to the recession.

The greatest array of technology-related jobs fall under professional and business services and metropolitan areas that have emerged the strongest from the Great Recession are generally those with significant exposure to these fields. Austin, the Bay Area, Denver and Raleigh, among others, have all outstripped the national expansion at least in part due to their success in technology-related fields.

It also remains to be seen how well the Bureau of Labor Statistics is actually tracking many of the jobs created during this expansion. This is particularly true as technology helps fuel a significant rise in independent workers and what has become known as the "gig-economy" where workers are able to perform tasks when they want for as much time as they want, often connected to customers through some type of technology-based intermediary (e.g., Uber drivers and the Uber mobile application). Capturing all of these workers, assigning them to appropriate employment sectors, and correctly classifying them as fulltime or part-time is undoubtedly a data collection challenge that will potentially lead to greater revisions to employment data in the years ahead.

Goods-producing sectors, which include natural resources and mining, construction and manufacturing are actually a mixed-bag in the U.S. Natural resources and mining is contracting severely along with energy prices, but the sector grew so quickly in recent years that this contraction still leaves employment nearly 6.0% higher than it was prior to the recession (see Fig. 2.6).

> "Homebuilders have recently noted their concerns about the scarcity of available labor."

Despite losing a bit of momentum versus 2014, construction was the fastest growing major sector in the country during the year ending in November 2015, at 4.2%. Rising levels of residential and commercial construction, along with major public infrastructure projects, are helping to spur this growth. Construction employment remains further below peak than any other employment sector, however, and the downturn in this sector was severe enough to drive away some prospective workers. Homebuilders and general contractors have recently noted their concerns about the scarcity of available labor.

Given trends in the ISM manufacturing index, it should come as no surprise that manufacturing is a weak spot in the employment picture. After posting respectable gains in 2014, the sector barely grew year-over-year as of November 2015. The secular decline of manufacturing employment in the U.S. shows no signs of reversing, with current manufacturing employment more than 10.0% lower than it was prior to the recession. The strong dollar and weak performance of major U.S. trading partners will continue to hinder growth in 2016.

It is evident that, while a few sectors are struggling, the U.S. is seeing broad-based employment gains. Even sectors such as government, which was hurt

by sequestration, and financial activities, which was slow to emerge from the financial crisis, have been somewhat resurgent in recent months. While far from fast-growing, these sectors have seen some acceleration in hiring. In particular, financial activities has ramped up of late and, as we will discuss in greater detail in the office market section, there are a number of components within this sector performing very well. Office landlords should reap the benefits of this growth in 2016.

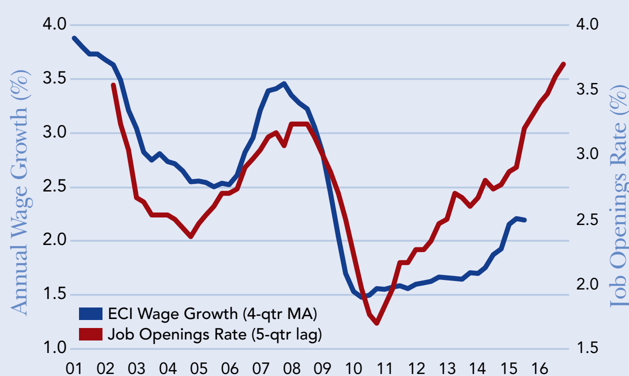
Labor market trends drive wage inflation

When unemployment declines, employers find it more difficult to hire, job openings rise and upward pressure is placed on wages. We noted in last year's edition of Perspective that wage growth was already occurring in markets that regained their prior employment peaks earlier in the recovery. San Francisco, Seattle, Houston and Austin, among others, saw wages outpace inflation between the end of 2007 and mid-2014. This trend continued in 2015 with more markets experiencing accelerating wage growth, including Portland, Raleigh and Oakland. These examples demonstrate the strong correlation between innovation-driven economies and substantive wage growth during this cycle.

National data indicate that wage growth, as measured by the Bureau of Labor Statistics' Employment Cost Index, has not been as strong as expected given the high level of job openings. Figure 2.7 shows a nearly 80% correlation between wage growth and jobs openings 18 months prior since 2002, but that relationship has not been as strong in recent years. The dramatic ramp up in job openings, depicted in Figure 2.7 as job openings as a percent of total employment plus job openings, would seem to indicate that wage growth will accelerate. Adding further support to this expectation, the net percentage of respondents to the November 2015 NFIB survey that plan to increase wages rose to 20%, the highest level since 2001. Interestingly, the survey's headline indicator, small business optimism, has been trending down this year, but due to labor constraints small businesses are increasing salaries to attract and retain the best talent.

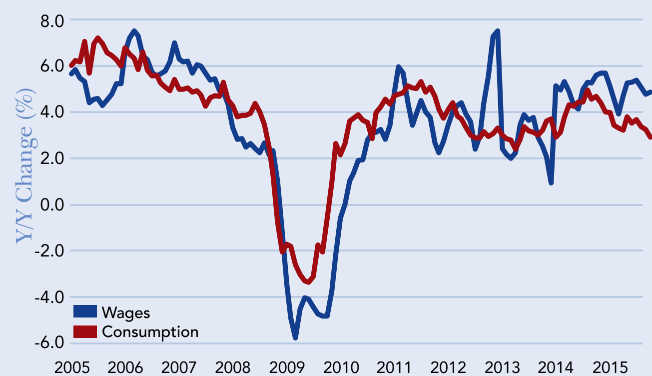
Strengthening wage growth bodes well for consumer spending, which has also been lagging. Using Bureau of Economic Analysis data on monthly personal income and outlays in Figure 2.8, we see consumption growth has been well correlated with wage growth. Starting in 2014, however, there seems to be a considerable disconnect. Here again, we expect the data to

Fig. 2.7
Job Openings and Wage Growth



Correlation = 0.8 *Sources: U.S. Bureau of Labor Statistics, Moody's Analytics*

Fig. 2.8
Wage Growth and Consumption



Source: U.S. Bureau of Economic Analysis; Monthly Personal Income & Outlays

fall back in line with its historical relationship and consumption growth should rise along with wages.

Housing demand will remain an economic driver

Lower homeownership rates and weaker household formation for most of the recovery and early expansion have undoubtedly held back consumption. But improving trends in the housing market should help spur faster consumption growth in 2016. We do not expect a significant reversion to higher homeownership rates, but increased housing construction and home buying as the economy grows should yield more spending.

Additionally, overall household formation has picked up recently, driving strong housing demand. We discuss household growth more fully in the apartment section of this report, but household formation rates have been abnormally low for young adults under the age of 35, suggesting household growth has the potential to strengthen significantly as economic prospects improve for this younger cohort.

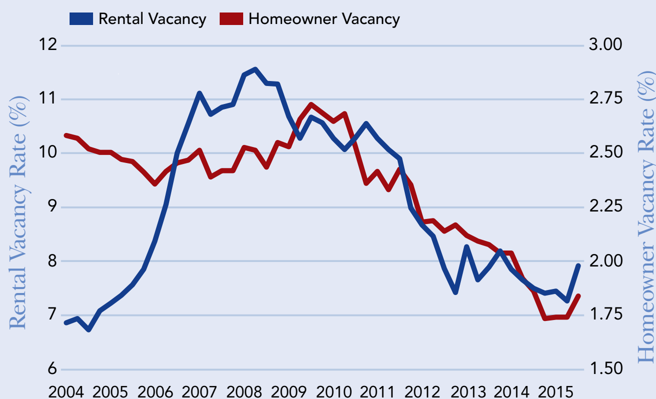
Whether they are living at home with their parents or in multiple roommate situations, Millennials have been slower to form households than past generations. Undoubtedly, economics are at play here as young people struggled considerably during the Great Recession and in many cases stayed in school due to poor job prospects. When this generation starts forming households in earnest, resulting in its members renting their first apartment or even buying a home, they will need to consume more, particularly as they shift into other phases of their lifecycle, which may include marriage and children, albeit at older ages than past generations. These dynamics bode well for apartment demand and consumer spending.

Vacancy trends reflect very healthy housing demand and also the considerable supply shortage that has developed since the end of the recession. Figure 2.9 shows both rental and homeowner vacancy rates are well-below their cyclical highs and are relatively unchanged versus a year ago. These measures are based on a sample that is intended to reflect the entire national housing market, unlike the vacancy rates for more institutional grade rental product that we will discuss later in this report. The data are subject to revision and therefore we do not read too much into the higher third quarter 2015 numbers, but the longer term trends are clear. In fact, even going back to a 20-year average, current vacancy rates are low.

> "Housing starts are lagging well behind new demand."

Continued growth in housing demand is supporting higher home prices, which is an important contributor to consumer confidence and household wealth. Lackluster stock market trends – after an extended period of stellar gains – may not have given households much of a boost in 2015, but home prices certainly did.

Fig. 2.9
U.S. Housing Vacancy

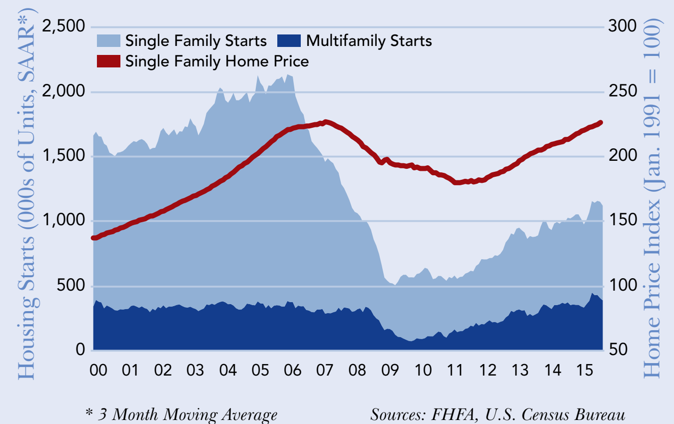


Source: U.S. Census Bureau

Figure 2.10 shows home prices, as measured by the FHFA Purchase-Only home price index, now exceed their prerecession highs. Construction has increased for all types of housing as apartment and home values rise, but housing starts have only ramped up to a pace of about 1.1 million units per year, compared to the more than 1.7 million unit average per year during 2000–07. Annual household growth reached closer to 1.7 million during the year ending in September 2015, so current starts are lagging well behind new demand.

In September 2015, the Federal Housing Administration's insurance fund reached its capital reserve requirement for the first time since 2009. This is another indicator of the housing market's recovery and could prompt the backer of low down payment mortgages to reduce its fee further. The FHA loan fee dropped from 1.35% to 0.85% in January 2015. Prior to the recession the fee had been just 0.6%. In general the availability of consumer credit, including residential mortgages, seems to be improving and lending standards on mortgages are loosening somewhat, according to the Federal Reserve's Senior Loan Office Survey. We do not expect these trends to precipitate a dramatic return to higher homeownership rates, but they are a positive sign for the economy in general and the housing market and housing related consumer spending in particular. •

Fig. 2.10
U.S. Home Prices and Housing Starts



** 3 Month Moving Average* *Sources: FHFA, U.S. Census Bureau*

Outlook

In this publication a year-ago we discussed how average annualized real GDP growth approached 5.0% in the second and third quarters of 2014 (which was later revised down to 4.4%). In 2015, preliminary data show the same two quarters averaging 3.0%, after just 0.7% growth in the first quarter of the year. Momentum is slower than it was a year ago and global risks remain amplified, but in many respects the current pace of economic growth could turn out to be just right. Domestic economic conditions are very healthy; from the labor market to housing, most indicators point to additional growth.

The economy is far from overheating and inflation is tame, which should ensure the Fed will avoid aggressive interest rate hikes that could abruptly halt the current expansion. A slow and steady approach to interest rate increases is consistent with our expectation for moderate economic growth. Risks over the next year are largely associated with geopolitical turmoil and tenuous global economic growth. In particular, concerns about growth in China have spooked investors recently even though U.S. exports to China are equal to only about one percent of GDP. We maintain a favorable outlook for the U.S. economy in 2016 and commercial real estate fundamentals should strengthen further as a result.

Technology Drivers & Disruptors

The impacts of technology on real estate are vast and more pervasive now than ever before. Technology is changing the way that people, companies, retailers, manufacturers and logistics providers utilize space. It also brings goods, services, experiences and the necessities of life more directly to the consumer.

Technology's pace of advancement is quickening at almost lightning speed. For example, while it took 75 years before the telephone had 50 million users, radio took 38 years, television 13 years and cellphones 3 years. Candy Crush, a game played on mobile devices, by contrast, took just 3 days to reach 50 million users! Similarly, in 2003, there were 0.08 connected devices for every person in the world, whereas by 2008, there was one connected device for every person. By 2015, we had reached 3.47 connected devices per person. By 2020, the number of connected devices should more than double, reaching almost seven devices per person, according to various sources.

> "Over time, big data will heavily influence how we live, eat, shop, work and play and most of us will never even realize it."

One implication of this rapid increase in the number of connected devices is the tremendous amount of consumer data being generated. Firms have only scratched the surface in terms of "big data" analysis, but increasingly it is enabling them to manufacture and market goods and services based on consumers' actions and desires. Over time, big data will heavily influence how we live, eat, shop, work and play and most of us will never even realize it.

Fast fashion is one outgrowth of the use of big data. Using data collected from website visits and advertisements, retailers can create goods targeted at different behaviors and views. If, for example, Americans in the South are focused on pictures of a celebrity with a certain red blazer, a fast fashion retailer can copy that red blazer's design, have it manufactured in Asia and delivered directly to the customer just six to eight weeks after it first appears. Meanwhile, if Californians are focused on another celebrity's yellow sweater, the fast fashion retailer can design and ship those goods on a similar timeframe. Utilizing big data and more efficient supply chains, retailers are able to more rapidly cater to customer preferences.

Amazon was one of the early pioneer's in collecting and analyzing big data. Amazon has also been at the forefront of another technological revolution that promises to change the demand for real estate, robotics. In March 2012, Amazon acquired Kiva Systems, a robotics company. Amazon currently utilizes Kiva robots at all 10 of its "eighth generation" fulfillment centers. There are 3,000 Kiva robots at Amazon's Tracy, CA fulfillment center to bring goods to employees who then pick materials and pack them onto moving compartments driven by other Kiva robots. Amazon also envisions the use of flying robots, or drones, to bring items to customers, but a number of obstacles, including FAA regulations, stand in the way of this technology seeing commercial use.

Google Ventures' SAVIone robot is being introduced to Aloft hotels, where it brings items ranging from toothbrushes to room service meals directly to the customer's room. Similarly, some healthcare providers, such as Massachusetts General Hospital, have begun utilizing robots to distribute meals and medicines to patients. News surfaced in 2015 that the government of Japan is offering subsidies aimed at spurring the development of robots to help care for its growing elderly population.

Robotics will likely reshape many aspects of our daily lives. However, in most cases, robots still require significant human support. Over the next five or ten years, it is unlikely that robots will fully displace workers; however, they will result in increased efficiency and faster delivery, while creating the need for fewer workers. Robotics will likely have the biggest impacts in the medical, manufacturing, hospitality and transportation industries.

> "Robotics will likely reshape many aspects of our daily lives."

Perhaps the single greatest way that robotics will change our lives over the next decade or two will be the commercial introduction of driverless cars. Driverless cars are, effectively,

very sophisticated robotic devices. Driverless cars are likely to ease global gridlock, allow cities to become denser, change where people live, improve the environment and lessen commute times by increasing the effectiveness of traffic flows. It is estimated that 20% of urban land is comprised of space to park vehicles. Moderate to widespread adoption of driverless vehicles could significantly boost the developable area within central business districts. Further, driverless vehicles would create significant changes in how and when goods are shipped.

Information and connectivity are also the hallmarks of the new sharing economy, which is already changing the ways that people consume temporary lodging and transportation and how they function in many other aspects of their day to day life. The sharing economy is expanding rapidly, and applications have recently been introduced that facilitate the sharing of parking spots, cars, bikes, unused office space, storage space, pet care and daily tasks, such as picking up dry cleaning and running errands. The sharing economy threatens to disrupt many industries, especially those in the hospitality and service categories.

3D printing is another technology that may greatly change our society and how we utilize real estate. Many goods can be created utilizing 3D printing. In fact, the body of the SAVIone robot is 3D printed. In China, they have even created a house utilizing 3D Printing. An advantage of 3D printing is that goods can be easily customized. This is especially helpful if one has to create a prototype and/or replace a broken or missing part. 3D printing will not only streamline the production of goods, but it may also lessen the need for manufacturing workers. On a positive note for employment, 3D printing is likely to encourage entrepreneurship and boost demand for the designers and programmers who will harness this technology.

Technology is creating an increase in urban populations, as people cluster together to exchange information and ideas. It is estimated that the global urban population increases by 1.5 million people every week. Connectivity and superior access to the internet are becoming ever more important. This is resulting in new technologies aimed at connecting people and businesses. In early January 2016, New York City began beta testing its LinkNYC kiosks, which provide wireless access of up to one gigabyte per second over a 150 to 300 foot range, free domestic calling, a dedicated emergency call button, USB charging ports and a touchscreen with helpful applications. The city has already installed two of these aluminum towers, with plans for 4,550 installed over the next four years and 7,500 by 2024. Advertising revenue from these kiosks is expected to generate over $200 million in annual revenue for the city.

Technology is also changing how education and information are delivered. The internet allows access to all types of information, much of which was previously only accessed through high schools, colleges and universities. Harvard, MIT, Yale, UC Berkeley, Stanford, University of Pennsylvania, Notre Dame, Oxford, and hundreds of other universities and colleges offer free online access to lectures by some of their top professors. Online educational resources, such as

Technology Disruptors: 3D Printed Homes

Technology Drivers & Disruptors

Codeacademy, Khan Academy and Skillshare, allow users anywhere to learn to write code for little to no money. Technology will reduce the barriers and costs associated with educating and training workers for jobs in the new economy as technological innovation reduces the need for less skilled workers.

All of these technologies, plus a number of others, have led to rapid growth in STEM (science, technology, engineering and math) employment and in the rise of technology as America's primary growth engine. Significant investment and wealth have been created alongside the hope that these technologies are poised for exponential growth. Many of these new technology firms are private companies that have been funded by venture capital firms, high net worth investors, private equity firms and the like. Investment analysts have nicknamed private companies with valuations of $1 billion or more "Unicorns."

According to CB Insights, there were 144 "Unicorns" with a cumulative valuation of $525 billion at the end of 2015. The most highly valued of these, one and a half year-old, Uber, had a valuation of $51 billion. Fourteen firms had a valuation of $10 billion or more and seven had a valuation of $5 to $9.9 billion. Mutual funds, banks, sovereign wealth funds and hedge funds have recently begun investing in these start-ups as well, and more than two-thirds of Unicorn companies now have one or more such investors. All of this capital flowing into technology start-ups has caused some to question whether we are in the midst of a technology bubble that could rival the 1998-2001 dot.com bubble.

While private market valuations are incredibly high and there are some signs that many of these values will not hold up, this cycle is different in many ways from that of the dot.com era. First, most (but not all) of these companies have proprietary technologies, are creating products and services that the market desires and are generating revenues. Second, public sector valuations are not nearly as high as they were during the go-go days of the late-1990s. As of year-end 2015, the P/E of the technology sector was 23.8. By contrast, in March 2000, technology companies had a mean P/E ratio of 156. Third, the current technology boom is much more multifaceted and is not as one dimensional as was the dot.com boom, which primarily focused on online retailing.

There are, however, significant risks. Firstly, private market valuations are incredibly high and recent evidence suggests that many of those valuations may not materialize when and if the firms go public. In 2015, just five Unicorn companies

Fig. 2.11
CBInsights $10 Billion+ Unicorn Companies

Company	Valuation (bil.)	Date Joined	Country	Industry
Uber	$51	Aug. 2013	United States	On-Demand
Xiaomi	$46	Dec. 2011	China	Hardware
Airbnb	$26	Jul. 2011	United States	eCommerce/Marketplace
Palantir Technologies	$20	May. 2011	United States	Big Data
Snapchat	$16	Dec. 2013	United States	Social
China Internet Plus Holding	$15	Dec. 2015	China	eCommerce/Marketplace
Didi Kuaidi	$15	Dec. 2014	China	On-Demand
Flipkart	$15	Aug. 2012	India	eCommerce/Marketplace
SpaceX	$12	Dec. 2012	United States	Other Transportation
Pinterest	$11	May 2012	United States	Social
DJI Innovations	$10	May 2015	China	Hardware
Dropbox	$10	Oct. 2011	United States	Internet Software & Services
Lufax	$10	Dec. 2014	China	Fintech
WeWork	$10	Feb. 2014	United States	Facilities

Source: CBInsights, Data as of January, 2016

went public. Of those five, Box and Square's IPO prices were 30% and 40% below their last private valuations, respectively. Similarly, just four companies with a valuation of $1 billion or more were acquired in 2015, and half of those sold at significant discounts. Separately, as reported by the Wall Street Journal, Gilt Groupe is in talks to be purchased by Hudson Bay for approximately $250 million, which is a fraction of its $1.1 billion valuation and short of the $268 million that had been previously raised from private investors. Given the weak market for new technology IPOs and the less than inspiring results of some of the most recent IPOs and mergers and acquisitions, it appears that there are downside risks related to many of these private market valuations.

This, in turn leads to a secondary risk. Whereas venture capital, private equity and hedge funds only report their valuations quarterly, and many agree that these valuations are often less than perfect, mutual fund companies and banks are required to update their valuations in real time. With mutual fund operators such as Wellington, Fidelity, T. Rowe Price, Blackrock and others now investing in the Unicorn companies, they may find it difficult to value these assets and may not have the staying power of some of the traditional venture capital and private equity players.

These valuation risks are real, and if they come to pass, they will have negative impacts on the technology sector and on the economy as a whole. That being said, we believe that the future bears well for the need for technology and for the demand for new technologies. Over time, developed economies will become more and more reliant on technology driven growth. It will fuel their economies' ability to expand in the face of low to moderate population growth and emphasis on service-related employment.

The biggest challenges to this technology revolution are likely to be the following:

1. Short-term disruption from overly bullish private sector valuations
2. Current limitations on battery technology
3. Broadband accessibility
4. Laws and regulations at the local, state and federal levels

None of these challenges are likely to interrupt the growth in technology, although each may slow it at points. Investors are rapidly becoming wary of the sky high valuations in the private markets, and some are starting to take a more cautious approach. Numerous companies, led by Tesla, are focused on the ability to greatly expand battery capacity and are focusing on new and improved methods to capture and store electricity. Innovative technologies such as LinkNYC will continue to expand and will go a long way to improving broadband access that is so very necessary to be successful in the technology economy. Finally, laws and regulations must be adapted to deal with and to properly regulate these technologies. In some cases, such as drone technology, it will likely result in severe restrictions on the commercial acceptance and marketability of goods and services, whereas other industries and technologies, such as online education, will likely benefit from government assistance.

> "Real estate owners must adapt as technology transforms both our economy and the profile and space usage demands of tenants."

Real estate investors must be cognizant of how technology is affecting space usage. Technology companies tend to grow very quickly and their credit is uncertain. Many have short life cycles. As real estate owners, it is important to carefully control spending on tenant improvements and to utilize those monies where they can best be re-used by the next tenant. Creating open, flexible spaces is just one answer. Owners can also attract and profit from these firms, which are often smaller with limited resources, by offering and charging for building amenities such as conference floors and break-out rooms. Real estate owners must adapt as technology transforms both our economy and the profile and space usage demands of tenants. Technology will create both potential for growth and challenges along the way. Smart, successful owners will continually use creative solutions to innovate and address these changes as they occur.

475 Sansome Street
San Francisco, CA

Capital Flows & Strong Fundamentals Drive Values

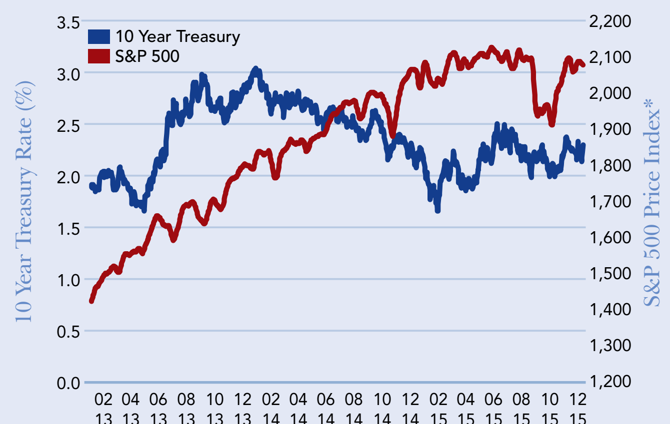
Capital markets were steeped in "New Normal" or "low for long" economic conditions throughout 2015. Slow global growth, low inflation, low oil prices and geopolitical risks forced most central banks to stimulate. However, the Fed divergently scaled back its accommodative policies as the U.S. economy continued to progress toward full employment. As a result, a wall of capital has found its way to the U.S. in search of higher yields and a "safe haven."

> "A wall of capital has found its way to the U.S. in search of higher yields and a *safe haven*."

During 2015, 10-year U.S. Treasury rates responded rapidly to market conditions introducing periods of short-term volatility (see Fig. 3.1). Declines followed the release of weak economic data while increases followed the announcement of stronger expectations, as well as potential Fed action. The 10-year U.S. Treasury traded generally in the 2.0% to 2.5%-range, well above most other sovereign debt levels, but this flight to quality kept U.S. Treasury rates very low. Global divergence in interest rates, however, has also strengthened the U.S. dollar relative to other currencies and introduced some short-term weakness in corporate earnings and raised stock market volatility.

In light of this current low-yield and uncertain environment, global investors have been drawn into alternative asset classes, such as commercial real estate. Strong and improving fundamentals in the sector have supported income growth enabling direct equity real estate investors and lenders to achieve attractive yield spreads over risk-free rates. In addition, the heavy and persistent weight of investor capital into real estate has contributed to cap rate compression and property value appreciation.

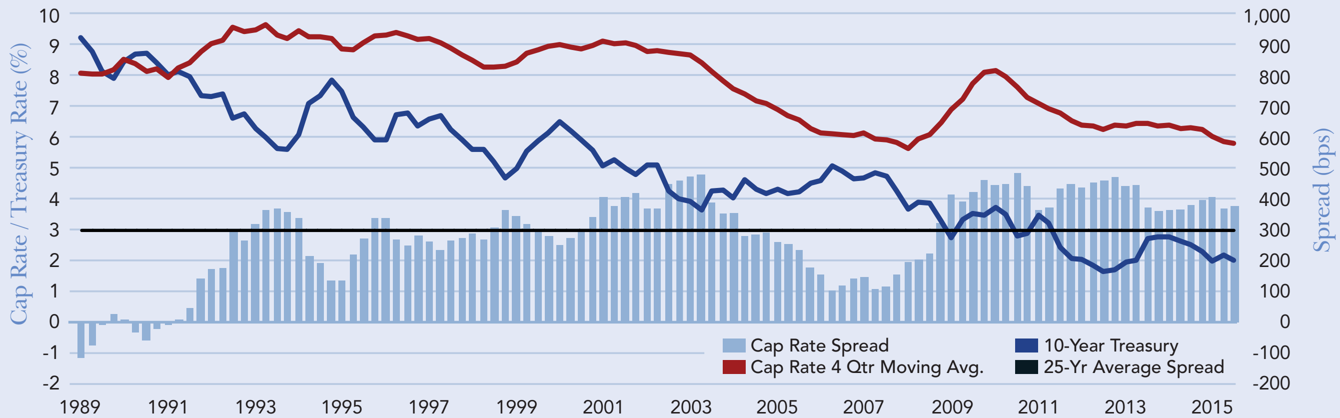
Fig. 3.1
Daily 10-Year Treasury Rate and S&P 500 Price Index



* 10 Day Moving Average

Sources: Standard & Poor's, U.S. Federal Reserve, Moody's Analytics

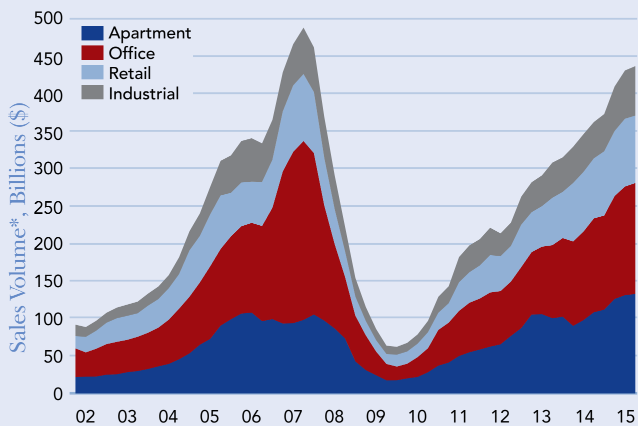
Fig. 3.2
U.S. Cap Rate Trends Relative to Treasuries



Sources: NCREIF (transaction-based cap rates), Federal Reserve, Moody's Analytics

As of 3Q 2015, average cap rate spreads over risk-free for core/core plus properties as represented in the NCREIF transaction-based series (see Fig. 3.2) remained above long-term historic levels. Spreads were even more amplified upon review of a broader cross section of the market provided by Real Capital Analytics which also included additional smaller and secondary market assets. Given these relatively large spreads, cap rates should be able to absorb any near- and medium–term interest rate uplift while preserving asset values. In addition, property net operating income is expected to grow as the economy continues to improve and supply and demand remain in balance, further supporting property value stability.

Fig. 3.3
U.S. Transaction Volume by Property Type



** Rolling 4 Quarter Total Investment Activity Source: Real Capital Analytics, Inc.*

According to Real Capital Analytics, transaction volumes through 3Q 2015 were up approximately 21% year-over-year on a combined basis across all property sectors, although the rate of increase decelerated through the year. The apartment and industrial warehouse sectors were notable standouts leading growth in transaction activity largely via portfolio and "mega" deals involving domestic private equity, sovereign wealth funds and other foreign investors. Although it increased over the prior year, retail transaction volume was the obvious laggard. Retail property sales momentum was healthy in the largest U.S. markets, but investors seemed to shun secondary locations, particularly as the evolving retail landscape created challenges for brick-and-mortar retailers (see Fig. 3.3 and Retail section).

Foreign investors, particularly Asian capital, continued to represent some of the most aggressive buying behavior, targeting core assets across North America, particularly in gateway markets. Total cross-border real estate investment activity in the U.S. reached record levels, according to Real Capital Analytics. Domestic private equity managers such as Blackstone, Carlyle and TPG have been very active raising record levels of capital for new funds targeted for both domestic and other global markets. In addition, as publicly-traded REIT shares have been trading generally at discounts to their NAVs due mostly to the anticipation of higher interest rates, private equity players have exploited these discount opportunities to accumulate quality properties. For instance, Blackstone acquired hotel REIT, Strategic Hotels and Resorts, Inc. (NYSE:BEE) and life science and biotech landlord, BioMed Realty Trust, Inc. (NYSE:BMR). This growing flow of capital to real estate is gravitating toward stabilized assets that offer modern functionality along with rent rolls possessing both credit and term.

Fierce competition for the "best" (and even second-best) assets continued to force other investors to the sidelines or to migrate up the risk spectrum toward alternative commercial real estate sectors and investment styles in search of a less competitive field and the potential for higher initial yields and alpha generation. In spite of the anticipation of higher interest rates, today's relatively low interest rates, combined with a competitive lending environment, continue to provide attractive opportunities for investors to utilize positive leverage, especially with regard to value add and/or secondary market investments. These opportunities however, may diminish as borrowing costs rise during the slow but anticipated uplift in interest rates during 2016 and beyond.

During 2015, target allocations to real estate were increased by a broad cross section of institutional investors. Billions of investment dollars have been targeted by pension funds and their advisors for not only primary but also non-core, secondary market opportunities – even foreign capital has begun to venture into these opportunities. A major takeaway within Emerging Trends in Real Estate 2016 identifies the efforts by, "… global as well as domestic investors casting wider nets as they look at U.S. real estate markets…. expressing growing confidence in (their) potential investment returns."

Underpinning this investment thesis has been improving market fundamentals in a growing number of areas, particularly in tech-driven and knowledge-based economies or "learned locales," but also other locations experiencing housing sector recoveries. The decline in oil prices to well-below $50 per barrel has weakened real estate fundamentals within energy-driven economies, particularly Houston. In contrast, lower fuel prices combined with a strong U.S. dollar have begun to translate into a net positive for consumers benefiting the retail, industrial distribution and hotel sectors, in particular; however, this benefit has been somewhat subdued by an upward trend in the personal savings rate. The remaining regions still experiencing stagnant or slightly improving conditions due to weak and/or early-stage employment growth continue to become fewer in number, as additional locations gain momentum in their recoveries.

> "The rush of capital along with healthy fundamentals contributed not only to heightened transaction activity but also to continued property value increases."

The rush of capital along with healthy fundamentals contributed not only to heightened transaction activity but also to continued property value increases across most sectors. Figure 3.4 highlights the sustained upward trend for commercial property values in general and across sectors, as measured by the Moody's/RCA Commercial Property Price Indices

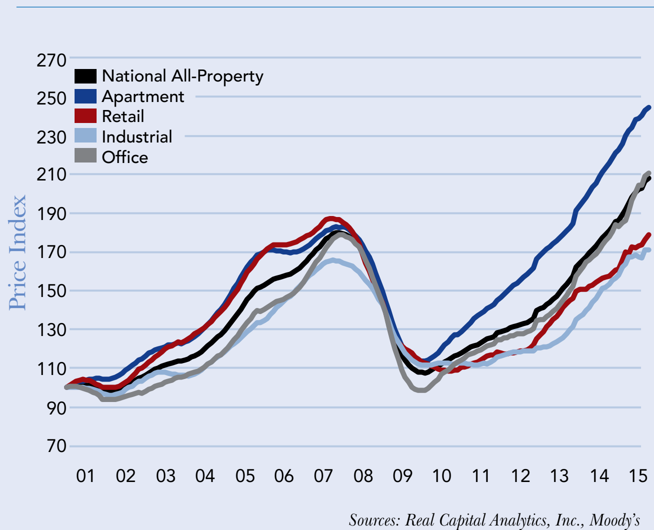
(CPPI). Overall, property values as of September 2015 increased year over year by 15%, a rate in excess of the prior 12 months. Value increases among major markets outpaced all others by almost 7% while the CBD office sector was again the standout performer recording almost a 25% increase year-over-year. Increases in suburban office values significantly trailed their CBD counterparts as the live-work-play appeal of city centers drove rent growth and aggressive investor pricing.

According to the Moody's/RCA CPPI, year-over-year value increases among retail and apartment properties both exceeded 13% while the industrial sector gained slightly less at 11%. This index shows industrial plateauing toward year-end 2015, but it should be noted that industrial value growth as measured by NCREIF was the strongest of the four major property types during the year-ending in 3Q 2015. Capital growth is anticipated to expand into the secondary/non-major ("18-hour") cities as investors search for yield and market fundamentals continue to improve.

According to RCA, sales volume growth in the four major property types was faster outside of the six major markets of Boston, New York, Washington, D.C., Chicago, Los Angeles and San Francisco, but underlying trends were hardly uniform as the six major markets posted faster sales volume growth in the retail and industrial property types, while lagging behind the non-major markets in apartment and office sales volume growth.

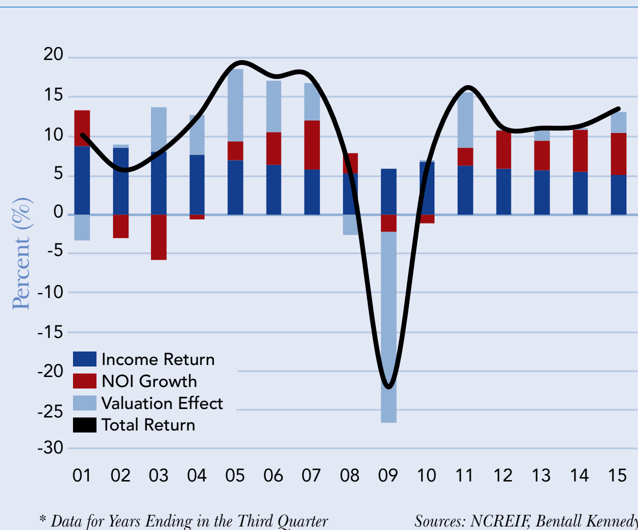
The heavy weight of investor capital combined with healthy market fundamentals have helped to position the U.S. as one of the top performing real estate markets globally, behind only Ireland and the U.K. in total return, according to IPD/MSCI. The NCREIF Property Index for the year ending 3Q 2015 registered a total return of 13.5%, indicating an improvement of over 200 basis points compared to

Fig. 3.4
U.S. Commercial Property Values



Sources: Real Capital Analytics, Inc., Moody's

Fig. 3.5
Decomposition of NCREIF Returns*



** Data for Years Ending in the Third Quarter*

Sources: NCREIF, Bentall Kennedy

the same 12-month trailing results during the 2012 to 2014 period (see Fig. 3.5).

Stable income and NOI growth were the primary drivers of performance over the last year, although cap rate compression continued to exert upward pressure on total returns in most property sectors. The dependence of total return on NOI growth was a concept we first introduced two years ago in Perspective 2014. This trend is expected to continue in the near- to medium-term given historically low cap rates across property sectors. In spite of these low initial yields, capital preservation should be achievable even during a rising interest rate environment due to the relatively wide current spread over risk free and the expectation that rate increases will unfold slowly.

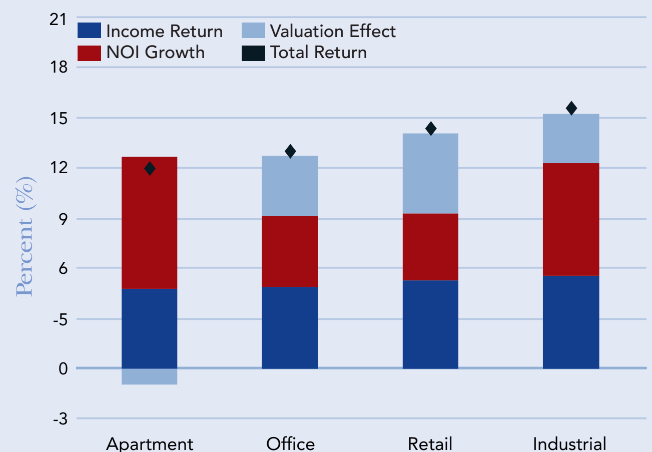
As of 3Q 2015, total returns for all property types achieved a minimum of 12% on a 12-month trailing basis (see Fig. 3.6). Apartments led the way in NOI growth as their demand outstripped supply; however, the valuation effect proved a drag on total return based on the sector's relatively low cap rates. Industrial commanded the highest total return through a combination of strong NOI growth and continued cap rate compression followed by retail and office, which both delivered slightly lower, but similarly balanced composition. As healthy fundamentals persist, stable returns should continue. However, as interest rates initiate their slow ascent, total returns should begin to mean revert with income dominating performance on a total return basis.

Consistent with last year's guidance, we emphasize NOI growth again as the key driver of investment returns for 2016. Healthy fundamentals are anticipated to continue to promote rent growth and stable property operating performances. The outlook for sustained job growth, rising consumer confidence, and accelerating and broadening wage inflation should lend support for solid U.S. commercial real estate performance during 2016. Although cap rates remain near historic lows across all property sectors, current spreads over risk-free rates should allow for interest rate uptick without negatively impacting capital values. We anticipate the Fed to increase interest rates in a gradual and transparent manner during 2016, lending further support to real estate capital preservation.

Beyond 2016, returns should eventually mean revert from low double-digit total returns to more stable, high single-digit long-term averages. Under this belief, income returns of 5% to 7% and capital appreciation proximate to the rate of inflation between 1% and 3% are expected. Further, as the U.S. commercial real estate markets enter later stages we anticipate some investors will rotate into earlier stage geographies in other parts of the globe in search of higher yields – the net effect to slightly decrease but certainly not derail the steady flows of capital pursuing stable U.S. commercial real estate returns. •

Fig. 3.6

Decomposition of NCREIF Returns by Property Type*



*Data for Year Ending 2015Q3

Sources: NCREIF, Bentall Kennedy

300 A Street
Boston, MA

Tight Market Conditions Leading Rents Higher

Consistent with our view that the U.S. economy is fundamentally healthy, commercial real estate space market trends improved further in 2015. Year-over-year as of the third quarter of 2015, vacancy[1] improved in all four major property types and the medical office subtype. Rising employment is translating into additional space demand. Some headwinds persist, and risks relating to global growth are not inconsequential, but in this section of Perspective we will highlight numerous factors that should benefit landlords in the quarters ahead.

Even with significant construction activity, the national apartment vacancy rate is near levels last seen before the 2001 recession. New supply is unlocking pent up demand in many markets. The stellar rent growth achieved in 2015 is unlikely to be replicated in 2016, as construction completions remain strong; but landlords should not be bracing for a decline in rents nationally.

The office market is at an earlier point in the cycle and development presents less of a risk, particularly as hiring in office-using sectors is robust. Vacancy is near 2008 levels and demand has been very strong. Even suburban submarkets have exhibited improvement, although with the surge in population in many urban cores across the country (a trend bolstered by new apartment supply), companies requiring highly-skilled labor are likely to give urban submarkets preference.

Retail and industrial trends are closely linked in terms of drivers, but recent results have been vastly different. According to CBRE-EA, retail availability, which reflects trends only in neighborhood and community centers, fell just 20 basis points over the past year. Industrial availability, by contrast, dropped nearly a percentage point, driving a healthy increase in rents. Ecommerce is a major challenge for brick-and-mortar retailers, while it has propelled a surge in demand for industrial space.

Provided fears relating to economic trends abroad do not deepen, strong labor market conditions and rising wages should boost property fundamentals and rents in 2016. Construction is ramping up in some property types, but a variety of factors should prevent a dramatic acceleration. Conditions are lining up for another year of healthy NOI growth and strong investment performance.

Fig. 4.1
Property Sector Summary Statistics

Property Type	Vacancy*		Year-over-Year Demand	Annual Supply Growth		Year-over-Year Rent
	2015Q3	2014Q3	Growth 2015Q3	2015Q3**	Past 10 Yrs.	Growth 2015Q3
Apartment	4.7%	4.9%	1.7%	1.5%	1.2%	5.1%
Office	13.4%	14.2%	1.9%	0.9%	1.1%	3.8%
Retail	11.3%	11.5%	0.8%	0.5%	1.4%	1.1%
Industrial	9.6%	10.5%	2.0%	1.2%	1.0%	5.6%

*Retail and industrial vacancy rates are availability rates. ** Year-over-year as of 2015Q3

Sources: CBRE-EA, Axiometrics

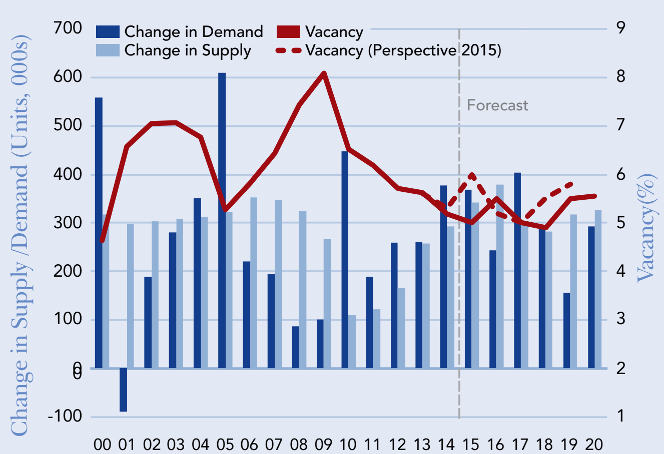
[1] The retail and industrial vacancy rates used throughout this report are availability rates. The availability rate tracks both vacant space and space that is set to become vacant.

Apartment

Overcoming rising worries about new supply, the U.S. apartment market recorded another exceptional year. Vacancy contracted modestly during the year ending in the third quarter of 2015, with Axiometrics reporting a 20 basis point decline and CoStar reporting a 10 basis point decline. Both firms expect vacancy to close 2015 below its 2014 level (see Fig. 4.2). Vacancy is also well-below its prerecession lows. Healthy job creation and accelerating wage growth in an increasing number of markets have helped drive demand for apartments. Construction activity is significant, but with vacancy below equilibrium levels in many metropolitan areas across the country, new product is unlocking pent up demand.

Household formation is a strong barometer for the prospects of all types of housing and, as we mentioned in the Economic Outlook section of this report, recent household formation has been strong. During the 12 months ending in September 2015, year-over-year household formation averaged nearly 1.7 million compared to just under 0.7 million over the prior 12-month period. Household formation is the strongest we have seen since 2006.

Fig. 4.2
Apartment Fundamentals



Source: Axiometrics

According to the U.S. Census Bureau, the 3Q 2015 homeownership rate was 63.7%, compared to an average of 67.2% over the prior 15 years. Today's much lower homeownership rate relative to recent history has significantly boosted the number of renter households. Applying the prior 15-year average homeownership rate to the 3Q 2015 household figure would result in about four million, or roughly 10%, fewer renter households nationally.

The surge in young professionals moving into new rental housing in major urban centers across the U.S. would suggest that this demographic is the primary catalyst for recent apartment trends. This seems particularly true as Millennials enter the workforce in growing numbers and younger households are much less likely to be homeowners today than they were prior to the recession. In reality, total household formation among younger age cohorts has been relatively weak and older households have been a much stronger driver of rental housing demand than anecdotal evidence and prevailing wisdom would suggest (see Fig. 4.3).

The share of households headed by a person 50 years of age or older has increased from its average share since 2000, whereas the share of households headed by a person under the age of 50 has declined. These older households, propelled by the Baby Boom generation who are now all over the age of 50, have also increased their propensity to rent. For example, 23.7% of householders ages 55-64 were renters in 2014, compared with 21.0% in 2010 and 18.8% in 2005.

The result of these trends from an apartment demand perspective is that renter household growth has

been relatively well distributed across age cohorts. We see in Fig. 4.3, the more recent annual increase in renter households for householders ages 55-64 (230,000 per year) has been roughly equal to that of householders under age 35, despite the former being a smaller group in total. To borrow a term often used to describe the impact of older age cohorts on the economy, the "silver tsunami" has had a material impact on apartment fundamentals.

It is difficult to ascertain the living arrangements of these older cohorts, but the fact that there are more people age 18 or older living alone than at any point on record (since 1967), may tie back to the growing number of older households. Population per household is also the lowest on record, using data back to 1940.

Millennials are far from a non-factor in the demand for apartments. Despite weak household formation rates among this younger age cohort, renter households with a householder under the age of 35 increased by an average of 246,000 annually during the 2011–14 period. Further, the youngest Millennial is still only 15 years of age, so this generation should remain a significant source of household growth over the next several years.

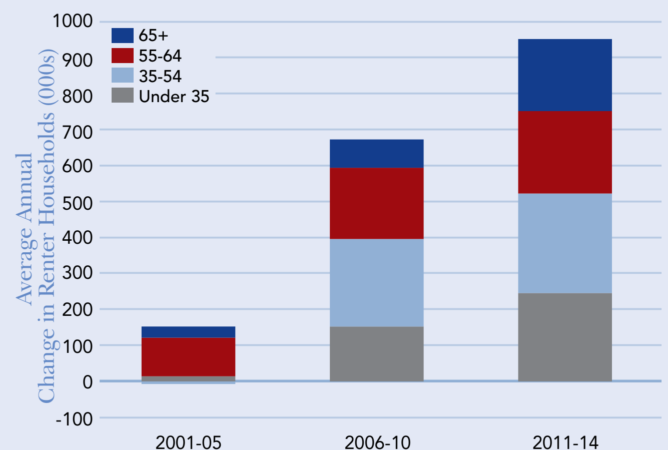
Beyond their early stage in life, data also show young people have a higher tendency to live at home with their parents than they have in the recent past. In 2014, 54.9% or 16.5 million young adults ages 18-24 lived at home with their parents, compared to 51.6% or 14.3 million in 2004. A similar swing was evident in 25-34 year-olds who went from 10.9% or 4.3 million living at home with their parents in 2004 to 14.7% or 6.2 million in 2014.

With additional improvement in the economy and a steady flow of Millennials approaching the age of household formation, the potential exists for this younger group to become a more dominant driver of rental demand. This is particularly true as this group struggles to pay off student loan debt and frequently lacks the down payment and credit history necessary to qualify for a mortgage, contributing to a later transition to the for-sale housing market. Furthermore, many in this generation favor urban living, where desirable for-sale housing product is less plentiful and often out-of-reach in terms of price.

National economic and demographic trends have heavily influenced apartment fundamentals across the country, but, as we noted in the Economic Outlook section of this publication, there are clear differences in performance across the country. Indeed metros that have capitalized on the strong expansion of knowledge-based jobs have tended to perform better than those that lack exposure to these employment sectors.

Fig. 4.3

Renter Household Formation by Age



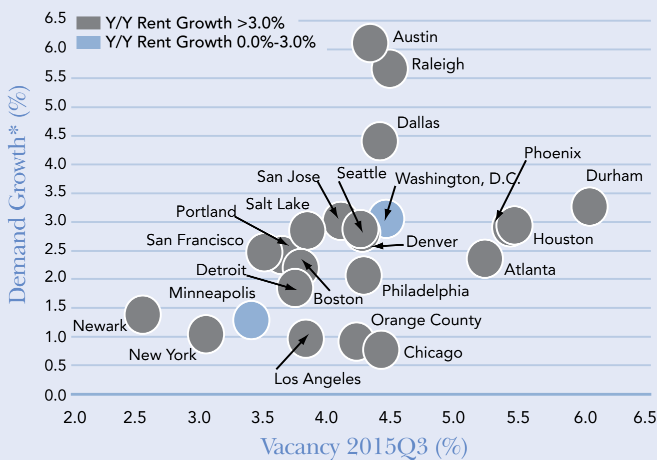
Source: U.S. Census Bureau

Apartment

Figure 4.4 shows a scatter plot of major U.S. apartment markets based on their vacancy level (x-axis) and year-over-year change in demand (y-axis). Rent growth is also indicated by the bubble color. Here we see most of the markets are relatively tight. Axiometrics' third quarter 2015 national vacancy rate was 4.7% and most of the markets shown here fall below that point.

Apartment demand growth is quite healthy across the major U.S. markets, with many seeing demand rise by 2.0% or more over the past year. Among the tighter markets are those that have benefited from the growth in knowledge-based industries, including Boston, New York and San Francisco. Demand growth will increasingly be constrained in tighter apartment markets as housing shortages prevent absorption and ultimately impact hiring and economic growth. We noted in this publication a year ago that companies have a much more difficult time growing in locations where new recruits cannot find housing. So new construction may temper rent growth in some submarkets, but the alternative – stalling economic growth due to a lack of housing – is far less appealing.

Fig. 4.4
Metro Apartment Market Performance



* 2014Q3 to 2015Q3

Source: Axiometrics

Indeed, Austin, Raleigh and Dallas have been the clear leaders in demand growth over the past year and all three have a modestly higher vacancy rate than many other large markets. By comparison, New York's vacancy rate is approaching 3.0%, and year-over-year demand growth has eased in recent quarters from around 1.4% to 1.0%.

Apartment net operating income (NOI) growth has exceeded the other three major property types in each of the past two years as conditions have heavily favored landlords. Healthy NOI growth should continue. Using the latest data through November 2015 from Axiometrics and smoothing it slightly using a three-month moving average, we see in Figure 4.5 that national occupancy has improved slightly over the past 12 months and year-over-year rent growth is just under 5.0%. Substantial occupancy gains are still evident in a number of markets. Occupancy is declining in just over half of the markets shown here, but many of these are among the tightest markets in the country. Notably San Francisco and Oakland experienced some of the strongest rent growth in the country, and occupancy, while lower than it was a year ago, is still north of 96%.

The U.S. economy continues to generate a significant number of new jobs for every multifamily unit developers start. Over the 12 months ending in September 2015, there were 7.1 jobs created for every multifamily housing start. This is not as strong as the 8.6 average jobs per multifamily start over the past five years, but it is much higher than the 4.1 average jobs per multifamily start observed over the past 20 years.

With rental vacancy at its lowest level since 1986 and the homeownership rate below its 20-year average, the favorable alignment of national economic trends and multifamily housing construction should remain a boon to apartment landlords in 2016. Add to this the

fact that single family starts, while rising, remain far below long-term trends, and it is clear the U.S. is still undersupplying housing.

This condition of undersupply exists even in the majority of markets seeing the highest levels of starts relative to renter households. With the exception of Houston, Newark and Raleigh, the rate of job growth continues to outpace housing starts as a percent of renter households. Seattle, Austin and Salt Lake City, which are seeing some of the strongest starts activity relative to the size of their markets, appear to have sufficient job creation to absorb this new supply. The greatest concern is that supply may be over concentrated in some micro-locations within the major markets, but this activity seems unlikely to cause a long-term supply-demand imbalance given the aforementioned trends. A more likely scenario is a temporary uptick in concessions or drop in asking rent as these projects lease-up.

The odds are reasonable that a year from now we will be talking about a minor increase in apartment vacancy, but this will be an increase off of historic low levels. Fundamentals in the national apartment market are unlikely to deteriorate significantly, particularly as construction costs and labor and materials shortages weigh on activity. It is likely that we are near the peak for apartment construction this cycle. Healthy fundamentals and strong NOI growth continue to make apartment investment attractive. But, as we stated a year ago, we think current high pricing on acquisitions tends to make development the more desirable option.

Fig. 4.5
Metro Apartment Occupancy & Rent Trends

	OCCUPANCY			Y/Y EFFECTIVE RENT GROWTH	
	Nov. 2014	Nov. 2015	Change	Nov. 2014	Nov. 2015
Atlanta	94.2%	94.6%	0.4%	7.6%	6.5%
Dallas	95.1%	95.5%	0.4%	5.1%	6.0%
Washington, D.C.	95.0%	95.4%	0.4%	0.5%	2.0%
Boston	95.8%	96.1%	0.3%	2.1%	5.7%
Miami	96.5%	96.8%	0.3%	6.1%	4.3%
Fort Lauderdale	95.6%	95.8%	0.2%	6.1%	6.2%
Raleigh	95.2%	95.4%	0.2%	3.8%	5.2%
Austin	95.3%	95.5%	0.1%	4.4%	5.0%
National	**95.0%**	**95.2%**	**0.1%**	**4.5%**	**4.9%**
Baltimore	95.0%	95.1%	0.1%	2.2%	2.5%
Los Angeles	96.3%	96.4%	0.1%	5.2%	6.6%
Seattle	95.4%	95.3%	-0.1%	6.2%	8.1%
New York	97.0%	96.8%	-0.1%	3.3%	3.3%
San Diego	96.4%	96.2%	-0.2%	5.4%	7.9%
Portland	96.0%	95.8%	-0.2%	6.7%	12.9%
Durham	95.1%	94.9%	-0.3%	2.6%	4.4%
San Francisco	96.5%	96.2%	-0.3%	8.6%	8.7%
Chicago	95.4%	95.1%	-0.3%	3.4%	2.9%
Minneapolis	96.2%	95.7%	-0.5%	1.6%	2.1%
Houston	94.6%	94.0%	-0.6%	5.3%	2.5%
Oakland	96.7%	96.1%	-0.6%	12.1%	12.2%
San Jose	96.3%	95.4%	-0.9%	11.3%	8.0%
Denver	96.1%	95.0%	-1.1%	10.3%	7.6%

Source: Axiometrics (calculations based on 3-mo. moving avg.)

Office

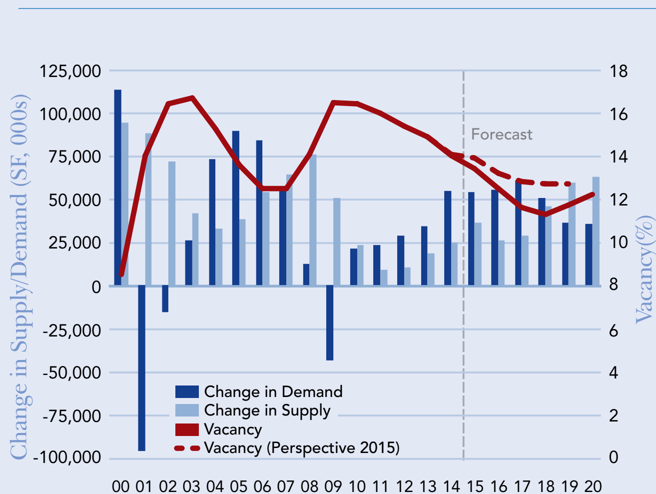
Office demand continues to outpace supply, leading vacancy to lows last seen before the Great Recession. According to CBRE-EA, office demand in the major markets it tracks rose by 58.4 million sf during the year ending in the third quarter of 2015, up from 51.9 million sf in the prior four quarters. Demand growth is not as strong as it was during 2004–06, but net absorption is poised to exceed net completions for the fifth consecutive year in 2015 (see Fig. 4.6).

CBRE-EA data show office vacancy at 13.4% as of 3Q 2015, 10 basis points lower than its level in the second quarter and 80 basis points lower than 3Q 2014. CoStar reports a lower vacancy level, at 10.3%, but trends are similar, with this vacancy rate being 20 basis points lower than the prior quarter and 60 basis points lower than the prior year. According to CBRE-EA, urban submarkets have modestly outperformed suburban submarkets over the past year in terms of vacancy contraction, but both urban and suburban areas have improved significantly. More than 60% of all office submarkets have experienced a year-over-year decrease in vacancy for five straight quarters, qualifying this period as the most geographically widespread improvement since 2006.

Interestingly, looking only at aggregated urban and suburban areas in each market, rather than individual submarkets, the improvement seems even more widespread. CBRE-EA data show that more than 80% of both urban and suburban areas in the U.S. experienced vacancy decline year-over-year as of 3Q 2015. Prior to the past four quarters, the last time over 80% of urban and suburban areas improved simultaneously was in 1995 (see Fig. 4.7).

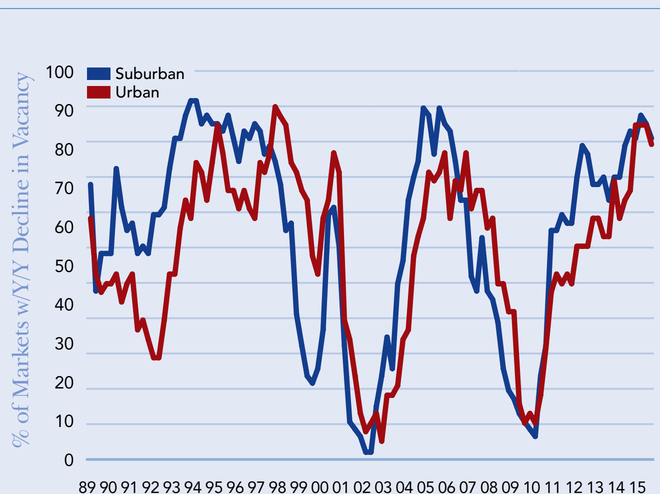
The reason such a higher percentage of aggregated urban and suburban areas are seeing declines versus the individual submarkets is owed to the magnitude of vacancy change among the individual submarkets. According to CBRE-EA, there were 167 submarkets with over a three percentage point decrease in vacancy over the past year, compared to 81 with an increase of at least three percentage points. Large

Fig. 4.6
Office Fundamentals



Source: CBRE-EA

Fig. 4.7
Share of Markets with Declining Vacancy



Source: CBRE-EA

decreases in vacancy at the submarket level in most cases offset the relatively smaller increases seen. On the whole, urban or suburban areas can improve even if they contain a few submarkets with rising vacancy. It also helps that improving submarkets have tended to be larger.

Such widespread improvement is a positive sign for the health of the market. Submarkets with declining occupancy at this stage of the cycle are often losing ground to more desirable locations where tenants can access better quality space and talent. These tend to be submarkets with superior access to transportation, housing and retail amenities. Boston, Chicago and Seattle are just a few examples of markets where this migration to quality is occurring, resulting in some submarkets with declining occupancy even as broader urban and suburban market clusters improve.

Strong office-using employment growth and relatively subdued construction activity are lifting most submarkets, but there have certainly been pockets of weakness over the past year. In Figure 4.8 we highlight some of the winners and losers among urban and suburban submarkets. It is not surprising to see tech driven markets like Boston, San Jose and Oakland among the lists of top occupancy gainers, while Houston figures prominently among the submarkets with falling occupancy as it struggles with contraction in the energy sector.

New York stands out among the list of urban submarkets with falling occupancy rates, with its World Financial Center submarket seeing a more than four percentage point decrease in occupancy following the delivery of One World Trade Center. It should be noted that New York has 10

Fig. 4.8
Top Occupancy Increase/ Decrease by Submarket

SUBURBAN

MARKET	SUBMARKET	Y/Y Change*
San Jose	Santa Clara	10.3
Phoenix	Northwest Phoenix	6.7
Houston	FM 1960	6.4
Newark	Route 22 West	6.0
Washington, DC	Crystal City / Pentagon	5.4
Minneapolis	Suburban St. Paul	5.3
Boston	E Cambridge / Kendall Sq	4.9
Washington, DC	Springfield	4.6
Boston	Quincy / Route 3 Corridor	4.4
Dallas	Las Colinas	3.
Newark	Morristown Region	-3.6
San Diego	Sorrento Mesa	-3.7
Houston	Westchase	-4.2
Wilmington	New Castle Co.	-5.1
Houston	Katy Freeway	-6.0
Washington, DC	I-395 Corridor	-6.2
San Diego	N. University City (UTC)	-6.8
Stamford	Stamford	-7.7
Los Angeles	Santa Monica	-8.1
Houston	North Belt	-15.2

URBAN

MARKET	SUBMARKET	Y/Y Change*
Oakland	Oakland	7.8
Jacksonville	Downtown Northbank	7.7
Chicago	North Michigan Avenue	7.2
Nashville	Downtown	5.1
Fort Worth	Ft Worth CBD	4.4
Wilmington	Wilmington CBD	3.8
New York	Penn Station	3.6
Detroit	CBD	3.5
Chicago	East Loop	3.3
Minneapolis	St Paul	3.2
Tampa	Tampa CBD	-1.1
Chicago	River North	-1.3
Baltimore	CBD Baltimore	-1.7
New York	Times Square South	-2.0
Washington, DC	Uptown	-2.0
St. Louis	CBD	-2.4
New York	Times Square/West Side	-2.5
Boston	Back Bay	-3.4
Houston	Downtown	-4.4
New York	WFC	-4.4

** Occupancy Change % Points*

Source: CBRE-EA (data as of 2015Q3, submarkets with at least five million sf)

Office

urban submarkets with at least five million sf that experienced rising occupancy rates (1.6 percentage points on average) and seven that experienced falling occupancy rates (1.4 percentage points on average). On the whole occupancy rose slightly in New York's urban submarkets and while the current occupancy rate is lower than the 95.0%+ cyclical highs observed in 2007, it is on a par with 2005, indicating fundamentals are quite healthy.

As discussed in the economic section of this publication, the U.S. continues to benefit from solid job creation. These trends have been particularly positive in office-using sectors. In Perspective 2015 we highlighted how the professional, scientific and technical services subsector of professional and business services had risen in prominence and was a major driver of office market gains. This sector includes most of the jobs commonly associated with science, technology, engineering and math (STEM) and technology, advertising, media and information (TAMI) fields. The performance of this subsector has only improved over the past year, with growth accelerating and becoming more evident across its various components.

In Figure 4.9 we present a table breaking down professional, scientific and technical services growth over the past year into its various components. Here we see six of the 10 components rising by at least 3.0% and a gain of 15,000 jobs, two more than reached that mark in our analysis a year ago. Further, no component is contracting. A year ago, legal services showed a decline of about 1.0%, but over the year ending October 2015 it reversed that loss.

Technology-related components such as computer systems design and management and technical consulting are growing at stellar rates, with the former component accelerating significantly from its pace in the previous year. It is also a positive sign, however, that impressive gains are evident in

Fig. 4.9
Major Office-Using Employment Sectors

PROFESSIONAL, SCIENTIFIC & TECHNICAL SERVICES

JOBS TODAY*	Y/Y Growth	Y/Y Change
8,734.1	**3.8%**	**318.9**

SUBSECTOR	Y/Y Growth	Y/Y Change
Computer Systems Design	5.7%	102.9
Management & Tech. Consulting	4.4%	55.1
Accounting & Bookkeeping	5.5%	53.2
Architecture & Engineering	3.1%	43.7
Engineering & Biological Research	3.1%	18.1
Advertising	3.4%	16.3
Other Professional Svcs.	1.6%	9.8
Legal Services	0.9%	9.7
Specialized Design Svcs.	7.1%	9.2
Social Science/Humanities Research	1.0%	0.6

FINANCIAL ACTIVITIES

JOBS TODAY*	Y/Y Growth	Y/Y Change
8,169.0	**1.9%**	**155.0**

SUBSECTOR	Y/Y Growth	Y/Y Change
Insurance	3.2%	79.7
Real Estate Rental & Leasing	2.5%	37.9
Securities & Commodities Investment	2.3%	20.4
Other Credit Intermediation	1.6%	12.6
Credit Unions	4.3%	11.0
Real Estate Credit	4.7%	9.9
Monetary Authorities (Central Bank)	0.5%	0.1
Lessors of Nonfinancial Assets	0.4%	0.1
Rental & Leasing Services	-0.1%	-0.3
Commercial Banking	-1.2%	-15.9

** As of October 2015*

Source: U.S. Bureau of Labor Statistics

more traditional components of business services. For example, accounting and record keeping has surged by 5.5% over the past 12 months. These gains are a boon to office locations that may be less concentrated in technology sectors (although in many cases this growth in traditional business services is largely serving the rapid expansion of technology companies and banks and securities firms that are outsourcing these activities).

Clearly technology is still a winner and firms in these fields are continuing to soak up space, ultimately translating into strong rent growth. Some energy-related jobs do fall into the professional, scientific and technical services category, but the concentration is not large enough to yield losses in any of the components. That said, recent data have shown some loss of momentum in architecture and engineering services, which includes professions such as geophysical surveying and mapping for the energy sector.

While it is a much smaller component of office-using employment and we have thus not included it in Figure 4.9, we would also be remiss to not acknowledge strong growth in some components of information sector employment. Indeed, while the sector grew by a somewhat pedestrian 1.9% year-over-year as of October 2015, the software publishing and internet broadcasting and search portal components grew by 4.1% and 9.6%, respectively, and combined to create over 29,000 jobs. These gains add further evidence of the strong foundation of job growth underlying net absorption in many tech-related markets. Strong gains in these areas of information sector employment also stand in stark contrast to the more than 18,000 jobs lost in the past year in the newspaper, book and directory publication subsector.

Another aside related to the information sector is the motion picture and sound recording component. This component is prone to significant swings in the monthly data, but it is clearly expanding at a healthy rate and is a key reason why the Los Angeles vacancy rate contracted 0.7 percentage points year-over-year as of the third quarter of 2015.

The acceleration in financial activities sector hiring over the past year is very positive news for the office market. Long the most important piece of office demand in most major office markets, this sector has been steadily losing ground to professional, scientific and technical services. Growth has not accelerated enough to upset this trend, but it has picked up enough to factor significantly into the additional improvement we expect in the office market.

Financial activities is still recovering from the great recession, but as we see in Figure 4.9, meaningful growth is taking hold across an increasing number of components. Outside of commercial credit, where low interest rates continue to squeeze margins, there were no material losses. Meanwhile, five of the 10 key components of financial activities employment created at least 10,000 jobs, with real estate credit nearly reaching that mark. These gains should give the office recovery legs, particularly in locations highly reliant on these jobs.

Innovation and technology remain the most significant catalysts for office-using job creation, however, bolstering markets with well-educated workforces and significant exposure to major technology employers. Growth in these areas is often difficult to measure in terms of the impact on the economy. New and smaller companies are often missed in Bureau of Labor Statistics surveys, and GDP calculations are not well-suited to capture the value creation of technology-related firms. But their impact is clear to the close observer of space market trends across an array of markets, including the Bay Area, Seattle, Denver, Boston, New York and even Chicago.

Office space demand from the technology sector is not just about large firms with significant balance

Office

sheets such as Amazon, Apple and Google. It is creating demand for smaller spaces too, particularly incubator and co-working offices such as WeWork, which has been rapidly expanding. A culture of collaboration and community is being fostered in these spaces, which has only accelerated the demand for the space and the expansion of the firms that seek to provide it.

In mid-2015 Crain's Chicago Business reported that co-working spaces in Chicago had grown from three totaling less than 150,000 sf in 2007 to 41 spaces and nearly 870,000 sf in 2015. Co-working is not a big enough trend to move the needle in most markets, but it is clearly growing as more independent, often technology-related firms emerge as the economy expands. Beyond the basic characteristics of the physical space, investors should acknowledge that tenants also value the more flexible time and financial commitment that such spaces offer. This flexibility is an important consideration for young, rapidly growing firms.

Understanding the nuances of how space is being used today and the underlying economic drivers is crucial to successfully executing an office investment strategy. But with over 80% of office markets seeing vacancy decline over the past year and our expectation that demand will continue to outpace supply in 2016 (a view also held by both CoStar and CBRE-EA), market conditions should be favorable for most investors. Figure 4.10, shows a snap shot of current vacancy relative to demand growth in most of the major U.S. office markets. Outside of Houston, demand has increased in every one of these markets over the past year and only Houston and Washington, D.C. saw rents fall. High vacancy markets such as Atlanta, Dallas and Phoenix are seeing annual demand growth of 2.5% or more and current vacancy rates are notably lower than what we observed in this graph a year ago.

Rent growth pressures will remain high in markets such as San Francisco, New York, Seattle, Austin and San Jose, as vacancy levels become uncomfortably tight. These conditions have certainly spurred tenants to become more proactive in their real estate strategies, particularly in supply constrained markets such as San Francisco, where Proposition M will prospectively limit the amount of office space that can be delivered after the current construction surge.

Office rents will continue to rise in 2016, with significant potential to accelerate from the roughly 4.0% pace achieved over the past year. High transaction prices and a positive outlook are spurring more development, including a growing amount of speculative construction, but developers will not be able to accelerate their activity fast enough to upset the supply/demand balance in the near term. A lack of available labor and other development constraints, including the high cost and limited availability of land as urban residential and retail development are currently the highest and best use, should temper development. Provided job growth holds up as we expect, office landlords have another strong year to look forward to in 2016.

Fig. 4.10
Metro Office Market Performance

* 2014Q3 to 2015Q3
Note: bubble size = market size

Source: CBRE-EA

Medical Office

Although prices have risen fairly dramatically, and yields have fallen, medical office is well positioned for continued strong performance over the next several years. The medical office sector's strong performance should be driven by the following factors:

- Aging demographics boosting demand for healthcare services
- Changes in the healthcare delivery model creating greater demand for outpatient services
- Changes in insurance and reimbursement costs hastening movement to cheaper alternatives
- Continued consolidations of hospitals and managed healthcare providers
- Need for modern and more efficient healthcare facilities
- Relatively muted medical office construction and low and falling vacancies

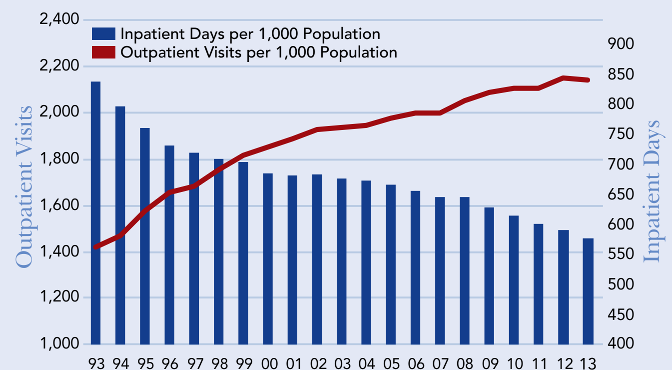
These trends bode well for medical office properties. Investors, anticipating many of these trends, have increasingly considered medical office as an established investment sector, and sales have and should continue to rise. With extremely low correlations to other property types within the institutional real estate investment universe and very healthy market fundamentals, medical office should continue to perform well.

The demand drivers for medical office should provide wind at the back of investors for many years to come. An expanding economy, aging Baby Boomers, and desires to rein in medical expenditures by moving more treatments to lower-cost facilities have created strong demand for the product. The oldest Baby Boomers began turning 65 in 2011, and it is estimated that each day almost 10,000 Baby Boomers turn age 65. Further, this trend will continue through 2029. It is important to note that healthcare expenditures rise over the course of one's life. The peak all-in spending years for healthcare are generally in the 65-84 year-old age bracket. While per capita costs are highest for those aged 85 and over, it should be noted that these individuals have significantly shorter expected life spans, limiting the all-in costs.

According to the Centers for Medicare and Medicaid, healthcare expenditures increased at a 5.6% annual pace from 2001 through 2015 and are forecast to rise at a 6.2% annual pace through 2023. Meanwhile, after growing at a 2.4% annual pace from 2001 through 2015, Moody's projects that healthcare employment will increase at a slower, but still healthy annual rate of 1.7% through 2025. Healthcare employment growth is projected to slow due to cost cutting efforts, consolidations in the hospital and managed care segments and technological innovations. While the pace of healthcare employment is expected to moderate, healthcare's percentage of total employment is expected to climb from 13.1% in 2015 to 14.0% by 2025.

Efforts to control costs in the healthcare system are leading to shorter hospital stays, rising outpatient procedures, more use of off-campus facilities, and rapidly rising physician participation rates within healthcare systems. The average length of a stay in community hospitals fell from 7.0 days in 1993 to 5.4 in 2013. At the same time, outpatient visits have increased dramatically, rising at a 2.1% annual rate from 1993 through 2013. Meanwhile, inpatient days fell at a 1.0% annual rate over the same time period (see Fig. 4.11).

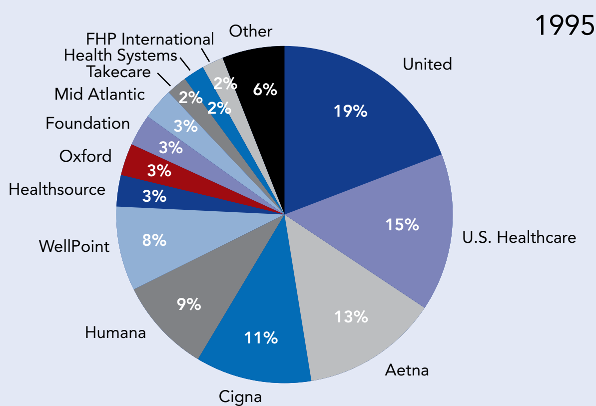
Fig. 4.11
Inpatient vs. Outpatient Care

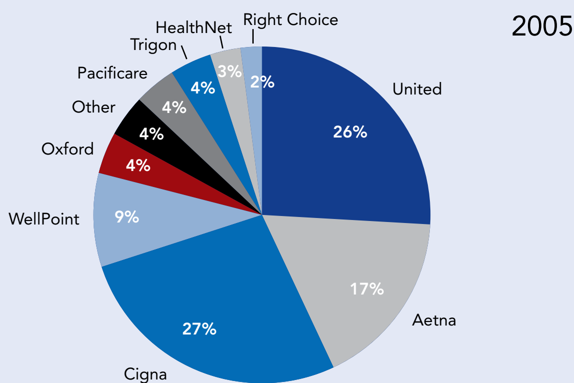


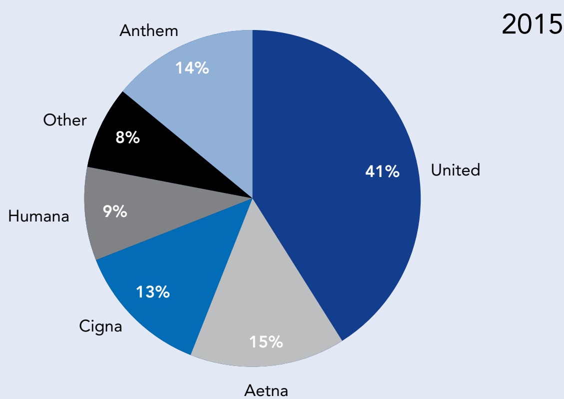
Sources: Avalere Health, American Hospital Association

Medical Office

Fig. 4.12
Managed Care Industry Market Share







Sources: Capital IQ, Cain Brothers

Efforts to control healthcare costs have also led independent doctor groups and smaller hospitals to merge into larger healthcare systems and to massive consolidation within the managed care industry. The number of hospitals in healthcare systems rose 25% from 1999 through 2013. Further, the share of all hospitals participating in healthcare systems rose from 51% in 1999 to more than 63% in 2013.

The managed care industry has seen a wave of consolidations in an effort to cut healthcare costs and boost efficiencies. In 1995, the largest managed care company controlled 19% of the market, the top five companies accounted for 67%, and 13 companies controlled 94%. Today, the largest player, United Healthcare controls 41% of the market, and the top 5 players account for 92% of the marketplace. Moreover, there are two mergers that have yet to clear regulatory approvals, but that would consolidate this 92% share into just three companies, United Healthcare, Anthem/Cigna and Aetna/Humana. (see Fig. 4.12). This trend towards consolidated healthcare providers and insurers is the result of greater efforts to rein in healthcare costs. By-products of these cost-saving efforts include increased outpatient care and ambulatory-care surgical centers. Finally, hospital mergers and consolidations continue at a brisk pace. From 2010-2014, there were 457 mergers, affecting nearly 1,000 hospitals.

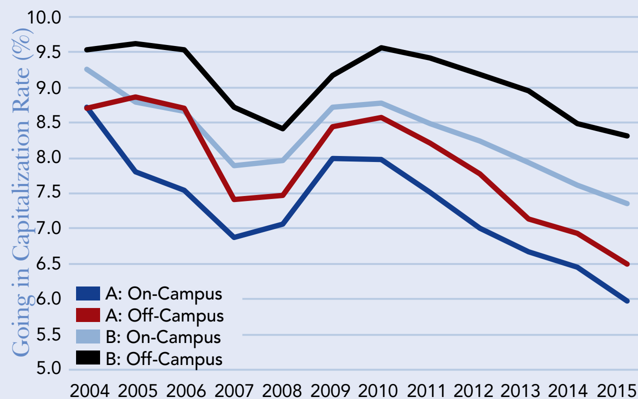
Strong demand drivers, efforts to control costs and mergers and acquisitions have led to rising demand for medical office properties. According to CoStar, medical office vacancy rates peaked at 10.6% in 2010. Since that time, vacancies have fallen gradually, to just 9.4% as of 3Q 2015. Meanwhile, medical office construction has remained relatively steady and muted. According to CoStar, medical office space under construction totaled 9.6 million square feet in 3Q 2015, which was two-thirds lower than the space that was underway at year-end 2007. Further, much of the supply now underway is pre-leased. Supply of new medical office space is expected to remain low relative to new demand over the next two years, which should lead to continued growth in occupancies and rents.

In response to healthy market fundamentals, growing demand, and limited new supply, medical office investment activity has surged. Real Capital Analytics reports that investment volume through the third quarter of 2015 totaled $12.9 billion, which is a substantial increase over 2014's entire year volume of $9.9 billion, and 2013's $7.5 billion.

Meanwhile, cap rates have plummeted as investors have increasingly sought medical office properties (see Fig. 4.13). Class A on-campus properties are generally pricing in the 5.5% to 6.0% range, while Class A off-campus properties are pricing in the 5.75% to 6.5% range. High quality assets in major U.S. markets are frequently pricing at even lower cap rates.

Medical office in particular, and healthcare properties in general, are great additions to a property portfolio. Relative to all of the other traditional real estate sectors, healthcare offers extremely low correlations on a 10-year basis, improving both risk-adjusted and overall portfolio returns (see Fig. 4.14). Healthcare properties are a strong diversifier. Also, medical office tends to include annual 2.5% rent increases over the term of the lease. Finally, as referenced in the economy section of Perspective, medical office employment, and hence demand, tends to be much less prone to downturns during recessions. Given strong demand drivers, continued attempts at restraining healthcare costs, limited new supply and strong and rising demand, the future looks bright for medical office.

Fig. 4.13
Medical Office Cap Rates



Sources: Cushman & Wakefield, Summit Realty Group

Fig. 4.14
Total Return Correlation Across Various Property Types

COMBINATION	CORRELATION
Apartments and Office	94.6%
Apartments and Retail	94.2%
Apartments and Industrial	95.0%
Office and Retail	93.1%
Office and Industrial	97.7%
Retail and Industrial	94.6%
Healthcare and Apartments	35.6%
Healthcare and Office	39.1%
Healthcare and Retail	29.4%
Healthcare and Industrial	33.3%

Source: NCREIF

Retail

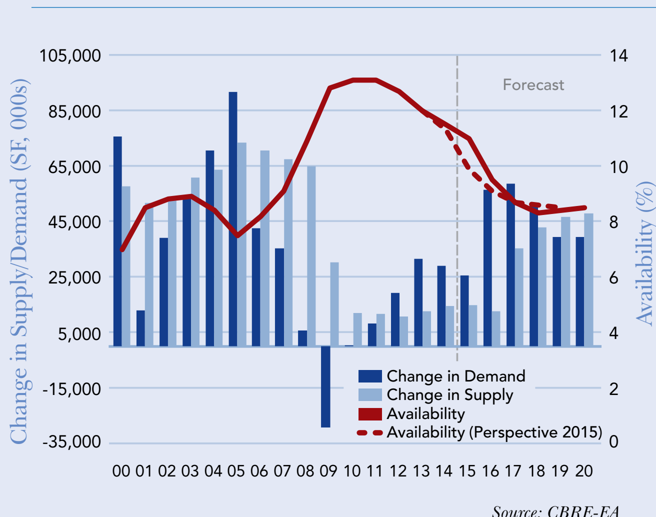
U.S. retail fundamentals continued their slow recovery in 2015. Retail availability was 11.3% in 3Q 2015, down 20 basis points from the year prior. Nationally, retail availability remains elevated relative to the previous expansion period (see Fig. 4.15) and current availability is nearly 400 basis points above its prerecession trough. However, long term average retail availability, at 10.0%, is much closer to current levels. This indicates that the retail space market is nearing historical averages, despite availability compression underperforming forecasts in each of the past three years.

Consumer spending is the fundamental driver of retail space demand. Year-over-year growth in headline retail and food services sales was a tepid 1.4% in November 2015. That growth rate drops to just 0.7% when autos are excluded (see Fig. 4.16). Much of this weakness is owed to gasoline sales, however, and the growth rate in retail sales excluding autos and gas improves to 3.6%. This growth rate, while respectable, is markedly slower than it was a year ago, and changing spending habits are creating challenges for most retailers and landlords.

In particular the growth in spending at food services and drinking places (i.e. bars and restaurants) began to exceed spending in grocery stores in December 2014 and this retail segment continues to grow rapidly. Additionally ecommerce spending, as we will discuss further, is rising in dramatic fashion, accounting for about a percentage point of the annual growth rate in retail sales excluding autos and gas. For the first time ever, strong ecommerce sales growth and lower gas prices have left U.S. consumers spending more online than they do at the gas pump.

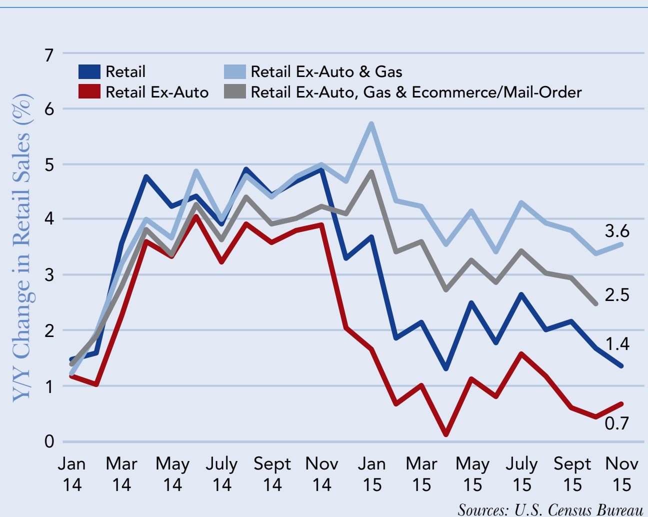
Slower retail sales growth than a year ago, even as wage growth strengthens, undoubtedly was the result of a variety of factors weighing on consumer confidence. Stock market declines, geopolitical uncertainty and recent terrorist attacks have impacted the consumer psyche, but their outlook seems to be improving again. Preliminary data through December

Fig. 4.15
Retail Fundamentals



Source: CBRE-EA

Fig. 4.16
Retail Sales Trends



Sources: U.S. Census Bureau

2015 from the University of Michigan consumer sentiment survey show an increase in confidence in each of the past three months, after a steady downward trend in the first three quarters of the year. Momentum in retail demand should begin to build in the next several years as personal finances improve and the recent increase in personal savings unwinds. Retailers will also adjust to the rise in online retailing and demographic trends will become more conducive to higher levels of consumer spending.

Changing Retail Marketplace

Urban and high street retail has performed substantially better than the wider market over the past five years. Millennials, especially those already within the prime spending cohort, have chosen a significantly different lifestyle than their parents did at their age. Some of this is by necessity due to weak economic prospects and high student loan debt burdens; but, particularly for those that are well-educated and working in high-paying STEM fields, there is clearly an element of choice. Instead of moving to the suburbs and purchasing homes, Millennials are increasingly locating in urban centers and the surrounding neighborhoods and renting their homes instead of buying. They are also, as a group, older when they first marry and have children. This dramatically changes their spending habits.

Millennials are devoting their incomes to their lifestyles rather than cars, home goods or child rearing. Evidence of this can clearly be seen in the significant rise in spending at bars and restaurants across the country. This lifestyle choice by the nation's largest generation has driven retailers to tailor their layouts to fit the small floor plates available to urban retailers. We have discussed this trend in previous editions of Perspective as well.

While urban cores will likely remain vibrant for the foreseeable future, as the Millennial generation ages, homeownership and child rearing will likely become a greater priority for this group. A recent survey by Boston's ULI Young Leaders Group showed that of a relatively small sample of older, well-educated Millennials in the city of Boston, 66% are currently renters and 99% said that they would like to own their home at some point. Likewise, 84% of all respondents wanted to have children.

We still believe on the margin more Millennials will chose to remain in an urban environment, even if that means continuing to rent due to the high cost of a condo or townhouse in their preferred location. But some will certainly follow a more traditional path to ownership in the suburbs, albeit on a delayed timeline in comparison to past generations, and their spending will also take on a more traditional profile.

Retailers targeting the Millennial generation as it is now have thrived, however, and one of the fastest growing segments during the past year has been "fast fashion." Retailers in fast fashion make and sell clothes cheaply assuming that the younger generation will change their style before the clothes wear out. This strategy brings shoppers back to the stores more frequently. Fast fashion retailers are providing consumers the experience of enjoying a rapidly changing stock while making small purchases on each visit.

H&M, Forever 21 and Primark are excellent examples of this strategy and each of these retailers has been opening new stores rapidly, bucking an otherwise challenging environment for apparel retailers. In the past two years, H&M has opened 740 stores worldwide, including 60 new U.S. stores in 2015 alone. Forever 21, fueled by strong revenue growth, plans to double in size by the end of 2018. Even traditionally ultra-luxury retailers like Nordstrom and Saks Fifth Avenue have begun pushing aggressively into the space. Nordstrom Rack and Saks Off Fifth each sell significantly discounted versions of the parent store's merchandise.

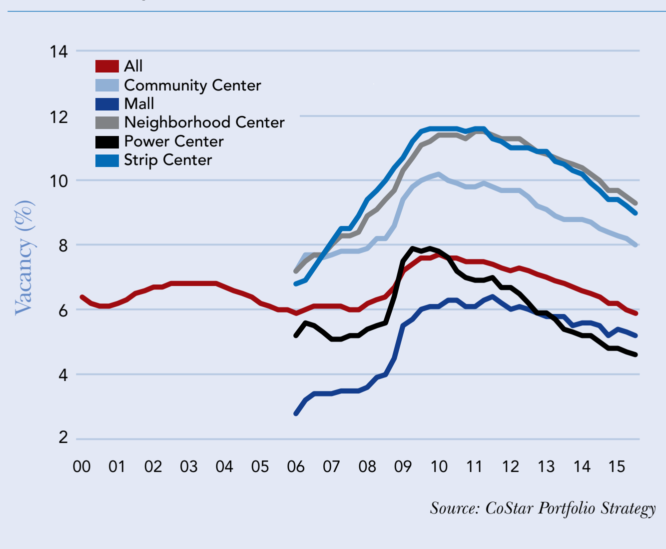
Retail

One of the most important arguments for brick and mortar stores versus online shopping is that consumers would rather see and hold an item before buying it and this remains largely true. However, if purchases are expensive, trips will be infrequent and consumers may be more apt to look online to get the best deal. Fast fashion retailers produce greater foot traffic to existing stores and thus create more sales.

Other retail space users have tried to foster a similar dynamic in order to boost sales. The café format has been an increasingly important component of retail strategies. Consumer banking company Capital One has replaced branches with cafes in order to get people in the door and increase brand recognition.

Even as retailers try to adapt, ecommerce continues to cut into brick and mortar sales. Over the past year, ecommerce has grabbed another percentage point of U.S. retail sales due to year-over-year growth of more than 15.0% as of 3Q 2015. Ecommerce represents nearly 11.0% of retail sales excluding autos, gas and food services and drinking places. This is two times the share of sales ecommerce represented in mid-2009. Brick and mortar retailers worldwide have struggled with growth in ecommerce and those that have best employed an omni-channel strategy that includes ecommerce have been the most successful.

Fig. 4.17
Retail Subtypes



Source: CoStar Portfolio Strategy

Online retailing continues to force the closure of underperforming stores and brands. American Apparel, Quicksilver and most recently, City Sports have been forced to shutter storefronts or declare bankruptcy. Retailers continue to grapple with the integration of online and in-store strategies. Those that survive will find creative ways in which to attract shoppers. Undoubtedly location selection will play an important role in their success or failure.

Regional and Retail Subtype Fundamentals

While urban retail has been the focus of retailers and investors alike, fundamentals in the retail subtypes that are historically associated with suburban living have improved during the past year. This is clear in Figure 4.17 which displays vacancy in retail subtypes as reported by CoStar Portfolio Strategy. Malls and power centers continue to display the lowest vacancy. However, over the past year neighborhood and strip centers saw the greatest improvement in vacancy. These two retail subtypes saw vacancy contract by 70 basis points during the year, to 9.3% and 9.0%, respectively. As the housing market improves these centers should continue to benefit from growing retail spending and their fundamentals will begin to converge with the wider market.

Differences in retail performance haven't just existed geographically within metro areas but also across metro areas throughout the country. As always, positive local economic trends have driven the strongest retail recoveries, but despite a disparity in growth rates between metros, the overwhelming majority of large U.S. markets are seeing demand

grow. At the top of Figure 4.18 are some of the nation's fastest growing metropolitan area economies and retail demand growth has been healthy. These include Austin, Raleigh and San Francisco which were three of the top six fastest growing employment markets over the past six years – these markets average 16% more workers than they had before the recession.

Rent growth by metro area has been increasingly broad-based, although some markets continue to struggle. With some exceptions, the strongest retail rent growth correlates to the fastest rates of job growth. San Jose enjoyed the fastest employment growth in the country over the past year and availability is extremely tight. Salt Lake City is similar in this respect. Employment growth in Salt Lake of 3.9% during the past year was the third fastest nationwide. Rent growth in Boston has been supported by its thriving core and wealthy suburbs and Los Angeles' downtown revival is contributing to its rent growth. The majority of other markets are enjoying moderate rent growth and improving fundamentals. Markets where rents are falling are generally only seeing minor declines.

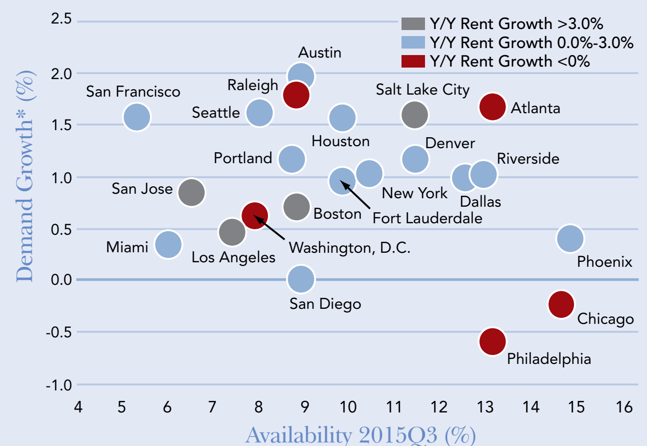
National rent levels increased by 1.1% during the year, up slightly from the 2014 annual growth rate of 0.9%, but less than half of the prerecession long term annual growth rate of 2.6%. Retail rents only began growing at the national level in the second half of 2013, but have increased steadily since.

Limited supply growth should help support improving fundamentals and allow for rent growth in the near term. According to CBRE-EA, over the past year, less than 15 million sf of retail space delivered. This was the largest annual completion total since the outset of the recession, but six years into the recovery, supply growth remains dramatically below prerecession levels. From 2004 to 2008, developers added an average of 68 million sf of retail supply annually to the national market, more than four times that which delivered in the past year.

The national retail market has been more severely challenged than the other property types, albeit with wide bifurcation across subtypes. The asset class is weathering exogenous factors including the dramatic growth of ecommerce, a still-cautious consumer, and demographic trends that place the peaks of two generations at the extremes of the prime spending cohort. The effects of these headwinds are most prevalent in suburban retail locations where economic trends have tended to lag behind their more urban counterparts this cycle.

The Millennial generation's propensity to locate in urban neighborhoods where they have access to all the retail amenities they need, often in walking distance, has supported this trend. We expect urban locations to remain the focal point for retailers and investors in the near term, but improvements in both wage growth and the national housing market will support more traditional suburban-style retail in the coming years.

Fig. 4.18
Metro Retail Market Performance



* 2014Q3 to 2015Q3

Source: CBRE-EA

Industrial

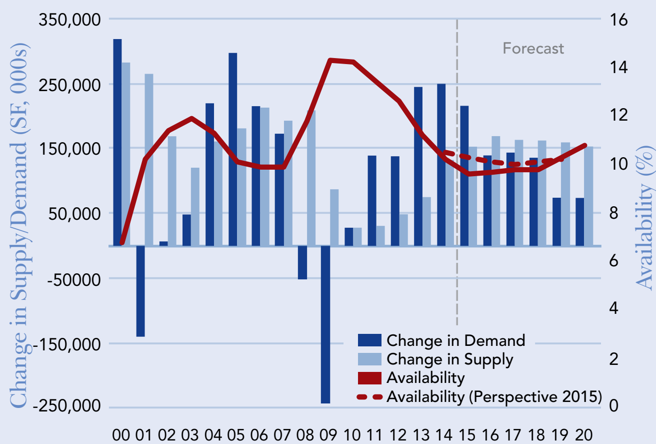
For the third straight year, industrial availability fell in 2015, with the magnitude of decline exceeding expectations. According to CBRE-EA, industrial availability was 9.6% in the third quarter of 2015, its lowest level in more than a decade and 70 basis points lower than the firm had projected it to be a year earlier. Over the last four quarters, more than 250 million sf of industrial space was absorbed, the third highest four-quarter total reached since 2000.

Continued U.S. economic expansion has contributed to this strong industrial demand growth. The pace of U.S. economic growth may not be stellar, but continued increases in consumption and solid overall macroeconomic conditions bode well for further growth in freight traffic across the country. Availability is forecast to edge slightly higher over the next two years; however, demand has the potential to exceed projections once again, pulling availability below current levels.

In an asset class that is affected more by broad economic trends than any other, recent economic momentum has helped produce healthy industrial demand growth. Over the past year inventories, which have historically exhibited the highest correlation with industrial demand of any macro indicator, expanded quickly. During the past four quarters, year-over-year growth in the real value of inventories has averaged more than 4.0% (see Fig. 4.20).

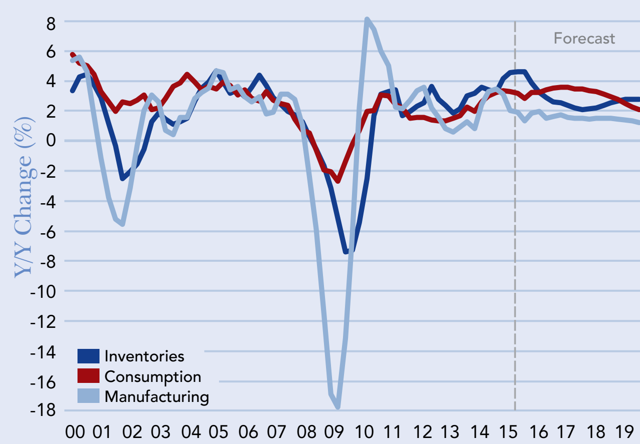
This pace is unlikely to be replicated in 2016 and industrial space demand growth should slow commensurately. Quarterly inventory growth decelerated markedly in the third quarter of 2015, causing the change in inventories to drag on GDP growth during the quarter. Even though inventories have risen more slowly, however, they have still increased, requiring users to absorb additional industrial space.

Fig. 4.19
Industrial Fundamentals



Source: CBRE-EA

Fig. 4.20
Industrial Demand Drivers



Source: Moody's Analytics

Fig. 4.21
Freight Totals by Port

Port	Total Inbound*	Change from YTD 2014	Total Outbound*	Change from YTD 2014	Total Change**	Ratio of Imports to Exports
Los Angeles	3,121,029	-13.3%	1,248,454	-23.4%	-12.8%	150.0%
Long Beach	2,714,614	3.0%	1,146,413	-6.2%	0.3%	136.8%
NY / New Jersey	2,443,750	12.0%	1,062,968	-1.5%	13.0%	129.9%
Savannah	1,243,703	26.3%	960,814	-1.8%	15.6%	29.4%
Seattle	990,735	9.2%	637,234	-10.9%	6.7%	55.5%
Norfolk	813,895	8.7%	758,877	-0.6%	8.8%	7.2%
Houston	650,696	19.0%	717,520	12.0%	12.0%	-9.3%
Oakland	701,277	-0.4%	711,707	-12.8%	-5.0%	-1.5%

** All Data YTD as of September 2015; Inbound/Outbound Stats for Loaded TEUs*
*** Includes empties*

Sources: Port Authorities of: Los Angeles, Long Beach, NY/NJ, Savannah, Seattle, Norfolk, Houston and Oakland

After enjoying a very strong growth rate in 2014, manufacturing production has slowed recently, and if the ISM manufacturing index is any indication, this slowdown is unlikely to reverse in the near term. A strong dollar should drag on growth in manufacturing production by making it harder for U.S. companies to compete on the global stage. This will inevitably be a headwind for industrial demand in the year ahead.

Weaker performance in industrial production should be more than offset by consumption growth and the accompanying rise in imports. While price changes, particularly those related to energy have made it more difficult to interpret import data, growth in international freight entering the U.S. is clearly evident in data collected from individual ports.

Figure 4.21 displays the year-over-year change in freight tonnage at the eight largest U.S. ports by shipping volume. Six of these top eight ports saw freight traffic increase, with just Los Angeles and Oakland experiencing a contraction in inbound loaded TEUs during the first three quarters of 2015. The increased purchasing power of U.S. consumers should only perpetuate this growth in 2016.

In many cases the increase in freight traffic has been dramatic. The ports of Savannah, Houston and New York/New Jersey all saw double-digit growth in inbound loaded containers when comparing the first nine months of 2015 to the same period in 2014. This has been a boon to industrial demand in these markets. As long as the indicators highlighted in Figure 4.20 continue to grow, U.S. companies will continue to lease additional warehouse and distribution space.

The drop in traffic at the Port of Los Angeles was due in part to interruptions in container processing resulting from months-long contract negotiations between management and labor. Subsequent months have been slightly stronger, but the YTD total through September 2015 remained below the same period a year earlier.

Industrial

The Ports of LA/Long Beach likely face further headwinds with the expansion of the Panama Canal scheduled to open in 2016. We do not anticipate a major disruption to cargo flows through West Coast ports, but on the margin East Coast ports are likely to attract some additional volume as the economics of shipping from Asia directly to East Coast ports improves. Some rebalancing of supply chains in anticipation of the canal opening could be factoring into the weak cargo numbers through LA/Long Beach over the past year, but the impact has likely not been significant. Industrial space demand in Los Angeles and the Inland Empire (Riverside) remains quite strong.

During the four quarters ending in the third quarter of 2015, the Inland Empire saw the single largest increase in its tenant base in absolute terms, as occupied space increased by more than 23 million sf. This market was followed by Chicago and Atlanta with 22 million and 19 million sf of new demand, respectively. On a percentage basis the rankings change. Riverside drops to second place, still an impressive showing, but there are a number of smaller markets that have outpaced the major distribution centers.

According to CBRE-EA, Vallejo, CA saw the largest percentage increase in demand during the past year, at 5.8%. Markets including Las Vegas (3rd, 5.5% growth), Austin (5th, 4.2% growth), Portland (6th, 4.0% growth) and Phoenix (7th, 4.0% growth) also ranked in the top 10. This is contrary to last year when only Las Vegas was among the top ten nationally. Each of these markets displayed strong local economic growth during the year and that has translated to healthy industrial demand.

Ecommerce sales growth remains an important driver of demand and, as we noted in last year's Perspective, these spaces are increasingly not just 500,000 sf+ buildings along the periphery of major population nodes. The push to shorten delivery times has led to the leasing of smaller, infill properties that help solve the "last-mile" hurdle firms face when shipping directly to consumers. For example, in 2015 Amazon opened a 52,000 sf operation on Goose Island and a 150,000 sf facility at 2801 S. Western Avenue in Chicago, a city where it now offers same-day shipping. Amazon also plans a 475,000 sf distribution facility in Joliet.

While demand for industrial space has proven strong to this point in the expansion, a severely muted supply cycle has been instrumental in allowing availability to fall to its current low rates. Industrial market fundamentals are historically susceptible to fluctuations in supply, especially at the local level. Supply constraints are rarely a consideration for developers and warehouses tend to be very easy to build relative to other property types. This, in conjunction with short build-times, creates the potential for supply to ramp up quickly. That said, the current supply pipeline remains well below prior peak construction levels. In the six years from 2009 to 2014, total industrial completions reached just 402 million sf. By comparison 200 million sf were built each year during the last expansion period.

During the year ending in the third quarter of 2015, 155 million sf of industrial space delivered across the country, representing the highest four-quarter total since the recession. Completions are expected to increase further in 2016, with CBRE-EA projecting just under 170 million sf of space will come on line, but this total is still below the levels observed during 2005–08. It also falls below long-term average levels. Throughout CBRE-EA's industrial fundamentals history, beginning in 1980, industrial developers have added an average of nearly 188 million sf of new space to the market per year.

Rent growth rates over the past year serve as a clear indicator of the divergence between supply and demand. During the year ending in the third quarter of 2015, CBRE-EA's industrial rent index increased by 5.6%. This represents the largest four-quarter change in more than a decade and a dramatic increase over the property type's long-term average rent growth rate of 1.9%. In an asset class where yields tend to be the main driver of returns, rent growth of this magnitude is rare. However, the national supply growth trend is such that rent growth should continue for the foreseeable future. CBRE-EA forecasts a very strong rent growth rate of 4.1% annually over the next five years.

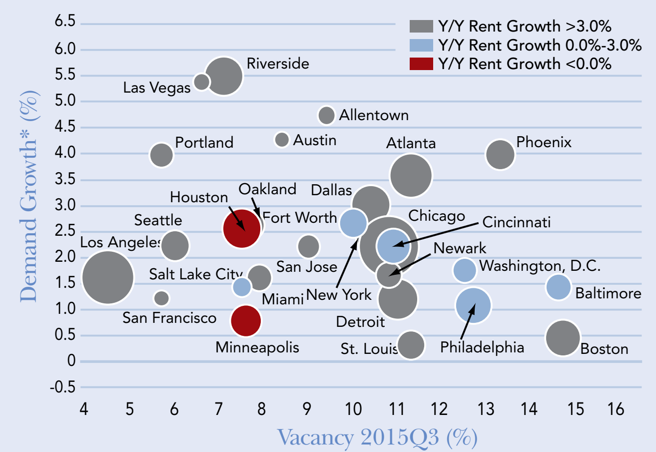
As is clear in Figure 4.22, industrial rent growth is a widespread phenomenon. Rents in all of the major industrial markets are growing at greater than 3% per year as are rents in the strongest local economies. Major distribution hubs across the country have enjoyed the strongest growth year-over-year, as the six major markets saw rent levels increase by an unprecedented average of 10.3%. Chicago proved the lowest of these at 6.2% while Riverside rent levels increased by nearly 18%, per CBRE-EA.

Rent growth in bulk distribution markets has been followed by fast growing local economies and San Francisco, Oakland, Portland, Austin, San Jose and Seattle each saw industrial rents rise quickly as well. As a group these metro areas averaged 9.2% rent growth during the year with San Francisco, at 14.6%, recording double digit rent expansion. Strong gains in these industrial markets highlights the far-reaching impact of their expanding innovative economies, with job gains in high-paying technology sectors helping to fuel local consumption.

Slower economic growth areas also saw rents rise during the year, but at substantially slower rates. Of the metro areas displayed in Figure 4.22, only Houston and Minneapolis saw rents contract, with the latter seeing only a minimal decline. Houston has seen outsized effects from falling oil prices and significant supply growth. Industrial rent growth is unlikely to resume in Houston until these headwinds subside.

The outlook for the national industrial market is positive. Demand has been consistently strong over the past several years and we do not expect that to change, but some dark clouds exist with the slowing of inventory growth and manufacturing production. However, growing imports, supported by a strong dollar, should help boost freight volumes in the primary markets. Supply growth is accelerating but the national industrial market is significantly undersupplied given historical conditions and we believe the industrial market remains an attractive investment opportunity. Real rent growth, an infrequent occurrence for this asset class, is clearly evident and should persist in 2016. •

Fig. 4.22
Metro Industrial Market Performance



* 2014Q3 to 2015Q3
Note: bubble size = market size
Source: CBRE-EA

Randolph Business Center
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Bentall Kennedy Group

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