May 2016

Sector Report

US Real Estate

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1. Executive Summary

The US real estate sector is on the growth path in the backdrop of a recovery in macroeconomic fundamentals, albeit slowly. With increasing capital availability and financing sources, investments in the US commercial real estate (CRE) market have been growing at a brisk pace, with 2015 witnessing USD 533bn worth of investments, the highest level since the 2007 peak. The office sector is attracting the biggest share of investments, closely followed by multifamily. However, the industrial sector is the fastest-growing sector attracting investments, led by foreign investors who have traditionally been underweight on this asset class. Foreign investments in US CRE increased across all property types in 2015, and have grown at a CAGR of 49% over the past five years.

Fundamentals have been improving across all property types. Absorptions continue to report positive trends, with a decline in vacancies and an increase in rents. Construction activity is picking up across sectors, particularly accelerating in the industrial and multifamily segments, with higher completions expected in 2016. Cap rates have been declining for all for the CRE property types, with rising property prices. They range between 5.8%-6.9%, with the highest rate for MOBs at 6.9% and the lowest for multifamily at 5.8%.

Healthy employment trends in professional and business services are driving demand for office space, with strong pre-leasing activity led by technology companies. Office rents – with CBD rentals growing faster than suburban rents – are expected to continue rising, as demand continues to outpace supply and vacancies decline. Manhattan, San Francisco and Los Angeles remain top primary office markets, while Nashville is a very promising secondary office market experiencing rising prices amidst a construction boom.

The industrial sector is also witnessing similar trends, with demand fueled by e-commerce players for Big Box spaces, while the development of port/airport infrastructure is expected to boost demand for nearby warehousing spaces. Dallas-Fortworth, Inland Empire (LA), Chicago, and Atlanta are key industrial markets where construction activity is robust, with over 72msf of space under development across these markets.

Healthcare spends are rising, driven by regulations such as the Affordable Care Act, and an ageing population, which are driving demand for medical services and therefore medical office buildings. Completions of MOBs are expected to nearly double in 2016. Boston, Raleigh-Durham and SF Bay Area are the top markets for life sciences real estate, given the availability of specialized talent and R&D infrastructure.

The demand for retail space is growing from retailers seeking to capitalize on macro trends – such as rising employment, rising wages and changing consumer preferences – that boost retail sales. New York City and San Francisco remain the top markets for retail real estate, despite high rents, led by high-income neighborhoods and population growth.

The recovery in the housing market continues, with an improvement in housing starts and home sales. Demand for multifamily renter homes has been rising over the past six years, with a decline in home ownership by over 500 bps after the housing bubble burst. Home ownership appears to have bottomed out. Though some improvement in home ownership is expected going forward, rental demand is expected to remain strong in the near term. Senior housing is expected to continue witnessing strong demand with healthy growth expected in the 65-plus cohort, aided by increasing life expectancy. The independent-living and assisted-living segments are witnessing strong traction. The multifamily market in Atlanta offers attractive investment prospects.

2. Macro Overview

US, one of the most resilient economies amidst global volatility, outpaces Eurozone and Japan in GDP growth

i. Tracking recent macro trends

The global economy appears to be settling into a new normal, as it grapples with changes in macroeconomic factors such as lower oil and commodity prices, and a stronger US dollar. A modest recovery continues in the developed economies of the Eurozone and Japan, supported by continued monetary easing. Fears of slowing Chinese growth and consequent central bank currency devaluation measures have left the world pondering upon its impact on all the major economies.

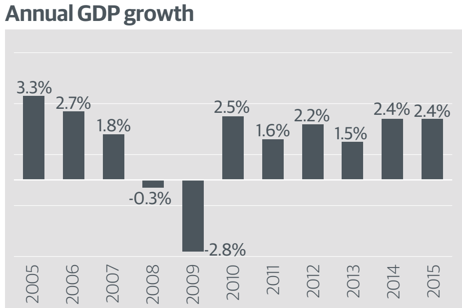
However, the largest economy in the world, the US has exhibited resilience in these volatile times, and is set to benefit from some key positive macro fundamentals. US GDP CAGR of 2.4% during 2013-15 exceeded that of other developed economies, such as Germany (1.5%), France (0.6%), Eurozone (1.2%), and flat growth for Japan during this period.

a. Modest GDP growth

US GDP growth has been between 1.5% and 2.4% during 2012-15 in an environment of nearly zero interest rates and sub-2% inflation. However, Q4-2015 GDP growth was very sluggish at barely 1% YoY growth on account of low energy prices, relatively muted retail sales, and lower exports due to a stronger USD and slower global growth.

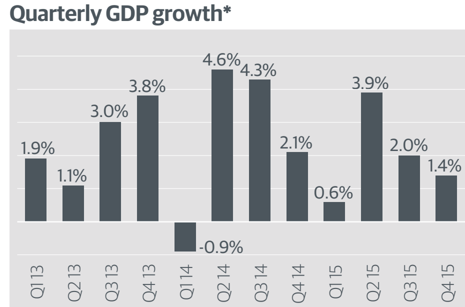
GDP trends

Annual GDP growth



Source: US Dept. of Commerce, Bureau of Economic Analysis

Quarterly GDP growth*



Source: US Dept. of Commerce, Bureau of Economic Analysis
*at annual rate

Consumer spending drives GDP growth led by healthcare spending and consumer goods

The GDP growth in 2015 were driven by the following factors:

- Consumer spending, which comprises ~69% of the GDP, contributed the most (over 90%) to GDP growth. Consumer spending was led particularly by the following:
  - **Services sector:** Services (about 45% of GDP) led the growth in GDP contributing over half of the 2.4% GDP growth in 2015, which was in turn led by spending on healthcare
  - **Consumer goods:** This comprises about 24% of GDP, and contributed ~35% to GDP growth, where growth was equally led by both durable, as well as non-durable goods

  Consumer spending remains one of the key economic growth drivers in 2016 and ahead.

Residential investment is kicking in, supported by 11% growth in housing starts in 2015

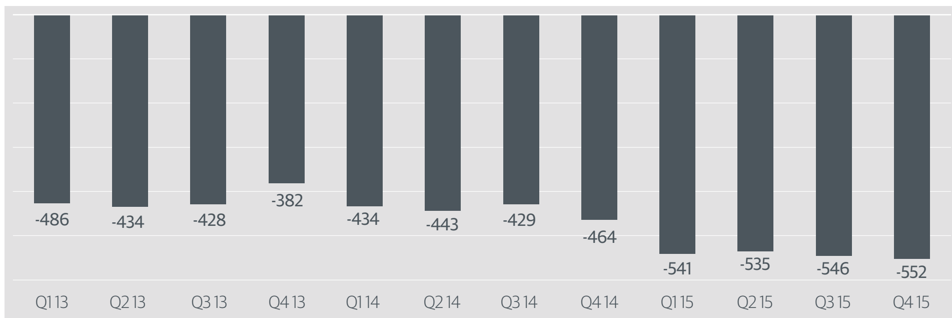
- Gross private domestic investment comprising 17% of the GDP, contributed nearly a third to GDP growth, while federal government spending (~17% of the GDP) also increased in 2015, contributing marginally to GDP growth.

  Residential investment remains a key driver of the private domestic investment growth. This is reflected in the performance of housing starts, which grew 11% in 2015 and 13% CAGR from 2012-15. Housing remains another key economic growth driver in 2016.

- Net exports have been a drag on the GDP growth. Net exports have been negative over the past two decades, and more pronounced in the past year due to the stronger USD. However, services trade balance continues to be positive, mitigating the larger impact of the higher negative trade balance for goods. Any further strengthening of the USD poses a marginal headwind to GDP growth, going forward.

Negative trade balance remains a marginal overhang on GDP growth

US Trade balance – Net exports* (USD bn)



Source: US Dept. of Commerce, Bureau of Economic Analysis, * Seasonally adjusted annual rates

US is expected to grow between 2-2.8% during 2016-17

While the outlook for the global economy appears to be gloomy, the US economy is expected to expand by 2-2.8%[1] during 2016 and 2017, on the back of net employment growth, steadily rising wages as a result of a tighter labor market, higher consumer spending on the back of higher disposable income, a positive growth outlook for residential investment and the housing market. A negative balance of trade, due to further strengthening of the dollar, is not expected to materially impact GDP growth.

GDP growth constituents

YoY growth (%) at Seasonally adjusted annual rates	2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross domestic product	-0.9	4.6	4.3	2.1	0.6	3.9	2.0	1.4
Personal consumption expense	0.8	2.6	2.3	2.9	1.2	2.4	2.0	1.7
Goods	0.3	1.5	0.9	0.9	0.3	1.2	1.1	0.4
Durable goods	0.2	1.0	0.5	0.4	0.1	0.6	0.5	0.3
Nondurable goods	0.1	0.5	0.4	0.5	0.1	0.6	0.6	0.1
Services	0.6	1.1	1.4	2.0	0.9	1.2	1.0	1.3
Gross private domestic investment	-0.4	2.0	1.2	0.4	1.4	0.8	-0.1	-0.2
Fixed investment	0.9	0.9	1.2	0.4	0.5	0.8	0.6	0.1
Nonresidential	1.0	0.6	1.1	0.1	0.2	0.5	0.3	-0.3
Residential	-0.1	0.3	0.1	0.3	0.3	0.3	0.3	0.3
Change in private inventories	-1.3	1.1	0.0	0.0	0.9	0.0	-0.7	-0.2
Net exports of goods & services	-1.4	-0.2	0.4	-0.9	-1.9	0.2	-0.3	-0.1
Government consumption expenditure	0.0	0.2	0.3	-0.3	0.0	0.5	0.3	0.0

Source: US Dept. of Commerce, Bureau of Economic Analysis

[1] IMF and other economists

Consumer sentiment still remains above past 2-yr averages, despite a modest decline in January 2016

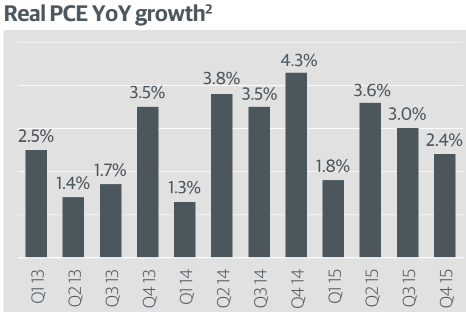
b. Consumer spending treading with caution

Consumer spending was lackluster in Q4 15, as evidenced in the declining growth in the PCE (personal consumption expenditure) price index. The consumer sentiment index marginally declined on March 16 to 91 due to changing expectations of slower job growth and lower wage increases. However, it is still well above 2013 and 2014 levels. The 2015 PCE growth was muted, relative to previous years, as consumers remained cautious on spending, despite higher disposable incomes for households due to lower gasoline costs. Consequently, personal savings have been inching upwards, as consumers remained cautious about spending. Retail sales growth has therefore, been muted in 2015 relative to previous years, the slowest since the recession of 2008-09.

Hourly earnings and personal savings have been rising

Consumer spending trends

Real PCE YoY growth[2]



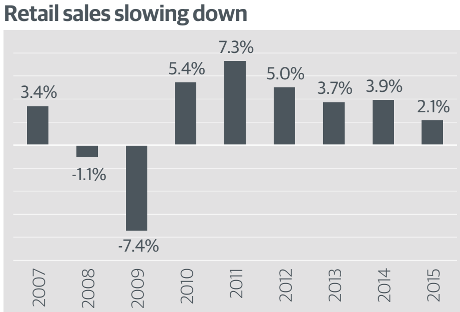
Source: BEA

Average hourly earnings growth

Period	Avg. growth
2007 - 2009	3.1%
2010 - 2015	2.0%

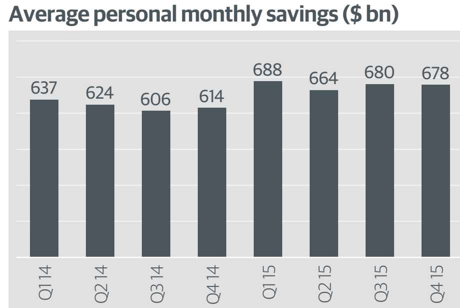
Source: University of Michigan

Retail sales slowing down



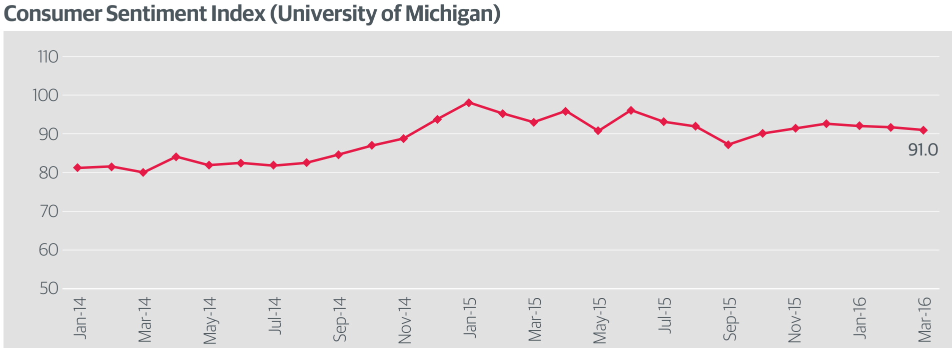
Source: US Census Bureau

Average personal monthly savings ($ bn)



Source: Bureau of Economic Analysis

Consumer Sentiment Index (University of Michigan)



Source: University of Michigan

[2] Seasonally adjusted annual rates

Consumer confidence index expected to inch up and touch the triple-digit mark in 2016

However, consumer spending is set to improve going forward, reflected in the forecasts for the consumer confidence index that is expected to rise to 96 by the end of 2016 and touch the triple-digit mark in the subsequent year.

Consumer spending drivers and outlook

The key drivers for consumer spending within the consumer goods and services segments are as follows:

Home improvement benefiting from an improving housing market – positive for residential real estate

Consumer durables: Durable goods continue to remain the backbone of consumer spending over the past several quarters, and have grown at a 6.4% CAGR over the past two years. Recreational goods and furnishings and household equipment are key sub-segments driving growth, which are growing consistently at 6% and 9% YoY, respectively, over the past two years. A key trend to watch out for is spending on home improvement, which is expected to accelerate from 2.4% growth in Q3 2015 to 6.8% in Q2 2016[3]. Home improvement continues to benefit from a strengthening in housing market conditions, including new construction and price gains, which bodes well for the residential real estate sector. These improving conditions are encouraging owners to invest in more discretionary home improvements, such as kitchen & bath remodeling, room additions, apart from replacements of worn-out components, such as roofs and siding.

Healthcare spending on the rise, driven by an ageing population, technology and regulations

Healthcare services: This has long been a key driver over the past few years, constituting 17%-18% of total consumer spending and growing at 4% annually. The Patient Protection and Affordable Care Act are positives for healthcare services, while the pervasive use of latest technology adds to healthcare spending. The rapid growth of the ageing (65-plus years) population translates into higher demand for specialized healthcare services and old-age homes, which are key drivers for growth in healthcare real estate.

Real PCE growth constituents

YoY growth at seasonally adjusted annual rates	2015				% Mix
	Q1	Q2	Q3	Q4	Q4 15
Total PCE Growth	1.8%	3.6%	3.0%	2.4%	
Goods	0.4%	1.8%	1.6%	0.5%	35%
Durable goods	0.2%	0.8%	0.7%	0.4%	13%
Motor vehicles and parts	-0.1%	0.4%	0.1%	-0.2%	4%
Furnishings equipment	0.1%	0.1%	0.2%	0.1%	3%
Recreational goods	0.2%	0.3%	0.3%	0.4%	5%
Other durable goods	0.0%	0.1%	0.1%	0.1%	2%
Nondurable goods	0.2%	0.9%	0.9%	0.1%	22%
Food and beverages	-0.1%	0.2%	0.0%	0.0%	7%
Clothing and footwear	0.0%	0.2%	0.0%	0.0%	3%
Gasoline, other energy	0.2%	0.0%	0.1%	-0.1%	3%
Other nondurable goods	0.1%	0.5%	0.7%	0.2%	9%

[3] As per LIRA (Leading Indicator of Remodeling Activity), Remodeling Futures Program at Harvard University

YoY growth at seasonally adjusted annual rates	2015				% Mix
	Q1	Q2	Q3	Q4	Q4 15
Services	1.4%	1.8%	1.4%	1.9%	65%
Household consumption	1.6%	1.8%	1.1%	1.6%	63%
Housing and utilities	0.6%	-0.1%	0.2%	-0.3%	17%
Healthcare	0.8%	0.5%	0.6%	0.4%	17%
Transportation services	0.1%	0.2%	0.1%	0.2%	3%
Recreation services	-0.1%	0.1%	0.0%	0.5%	4%
Food services	0.2%	0.5%	0.1%	0.3%	6%
Financial services	0.0%	0.2%	-0.1%	0.2%	6%
Other services	0.0%	0.5%	0.1%	0.2%	9%
Others	-0.2%	0.1%	0.4%	0.3%	3%

Source: Bureau of Economic Analysis

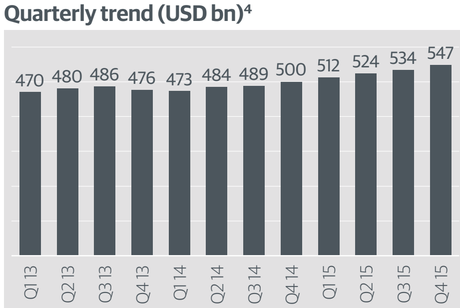
Residential fixed investment growing at 8% p.a., is driving private domestic investment

Investment trends

The economy continues to see **residential fixed investment**, which constitutes ~20% of private domestic investment and is its fastest growing component. It has grown at a CAGR of 5.3% over the past two years, driving total gross private domestic investment growth of 5.1%. This is visible in the 2-yr CAGR of 10% in housing starts. It is estimated that 2017 will be the first year since 2008 when housing starts will register the recommended 1.5 mn mark, which accommodates normal US population growth.

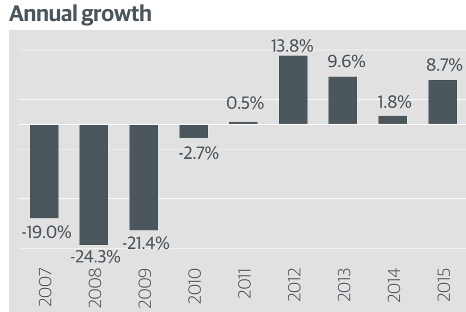
Residential fixed investment

Quarterly trend (USD bn)[4]



Source: Bureau of Economic Analysis

Annual growth



Source: Bureau of Economic Analysis

Unemployment continues to subside, as nonfarm job gains bolster the labor market

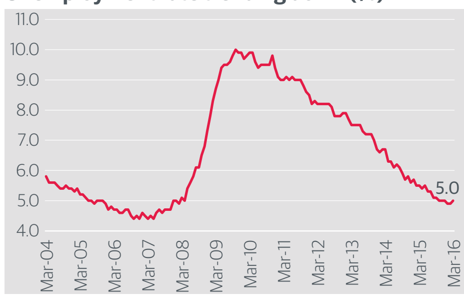
Encouraging employment trends

Employment has been trending upwards with the unemployment rate standing at a 7-year low of 4.9%. Non-farm payroll additions of 2.7mn in 2015 is above its past 3-yr average, although lower than 2014 levels.

[4] Seasonally adjusted annual rates

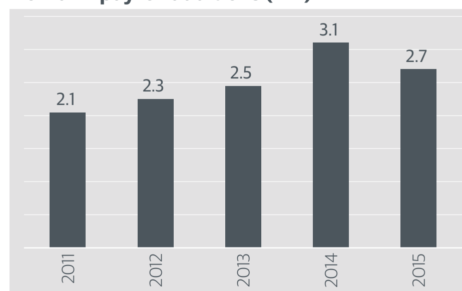
Employment trends

Unemployment rate trending down (%)



Source: US Dept. of Labor, Bureau of Labor Statistics

Nonfarm payroll additions (mn)



Source: US Dept. of Labor, Bureau of Labor Statistics

Service sectors drive employment gains, led by education, health, leisure and hospitality

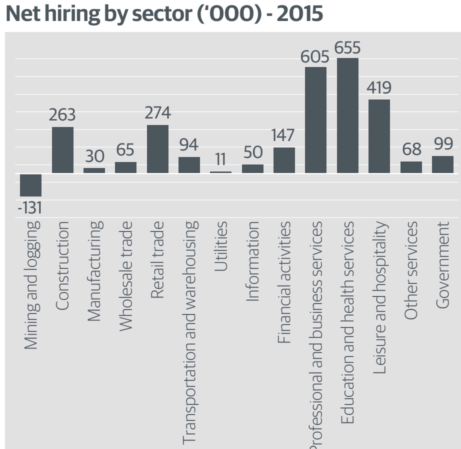
The most active sectors that are witnessing increased hiring are education, health, leisure & hospitality and professional & business services. Hiring in the education and health space is growing at a fast rate of over 15%, leading to positive momentum for healthcare real estate and social infrastructure segments. The hiring momentum continues in the leisure and hospitality sector, which has grown at a CAGR of 12% over the past two years. This bodes well for the hotels and retail real estate segments. Although hiring for professional and business services slowed down in 2015, it is still buoyant with over 0.6mn net hirings per annum over the past few years, indicating that demand for office space continues to be healthy.

Specialty trade contractors are hiring actively, driving construction sector employment gains

Construction sector hiring accounts for 10%-11% of net hirings annually and has been relatively buoyant over the past years. Although net hiring declined YoY in 2015, net additions per annum have sustained at over 260,000 in each of the past two calendar years. The bulk of the construction hirings is for specialty trade contractors (STC), driven by both residential STC (7% YoY growth in January 2016) and non-residential STC (5% YoY growth in January 2016).

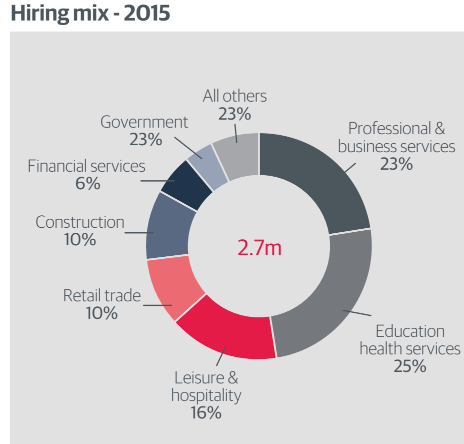
Hiring trends

Net hiring by sector ('000) - 2015



Source: US Dept. of Labor, Bureau of Labor Statistics

Hiring mix - 2015

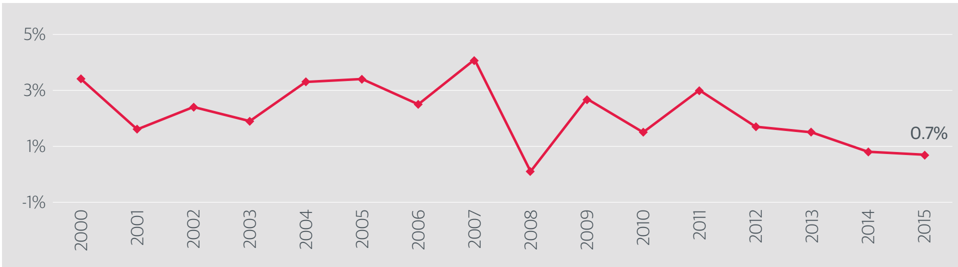


Source: US Dept. of Labor, Bureau of Labor Statistics

Inflation is forecast to pick up in 2016

Inflation remains a key area to watch out for. The broader inflation remains well below the Fed's target rate of 2%, with hardly any inflation seen in 2015, primarily due to falling energy prices. This potentially sets a deflationary tone if the subdued oil price trend continues, going forward. However, oil prices are expected to be steady or possibly rebound in 2016, allaying any fears of deflation. This could pave the way for inflation in 2016, as higher prices of non-oil components drive inflation upwards. In 2015, while the overall inflation was below 1%, home rentals grew faster by 5% (in a trend similar to that in 2014). Inflation is forecast to rise to 1.6% and 1.9% in 2016 and 2017, respectively.

Consumer Price Index (CPI)



Source: US Dept. of Labor, Bureau of Labor Statistics

A rising rate regime and stronger dollar augur well for investment in the US

c. Fed rate hikes and its implications

The Fed raised interest rates by 25 bps in December 2015 for the first time in 10 years, signaling a positive outlook for the economy. While Fed officials expect additional increases in an attempt to normalize monetary policy, they maintain a very cautious approach for further hikes, which would only be gradual depending on how the macro data pans out.

Impact on economy

While any hike in interest rates generally slows the overall economy, the current rates are still quite low in the US to have any meaningful impact on growth. The regime of rising interest rates and the strengthening of the USD have made the US a more attractive investment destination.

Foreign investment in US CRE grew 40% p.a. from 2004-07, during a rising rate regime

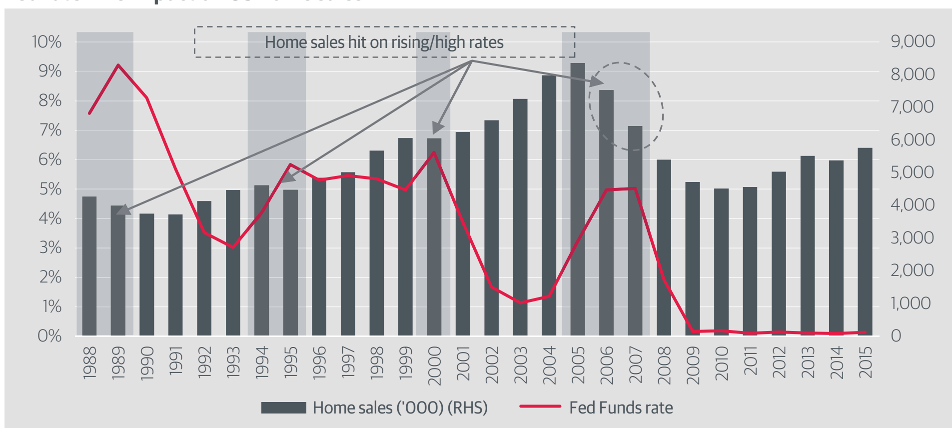
In fact, the rise in US interest rates is expected to bring in foreign investment. The last time interest rates rose during 2004-2007, foreign investment in US commercial real estate grew at a CAGR of 40% aggregating USD 47bn by 2007. Investments from China could be prominent on account of: (i) the desire to pull money out of the country (due to huge volatility in its stock markets, resulting from a moderating growth scenario) and park it in a safe location that respects private property rights, and (ii) the depreciation of the Chinese currency against the USD over the past six months.

Impact on real estate

Rate hikes are bound to translate into higher borrowing costs, which is expected to have some negative impact on the real estate sector. Over the past five years, the housing sector was a key beneficiary of low interest rates and the three rounds of quantitative easing (QE) pursued by the Fed. Home sales have therefore got a boost from lower interest rates post the recessions in 2001-02 and 2008-09, when the Fed had lowered rates significantly. Similarly, home sale volumes were impacted when the Fed raised rates. A similar trend was observed in the aggregate value of home sales, which were impacted primarily by volume declines that more than offset the rise in home prices during rate hikes.

Home sales volumes impacted by rate hikes

Fed rate hike impact on US home sales

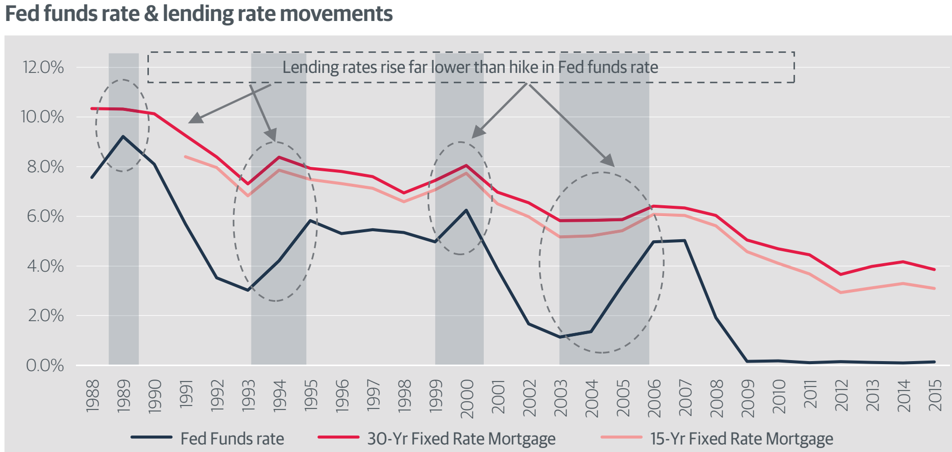


Source: Federal Reserve, U.S. Department of Housing and Urban Development

Borrowing costs relatively less hit by rising rates

Over the past three decades, the hike in the Fed funds rate has either not translated in a hike in lending rates or the hike has not been commensurate with the interest rate hikes in the market. Cost of funding has not risen proportionately, a comforting sign for home borrowers. Consequently, delinquency rates for residential mortgages have not been materially impacted. These are positive trends for the residential real estate sector.

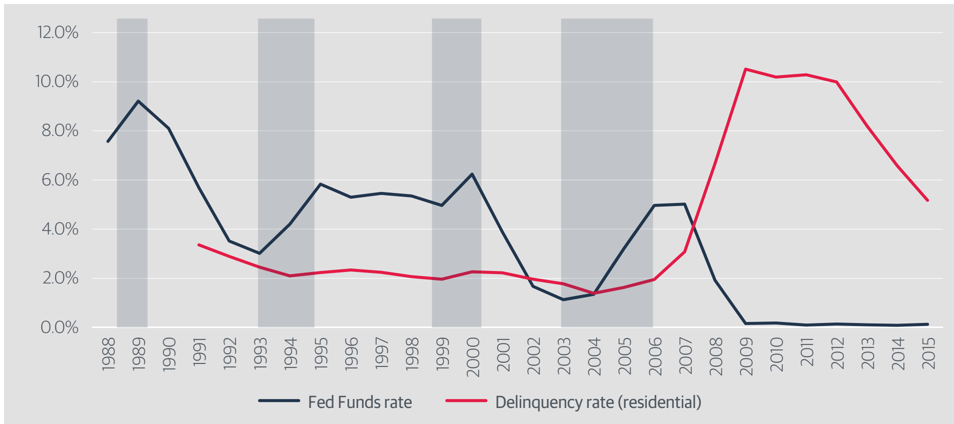
Fed funds rate & lending rate movements



Source: Federal Reserve

Residential delinquency rates not materially impacted by rising rates

Fed funds rate & delinquency rates



Source: Federal Reserve

The impact on Commercial real estate (CRE) is expected to be minimal. Traditionally, while the impact of rising interest rates on yield-oriented investments like CRE is negative, the current rising rate environment is not likely to have such an impact. The key reasons being:

- The Fed's rate hike this time around has been driven by improving economic fundamentals, such as an improving job market and lower unemployment, which is in fact a positive driver for the CRE market.

Adequate room exists for compression in spread between CRE cap rate and treasury yields

- **Little correlation between rising interest rates and cap rates.** While investors fear that rising interest rates result in higher cap rates and therefore, lower property values, historical data suggests that rising rates do not impact cap rates commensurately and hence real estate values, when analyzing their trajectories over the past few decades. This confirms that there are other variables at play beyond interest rates that influence cap rates.

  A key factor that could provide protection in a rising rate regime is the spread between the cap rates and the 10-yr treasury yield, which can absorb higher treasury yields without equivalent cap rate increases. The 360 bps spread at the end of Q2 2015 was larger than the historical average spread of the last 30 years (from 1986 to Q2 2015) of 280 bps. This suggests that room exists (extra spread of 80 bps) for further compression between treasury yields (rising) and cap rates before property value of CRE gets impacted.

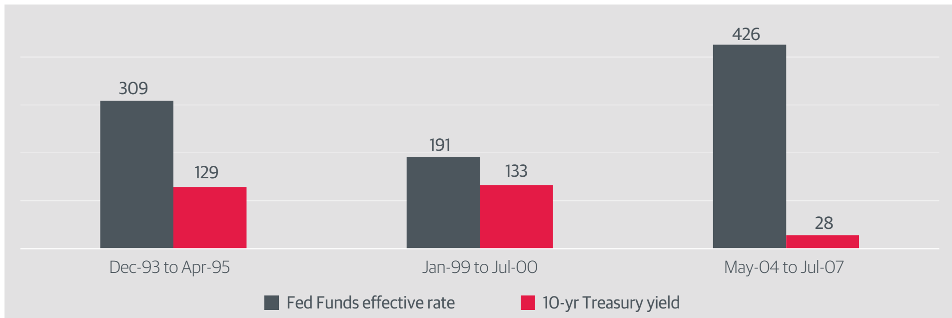
Cost of CRE debt is not too correlated to rate hikes

- **Fed funds rate does not substantially impact the cost of debt used to finance CRE.** CRE debt pricing has become more dynamic, with debt providers offering rates pegged to a variety of other market rates, such as the 5, 10 and 20-year treasuries for long-term debt. Other rates used to price commercial loans tend to closely track treasury rates of equal maturity, so treasury rates can be used as a surrogate for analyzing movements in these rates as well.

  Over the past 25 years, it has been observed that an increase in the Fed funds rate does not necessarily lead to a commensurate increase in the behavior of corollary rates, which influence lending to CRE. In each of the periods of Fed funds rate increases after 1990, the increase in the 10-year treasury yield has been far lower than the increase in the Fed funds rate. This implies that the effective cost of CRE debt would not be impacted as much as the extent of Fed rate hikes.

Little change in treasury yields w.r.t. changes in interest rates

Change in benchmark rates vs Fed funds rate (bps)



Source: Federal Reserve

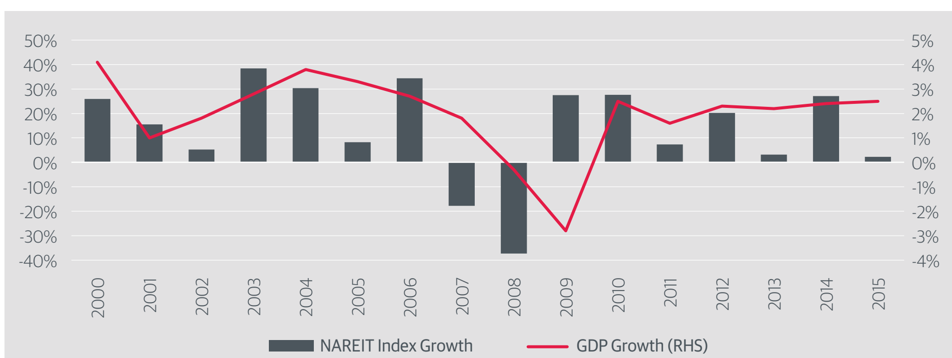
The immediate impact of rate hikes in commercial real estate is rising short term interest rates, which is already seen. According to CBRE, certain markets are expected to be more susceptible than others to interest rate increases, such as Washington D.C., New York and Boston. While cities like Dallas and Atlanta could be impacted less due to lower cap rate compression and some rent growth.

GDP growth key to US real estate market prospects

ii. Real estate performance vis-à-vis economic growth

Historically, the performance of the US real estate market has more or less reflected growth in the broader US economy. The FTSE NAREIT (National Association of Real Estate Investment Trusts) US Real Estate index, which provides a measure of the total returns given by the US real estate market, has shown performance that can be closely tracked to GDP growth.

Real estate index (NAREIT) vs US GDP growth



Source: NAREIT, U.S. Department of Commerce, Bureau of Economic Analysis

Improving macro environment to lead the recovery in real estate

The US is currently better paced in a very volatile global economy, offering stable growth prospects. Given the improving employment numbers and fairly reasonable consumer spending growth, the ingredients are in place for recovery in the broader economy and the real estate market as well. The housing sector recovery is a key positive as home sales continue to rise since the recession of 2009. The current environment of rising interest rates is not likely to hinder the outlook, given the extremely low rates compared to that in the past. Overall, the current macro environment remains benign for US real estate and serves as a possible catalyst for growth.

3. US Real Estate Market





- Investments in US CRE grew at a 30% CAGR during 2010-15, with foreign investment growing at 49% CAGR; Middle East investments totaled over $6bn in 2015 driven by SWFs of UAE and Qatar
- Housing starts and home sales grew at a 5-yr CAGR of 14% and 5% respectively, while distressed home sales declined from 40% to 6% of total sales in the past 7 years
- Cap rate compression moderated for CRE in 2015 with average cap rates declining to 6.9%, from 7.1% a year ago
- The lower cost of living and doing business are making 18-hour cities attractive
- Foreign family office wealth expected to migrate to the US, the repeal of FIRTPA Act and the EB-5 financing program to boost foreign investment

i. Overview

The US real estate sector benefited from a positive macroeconomic environment in 2015 with fundamentals improving, as demand for space grew across all property types, driving vacancies lower and rents higher. Investors have been active across all segments of real estate, with increased availability of capital. The US real estate market can be broadly segmented into commercial and residential real estate.

Commercial real estate in the US has grown at a CAGR of 30% in the past five years

Commercial real estate (CRE) includes offices, retail (malls, shopping centers, and strip centers), healthcare facilities, multifamily (buildings with five or more units or apartments), hotels and industrial real estate (manufacturing plants and warehousing facilities). The US CRE market has witnessed sustained growth in investment volumes, growing at a CAGR of 30% over the past five years to USD 533bn in 2015.

Residential real estate refers to the housing market in general, including single-family (buildings with a single unit) housing units. We are seeing a recovery in housing starts, which have been growing at a healthy 12% annually over the past three years, comfortably surpassing the 1mn per year mark.

ii. Recent/ Emerging Trends

a. Positive fundamentals shaping commercial real estate

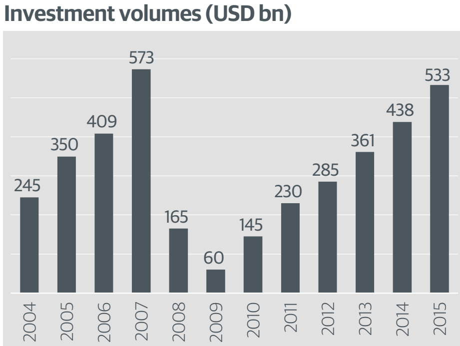
The investment volume of USD 533bn in 2015 is the highest level achieved after the peak witnessed in 2007. Investments have increased across all the five CRE property types (office, multifamily, retail, industrial, and hotels) in 2015. The key positive attributes of CRE are its tangibility as an asset class, stable operating income, and non-vulnerability to sudden price changes due a changing macro-economic environment.

Industrial and multifamily sectors drive CRE investment volumes during 2010-15

The industrial and multi-family sectors remained the most active, each registering a 30% CAGR in volumes during 2010-15, followed by retail and office investment volumes, which have grown at a CAGR of 28% and 24%, respectively. Investors in the office sector are more attracted towards the higher yield suburban offices than CBDs (Central Business Districts).

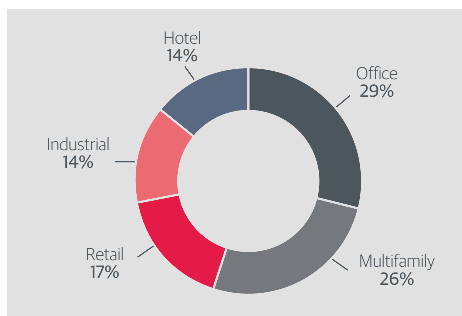
CRE investment trends

Investment volumes (USD bn)



Source: Real Capital Analytics

CRE investment mix 2015



Source: Real Capital Analytics

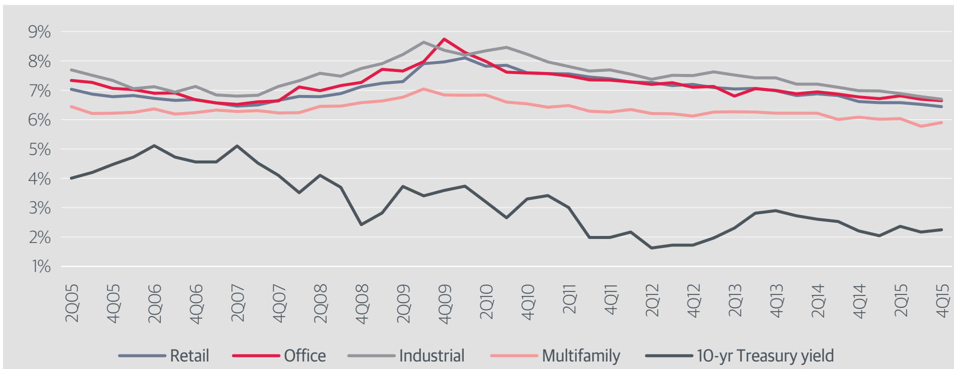
Strong industrial investment volume growth of 61% in 2015 driven by a relatively high cap rate

Cap rate compression moderated for CRE in 2015 with average cap rates declining to 6.9%, from 7.1%

In 2015, the industrial sector grew the fastest in terms of volume, growing by 61%, driven by a relatively high cap rate of 6.7%. This was followed by the multifamily and office sectors, which grew by 26% and 17%, respectively. Industrial investment performance is expected to be strong, driven by increasing demand for distribution and intermodal centers.

While the combined average cap rates for all the CRE property types declined modestly from 7.1% in 2014 to 6.9% in Q3 2015, cap rate compression moderated during 2015. However, industrial cap rates declined more steeply than other CRE sectors.

Cap rates for CRE types

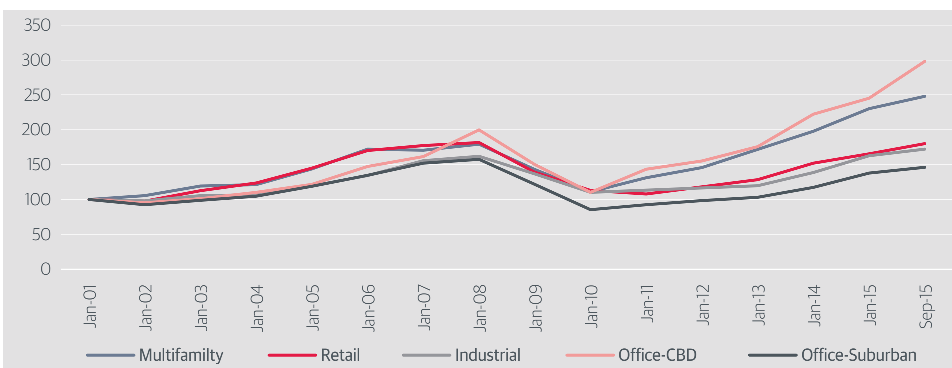


Source: Real Capital Analytics

Average prices of CRE properties rose across all property types in 2015, led by retail (+ 22.5% YoY)

The average prices of CRE properties rose across all property types in 2015, with a 22.5% YoY increase for retail, followed by 14% for multifamily, 8% for industrial and 7% for office properties.

CRE pricing indices



Source: IRR

Manhattan continues to be the top market for CRE, followed by Los Angeles, Chicago, Dallas, Atlanta and San Francisco. Orlando, Palm Beach and St. Louis were the fast growing markets among the secondary and tertiary markets, which registered triple-digit increases in YoY sales volume.

Outlook: Investors are attracted towards the higher yielding secondary and tertiary markets in the US CRE market. The top-tier markets are also expected to benefit, given the shortage of inventory.

While the prices for CRE are headed upwards, the pricing in the CRE markets does not represent a new bubble or other significant source of risk due to: (i) higher spreads between cap rates and underlying treasury rates of over 400 bps in 2015, relative to the pre-crash level of below 200bps in 2008, and (ii) disciplined lending and, therefore, very low risk of default. CRE remains an attractive investment opportunity, given the safety and returns offered in a volatile global economy and the expectations of healthy rental income flows to continue in 2016.

CRE remains an attractive investment opportunity due to the safety and returns offered in a volatile global economy

The fundamentals of the office, industrial and retail real estate sectors are improving, with positive demand/absorption trends, accompanied by declining vacancies and rising rents. The multifamily sector is also witnessing increasing rents and declining vacancies. However, new supply additions could likely reverse the downward trend in vacancies.

b. 18-hour cities

The lower cost of living and doing business are making 18-hour cities attractive

A trend emerging is the rise of the 18-hour city, where major community services run well beyond the 9-to-5 time window and often do not shut down completely at midnight. The relatively lower cost of living and doing business are making the 18-hour cities attractive investment opportunities.

The key drivers supporting the emergence of these cities include:

i. Attractive yields relative to gateway markets, given that cap rate compression has moderated for these cities
ii. New development and a modern culture attracting millennials (16-34 age group)
iii. Improving US macro economy and population growth
iv. Advancement of technology making it possible to offer benefits of a larger urban area at a significantly lower cost of living and doing business.

Denver, Charlotte, Atlanta, Raleigh-Durham, Austin and Dallas are among the top 18-hour cities according to an Emerging Trends 2016 report/survey published by PwC and ULI (Urban Land Institute). Atlanta and Raleigh, are expected to see its population increase significantly until 2030, and are also experiencing a wave of urbanization.

c. Key suburban trends

With a handful of dynamic downtowns in the country, a large part of the US population is located in the suburbs. Given that prices in the major gateway markets have risen significantly, the suburbs have caught the attention of investors.

Millennials prefer to shift from cities to suburbs

- As per the 2015 ULI survey, a larger number of millennials (16-34 age group) prefer to live in the suburbs, compared with the current suburban millennial population. Although a majority of them still prefer city living to suburban living, there is a clear shift in preferences from city (down from 46% to 37%) to suburbs (up from 24% to 29%).
- Suburbs represent a major share of the existing jobs base. In the top 40 metro areas, 84% of all jobs are outside the core center of the city.
- Suburban downtowns are witnessing an influx of people, especially if they have a 20-minute transportation link to city-center jobs and main street shopping areas. These close-in suburbs possess attributes of an 18-hour city, which have a clear access to the city center for jobs and act as employment centers as well. About 75% of millennials prefer these 20-min close-in suburbs.

In cities like Chicago, which have seen corporate in-migration from suburbs to the city center to tap talent, suburban offices have also been witnessing rising demand and a steady decline in vacancies. On the other hand, San Antonio, Dallas and Houston in Texas are key secondary markets, where job growth is dominated in the suburbs. San Antonio witnessed over USD 1.2bn in office transaction volume in 2015, with over 97% activity happening in the suburbs.

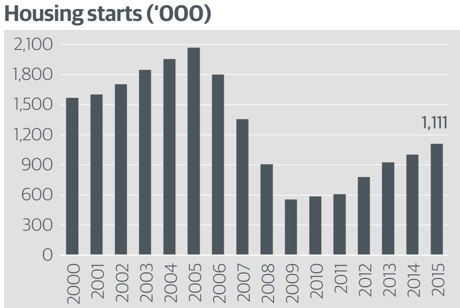
Housing starts expected to continue rising to 1.3mn in 2016

d. Housing outlook continues to improve

Housing starts, currently at the highest level in the past seven years at 1.1mn, have grown at a CAGR of 14% over the past five years, led particularly by multifamily housing, which grew at a CAGR of 28%. They are expected to rise to 1.3mn in 2016 and 1.5mn in 2017[5]. Home sales grew at a CAGR of 5% over the past five years, driven particularly by new home sales.

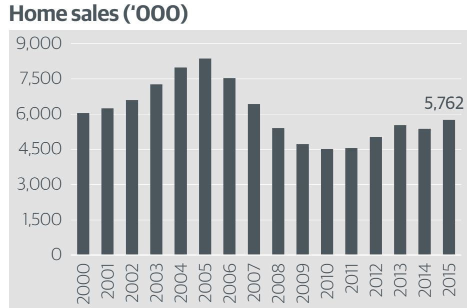
Housing trends

Housing starts ('000)



Source: US Census Bureau

Home sales ('000)

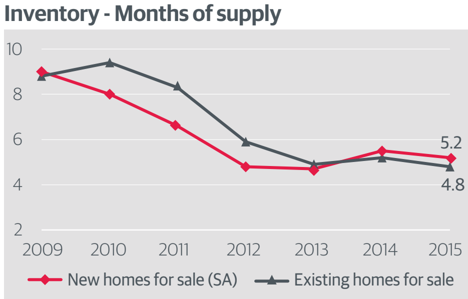


Source: US Department of Housing and Urban Development

Distressed home sales have declined from 40% to 6% of total sales in the past 7 years

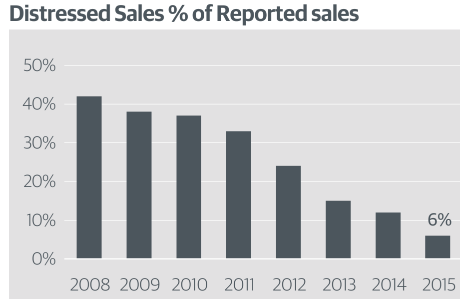
Inventories of new and existing homes available for sale have tightened in 2015, with months of supply reducing to five months from the past six-year average of six and seven months, respectively, for new and existing home inventory, respectively. The shortage in housing is attributed to the lack of adequate homebuilding activity and a sharp reduction in distressed properties, which have fallen to 6% of reported sales in October 2015, from 40% during 2008-09.

Inventory - Months of supply



Source: NAR

Distressed Sales % of Reported sales



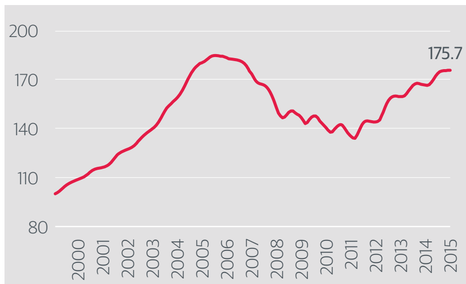
Source: NAR

[5] US Census Bureau

Declining home affordability due to rising home prices to bottom out in 2016

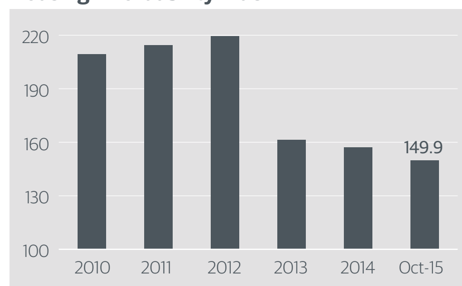
The rise in the S&P/Case-Shiller index indicates that home prices have been steadily rising over the past three years at a CAGR of ~7%. This is expected to have a positive impact on home equity values and, therefore, lower addition to distressed properties, which will hamper any increase in home inventory levels. As home prices rise, affordability for new home buyers, which has deteriorated since 2012, is expected to get further impacted. The Housing Affordability index has declined to 150 in Q3 2015 and is expected to decline further, before bottoming out in 2016.

S&P/Case-Shiller US National Home Price Index



Source: S&P Dow Jones Indices

Housing Affordability Index



Source: Axiometrics, NAR

Millennials and baby boomers expected to be most active in the housing sector

e. Changing demographics and its impact on housing demand

Millennials (the 16-34 age group) are the largest cohort in population, followed by the baby boomers (51-65 age group). These two key categories are the ones expected to make home-buying decisions in the next few years, based on the following:

- Millennials buying their first homes, and
- Baby boomers either downsizing/retiring to a new home or purchasing a second home

The key driving forces behind these trends are:

- Those in the 25-34 age bracket comprise nearly a third of home buyers. Given the sheer size of millennials, coupled with the gradual improvement in the economy, we expect an increasing number to adopt early home ownership, as against renting.
- Baby boomers approaching retirement or already retired, looking to downsize/sell their home in order to lock in a lower cost of living (in turn benefiting from higher home prices) or even purchasing a new home suited to their changing needs, taking advantage of lower interest rates before rates rise further.

Home ownership is at the lowest level in the past 48 years at 63.8%

On an annual basis, the home ownership rate is down to 63.8% in 2015, the lowest since 1968, from the highest level of 69.2% in 2004. In the short term, the rental housing market is expected to be preferred over owning homes.

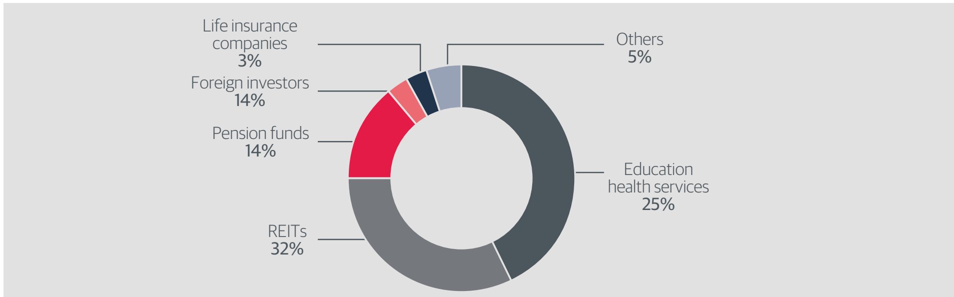
iii. Investment in US Real Estate

Foreign investment in US CRE grew at a 49% CAGR during 2010-15

a. Equity capital flows continue unabated

Private equity (PE), the bulk of equity investment in the US CRE market, has not witnessed any material growth in 2015. While investments from private investors and REITs have returned to pre-recession levels, investments by foreign investors have surpassed pre-recession levels and are the growth drivers of investment in CRE. The key players in US real estate, as of Q3 2015, are as follows:

Equity investment mix as of Q3 2015



Source: Situs RERC

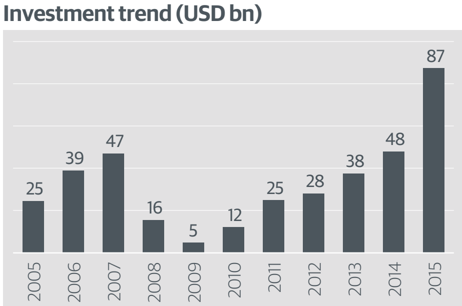
IRR expects foreign family office wealth to migrate to the US

Foreign investment

Investments from foreign investors have been healthy since the recession of 2009, recording a five-year CAGR of 49% to USD 87bn in 2015. This trend is more prominent in the industrial sector, where foreign investors constituted nearly 30% of the total foreign investment in US CRE in 2015, compared with a mere 5% in 2014. Foreign investment in US CRE has more than tripled in 2015, from the levels seen in 2005, with its share in total investment rising to 16% from ~7% in 2005. The trend of increasing foreign investments in US CRE is expected to continue[6] as foreign family offices continue to migrate family wealth into the US.

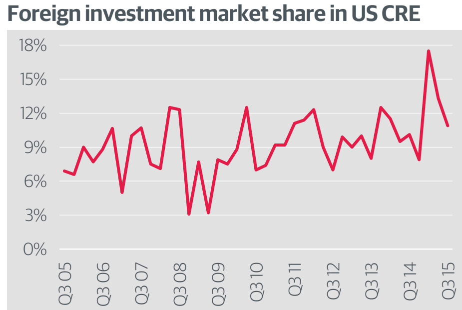
Foreign investment in US CRE

Investment trend (USD bn)



Source: Real Capital Analytics 2015

Foreign investment market share in US CRE



Source: IRR

Canada continues to be the top foreign investor in US CRE accounting for 27% of total foreign investment

Canada has consistently been the top investor in US CRE for the past five years, accounting for 27% of the total foreign investment in 2015. Proximity to the US, long experience and expertise of investing in the US, and a relatively weak Canadian real estate market are key factors driving Canadian investors into US real estate. Canada was followed by Norway, Singapore, China and Germany in terms of investment volumes as of Q3 2015.

The economic slowdown in China and Europe's growth concerns are factors driving international investors to the US, which is now regarded even more as a safe haven, with the added benefit of a strong currency and opportunity for capital appreciation. Foreign investment in 2016 is also expected to be boosted by recent changes to the FIRTPA Act that eases taxes for foreign pension funds buying US property.

[6] IRR (Integra Realty Resources Inc.)

Foreign investment in the US is expected to increase in 2016, led by New York City

As per a survey conducted by the Association of Foreign Investors in Real Estate (AFIRE), US properties will witness more foreign investments in 2016 as compared with 2015, especially in New York City, followed by Los Angeles and San Francisco. About 64% of the survey respondents indicated they planned to increase their investments in 2016.

SWFs are the major Middle East investors in US real estate in 2015, investing over USD 6bn (total JV investment)

Middle East investments

Investors from the UAE pumped in ~USD 4.5bn in the US real estate market over the three years ending in June 2015, with USD 1.8bn coming in the last 12 months ending June 2015. UAE's major investments have been in the industrial and hotel sectors during this period. Investment in the US multifamily real estate sector from Bahrain totaled USD 400mn in the 12 months ending June 2015, with a cumulative total of USD 1.1bn over three years.

Sovereign wealth funds (SWFs), Abu Dhabi Investment Authority (ADIA) and Qatar Investment Authority (QIA) made major investments in US real estate in Q4 2015. A JV involving ADIA acquired a portfolio of industrial properties of the Exeter Property Group for USD 3.15bn, while QIA entered into a JV with Brookefield Property Partners for developing the Manhattan West Development project (a 7 msf mixed-use development, including a 2 msf 67-storey office building, a 62-storey luxury residential building, a hotel and redevelopment of a 1.8 msf office building) for a total cost of USD 8.6bn. The Manhattan West Development project is scheduled for completion in 2019. QIA bought a partial stake in the project for USD 3.23bn, according to Colliers International.

Middle East investment in US real estate (USD bn)

As of Jun-2015

Country	Sector	Past 1 yr	Past 3 yrs
UAE	Industrial	0.7	1.5
UAE	Hotel	0.7	1.3
Bahrain	Multifamily	0.4	1.1

Source: Real Capital Analytics;

During Q4-2015

Country	Sector	Amount
Qatar	Mixed-use	3.23
UAE*	Industrial	3.15

* Total investment of JV with PSP Investments

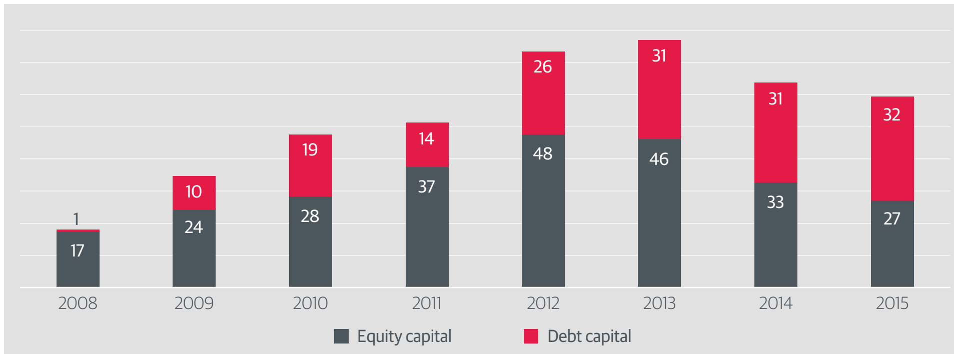
REITs

REITs, while contributing the second largest share of equity investment at 32% (including market capitalization changes), are 230 bps lower in 2015 than the previous year. The market capitalization of all publicly traded REITs (95% of which are equity REITs) of ~USD 900bn at the end of 2015 delivered a healthy CAGR growth of 18% from 2010-2015, although it was marginally lower than the m-cap at the end of 2014.The FTSE NAREIT US Real Estate index, a measure of the performance of US REITs, has delivered positive returns in all the years post the financial crisis in 2008-09. However, the index slowed down in 2015, delivering a meager 2.3% return.

Capital raised by Mortgage REITs have grown at a 5-yr CAGR of 11%

Total capital raised by all publicly listed REITs has been declining annually since 2013, with USD 59bn raised in 2015. However, mortgage REITs (debt-based) continue to raise increasing amounts of capital, growing at a 5-yr CAGR of 11% to USD32bn in 2015.

Capital raised by publicly listed REITs (USD bn)



Source: reit.com

b. Debt financiers turn cautious, competition heats up

The larger share of investments are debt based and dominated by commercial banks, commercial mortgage–backed securities (CMBS), government agencies and life insurance companies. Lending by banks is now more disciplined after the 2008 financial crisis, given that the regulations of Dodd-Frank and Basel III mandate banks to have higher capital reserve requirements for acquisition, development and construction lending.

CMBS's share of lending decreased by 600 bps in 2015 to 21%, and it formed the bulk of lending to the retail and hotel sectors. Government lending agencies continue to control lending to the multifamily sector, with its share maintained over the past three years.

Life insurance companies remain conservative lenders, willing to sacrifice market share to maintain loan quality

Life insurance companies continue to be very conservative and selective lenders, with a willingness to sacrifice market share to preserve loan quality. Their market share has remained unchanged over the past one year at 12%, with ~USD 370bn of outstanding commercial mortgages. These insurance companies manage risk by strict underwriting standards and portfolio diversification, leading to a lower risk premium than other mortgage products.

Commercial bank loans to CRE grow faster (8.7%) than total loan originations (7.6%) and LTVs dropped from 71% in 2007 to 66% in 2015

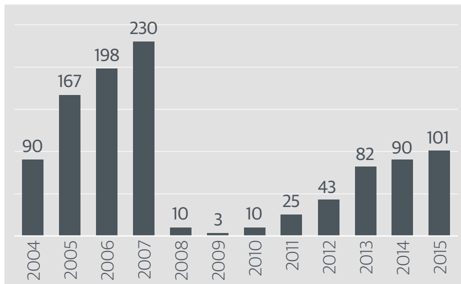
While systems need to be upgraded and lending gets pruned/more disciplined as a result of the new rules, new deals now have a cushion against risk. LTV (loan-to-value) ratios have come off from the peak of the previous cycle, from ~71% in May-2007 to 66% in Oct-2015. However, spreads have reduced, from about 2.3% to 1.6%[7] over a period of five years, indicating that competition is heating up for real estate lending.

Loan origination growth of 7.6%YoY in Q3 2015 was stronger than the 4.4% growth a year ago, driven primarily from US depository institutions, which grew by 8.7%, contributing nearly half of all commercial real estate debt. This is a healthy sign for CRE, given that lending standards have improved. However, institutional lending has not yet reached pre-recession levels.

[7] Bank of America

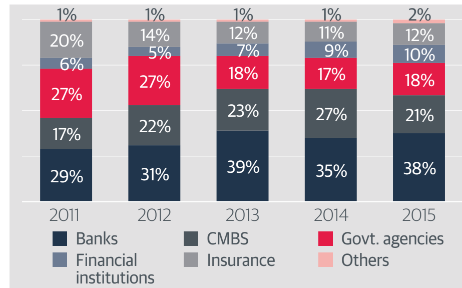
Debt investment in US CRE

CMBS issuance (USD bn)



Source: Commercial Mortgage Alert

Debt investment mix - 2015



Source: Situs RERC

CMBS delinquency rates continue to decline since 2009 as lending turns more disciplined

CMBS market recovery

The CMBS market is recovering from the lows of the 2009 recession, in line with the recovery of securitized lending. While CMBS issuance in 2016 is expected to be near 2015 levels, aggressive estimates suggest that issuance could increase to ~USD 150bn by 2016 and USD 200bn by 2017. Delinquency rates have also continued to decline, to 3.4% in Nov-2015 from the highs of 10.2% in early 2010, as lending became more disciplined.

While maturing loans, including CMBS, have been successfully refinanced with the support of low interest rates, it is expected[8] that commercial real estate loans worth ~USD 750bn maturing in 2016 and 2017, may have difficulty refinancing without the loosening of underwriting stances and/or recapitalization by the borrowers. The refinancing rate is projected to decline to 75% of all loans maturing in 2016, compared with 80% in 2015. Given that the recent FED rate hike is small and interest rates remains low, it may not have a massive effect on its own, but subsequent hikes predicted could lead to a more conservative and less risky lending environment, impacting refinancing activity.

Mezzanine lending expected to pick up as lenders seek higher return in an improving economy and a regulated lending regime, and large amount of CMBS loans come up for refinancing

Mezzanine financing opportunities remain

Post the global financial crisis in 2008, as traditional banks turned conservative in their lending to real estate due to regulatory issues, mezzanine financing has played an important role in financing new construction projects. While it is difficult to quantify the amount of mezzanine lending (in the form of mezzanine loans and preferred equity), the amount of private equity flowing to real estate debt funds provides a measure of capital coming in through this source. Funds raised by North American-focused real estate debt funds grew at a CAGR of 79% from 2012-14 to USD 11.6bn[9]. With large amount of conduit CMBS loans maturing in the coming two years, mezzanine financiers have ample opportunity when they come up for refinancing.

There exists a reasonable amount of real estate assets outside the primary regions, in the secondary markets, which are largely ignored by risk-averse lenders. This offers enough opportunity for mezzanine lenders, given that the economy continues to improve. This bespoke lending is expected to pick up in the second half of the decade, partly due to the quest of higher returns in a regulated lending environment.

[8] Morgan Stanley
[9] London-based research firm Preqin

iv. Change in regulations to encourage foreign investment

Foreign pension funds to be spared from the FIRTPA tax liability upon sale of US real property interests

a. Repeal of FIRTPA Act

Foreign investors in US real estate are regulated by the Foreign Investment in Real Property Tax Act (FIRPTA), which taxes foreigners on the sale of US real property interest. The effective tax rate of as much as 60% (including federal, state and local levies) for foreign investors was a key deterrent to invest in the US real estate. However, recent changes to FIRPTA made in December 2015, (i) exempts certain foreign pension funds investing in US real estate assets from the FIRTPA tax liability, and (ii) doubles the maximum stake a foreign investor may have in a US publicly-traded REIT from 5% to 10%, without triggering the FIRTPA liability upon the sale of the REIT stock. These amendments are game changers for foreign investors from a returns perspective.

EB-5 visas issued increased from 700 in 2007 to the annual cap of 10,000 in 2014

b. EB-5 financing program – a thumbs up to foreign investors

The EB-5 program encourages capital investment by foreign investors in US businesses/assets, and is aimed at job creation. It enables foreigners to get permanent residency/green cards if they invest a minimum of USD 1mn in a commercial business (or USD 0.5mn in a rural/high-unemployment business) in the US that creates at least 10 permanent full-time jobs for qualified US workers. This program is expected to encourage foreign investment in the development of commercial real estate. The number of EB-5 visas/green cards issued increased substantially from just 700 in 2007 to the annual cap of 10,000 in 2014, and the same number was achieved in 2015 as well. Chinese investors comprised over 90% of these visas. The EB-5 program remains an active source of foreign investment into the US, especially into real estate.

4. Office Real Estate

- Net absorption of 87 msf at 9-yr high in 2015, to continues to outpace supply in 2016
- Demand driven by tech and healthcare, while pre-leasing momentum continues
- Vacancy of 12.5% is below pre-recession levels, expected to further decline in 2016
- Foreign investment in Class B properties surge 6x in 2015 to $4bn
- Office prices grow 6.7% in 2015 - suburban prices grow faster than CBDs, cap rates at 8-yr low of 6.7%
- CBD rents growing faster than suburbs, but pace of national office rents to moderate to 2.2% in 2016

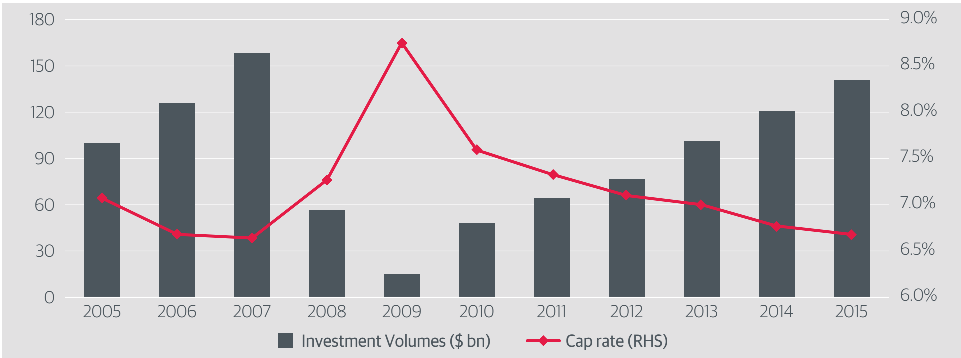
Office investment volumes grew at a 5-yr CAGR of 24% to USD 141bn in 2015, with steady decline in cap rate by 90 bps from 2010-15 to 6.7%

i. Overview and key markets

The fundamentals of the US office sector are healthy, given the rising demand and continued decline in vacancies from over 16% in 2010, to 12.5% in 2015. Net absorptions have been outpacing deliveries for the past five years, while the prices of office properties continue to rise, resulting in a decline in cap rates.

Investment volumes have grown at an impressive CAGR of 24% over the past five years to USD 141bn in 2015, the highest since 2007. Suburban offices are drawing the attention of investors, with higher cap rates (7.4%) relative to CBDs with an average cap rate of 6.8% in 2015. Manhattan was the top office destination reporting USD 27bn in sales volume (19% YoY growth) in 2015, followed by Chicago (which reported USD 8.7bn), Boston, Los Angeles and San Francisco. Secondary markets such as Atlanta, Orange County and Phoenix posted significant increases in sales volume, indicating that investors are also interested in the higher-yielding secondary markets.

Office investment volumes and cap rates



Source: CBRE

Net absorption grew at 5-yr CAGR of 37% to 87 msf, outpacing completions for the 5th consecutive year

Unlike most secondary markets, Gateway markets are benefitting from an inventory crunch in the office segment with flattish or declining inventory levels in 2015 compared with the previous year: Los Angeles reported a 3% decline, Washington DC and San Francisco witnessed about 0.3-0.5% declines, while New York remained flat. Prices of office buildings hit record highs by Q2 2015 in Chicago and reached post-2009 highs in New York and Los Angeles.

ii. Absorption continues to outpace supply

The annual net absorption in 2015 for the national office market was the highest in the past nine years at 87 msf, which grew at a CAGR of 37% in the last five years, while completions grew at a CAGR of 13% to 65 msf in 2015. Strong absorption was driven by robust leasing activity in all the core markets. The uptick in leasing was supported by:

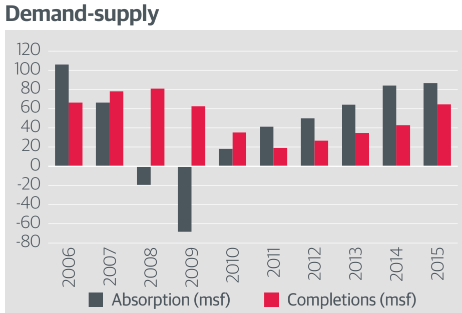
Vacancies declined by 350 bps over 5 years to 12.5% in 2015, the lowest since 2007

- Early leasing by large tenants (especially in New York) to lock-in deals at favorable prices, and
- Need to configure office space into a modern and collaborative layout preferred by employees, leading to demand for such space, where modifying existing layouts is a challenge.

Net absorption has been clearly outpacing that in completions, with vacancies declining by 350 bps from its peak in 2010 to 12.5% in 2015, the lowest since 2007.

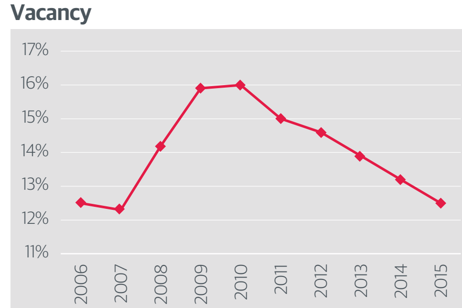
Office trends

Demand-supply



Source: Colliers International

Vacancy



Source: Colliers International

Fierce competition for talent and need to quickly scale up are driving tech companies to expand into secondary markets

a. Technology firms drive office market growth

Technology companies have been expanding at a pace not seen before, leaving behind the banking and financial services sector in terms of office real estate demand. These tech firms are driving demand for office space not just in the Silicon Valley, but also in the secondary markets. Factors such as intense competition for talent and the ability to scale up quickly are driving expansion beyond the traditional tech-hubs.

Many secondary markets are less expensive in terms of both real estate and a well-educated workforce. The expansion is seen in both back-office, as well as engineering jobs. Amazon now occupies 11msf of office space in Seattle after moving its headquarters there in 2015, while Apple has 8 msf in the San Francisco Bay area. A few examples of the large space absorbed by tech firms in 2015 are Indeed.com's occupancy of 220,000 sf, ARMInc.'s 101,867 sf lease and Cirrus Logic's 85,000 sf prelease commitment, all in Austin. This is in addition to the huge space leased by Facebook (247,000 sf), Tableau Software (207,791 sf) and Zillow (136,162 sf), all in Seattle.

The emergence of 18-hour cities such as Austin, Raleigh-Durham and Nashville, are attracting talent, given that the creative talent pool is drawn towards urban environments. While Nashville is a major hub for the healthcare industry, it is also benefiting from growth in technology companies. The technology and healthcare sectors are expected to witness the highest growth in employment from 2014-24[10] at 20% and 21%, respectively. This growth in employment is expected to drive higher demand for office space, both in gateway as well as the secondary markets.

Corporate relocations and professional services due to lower costs and business-friendly locations are driving secondary office markets

b. Vacancies below pre-recession levels

National vacancy has dipped to 12.5% in 2015, the lowest in the past eight years. Vacancies of many markets having a large tech presence, have dipped below their previous troughs in 2008-09, such as Raleigh-Durham (590 bps down), Oakland, CA (560 bps down), Nashville (380 bps down) and San Francisco (270 bps down).

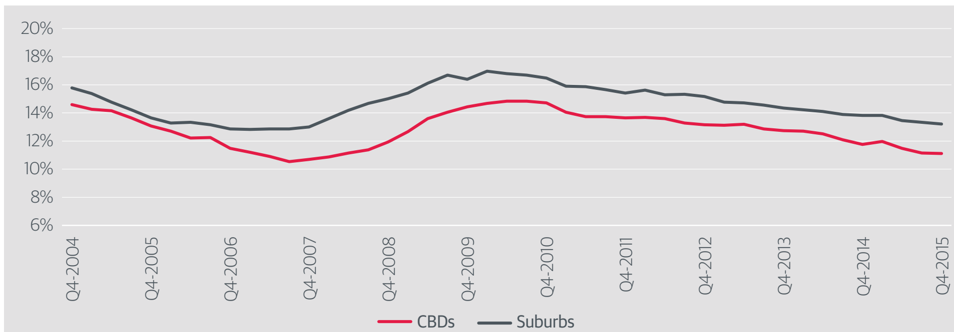
Growth of professional services and corporate relocations to lower cost and business friendly locations, are trends that have fueled office demand in many secondary markets. Over 500 companies have relocated to Texas in the past five years. An example includes JP Morgan Chase's relocation of its technology and operations departments from prime Manhattan to Jersey City, New Jersey, taking up 344,000 sf of space, driven by tax breaks amounting to USD 188mn over 10 years. Another case in

[10] Bureau of Labor Statistics

point was Toyota's relocation from California to Plano in Texas – benefiting the company in the form of various grants and lower taxes, and by creating a more collaborative office environment to attract a younger workforce.

Vacancy rate comparison – CBD and suburbs

National vacancy rates



Source: Colliers International

Middle East investment in US real estate (USD bn)

Region-wise vacancies

Suburbs	Vacancy	CBDs	Vacancy
West	12.9%	West	10.7%
South	12.6%	South	13.0%
Northeast	14.3%	Northeast	10.2%
Midwest	13.2%	Midwest	11.8%
US	13.2%	US	11.1%

Source: Colliers International

Lowest office vacancy rates in US

Suburbs	Vacancy	CBDs	Vacancy
Nashville	4.6%	Oakland CA	3.5%
San Jose	5.5%	Raleigh-Durham	5.0%
Bakerfield, CA	7.0%	Charleston	6.4%
SF, Peninsula	7.8%	Little Rock	6.8%
Portland	8.2%	SF	7.2%

Source: Colliers International

c. Preleasing gains favor as construction picks up

Construction activity of 107 msf is the largest in the past 7 years, with over 50% pre-leased in top gateway markets

While more than half of the 80 markets nationally had new deliveries in 2015, a handful of markets delivered over 1msf in Q4 2015, led by Houston, Dallas, Austin, Seattle, Phoenix, Pittsburgh, New York and San Francisco. The majority of the space under construction in various markets has anchor tenants before the completion of the projects. For instance, Silicon Valley has 80% of projects pre-leased, Manhattan has 70%, Boston has 60%, Chicago has 59%, and San Francisco has 50% of new construction space as pre-leased.

Declining vacancies are prompting accelerated construction activity in the office market. The current pipeline of 107 msf of projects (10.8% higher than year-ago levels) led by New York's 11 msf of new supply that is underway, is the largest in the past seven years on account of pent-up demand, after construction slumped to an average 50 msf annually post the financial crisis, throughout the recovery, when lenders turned conservative in their project lending with significant pre-lease requirements, and development was constrained, hurting construction activity in the past three-four years.

iii. Rental and pricing trends

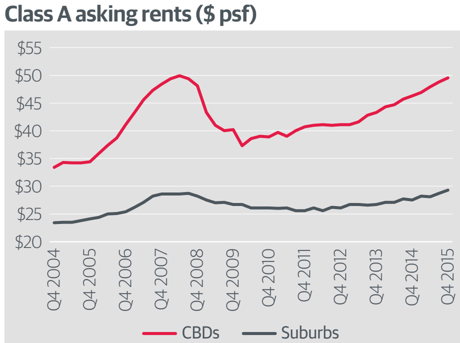
CBD rents grew (7.1% YoY) faster than suburban rents (3.6% YoY) in 2015

National office rents grew by 2.2% YoY in Q4 2015 to USD 31.3 psf, the highest quarterly growth in several quarters. Office rents for Class A properties continue on an upward trend for both CBDs (7.1% growth in 2015) and suburbs (3.6% growth in 2015), with CBD rents the highest since Q3-2008 and suburban rents now at a new peak, driven by strong annual rate increases in 2015 in the Californian markets of San Francisco (19% YoY), San Jose (15% YoY), Los Angeles, San Diego and Oakland (33% YoY), which have the most expensive suburban rents in the US. Although the outlook for asking rents remains positive, they are expected to moderate in 2016, particularly in San Francisco.

While rents continue to rise in the office market, CBDs grew faster than suburban offices as employers generally preferred large walkable and high-density premises. Major markets enjoy high rentals; San Francisco has among the highest office rents in US, even higher than New York in many submarkets, as rents in New York are being offset by increasing concessions, such as large work letters, free rent, etc.

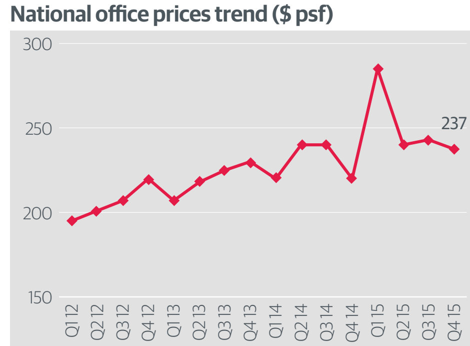
Office pricing property trends

Class A asking rents ($ psf)



Source: Real Capital Analytics, CBRE

National office prices trend ($ psf)



Source: Real Capital Analytics, CBRE

Office market pricing growing at 6-7% p.a.

Pricing in the office market has remained strong, maintaining an uptrend since Q1 2012, growing at 6-7% annually till 2015. Prices of offices in suburbs (8.5% growth) grew faster than that in CBD properties (4.6% growth) in 9M 2015. The increases in prices are driving down cap rates in the office market, with the average cap rate declining to 6.6% in Q4 2015, from 7% in Q1 2014.

iv. Foreign investment in the office sector

Foreign investment in secondary markets nearly tripled in 2015 to USD 2.2bn

The US office sector continues to attract foreign investment, which amounted to over USD 20bn in 2015, with Canada consistently being the top investor. China is now the second largest investor in office, with14% of total foreign investment in 2015, though it had not even featured in the top 5 in 2014 (over a three-year period, it figures in the top 5).

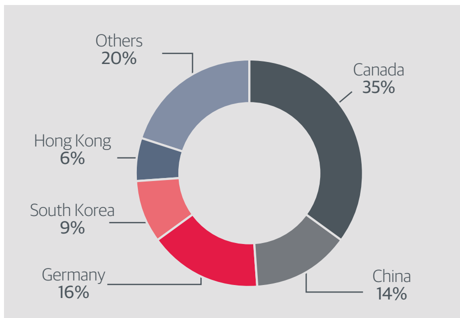
Class B properties witnessed 6x surge in foreign investment in 2015 to USD 4bn

Four markets recorded over USD 1bn of foreign investment, all primary gateway markets - New York, Washington DC, Boston and Seattle. While primary markets overshadowed secondary market activity, investment in secondary markets nearly tripled to USD 2.2bn in 2015, led by Miami, Atlanta and Denver. Another trend observed is the diversification by foreign investors into Class B[11] office space, with capital invested in these properties growing significantly (6x) in a year to USD 4.1bn in 2015. New York has attracted the bulk (41%) of this Class B investment in 2015, which is 8x the investment in 2014.

[11] Class B properties are a notch below Class A properties, which represent the highest quality buildings, relatively new, well located, professionally managed and commanding the highest rents. Class B are relatively little older, but still have good quality management and tenants.

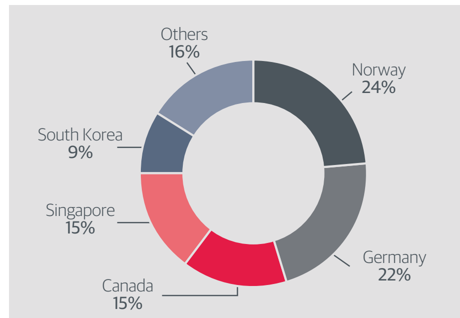
Global investment in US office sector

2015 Foreign investment mix



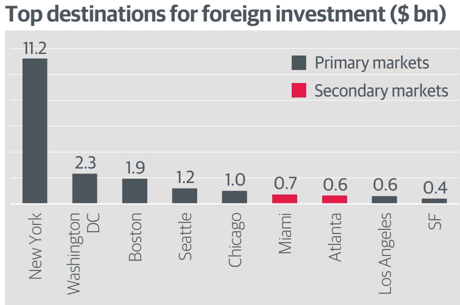
Source: JLL

2014 Foreign investment mix



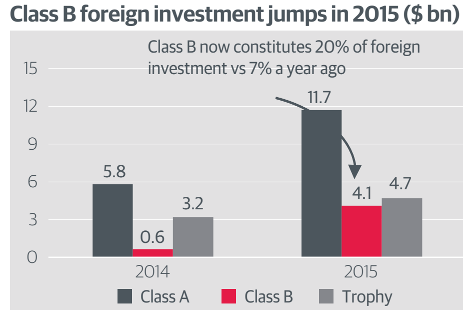
Source: JLL

Top destinations for foreign investment ($ bn)



Source: JLL

Class B foreign investment jumps in 2015 ($ bn)



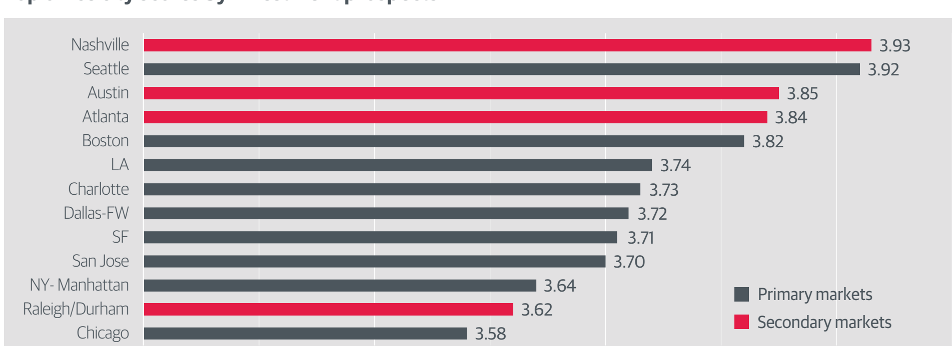
Source: JLL

The West and Northeast regions are core office markets comprising 46% and 30% of net absorption

v. Promising office markets to watch out for

The core markets for the US Office sector remain the West coast and the East coast/ Northeast, which contributed 46% and ~30% of the net absorption respectively in Q4 2015, with the balance comprising secondary office markets in the South/Midwest regions. The West coast markets led absorption gains for the first time in Q4 2015 in over two years, led by Los Angeles and Phoenix. As per the Emerging Trends in Real Estate Survey 2016 undertaken by PwC and ULI, Seattle tops the list for core office markets in terms of investment prospects, followed by Boston, Los Angeles and SF, while Nashville tops the list for secondary markets.

Top office city scores by investment prospects



Source: PwC and ULI's Emerging Trends in Real Estate Survey 2016

Competition for prime office space in Seattle drove up Class A rents by 10% in 2015

Seattle (West)

Seattle continues to witness over 2 msf of annual net absorption for the third consecutive year, with 2.8 msf of net absorption in 2015, driven by technology companies. Vacancies are down to a multi-year low of 8.4%. Apart from Amazon, many Silicon Valley based technology firms such as Facebook, Google, Apple, Oracle, and Salesforce, have expanded their Seattle offices to tap the engineering talent pool. Demand in core urban submarkets remains strong, with competition for prime office space driving Seattle's Class A rents, which grew by 9.7% in 2015. While the office market outlook for Seattle remains positive, the rapid pace of possibly speculative projects under construction to be delivered over the next 18-36 months needs to be watched out for.

Vacancy in Boston is expected to continue to drift lower into single-digits in 2016

Boston (North East)

After reporting 2 msf of net absorption in 2015, positive net absorption is expected to continue in Boston in 2016, with tenants seeking over 4 msf of space. With about half of the 5.8 msf under construction property available for delivery during 2016-18, Boston faces a demand-supply imbalance. Consequently, vacancy rates are on the downward trend, declining 210bps YoY to 8.9% at the end of 2015, and are expected to continue the slide into the lower single-digits in 2016. Asking rents are headed upwards, with annual rent growth topping 30% in some sub-markets.

With tech firms beginning to move to the Financial District from Cambridge and life sciences companies, which traditionally preferred the Cambridge neighborhood, also looking elsewhere due to high rents, there is a healthy demand for office space in the other submarkets of Boston.

Cap rates in LA expected to further decline, post 160 bps decline over 5 yrs to 4.5% in 2015

Los Angeles (West)

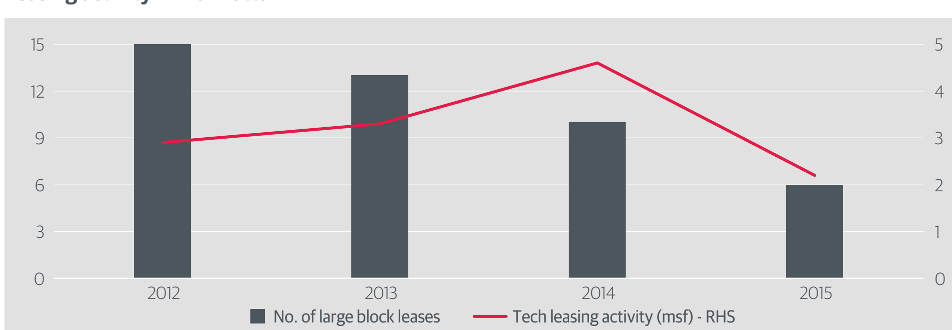
Absorption remains positive while vacancies continue to decline, dropping by 70 bps in 2015 to 17.9%. CBD rents in LA grew 2.7% in 2015 to USD 40.8 psf, while suburban rents grew 6.9% to USD 39 psf. LA is currently witnessing strong investment activity, with a number of high profile assets having come up for sale and expected to fetch a higher price psf. Cap rates which have steadily declined from 6.1% in 2010 to 4.5% in 2015, are expected to decline further, indicating that LA offers opportunity from an investment perspective.

Strong leasing by tech companies leveled off in 2015, while vacancy of 9.6% was Manhattan's lowest level since 2008

Manhattan – NY (North East)

While Manhattan recorded a sixth consecutive year of positive absorption, with 4.3 msf of net absorption in 2015, it was lower than in 2014, as the robust leasing by technology companies has been leveling off. Large block leases (over 100,000 sf) continued to decline in 2015. Positive aspects are that vacancy rates are at their lowest level since 2008, declining 40 bps in 2015 to 9.6%. Asking rents continued to rise for the eleventh successive quarter, ending 2015 at USD 71.5 psf (up 7.5% YoY).

Leasing activity in Manhattan



Source: JLL

Class A rents in Midtown Manhattan are at all-time highs of USD 80psf - rapidly growing rentals in Manhattan are expected to moderate in 2016

The Midtown submarket in Manhattan is heating up, with average Class A rents at nearly all-time highs (up 4% in 2015 to USD 80.2 psf) and limited available supply in Midtown South, the preferred tech location. Consequently, some tenants are looking at considering short-term options like co-working, while others are looking at adjacent markets like Brooklyn. New supply is underway in Manhattan, such as the 19 msf in Hudson Yards/Manhattan West area of Midtown South which is planned or under construction, as per Colliers International. While the outlook remains positive, rental growth is expected to moderate in 2016.

San Francisco (West)

SF remains one of the strongest office markets in US with investment volume of USD 3.7bn in 2015

San Francisco (SF) continues to be one of the strongest office markets in the US, with investment volume of USD 3.7bn in 2015 (above the historical average of USD 3bn since the 2008 financial crisis). Absorption in San Francisco remains healthy, with 1.6 msf of net absorption in 2015. With ~6 msf of space in use among 166 tenants in SF, demand remains strong. If the entire tenant demand is assumed to be fulfilled, it would imply net absorption of ~2.1 msf[12], which portends well for leasing activity in 2016. Vacancies are down 30 bps in 2015 to 7.2%.

Strong tech demand in SF driving up the already high office rents with Class A and Class B rents rising by 18.7% and 27% respectively in 2015

SF has about 5 msf under construction of which 37% is preleased, and has an additional 12 msf in various stages of planning. Rents in SF continue to rise, with average Class A rents rising 18.7% in 2015 to USD 73.6psf, and Class B rents rising from USD 47.8 psf to USD 73.3 psf over two years, growing 27% in 2015 alone. They are expected to rise in 2016 as well, although at a slower pace. Many technology tenants are willing to pay such rents for being in the area, rather than having to move out.

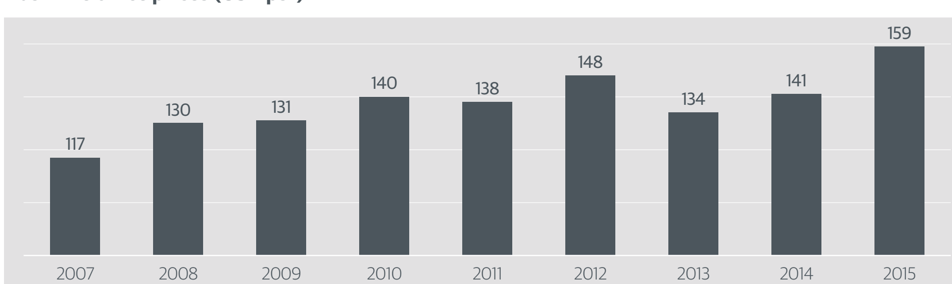
Nashville (South)

Office investment volumes in Nashville (18-hour city) in 2015 increased 35% to over USD 820mn, with outside investors driving prices upwards, which have been hitting new highs and has been driving local investors away from the market. High prices, coupled with low vacancy rates, are driving rentals also higher. Nashville's vacancy hit an all-time low of 6.7% in Q4 2015 and is expected to continue declining till new supply hits the market towards the end of 2016 and in 2017.

Price hitting new highs in Nashville, while development picks up pace with 76% of 2016 deliveries already preleased

Nashville is experiencing a development boom with 2.5 msf under construction. Expected deliveries in 2016 are 76% preleased, while those in 2017 are 43% preleased so far. Given that leasing remains tight in new construction, vacancy rates are expected to continue declining, despite the addition of new supply. Nashville is facing a congestion issue, which is an indicator of population and economic growth. However, transportation challenges need to be addressed, failing which tenants would face a long-term tradeoff between the benefits associated with a downtown and the convenience of a suburb. Overall Nashville remains a healthy market from a growth and investment perspective.

Nashville office prices (USD psf)



Source: JLL

7 Colliers International

vi. Investments in office sector

Qatar Investment Authority invests USD 3.2bn in Manhattan in a JV with Brookfield Property Partners

Top office deals in 2015 & 2016

Buyer	Investor type	Assets purchased - market	Market	Deal value ($ mn)	Price ($ psf)	Area (msf)
Qatar Investment Authority^	SWF	Manhattan West Development	Manhattan	3,226	561	5.75
SL Green Realty	Real estate firm	11 Madison Avenue	Manhattan	2,435	1,065	2.3
Ivanhoé Cambridge JV Callahan Capital Partners (ICJCCP)	Real estate firm - PE firm	3 Bryant Park	New York	2,200	1,833	1.2
Ivanhoé Cambridge	Real estate firm	1095 Avenue of the Americas	New York	2,200	2,122	1.04
Citigroup	Financial firm	388-390 Greenwich Street*	New York	2,000	759	2.6
CalPERS	Pension fund	787 Seventh Avenue*	New York	1,933	1,097	1.8
General Growth Properties	REIT	Crown Building	New York	1,780	4,450	0.4
Blackstone	Investment firm	233 S Wacker Drive	Chicago	1,500	397	3.78
RXR Realty/ Hong Kong Monetary Authority	PE firm	230 Park Avenue	New York	1,207	858	1.4
RXR Realty & Blackstone Group	PE firm	Helmsley Building	New York	1,200	857	1.4

Source: JLL; ^ partial interest sale; * in Q1 2016

Core markets of Boston, NY and LA are in a rising phase, while SF and Silicon Valley appear to be peaking out

Office life cycle

The majority of the office markets represent potential investment opportunities. Major markets such as Boston, New York, and Los Angeles continue to witness strong demand and rising rentals, while the already high rents in San Francisco and Silicon Valley appear to be peaking out. Boston's Cambridge market is seeing strong demand from technology tenants driving rents to USD 58.2 psf, higher than even Washington DC and Downtown, New York.

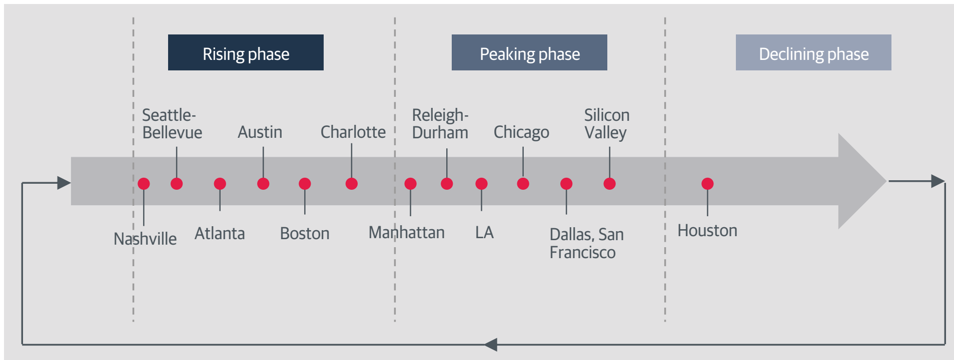
Houston is in a declining phase, impacted by the downturn in the energy sector. It witnessed negative absorption in 2015 and continues to see lack of demand and high vacancy.

Overall, given the sustained demand from tenants and tightening supply, landlords are well placed to raise rents, reflecting the strength in the US office sector for the next 12-24 months.

Office demand is expected to exceed supply in 2016, driven by healthy employment trends in services sectors

Vacancies to continue declining with 2.2% rise expected in rentals in 2016

The office cycle



Source: JLL

Outlook

The outlook for the office sector remains encouraging, driven by healthy employment trends in professional and business services. A stronger macro economy is expected to boost the US office sector. On a national basis, office space absorption has outpaced completions each year for the past five years and is expected to continue in 2016. This would mean that vacancies will continue to decline. Asking rents are expected to further grow (at a moderate pace), particularly in major markets (except Houston) and rise by an average 2.2% in 2016.

Technology companies actively remain on the lookout for large blocks of space for expansion, either in the core markets or satellite offices in secondary markets. They are active tenants for signing significant pre-lease commitments in new construction and will remain a key driver for the market.

5. Industrial Real Estate

- Foreign investment in industrial sector increase 11x in 2015, contributing 40% of industrial investment, up from 6% during the past 3 years
- Net absorption of 231 msf in 2015, the highest in recent history, as e-commerce, 'Big Box', infrastructure development drive warehousing demand
- Vacancy at the lowest level in 15 years at 6.4%, pace of decline to moderate in 2016
- Rents to rise by 4.5% in 2016, after growing at a CAGR of 5% over the past 3 years
- Construction in full swing with space under construction at a 10-yr high of 192 msf, expected by Jun-2017 - Chicago construction activity is strongest since 2008

i. Overview and key markets

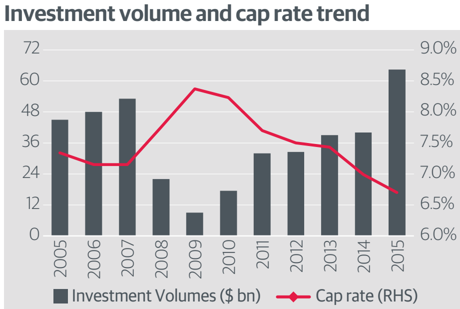
Industrial property fundamentals are solid, given that demand is strong in a favorable economic environment, with low vacancy levels, coupled with record construction activity. The industrial real estate market is broadly segmented into warehousing-distribution centers, manufacturing facilities and flex spaces[13] that are gaining favor in small warehouses for optimum space utilization. Warehousing and distribution centers is the dominant segment, accounting for over 70% of industrial inventory and absorbing bulk of the demand (over 85%) in 2015.

Investment in US industrial real estate reached a record USD 64bn in 2015 (+ 61% YoY)

Industrial investment volume growth continues to be robust, growing by 61% YoY to over USD 64bn in 2015 and at a 30% CAGR over the past five years. Q4 2015 witnessed the highest ever quarterly industrial investment volume at USD 20.5bn.

Transaction activity in Q4 2015 mirrored the broader trend in rest of the year 2015, with portfolio transactions significantly outweighing single-asset deals in the ratio of 10:1 on a square foot basis. Investors with an extended investment horizon have been seeking to quickly build a diversified portfolio of industrial assets, which is driving portfolio activity.

Investment volume and cap rate trend



Source: CBRE

Industrial cap rates - H2 '15

Market	Cap rate	Chg over H1 '15 (bps)
Class A	5.6%	-14
Class B	6.7%	-11
Class C	8.1%	-6

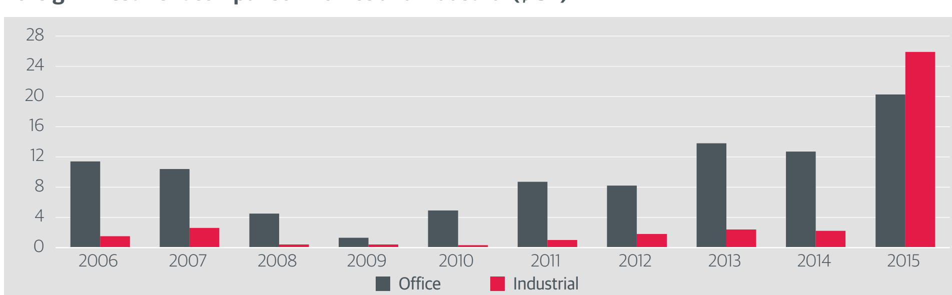
Source: CBRE

Foreign investors accounted for 40% of total investment in 2015, compared to 6% in the past 3 years

UAE accounted for 12% of foreign investment

Investment by foreign investors, who have been underweight on the industrial sector so far, increased significantly in 2015 (11x jump in 1 year), exceeding foreign investment in the office sector for the first time in the past decade. Foreign investors accounted for about 40% of the total industrial investment in 2015 (compared to 6% of industrial investment in each of the past three years) amounting to USD 25.9bn, with Singapore topping the list with USD 12.7bn. UAE constituted 12% of foreign investment to USD 3.15bn, led by the acquisition of a portfolio of properties of the Exeter Property Group by a JV involving Abu Dhabi Investment Authority and PSP Investments of Canada.

Foreign investment comparison – office and industrial ($ bn)



Source: JLL

[13] Single-story buildings with 10-18-foot ceilings catering to a mix of warehouse, office, retail or light industrial use

Key markets

The core US markets for industrial real estate are concentrated in Dallas-Fort Worth, Atlanta and Houston in South/Southeast, Los Angeles (incl. Inland Empire) in the West, and Chicago and Detroit in Midwest. Industrial investment activity in 2015 was concentrated in six markets, which accounted for 30% of all sales.

Top markets by investment volumes in 2015

Markets	Share
Los Angeles	7.4%
Chicago	5.2%
Dallas-Fortworth	4.6%
Inland Empire	4.6%
New Jersey	4.4%
Atlanta	3.4%

Source: Colliers International

Top markets by demand in 2015

Markets	Share
LA-Inland Empire	7.8%
Dallas-Fortworth	7.2%
Atlanta	6.0%
Chicago	5.4%
Philadelphia	4.0%
Detroit	3.6%

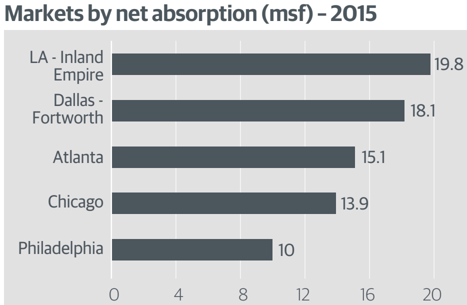
Source: Colliers International

Construction activity of 192 msf is the highest in past 10 years

Construction activity is in full swing in US industrial properties with about 192 msf under construction as of the end of 2015, the highest in the past decade. The top 5 markets accounted for 43% of under-construction activity in 2015 led by Dallas-Fort Worth (20.5 msf) and Atlanta (18 msf). In terms of demand, the top 6 markets constitute 34%, led by Los Angeles-Inland Empire (7.8%), Dallas (7.2%), Atlanta (6%) and Chicago (5.5%).

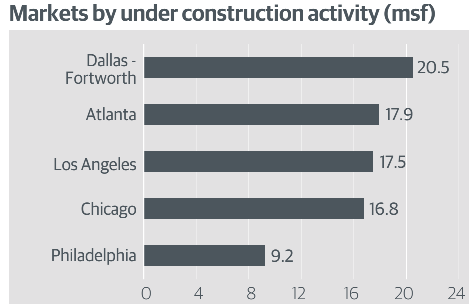
Top 5 US industrial markets

Markets by net absorption (msf) – 2015



Source: Colliers International

Markets by under construction activity (msf)



Source: Colliers International

Industrial prices grew by 8% in 2015 led by 19% growth in the primary markets

Industrial prices in the US have witnessed strong growth of 8% in 2015, led particularly by the primary markets which grew by 19%, overshadowing the muted 1% growth in the secondary markets.

ii. Key market drivers

a. Online retail distribution

Contribution of e-commerce sales in retail, more than doubles in 5 years growing at a CAGR of 16% to USD 340bn

The pick-up of e-commerce as a channel for retail sales is driving demand for distribution centers from retailers. Share of e-commerce sales in total retail sales has risen from 4.9% in Q1 2012 to 7.5% in Q4 2015 to USD 340bn, and is expected to rise to mid-teens in the coming decade as per a forecast by Forrester Research. E-commerce is fueling new distribution projects in the major hubs of Dallas/Fort Worth, Chicago, Inland Empire and Atlanta, with each market having construction projects of at least 10 msf in the pipeline, with major US retailers expanding their warehousing facilities. The largest e-commerce player in the US, Amazon has occupied an additional 4.2 msf in the Inland Empire region of Southern California, over the past two years. Similarly, Walmart is presently building two 1.2 msf e-commerce facilities, one each in Chino, CA and Atlanta. Target, Home Depot and Kohl's are also making major investments in e-commerce related warehousing facilities in the US.

Online retail distribution trends

Ship from Store (SFS)

Focus on the last mile is driving demand for smaller warehousing facilities near major population centers

Rather than fulfilling online orders from traditional warehouses located miles away from consumers' homes, retailers are routing orders to nearby stores (known as SFS) that are closer to the customer than the retailers' own warehousing facility. As retailers strive to ship customer orders quicker, they are focusing on the last mile for shorter delivery times. This is driving demand for smaller infill warehousing facilities near the edge of major population centers and being adopted by larger retailers such as Walmart, Best Buy and Gap.

Big Box

A major trend that has emerged in industrial real estate among e-commerce tenants is the demand for large 'Big Box' space, which are areas of at least 300,000 sf, equipped with state-of-the-art distribution facilities, with features such as clear heights (36-40ft from the earlier 30-32ft) to accommodate modern conveyor systems, larger bays and additional space for parking. Development of these huge warehousing centers are vital for providing large order fulfilment with different timely delivery options. Over the past four years, Big Box spaces have grown significantly:

E-commerce is driving the demand for 'Big Box' space where development activity remains strong with 74 msf of under construction which is scheduled for delivery in 2016

Big Box fundamentals

Parameters	2011	2015
Deliveries (msf)	9	61
Speculative development (msf)	0.6	34.8
Cap rates	7.2%	6.0%
Rents ($ psf)	3.55	4.54

Source: Colliers International

Top Big Box markets

2015 metrics	Net absorption (msf)	Vacancy
Los Angeles	5.1	4.4%
Dallas	2.8	14.0%
Chicago	1.6	8.4%
New Jersey	0.7	12.8%

Source: Colliers International

Nearly 95 msf was leased in 2015. Net absorption amounted to 56 msf in 2015, while completions were very strong at 61 msf, with year-end vacancy of 7.3%. The top markets (by net absorption) for the Big Box segment are Los Angeles, Dallas and Chicago. Construction activity continues to be strong with 74 msf under construction, which is scheduled for delivery in 2016. Although the Big Box segment comprises nearly half of the country's speculative construction, demand continues to be strong in most markets.

b. Intermodal centers – rail connectivity

Intermodal centers are expected to drive 172 msf of industrial development for USD 10bn investment

While trucks remain the dominant shipping method for domestic distribution, the nationwide shortage of truck drivers has created demand for alternatives, such as rail, that are emerging as a key factor determining logistics strategies and industrial real estate development. Intermodal rail is gaining prominence with the rail intermodal traffic in US increasing 5.2% in 2014. The intermodal facilities are expected to drive the development of an estimated 172.3 msf of industrial space, and represents an investment potential of USD 10bn, together with business park infrastructure costs. Markets with intermodal centers are commanding the highest growth in rents, a trend that is expected to continue. Dallas/Fort Worth, New Jersey, Chicago, Atlanta, Indianapolis and Kansas City are key intermodal and inland distribution centers.

Key factors driving growth of these intermodal markets are land availability, a sizable population and rail connectivity of inland ports to other major cities. Presently, Dallas-Fort Worth with rail connectivity to the ports of Chicago and Southern California (busiest seaports through which 40% of imports enter the country) has over 11.7 msf of speculative area under development and is set to add an additional 23 msf of new inventory in the next three years.

c. **Employment and international trade**
Employment growth in heavy industries such as construction, manufacturing and trade, transportation and utilities bodes well for industrial assets. These industries added 28% of the 2.7mn jobs added in 2015.

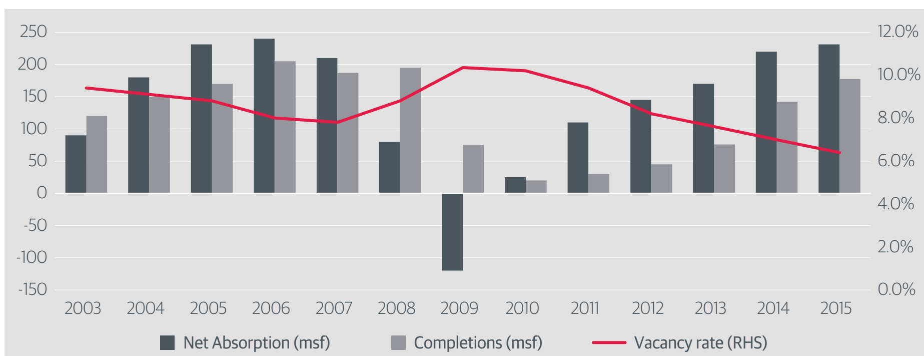
iii. Sectoral dynamics

a. Warehousing – Distribution centers

Net absorption rose to 231 msf in 2015 (still below the 2006 peak), outpacing supply for the 6th consecutive year

- **Demand and supply trends**
Industrial demand remains strong in US, especially for warehousing and distribution spaces which constitutes over 85% of the total industrial real estate demand. Net absorption increased to 231 msf in 2015 (but still below the 2006 peak), and continues to outpace supply for the sixth consecutive year, despite a 5-yr CAGR of 55% in completions to 177 msf in 2015. Although 54% of the 192 msf under construction is speculative and expected to hit the market by Jun-2017, occupancy issues are not expected given the robust absorption trends relative to supply.

Net absorption outpacing completions

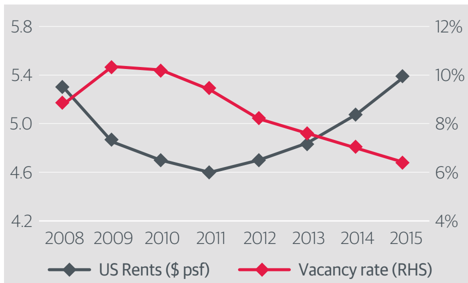


Source: JLL

Vacancy at lowest level in past decade as industrial rents grew at a CAGR of 5% over the past 3 years but still remains below the 2008 peak

- **Rental and vacancy trends**
Strong absorption trends have been driving vacancies lower, with vacancy of 6.4% reported in 2015, the lowest in the past 15 years. This has been pushing up industrial rentals, which grew by 6% in 2015 to USD 5.39 psf and at a CAGR of 5% over the past three years, but still remains below the Q2 2008 high of USD 5.6 psf. As per a survey by Colliers International, over 85% of the respondents forecast industrial rents in the US to stay at current levels or move higher, with over half expecting higher rents in Q2 2016 compared with Q1 2016, while 54% of the respondents expect vacancy to drop further during this period.

Rising rental trends and declining vacancies



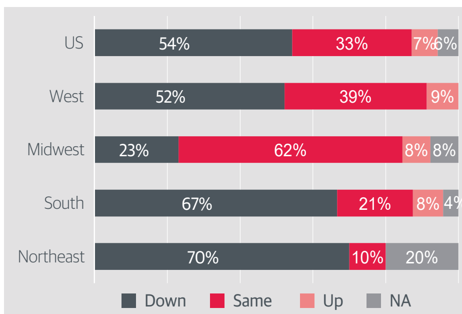
Source: Colliers International

Regional vacancies

Vacancy	Q4 15
West	4.6%
South	7.2%
Midwest	6.3%
Northeast	8.2%
US	6.4%

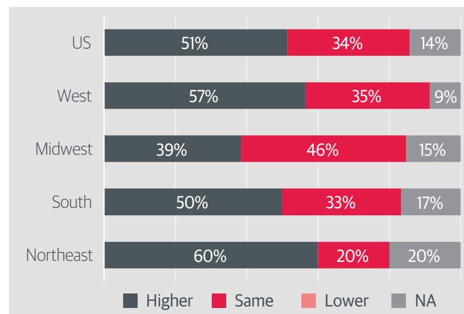
Source: Colliers International

Forecast for industrial vacancies



Source: Colliers International

Forecast for industrial rents



Source: Colliers International

Occupancy levels surpass the 2007 highs at warehouses near the US seaports

The Panama Canal expansion to drive demand for warehousing space at East coast ports

The Panama Canal expansion to drive demand for warehousing space at East coast ports

- **Seaports**

  Increase in cargo volumes at the country's top seaports and little new development, are driving occupancy levels at warehouses/distribution centers surrounding these ports, which has now surpassed the highs of the previous real estate boom in 2007. Container traffic at the East/Gulf coast have been growing much faster than the West coast. The expansion of the Panama Canal is expected to permit larger ships and increase container traffic by 5-15%, boosting demand for warehouse and distribution centers around the eastern ports. This is expected to shift some of the shipping activity from the West coast to the East coast. As much as 10%[14] of cargo originating from Asia could bypass the West coast and head directly for the East coast, benefiting port cities like New Jersey, Savannah, Miami, Baltimore, Jacksonville and Charleston. Projects such as the USD 1.6bn dredging project at the port of New York and New Jersey that would provide post-Panamax vessels access to marine terminals, have been driven by the Panama Canal expansion. Industrial absorption in the West coast grew by a moderate 17 msf during 2007-14 (88% of which was during 2012-14), while the ports of East coast and Gulf of Mexico reported a healthy 37 msf of net absorption during this period.

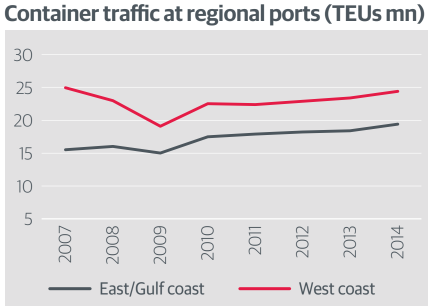
  Many East coast ports are also undergoing port deepening projects, which is expected to drive demand for incremental warehousing/distribution space. For instance, Miami is expanding port infrastructure with a new port tunnel, rail link and widening of the shipping channel, for USD 1.3bn.

[14] Study by C.H. Robinson Worldwide Inc.

Net absorption doubles at the top ranked port of New York & New Jersey in 2015 to 19.2msf

The port of New York and New Jersey has been the top ranking port as per JLL's Seaport Index, which reported nearly 6% growth in TEU[15] volume in 2014 and 5% CAGR from 2007-14, outpacing the top West coast ports of Los Angeles and Long Beach. This has driven demand for space around the port in New Jersey, which reported record net absorption in 2015 of 19.2 msf, more than 2x the previous year's level. Industrial development at the port of Savannah has picked up over the past few years. Savannah's distribution centers, which serve as a conduit to inland ports in Atlanta, are expected to flourish as the volume of ships increase once the expansion of the Panama Canal is completed, scheduled in April 2016.

Container traffic at regional ports (TEUs mn)



Source: JLL

Top seaports in US

Rank	Top Seaports	Index Score	Category
1	New Jersey/NY	129.5	Tier 1
2	Long Beach	108.2	Tier 1
3	Los Angeles	106.0	Tier 1
4	Savannah	78.4	Tier 2
5	Tacoma	77.2	Tier 2
6	Vancouver	77.2	Tier 2
7	Baltimore	74.0	Tier 2
8	Houston	72.7	Tier 2

Source: JLL

Spaces around top ranked O'Hare airport in Chicago are witnessing lower vacancy and rising rents

- **Airports**

  Surge in global air cargo volume (4.5% YoY in 2014) is expected going forward, driving demand for developing and leasing distribution centers surrounding key airports. Spaces around leading airports are witnessing rising rents and low vacancies, as there is high demand for proximity of the cargo to the hangars. As per JLL's airport index, Chicago's O'Hare was the top ranked airport, followed by Miami and Los Angeles, based on the availability of industrial and warehousing space, access to large population centers, prospects for air cargo growth, etc.

Rents outside LA airport are set to rise with a low vacancy of 2.8% and shortage of quality space

  Industrial properties near intermodal friendly airports, like O'Hare and Miami International, are witnessing higher rents and lower vacancy rates, while rents are expected to continue rising outside Los Angeles' international airport due to high demand and shortage of quality space and significantly low vacancy (2.8%), where large cargo carriers such as FedEx, Cathay Pacific, Delta, American and Korean airlines have their hubs.

  Airports at Dallas and Indianapolis with multi-modal options and numerous sites available for big-box development, are gaining attention to overcome potential supply chain interruptions and reported the highest net absorption of 2.4 and 1.4 msf among all airports, respectively. Construction activity has been strong with 12 msf of warehouse space developed near the Dallas airport over the past five years and 13.7 msf near the Indianapolis airport.

b. Other Industrial assets

Chicago is a top 3 leasing location for manufacturing facilities with 3.9 msf leased in 2014

Manufacturing facilities

Manufacturing firms in the US are now more inclined to set up local facilities vis-à-vis having facilities abroad, driven by factors such as ability to meet customer orders from nearby facilities, lower labor cost arbitrage between the US and other countries like China, lower transportation costs, etc. Baxter International is constructing a new 1 msf state-of-the-art manufacturing facility in Atlanta for its plasma-

[15] Twenty-foot equivalent unit

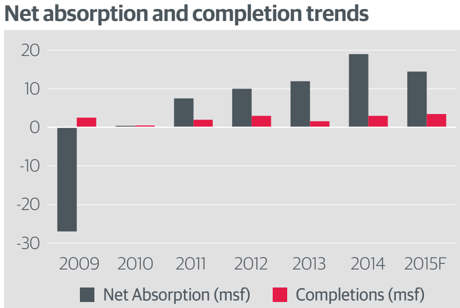
based treatments, scheduled for delivery in 2018. Other US companies expanding or building new facilities in the US include GE, Caterpillar, DuPont and Whirlpool. Demand for manufacturing space has been increasing in the US, pushing up leasing activity. Of the 38.8 msf leased in 2014, Los Angeles (6.2 msf), San Diego (4 msf) and Chicago (3.9 msf) were the top leasing locations.

Rents at all major manufacturing hubs grew over 6% in 2014 and are expected to rise further

Given the various technological advancements, many older facilities are turning functionally obsolete, driving facility construction. Large build-to-suit projects are currently underway in Atlanta and Chicago. The declining differential in the wages of the US and emerging economies like China, due to the rapidly rising wages in China (15-20% YoY and expected to grow ~10% annually in future) relative to the US (~3% YoY), is a factor that could drive the development of manufacturing facilities in the US. Absorption continues to significantly outpace completions over the past four years, while vacancy continues to decline and rents continue to rise. Average rents for manufacturing facilities reached multi-year highs of USD 5.34 psf in 2014, and are expected to rise over the next few years. Los Angeles enjoys the highest industrial rents at USD 6.81 psf, while Jacksonville and Atlanta have the lowest rentals at USD 3.12 and 3.36 psf, respectively. Major manufacturing hubs have all seen annual rental increases of over 6% in 2014.

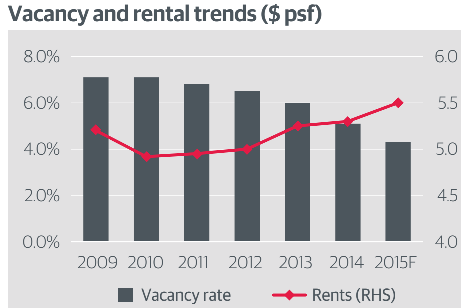
Manufacturing trends

Net absorption and completion trends



Source: Cushman & Wakefield

Vacancy and rental trends ($ psf)



Source: Cushman & Wakefield

Flex spaces

Flex space rentals expected to grow by 5% during 2015-17, driven by LA and Silicon Valley

Flex spaces (small single-story buildings with 10-18-foot ceilings catering to a mix of office, warehouse, retail or light industrial use), a small portion of the industrial inventory, are gaining traction. Absorption continues to outpace supply, which was the highest since 2008, led by the technology sector, which is being driven by collaborative office layouts and flexible office working environments (work from home, etc.) rendering vacant office areas usable. Silicon Valley has been absorbing the highest space over the past three years and is expected to remain the leader, accounting for 18% of absorption, followed by Boston (led by tech and life sciences), Denver (led by energy and aerospace) and Dallas (led by energy and tech). Vacancy rates continue to fall and the trend is expected to continue as supply constraints exist.

Construction of flex spaces picked up in 2014 with the addition of 4.3 msf, with Phoenix accounting for more than half of new deliveries, Silicon Valley adding 0.6 msf and New Jersey adding 0.46 msf. Demand is expected to continue outpacing supply, with 29.7 msf of projected absorption from 2015-2017. Rents are estimated to grow by an average of 5% per annum during 2015-17, with rents in Los Angeles and Silicon Valley expected to grow between 6-7%, pushing rentals to over USD 12 psf and USD 20.9 psf by 2017. Improving employment conditions are expected to drive demand for flex space over the coming years and fundamentals are expected to remain strong.

Petrochemical industry and Panama Canal expansion to more than offset impact of low oil prices in Houston

c. Impact of oil prices on energy dependent industrial markets

While the prolonged drop in oil prices during 2015 and 2016 has impacted absorption and vacancies and dented sentiment in oil dominant markets, such as Houston, the impact is expected to be less pronounced due to a more diversified economy. The industrial real estate market in Houston is expected to be healthy, driven by the petrochemical industry and the Panama Canal expansion which positions the port of Houston as a principal port of central US to handle increased traffic after the expansion. Over USD 100bn of development/expansion projects are identified or underway at chemical plants along the Gulf coast. Other dominant sectors in Houston after energy, such as healthcare, aerospace, manufacturing and transportation, are witnessing a pick-up in construction activity.

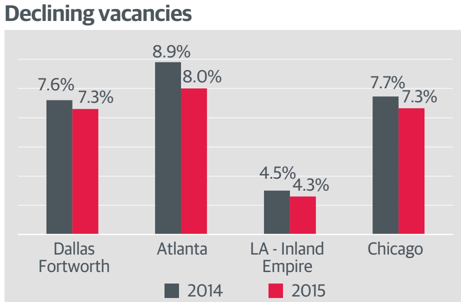
Other markets with reasonable oil dependence, such as Dallas-Fortworth, Denver and Pittsburgh are not expected to have any major impact of declining oil prices due to the diversification of other industries, with energy comprising just 1.1% of Dallas' total employment and Denver's industrial sector comprising a negligible share of occupancies.

iv. Promising industrial markets

As per the Emerging Trends in Real Estate Survey 2016 undertaken by PwC and ULI, Los Angeles (4.02) tops the list for industrial real estate markets in terms of investment prospects, followed by Dallas-Fort Worth (3.99), Atlanta (3.89) and Chicago (3.73).

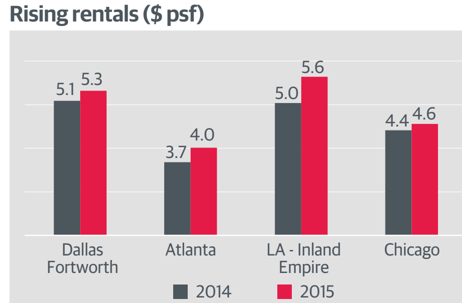
Metrics for top industrial markets in 2015

Declining vacancies



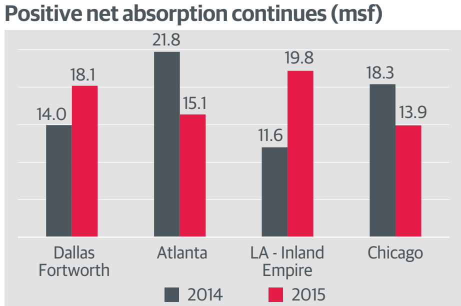
Source: Colliers International

Rising rentals ($ psf)



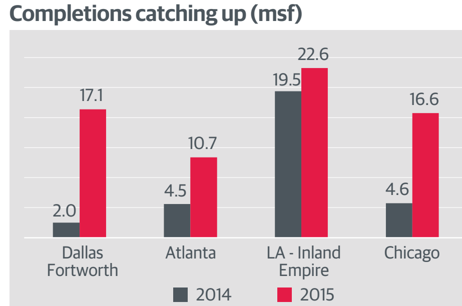
Source: Colliers International

Positive net absorption continues (msf)



Source: Colliers International

Completions catching up (msf)



Source: Colliers International

Dallas-Fortworth (South)

Vacancy expected to bottom out at 7-7.5% in Dallas-FW as 20 msf of space gets delivered in 2016

Dallas-Fort Worth witnessed a very strong 2015 with absorption at the highest level since 2007. Rentals are at the highest level ever and vacancy is near the 2013 low of 7%, the lowest level since the recession. While construction is booming with 18 msf of speculative space under construction at the end of 2015, which hints at the broader concern on leasing activity, with the number of deals signed at the lowest level since 2009. Although this drop could be attributed to rising rentals and the difficulty faced by tenants in finding spaces that suit requirements, it offers ample opportunity for build-to-suit activity, which has been picking up.

Vacancy is expected to modestly rise in 2016 to 7.8% as and when the 20 msf of under construction space gets delivered. Overall, the outlook for the industrial sector in Dallas-Fort Worth remains positive, although absorption levels in 2016 are not expected to remain as robust as in 2015.

Atlanta (South)

Strong demand for build-to-suit deliveries driving rents higher in Atlanta, now at all-time high of USD 4 psf

Atlanta recorded the third highest net absorption in US in 2015 at 15 msf, after the record high seen in 2014, with vacancy now at the lowest level since 2001 at 8%. The strong demand was led by build-to-suit deliveries to handle e-commerce businesses, followed by food processing and logistics industries.

Build-to-suit deliveries are expected to remain active as companies feel the need to customize their facilities to handle latest technology and larger volume of goods. Absorption levels are expected to remain strong in 2016, similar to 2015, pushing vacancies lower and rentals higher (9% YoY in 2015), now at an all-time high of USD 4 psf.

Construction activity is strong, however, with another 9 msf of speculative space expected to come online in 2016 after 4.8msf of speculative industrial space was delivered in 2015, construction appears to be peaking out.

Los Angeles – Inland Empire (South West)

While construction activity is growing rapidly in LA - Inland Empire, strong demand has kept pace with supply (19 msf of net absorption and 22.6 msf of completions in 2015). While vacancy rates have remained stable over the past three-four quarters slightly above 4%, rents continue to rise, up 12% in 2015 and expected to grow in 2016 as well.

Pick-up in international trade is expected to boost port related infrastructure and rentals in the Inland Empire

Industrial demand is concentrated in buildings with over 0.5 msf, which is witnessing the most construction, leading to wide fluctuations in the vacancies of these buildings. International trade is key to industrial demand in the Inland Empire, which is being driven by large multi-national companies upgrading their industrial spaces to modern facilities. The strengthening US dollar is boosting imports into the US, which is expected to drive demand for port-related infrastructure. Tightening of coastal markets is expected to drive tenants further east into the Inland Empire for expansion into larger and modern facilities.

Chicago (Mid-West)

Vacancy stands at 14-yr low of 7.3% in Chicago, with construction activity at the highest level since 2008

Chicago's industrial market continues to see improvement on the back of strong absorption (14 msf), vacancy at a 14-year low of 7.3%, and maximum construction activity since 2008, with 15.2 msf under development across 54 projects. Rental growth has been moderate, growing by 3% in 2015 to USD 4.56 psf. Leasing volumes of 34.2 msf, although 9% lower than the previous year, are fairly sound with 'Big Box' spaces gaining traction, growing by 25% in 2015 to 10.7 msf.

Big box leases grew by 25% in Chicago to 10.7msf in 2015

Some of the large leases signed during 2015 were all build-to-suit leases, including Mars Candy's 1.4 msf lease in Elwood's CenterPoint Intermodal Center, Saddle Creek Logistics Services' 1.1 msf in Joliet and 3M's nearly 1 msf lease signing in Park 88 in DeKalb. However, sales volumes have hardly grown in Chicago over the past three years, declining by 32% in 2015 to 14 msf. The outlook for Chicago is stable for 2016.

New Jersey (North East)

New Jersey witnesses its highest industrial investment (USD 3.2bn) in a decade at average prices 20% higher than 2009

The Northeast region has experienced the lowest absorption, lowest decline in vacancy rates and slowest growth in rentals, relative to other regions in the US from 2014 to 2015. However, New Jersey offers the most promising prospects in the region, with record absorption (more than 2x) in 2015.

Tightening market conditions in New Jersey are driving developers to accelerate construction activity, with currently 18 projects totaling 5.5 msf under construction and expected to be completed by the end of 2016. About 46% of these projects are concentrated in the Exit 8A submarket of New Jersey, all of which is speculative. While the vacancy decline of 230 bps to 9.8% was pronounced in 2015, rent growth has been flat, auguring well for tenant demand.

Investment volumes surged to the highest level in 2015 amounting to USD 3.2bn, with property prices averaging USD 78.3 psf (1.8% YoY) and 20% higher than the low of 2009.

v. Investments in industrial sector

Top industrial deals in 2015

Buyer	Investor type	Assets purchased - market	Market	Deal value ($ mn)	Price ($ psf)	Area (msf)
Portfolio:						
Prologis JV Norges Bank	Industrial real estate firm	KTR Platform	Multiple	5,900	98	60
Global Logistic Properties	PE firm	IIT National Industrial Portfolio	Multi- state	4,550	79	57.6
Canada Pension Plan	Pension fund	GLP Income Partners I (IndCor Assets)	Multi- state	3,500	30	115
Abu Dhabi Investment Authority JV	SWF	Exeter National Portfolio	Multi- state	3,150	54	58
China Life JV	Insurance company	GLP US Income Partners	New York	2,600	45	57.6
Exeter Property Group	Real estate investment manager	Prologis National Core Portfolio	Multi- state	475	57	8.4
Single-asset:						
BlackRock	Investment firm	The Crossings @ 880	Oakland-East Bay	135	195	0.7
Jay Paul Co.	Real estate firm	Lockheed Martin Corp.	Silicon Valley	129	219	0.6
Circle Industrial	Real estate PE firm	560 Merrimac Ave	Philadel-phia	91	90	1.0

Source: JLL

While pace of vacancy decline is expected to moderate in 2016, industrial rents to rise by 4.5%,

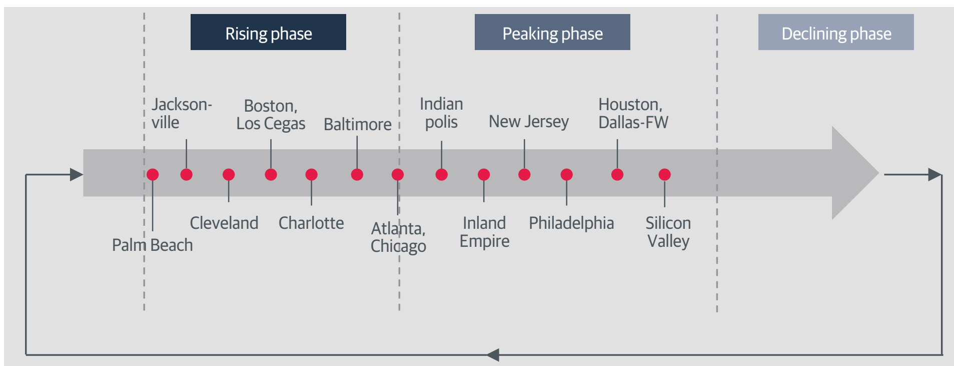
2016 is expected to be another strong year for industrial with continued foreign interest

Outlook

This year is expected to be another strong year for industrial real estate, with healthy absorption levels expected to exceed supply, despite rising completions, reducing the gap between the two. Absorption is expected to be driven by increasing demand for large, modern distribution and intermodal centers. Construction is accelerating as speculative development picks up, and is expected to arrest the pace of decline in vacancy, which is at a 15-year low, and is estimated at 6.2% by the end of 2016. Competition for space is fierce, which has been driving rents upwards; rents are expected to increase in most markets and rise further by an average 4.5% in 2016. Investor appetite for US industrial assets have been pushing up asset values and cap rates lower, which stands now at 6.7%.

Foreign investors are expected to continue infusing capital into the sector, as many funds have been underweight on these industrial assets. While headwinds related to slowing domestic manufacturing activity remain, job gains in the transportation/warehousing and construction sectors and traction in e-commerce businesses and big box industrial spaces, bode well for demand.

The industrial cycle



Source: JLL

The current industrial cycle in the US indicates that all the markets are rising, with continued growth in rents. As the 'Big Box' logistics sector tightens across primary markets, demand for Class B space is expected to rise, coupled with higher rentals. Construction is on an upswing, with some amount of speculative activity as well. Although fundamentals appear to be peaking in many of the markets, the outlook for 2016 remains positive, with moderation expected in the growth of rentals.

6. Healthcare Real Estate

- Investment volumes surge to record $10bn, driven by rising demand for healthcare services
- MOB prices rise 17% in 2015, driving down cap rates to an 8-yr low of 6.9%
- Demand for technologically advanced MOBs to increase
- MOB construction picking pace with ~24 msf of supply expected in 2016, twice that of 2015
- Vacancy at a 7-yr low of 9.5%, declining by 130 bps over the past 5 years

Rise in healthcare spending and favorable demographics bode well for MOBs which are seeing positive absorption & declining vacancies

i. Overview

The healthcare industry in US is currently well poised, with a rise in healthcare spending (6% CAGR expected from USD 3tn in 2014 to USD 5.5tn in 2024) and increasing demand for healthcare services, driven by favorable demographics. These factors augur well for the healthcare real estate, which largely refers to hospitals and medical office buildings (MOBs). These MOBs include laboratories (labs), pharmacies, physiotherapy and other treatment centers.

Demand for MOBs continues to be strong, with positive absorption trends seen over the past five years. Vacancies have been dropping with modest growth in rents. Hospitals are expanding outpatient facilities, with a pick-up in the construction of off-campus MOBs, indicating that healthcare is shifting from hospitals to MOBs. The implementation of the Affordable Care Act is a key regulation, significantly widening insurance coverage to a much larger population base, expected to positively impact the healthcare spending and healthcare real estate.

Investment volumes in healthcare real estate in 2015 were the strongest in history, recording USD 10bn. Healthcare property prices have risen at a CAGR of 6% over the past four years to an average of USD 272 psf, leading to steady decline in cap rates by 100bps during this period to 6.9% in 2015.

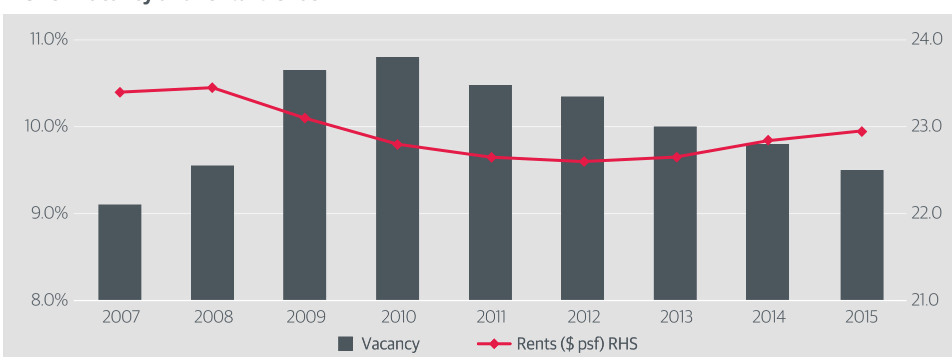
ii. MOB trends

Vacancy for MOBs stood at a 7-yr low of 9.5% in 2015, while rents are just below the 2008 peak

a. Absorption continues to be positive

The absorption trend for MOBs has remained positive, with 5.8 msf absorbed for the first 9M 2015, although it was 15% lower than the corresponding 2014 levels. Vacancy continues to decline for the fifth successive year, now at a seven-year low of 9.5% at the end of 2015, which is only marginally higher than the 9.1% during the peak of 2007. Average rents of MOBs, which are just below the 2008 peak of USD 23.4 psf, have been stable over the past three years, trending mildly upwards, and are now at a three-year high of USD 22.95 psf. Rental growth for MOBs are significantly lower than that of the general office market, which grew annually by ~7% for CBDs and 6% for suburban offices during this period.

MOBs - Vacancy and rental trends



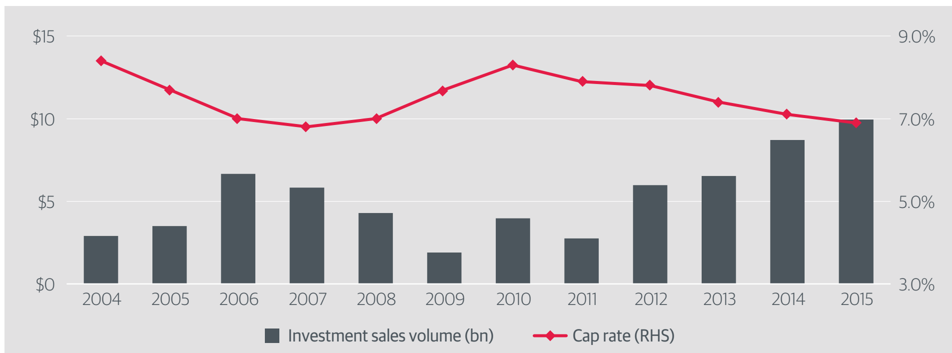
Source: Colliers International

Investment in MOBs stood at record highs of USD 10bn in 2015, driven by rising demand for healthcare services

b. Surging investment sales volumes

The year 2015 witnessed USD 10bn of sales volumes in MOBs, the highest in history. Investor traction towards healthcare real estate is driven by relatively higher cap rates compared with other real estate segments and strengthening demand for healthcare services. The trend is expected to continue, going forward. However, cap rates have been declining faster for MOBs compared with the commercial office sector with the office cap rate just 20 bps below the MOB cap rate at the end of 2015.

MOB – Rising investment sales volumes and declining cap rates

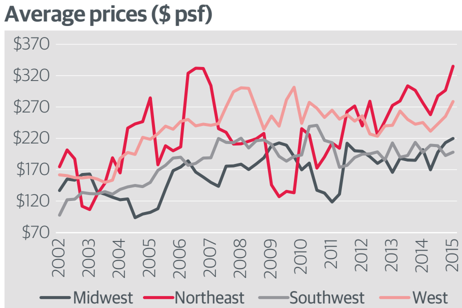


Source: Real Capital Analytics, Hammond Hanlon Camp LLC

Prices of MOBs rose 17% in 2015, as cap rates declined to an 8-yr low of 6.9%

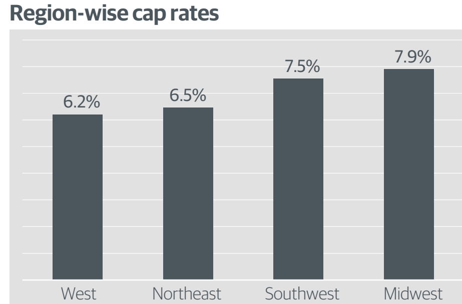
The rising demand for healthcare services - especially from the 65-plus-year-old population, which is growing rapidly and is expected to grow 34% from 2015-24 to 63mn is driving demand for these healthcare assets in the US. This has driven prices upwards, with the cap rate declining from 8.3% in 2010 to 6.9%in 2015, driven by sharp price appreciation of over ~17% in 2015 to an average USD 272 psf, driven by 20% in the Northeast to an average USD 330 psf and ~15% in the West to an average USD 275 psf, resulting in cap rates close to 6% for these regions.

Average prices ($ psf)



Source: Real Capital Analytics

Region-wise cap rates



Source: Colliers International

REITs are the top investors in US healthcare real estate

REITs have been active in the US healthcare real estate since the REIT Investment Diversification and Empowerment Act of 2007 came in, which allows REITs to be involved in the operations/business side of healthcare, apart from only managing real estate. They were the top investors in 2015, buying both outpatient and inpatient real estate.

Top healthcare real estate deals in 2015

Buyer	Investor type	Assets purchased/ Seller	Deal value[16] ($ mn)	Price ($ psf)	Area (msf)
Ventas Inc.	REIT	Ardent Health Services	1,600	500	3.2
Ventas Inc.	REIT	ARC Healthcare REIT	1,286	NA	NA
Medical Properties Trust	REIT	Capella Healthcare	600	NA	NA
SNH REIT	REIT	Cole Properties Trust	539	NA	NA
Canada Pension Plan & Welltower	Institutional investor	8 MOBs in South California	449	1,025	0.44
Health Care REIT	REIT	G&L Realty	443	NA	NA
HCP Inc.	REIT	Memorial Hermann Health System	225	188	1.2
St. Louis University	Educational institution	Tenet Healthcare	200	NA	NA
HCP Inc.	REIT	Digital Realty Trust	161	NA	NA
MB Realty	Real estate firm	12 MOBs in Chicago	159	317	0.5

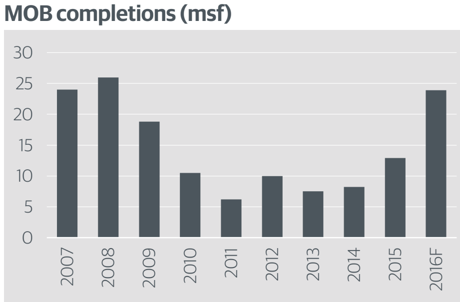
Source: Revistamed.com; NA: Not available

c. Construction gathering pace

MOB completions are expected to grow 85% in 2016 with majority being off-campus

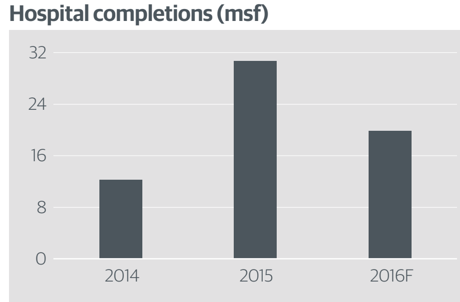
Construction completions in the healthcare real estate sector in 2016 are expected to be flat compared with the previous year at 43.8 msf. Construction of MOBs is accelerating, with 85% growth in completions expected in 2016[17] to 23.9 msf, after 57% growth in 2015, which is offsetting the decline in hospital completions. Also, the bulk of under-construction MOBs (72%) are off-campus[18] in terms of the number of properties, with 28.7 msf under construction (66%) compared with 14.5 msf of on-campus under construction. These indicators clearly hint that healthcare real estate is shifting from hospitals to outpatient facilities.

MOB completions (msf)



Source: Revista

Hospital completions (msf)



Source: Revista

While completions of hospital projects are expected to be lower in 2016 by 35% to 19.9 msf, construction of hospitals is still active, with the bulk (75%) of the under-construction activity being expansion projects. Of the remaining new/replacement hospital projects, there are 124 new hospitals under construction, which aggregate to 30 msf and USD24bn in value.

[16] Includes only real estate
[17] Revista
[18] Not on hospital campus

Demand for lab space is strong in prime markets with contemporary infrastructure, near centers of higher education

d. Growing demand for lab space

The need to constantly develop new products through innovation is driving demand for lab space in markets near eminent centers of higher education. Demand for vacant lab space is healthy in prime locations with contemporary infrastructure. The rise in demand for generics (due to the patent cliff) is hurting branded pharmaceutical companies, which are constantly on the lookout for new growth avenues. M&A in healthcare is common, contributing to redevelopment or renovation of older facilities, disposition of real estate such as laboratories (labs) or acquisition of new space with advanced infrastructure to enable innovation and retain top talent. M&A consolidation is expected[19] to result in smaller firms relocating from the secondary markets to primary clusters. For instance, Vertex Pharmaceuticals set up its new headquarters at the South Boston waterfront in 2014 by leasing 1.1 msf, as part of its drive to consolidate 11 smaller buildings across two buildings.

The pipeline for FDA drug approvals of pharmaceutical companies is also a leading indicator of demand for lab space.

iii. Healthcare trends – Implications on healthcare real estate

Demand to increase for MOBs, which are technologically advanced and cheaper to build

Technology transformation in healthcare: pros and cons

The proliferation of technology in healthcare has been pervasive in the US and expected to continue, with noticeable implications for healthcare real estate. The emergence of wearable/shareable devices enables remote monitoring of patients. This benefits consumers by eliminating outpatient visits, and a reduction in the size of diagnostic equipment could reduce the need for storage space. While these factors could slightly hurt demand for medical office space, strong trends exist offering ample growth opportunity for medical office buildings (MOBs). Adoption of self-service check-in kiosks and patient-location tracking systems requires modification of floor plans to maximize space for patient-provider consultations and improve patient flow. The costs and service disruptions due to upgrade of existing space for offering advanced procedures, audio/visual capabilities (for shared medical appointments), etc. in expensive hospitals, is driving demand for outpatient facilities in technologically advanced MOBs, which are less expensive to build. Technology is expected to have a net positive impact on MOBs, with increase in demand.

Flourishing retail clinics supported by the Affordable Care Act could spur demand for real estate in new setups

Retail healthcare to benefit from the Patient Protection and Affordable Care Act

As the number of individuals with an insurance cover rise under the Affordable Care Act, hospitals and healthcare providers are struggling to cater to the enormous volume of patients coming under the insurance cover for the provision of healthcare services, handling of payments, etc. This has necessitated intermediaries, such as retail clinics, to alleviate some of the burden. Retail health clinics with medical facilities not only benefit from increased visibility and higher consumer foot falls, which is generally not found on hospital campuses or MOBs. Retail locations such as shopping centers are, therefore, gaining favor due to the convenience of reduced wait times, long working hours, on-site pharmacy and ample parking (from a customer's perspective), and lower costs associated with operating on the existing premises (from the healthcare operators' perspective). While these retail clinics do not fuel any demand for real estate, its impact could be positive if new stand-alone facilities are built in existing or new retail centers or through a healthcare-retail partnership.

Retail clinics have been flourishing in the US, growing at a CAGR of 15% over the past three years, and expected to grow from the current 2150 to over 2800 by 2017[20], with pharmacy chains such as CVS and Walgreens comprising nearly 75% of these health clinics. These clinics are increasingly being affiliated to health systems and viewed as their partner and not as a competitor, which augurs well for real estate if occupied in new set-ups or premises.

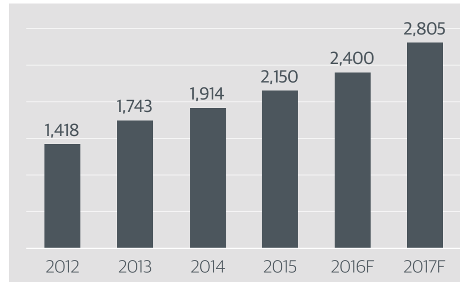
[19] As per JLL
[20] Estimated by Accenture

Major US retail clinics

Retail Clinic	Market share	Affiliations to Health systems	No. of locations
CVS Minute Clinic	50%	47	901
Walgreens Healthcare Clinic	24%	6	437
Kroger Little Clinic	8%	4	140
Walmart Retail Clinic	6%	46	103
Target Clinic	4%	2	80

Source: Manatt Health

Retail clinics

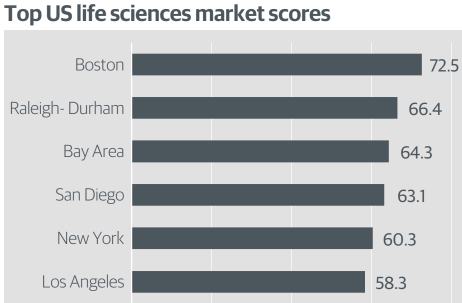


Source: Accenture

iv. Key life sciences markets

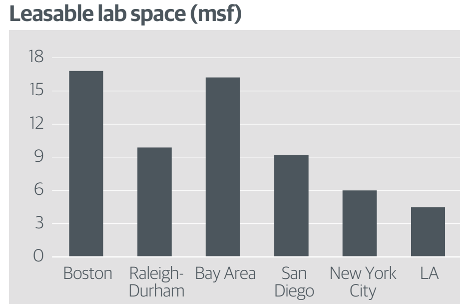
The core markets for life sciences companies are the primary gateway markets due to the availability of R&D infrastructure and a specialized labor force. As per JLL's rankings for the top life sciences (LS) markets in the US based on concentration of LS establishments, employment, patents and funding received by LS companies, the top LS regions/markets are Boston, Raleigh-Durham and San Francisco Bay Area.

Top US life sciences market scores



Source: JLL

Leasable lab space (msf)



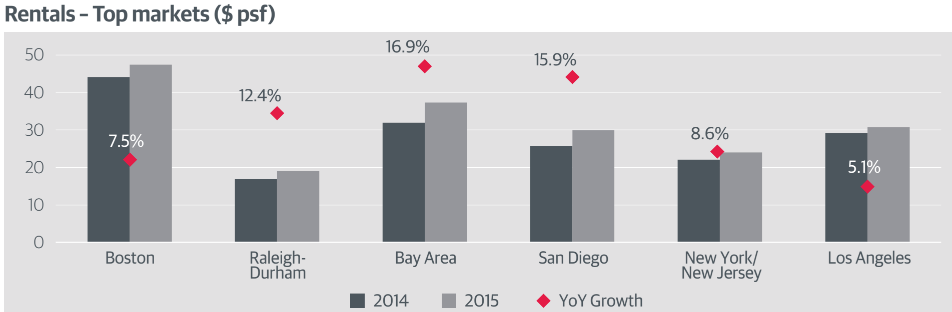
Source: JLL

Rentals ticking upwards in primary markets

Rental growth in traditional core markets significantly outpaced the US average of 3% in 2015

While the average rent growth for lab space in the US was a mere 3% in 2015 to USD 24.3 psf, the core traditional markets have witnessed much faster growth in rentals than other secondary markets such as Philadelphia and Denver. Despite much lower average rents in these secondary markets (that are attracting smaller firms), the majority of the demand remains in the higher rent established markets, such as Cambridge (Boston) and San Francisco.

Rentals – Top markets ($ psf)



Source: JLL

East Cambridge in Boston remains a top investment destination, while rents in West Cambridge are picking up (13% YoY)

Boston

The greater Boston area has a large pool of healthcare professionals and is home to renowned academic institutions. The region has access to over 0.25 mn students across 52 higher education institutes, including top talent from MIT and Harvard, a key factor attracting investors.

Leasing activity remain strong in the Cambridge market (with 8.1 msf of rentable lab stock, which is the largest in Boston), with 1.34 msf of space requirement from key life sciences tenants looking to expand. East Cambridge and Kendall Square are favored investment destinations, while the West Cambridge submarket is picking up, where rentals have grown faster (13% YoY) to an average of USD 45.2 psf than East Cambridge (2% YoY) with average asking rent at USD 57.9 psf in 2015. Vacancy is down 390 bps in 2015 to 4.2% in East Cambridge.

Boston is the top-ranked market in terms of number of patents per capita, while Boston-based life sciences firms received USD 2.4bn in venture capital funding in 2015, the second highest in the US. Demand for lab space in Boston recently witnessed an increase in lab space when seven new products of Massachusetts-based pharma firms received FDA approval.

Raleigh - Durham

The life sciences cluster of Raleigh-Durham (also called the Research Triangle) enjoys a very rich talent pool due to proximity to three leading research institutes (Duke University, North Carolina State and the University of North Carolina). The region receives a major share of total venture capital funding (21%) in the US. Direct vacancy (vacancy excluding sub-tenants) dropped by 180 bps in 2015 to 16.5% in Raleigh-Durham and currently there are 0.9 msf of space requirements. Redevelopment projects are gaining ground in Downtown Durham. The 0.28 msf Chesterfield building is being renovated, while over 0.115 msf of lab space renovations are planned at the Main Street and Carmichael buildings.

Leasing activity is picking up in North County of SF with significant drop in vacancy to 0.2%

San Francisco – Bay Area

The SF Bay Area is at the forefront of innovation in the life sciences industry and is home to some of the country's largest life sciences companies such as Merck, Genentech and Gilead in the Mid-Peninsula region and Novartis and Bayer in Oakland/East Bay. It benefits from the well-educated talent pool from the reputed universities located across the Northern California Bay Area, with 50% of the life sciences labor force engaged in medical and diagnostic work. The region enjoys a significant share of patents (23%) and venture capital funding (7%) in the US. Leasing activity in the North County of SF (with the largest rentable lab stock in SF) is on the rise, with direct vacancy declining steadily to 0.2% from 2.7% in 2014.

Key metrics in top LS markets

Market/Region	Patents	Employment	No. of LS Companies
Boston	1,879	82,075	1,895
Raleigh- Durham	259	31,984	2,112
SF Bay Area	1,972	63,158	1,514

Source: JLL

Outlook

The MOB sector is expected to continue witnessing positive absorption and lower vacancy rates along with rising rents in 2016, as supply remains limited. The healthcare industry is relatively more recession-proof, benefiting healthcare real estate. Demand for medical services and healthcare spending is expected to remain robust, driven by demographic trends related to the ageing population and regulations such as ACA, Medicare and Medicaid.

Demand for MOBs and lab space is expected to remain strong, with rising rents and declining vacancies despite doubling of supply in 2016

While demand for MOBs is expected to benefit from technology, M&A and shift from hospitals to outpatient facilities in an attempt to lower costs, the proliferation of retail clinics could support the demand for real estate. Demand for rental properties is expected to be strong, especially in the core markets, given the increasing costs for constructing new buildings due to rising labor costs. Construction of MOBs is picking up pace with nearly twice the supply of 2015 expected in 2016 (24 msf), while demand for lab space is expected to be strong and rents are expected to rise meaningfully at least in the short term in the established core markets, implying a positive outlook for healthcare real estate.

7. Retail Real Estate

- Net absorption of 88 msf in 2015 outpaces deliveries for the 6th year in a row - trend to continue in 2016
- Vacancy down 230 bps since 2009 to 7.9%, to continue falling with a 75% completion-absorption ratio
- Prices hit historic highs of $548 psf (+22.5% YoY), while cap rate declines to a decade-low of 6.4%
- Rents are headed upwards after growing 2.3% in Q4 2015.

i. Overview and key markets

The fundamentals of the retail real estate sector are healthy, as investment volumes continue to surge in a buoyant demand environment of changing shopping preferences and customer experiences. Healthy employment trends with 2.7mn job additions and wage growth of ~2% in 2015, coupled with lower energy prices, rising consumer savings and disposable income, augur well for retail sales and therefore retail real estate.

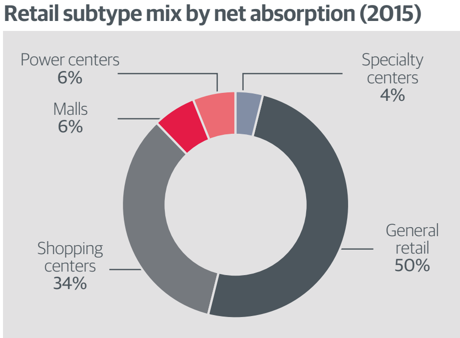
Demand environment remains strong – net absorptions grow at a 5-yr CAGR of 8% to 88msf, outpacing supply for the sixth successive year

Demand for real estate continues to exceed supply for the past six years, with net absorption growing at 8% CAGR from 2010-15 to 88 msf in 2015, while completions grew at a CAGR of 5% during this period to 66 msf. Vacancy rates have therefore been trending down, coupled with increases in rents. While supply has been struggling to meet demand, construction activity is picking up pace. Cap rates have been declining, as retail property prices continue to rise in each of the years, post-recession.

The largest retail category, general retail (including single tenant, free standing, general purpose buildings) enjoys among the highest rents among various subtypes in the primary markets. Shopping centers (including neighborhood, community and strip centers), malls & lifestyle centers, power centers (including at least three category-dominant anchors) and specialty centers (including airport retail, theme or festival centers) are the other retail subtypes drawing the attention of the millennials, the dominant consumer group.

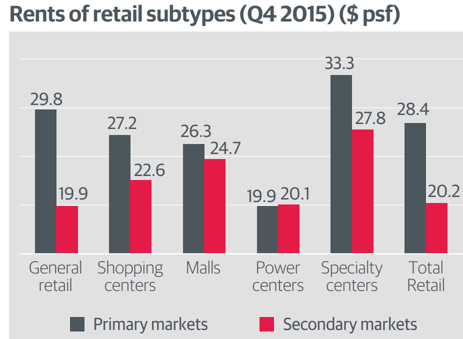
Retail subtype parameters

Retail subtype mix by net absorption (2015)



Source: JLL

Rents of retail subtypes (Q4 2015) ($ psf)



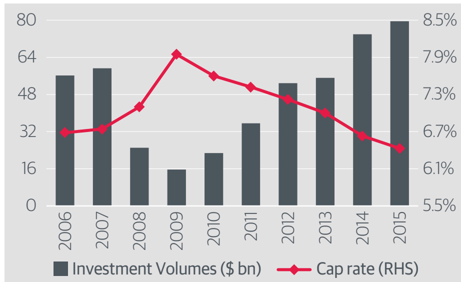
Source: JLL

Investment trends

Investment volumes grew at 5-yr CAGR of 28% to USD 80bn in 2015 with property prices at historic highs and cap rates at decade lows

Investment volumes in retail properties have grown at a 5-year CAGR of 28% to USD 80bn in 2015 (up 7% YoY), although Q4 2015 lagged year-ago levels. Average retail property prices have risen by 22.5% in 2015 to USD 548 psf, the highest in recent history. Retail cap rates continue their downward trend, declining to 6.4% at the end of 2015. However, the pace of the decline in cap rate has slowed down, decreasing by 20 bps in 2015, which is at the lowest level in the past decade.

Retail investment volume and cap rate trend



Source: RCA, CBRE

Neighborhood centers cap rates - H2 '15

Market	Cap rate	Chg over H1 (bps)
Class A	5.6%	-9
Class B	6.7%	3
Class C	8.4%	4

Source: CBRE

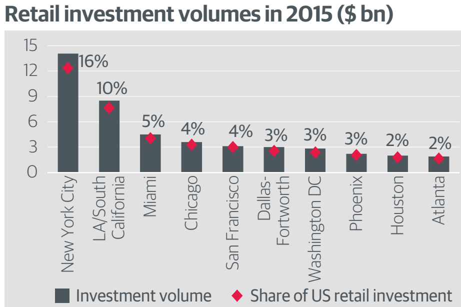
New York attracted the highest retail investment (USD 14bn) in 2015 among US markets

New York has been the top destination for retail investment at USD 14bn with a 16% share of 2015 investments, followed by Los Angeles/South California and Miami, with the top three accounting for nearly a third of total retail investment. Although investment by REITs declined 35% YoY in 2015 on the back of robust investment activity in 2014 (USD 29bn in acquisitions led by a large one-off portfolio deal), investments by REITs was largely flat at USD 19bn, excluding a large deal. REITs remain active investors in retail assets.

Foreign investment of USD 8bn in 2015 increased to 10% of total retail investment

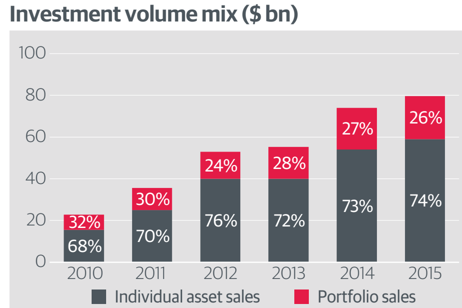
While the US retail real estate sector does not draw significant foreign capital, foreign investment in US retail properties increased from 5.2% of total retail investment in 2014 to 10% in 2015 amounting to USD 8bn. Sovereign wealth funds, and pension funds that are typically drawn to Class A malls, comprised 40% of foreign investment. Australia was the top investor in 2015, followed by Singapore, Canada and Spain. The largest foreign transaction in 2015 was GIC's (Singapore) investment of over USD 1.3bn in malls along the West coast markets. Single asset transactions continue to comprise a significant share of investment volumes.

Retail investment volumes in 2015 ($ bn)



Source: RCA, CBRE

Investment volume mix ($ bn)



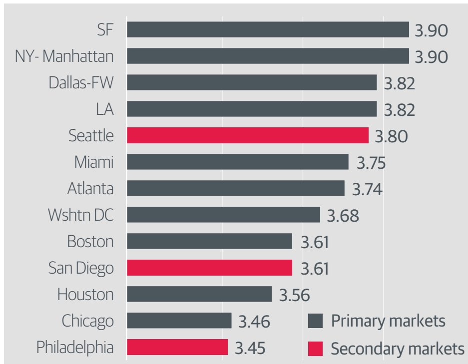
Source: RCA, CBRE

Demand for retail space in the primary markets exceeds twice that in the secondary markets

Key markets

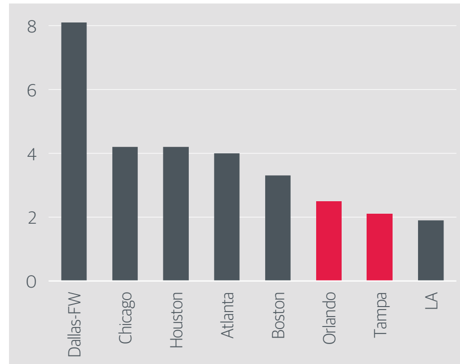
The bulk of retail real estate activity in terms of net absorption is concentrated in the primary markets, which totaled 55.9 msf in 2015 (10 markets tracked by JLL). Secondary markets (nine markets tracked by JLL) reported net absorption at 24.9 msf in 2015, led by Orlando. Demand for new space is coming in from the primary markets, where construction is slow. The top three retail real estate markets based on investment prospects are San Francisco, Manhattan and Dallas-Fortworth, as per PwC and ULI's Emerging Trends in Real Estate Survey 2016.

Top retail markets by scores



Source: PwC and ULI's Emerging Trends in Real Estate Survey 2016

Top markets by net absorption (2015) (msf)



Source: JLL

ii. Key economic trends shaping retail

Popularity of fresh format groceries rises among millennials, boosting demand for neighborhood & strip centers among retailers

a. Fresh format groceries drive demand for neighborhood, community and strip centers

As competition among the food related retailers/grocery stores heats up and consumer habits change, retailers are coming up with new concepts, focusing on consumer experience. The fragmentation of grocery shopping centers is also driving demand for fresh format groceries, whose popularity is growing, especially among the millennials, who are dominant among consumers and expect a more enriching/fresh shopping experience.

Grocery retailers such as Walmart, Kroger, Whole Foods, H-E-B, Aldi and Trader Joe's, are all expanding, while casual restaurants and medical retailers are also seeing expansion. Food services (restaurants) have been performing well, delivering strong 7% YoY growth in Q4 2015, and they continue to drive demand for space in various retail formats. Publix, The Fresh Market and Weiss Markets are renovating over a hundred stores in the next 12 months for a better shopping experience.

Limited assortment stores offering limited selection options at lower price are also seeing expansion, such as German discount store Lidl, which plans to open grocery stores by 2018. These new formats located in neighborhood and strip centers, are witnessing strong traction with strong double-digit revenue growth. Vacancy at these neighborhood, community and strip centers declined by 120 bps over the past two years and is expected to see increasing absorption.

b. Urban retail steps up the gas

High-end luxury and discount retail formats are doing well

Both luxury as well as discount retail formats are doing well, driving net absorption for retail space. While premium luxury and fast-fashion concepts are gaining traction seeking space in High Street locations, dollar store chains are flourishing since 2000, with the number of new store openings translating into a rate of a new store every 4.5 hours. The top five discount apparel retailers in neighborhood shopping centers are expected to absorb over 3.6 msf of space in 2016. Middle-class consumers are yet to open their purse strings in a big way. They have turned frugal since the recession, despite rising incomes and declining debt.

Heavy demand for Class A space is leading to a shortage, while Class B or C properties are not finding enough takers, resulting in high vacancies (Class B/C account for 75% of national vacancy). Urban retail rents grew 8% over the past two years, which are well above their previous peaks before the recession, while rents of other retail subtypes have grown 2% during this period and are still 14% below their pre-recession peaks.

High demand for urban/ luxury retail have driven rents to new highs, as high-end urban development projects come up in Miami and New York

Jewelry retailers are expected to witness some expansion in 2016. Signet Jewelers plans to open 60-65 stores, while online retailer BlueNile entered into physical retail with a 325 sf store used as a test for future expansion. Retailers in the accessory segment, such as Michael Kors, Francesca, Fossil and Vera Bradley, are setting up new stores that are expected to be delivered in 2016. Luxury retailers are on the look out to expand in high-income neighborhoods with healthy population growth, and are expected to target high-end urban development projects, such as the Brickell City Centre in Miami and the shops at Hudson Yards in Manhattan - New York City, which are coming up in the next few years. Despite higher rents for urban/luxury retail, demand from tenants is strong with the expectation of commensurate sales justifying the high rents. While urban retail continues to gain traction among different subtypes of retail.

Fitness centers are expected to absorb 10.4 msf in 2016

Fitness centers to flourish in 2016

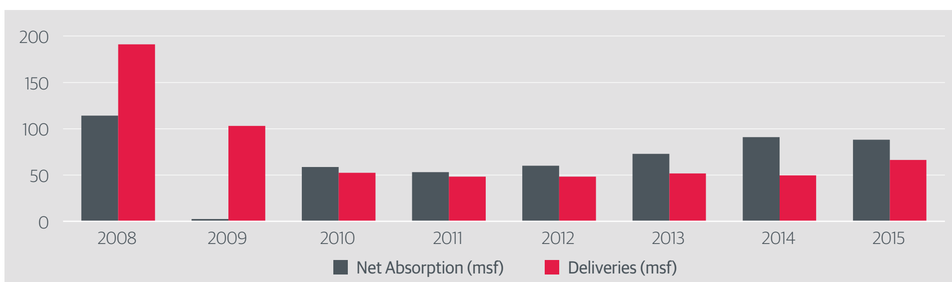
Three fitness clubs, Anytime Fitness, Gold's Gym and LA Fitness, plan to open 125, 60 and 50 stores, respectively, in the next one year, aggregating to 5.9 msf. The net absorption for the top 20 expanding fitness centers is expected to be 10.4 msf in 2016.

iii. Demand and supply trends

a. Retail absorption continues to outpace completions

Demand for retail real estate continues to be strong since the downturn of 2008-09, with net absorption exceeding deliveries for the sixth consecutive year. Net absorption of 88 msf in 2015 was marginally lower than 2014, yet healthy, driven by the primary markets where there is active demand for new space. Completions increased by 33% YoY to 66 msf in 2015, the highest since 2009.

National retail net absorption and completion trends



Source: JLL

Net absorption of neighborhood, community & strip centers expected to more than double in 2016 to 53 msf coupled with drop in vacancy

Although absorption and completions of neighborhood, community and strip centers have been lower in 2015 than the previous year, absorption continues to be greater than completions for the past four years. Demand for these centers remains strong, whereas supply is lagging significantly, which is expected to drive down vacancies by 220 bps during 2016 and 2017. Net absorption in 2016 is expected to more than double to 53 msf from ~20 msf in 2015, the highest since 2005, and continue to rise in 2017 as well, after which it is expected to taper off.

b. Vacancy and rental trends

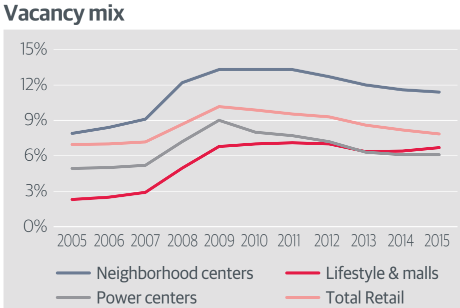
Strong demand relative to supply and limited retail construction, which is expensive in the primary markets (especially CBDs), has driven down national vacancies from 10% in 2010 to 7.9% in 2015, just 90 bps above the pre-recession low. Retailers are moving into newly completed lifestyle centers and malls with modern formats to be in line with contemporary shopping habits, driving down vacancies at these centers to 6.7%. Vacancies of power centers and neighborhood, community and strip centers have largely been unchanged in the past one year at 6% and 11%, respectively.

Rental growth of 2.3% in Q4 2015, has picked up to the fastest level since the recession

With vacancies dropping, rentals are rising, growing the fastest since the recession on a quarterly basis, delivering 2.3% rent growth in Q4 2015. While prime rental growth (in US' luxury High streets) has been moderating in the 3-4% band over the past three-four quarters, it accelerated to 8.6% growth in Q4 2015, driven by a sharp rise in New York City's rents.

Retail trends

Vacancy mix



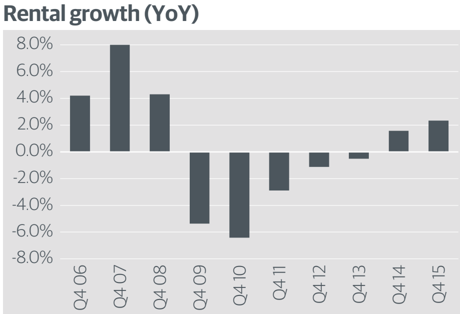
Source: CBRE Econometric Advisors

Lowest retail vacancy markets in the US

Market	Vacancy	Cap rate
San Francisco	2.1%	5-5.8%
New York City	3.1%	5-5.5%
Miami	3.3%	5.5-6%
Boston	3.8%	6-6.5%
Houston	5.8%	6.3-7%

Source: JLL

Rental growth (YoY)



Source: CBRE Econometric Advisors

Prime rental growth

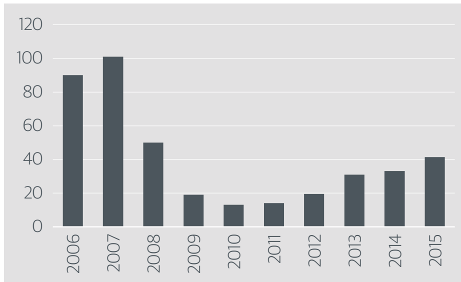
Source: CBRE Econometric Advisors

c. Construction picking up pace

Construction pipeline of 41 msf at end of 2015, is the highest since 2009

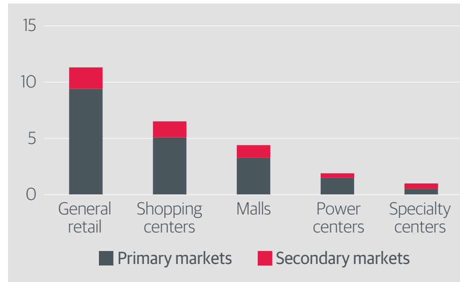
Retail construction activity is rising after the limited construction seen in 2015, with 41 msf under construction as at the end of 2015, which is the biggest construction pipeline since 2008. Construction activity is led by general retail, shopping centers and malls & lifestyle centers. Major retail projects aggregating to 3.74 msf in the Northeast region are under progress, with expected delivery between 2016 and 2018.

Retail - Under construction space (msf)



Source: CBRE Econometric Advisors

Under construction as of Q4 2015 (msf)*



Source: JLL; * 19 markets tracked by JLL

iv. Key promising markets

San Francisco (West)

Rents in SF expected to continue rising after 9% growth in 2015, with lowest vacancy of 2.1% and limited construction activity

San Francisco (SF) has traditionally been under-retailed. However, it possesses prime demographics, such as a healthy high-income population, where median household income is expected to grow by ~6%, twice the national average over the next five years. Retailers catering to lower-income demographics are being replaced by higher-end retailers, who can afford higher rents. Saks Fifth Avenue, Suit Supply and Barneys New York recently opened new stores in SF, while fitness centers and food & beverage retailers are also expanding. Consequently, retail demand has been strong and expected to be so.

San Francisco faces supply challenges due to the lack of adequate developable land and strict construction laws that are limiting construction activity. With just 0.25 msf under construction in SF, opportunities exist for upgrading existing spaces. SF's vacancy is the lowest in the US at 2.1%, making it difficult for retailers looking to expand. Rents grew by 9% in 2015 and are expected to continue rising in the next few years, till such time as new supply additions push up vacancies.

New York City (North East)

Construction projects worth 3.7 msf expected to be delivered during 2016-18 in New York

New York City is regarded as one of the top retail destinations, with one of the lowest vacancy rates in the country and characterized by a population with strong income growth. At a vacancy of just 3.1%, Manhattan is among the top three US retail markets with lowest vacancies. However, new supply is expected to kick-in over the next two years with some large construction projects expected to be delivered, such as 2.07 msf at the American Dream Meadowlands project in 2017, 1 msf at the shops and restaurants at Hudson Yards in 2018 and 0.68 msf at City Point in 2016. Apparel retailers are the leading tenants in prime Manhattan, with 45% of leased space in 2015, followed by beauty and footwear, each with 10% share of leased space.

Manhattan has seen a decline in rents, as well as leased space and the number of leases in 2015, due to the unwillingness of retailers to pay the huge rents quoted typical of the metro city's most sought-after neighborhoods. However, this has driven demand in other lower rent submarkets of the city, such as the emerging Downtown Brooklyn and Williamsburg in Brooklyn, where rents have risen by 15% in 2015. Other lower-rent prime Manhattan neighborhoods, such as SoHo and the Upper East, are witnessing a rise in leasing activity from new retailers such as Yves Salomon and Elie Saab.

Undeterred by falling oil prices, Houston retail fundamentals are strong with rents rising 2% p.a. and development picking up to cater to rising demand

Houston (South)

Despite declining oil prices, the retail real estate sector has remained fairly resilient in Houston, where energy is a dominant industry. Net absorption of 4.2 msf in 2015 was healthy, while the retail vacancy declined by 30 bps to 5.8%. Average rents rose 2.1% YoY to USD 15.2 psf in 2015, maintaining 2% average rent growth over the past three years. Houston has 2.84 msf of retail space under construction, of which 52.5% is pre-leased. Urban development is increasing with multi-story projects picking up to cater to the high demand.

Chicago's investment volumes grew by 27% to USD 3.5bn and retail prices increased 12% in 2015

Chicago (Midwest)

Investment volumes in Chicago grew by a robust 27% in 2015 to USD 3.5bn across 264 properties (7% higher). Institutions were the top investors comprising 49% of retail investments, while foreign investors contributed 11% of total investment. Chicago's largest sale in 2015 was the purchase of a portfolio of three properties known as 669 Mag Mile spanning 148,000 sf, for USD 295mn by a London-based real estate fund from JP Morgan Investment Management. Prices rose 12% to an average USD 253 psf in 2015, driving down cap rates by 25 bps to 6.4%. While completions were below their historical average in 2015, construction pipeline is growing with 77% of projects under construction being pre-leased.

v. Investments in retail assets

Top retail deals in 2015

Buyer	Investor type	Assets purchased - market	Market	Deal value ($ mn)	Price ($ psf)	Area (msf)
Portfolio:						
Chambers Street Properties	REIT	Chambers/ Gramercy Merger	Multiple	2,300	92	24.88
Blackstone	Investment firm	Excel Trust Buyout portfolio	Multiple	2,000	217	9.18
GIC^	SWF	Macerich retail portfolio	Multiple	1,386	178*	7.77
Single-asset:						
Blackstone	Investment firm	The Shops at Skyview Center	New York City	400	714	0.56
Vornado Realty Trust	REIT	Old Navy Flagship Store	New York	355	4,565	0.08
Heitman	Real estate Investment firm	Shops at Wailea	Hawaii	342	2,079	0.16

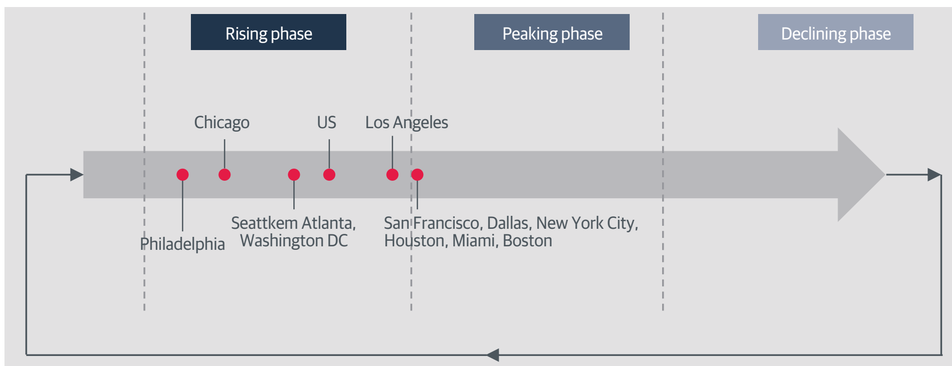
Source: JLL; ^ partial interest sale; *based on GIC's partial stake

Completion to absorption ratio of 75% is expected to drive vacancies lower and rents higher for the next few quarters

Outlook

The retail real estate sector is poised for another year of further improvement in 2016, with demand for retail space expected to grow as retailers expand, supported by consumers (excluding energy) benefiting from higher disposable incomes due to lower energy prices. Employment gains of 2.7mn in 2015 (third successive year of over 2mn job additions) along with wage growth, bode well for retail sales. Completions are expected to continue lagging absorption, which is slated to increase in 2016, driving rents substantially higher due to low supply. With a completion-to-absorption ratio of 75% in 2015, vacancies are headed lower for at least a few more quarters. The tightening markets, especially in the primary metros, are expected to translate into higher prices as well. The pace of growth in rents and prices should slow during 2017-18 when supply starts catching up with demand.

The retail cycle



Source: JLL

All the key retail markets are in a rising market, with declining vacancies and rising rents. The top primary markets of San Francisco, New York City, Dallas, Houston and Miami are strong, witnessing demand exceeding new supply additions and therefore entering a peaking phase, which is expected to sustain as long as demand and supply reach equilibrium levels.

8. Multifamily Real Estate

- Investment volumes continue to record strong growth with 30% 5-yr CAGR to $137bn, a new record
- Despite strong demand, vacancy rate is expected to increase from the 6-yr low of 4.5% as construction increases
- Multifamily prices grew 14% in 2015, as cap rates declined to a decade-low of 5.8%
- Home ownership at 48-yr low of 63.8%, demand for rental homes expected to be healthy in the short term
- Rental growth of 4.4% during 2010-15 to moderate to 2-2.4% during 2016-17

i. Overview and key markets

Demand for renter homes rising with decline in home ownership over the past 10 years to 63.8% in Q4 2015

The fundamentals of the multifamily real estate sector have improved since the downturn in 2009, as absorption remains buoyant amid rising completions and rents continue to increase with declining vacancies. The demand for multifamily renter homes has been steadily rising with a decline in home ownership by over 500 bps to 63.8% over the past decade, as the number of households opting to rent (rather than owning) continue to increase. Multifamily housing starts have been posting robust growth (28% CAGR) over the past five years, while home sales are growing moderately, reporting a 5% CAGR. Investments in the sector continue to post record highs year after year, as property prices continue to rise. Increasing supply is expected to lead to rising vacancies and lower rents in the coming two years. While cap rates have been declining since 2009, they stabilized in 2015.

Multifamily investments continue to record strong growth with 30% 5-yr CAGR to USD 137bn in 2015

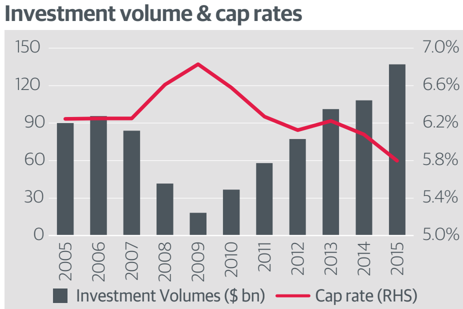
Prices of multifamily units grew by 14% in 2015

Investment trends

Investment in the multifamily sector continue to be robust with volumes growing at a CAGR of 30% to USD 137bn (27% YoY) over the past five years, the highest in recent history, driven by Q4 2015 volume, which was the highest quarterly volume in history. Average prices of multifamily units have been rising, and increased by 14% in 2015 to USD 151,000. The downward trend in cap rates appear to have stabilized, with no material change in H2 '15over H1 '15.

Multifamily investment & cap rate trends

Investment volume & cap rates



Source: RCA CBRE

Cap rates - H2 2015

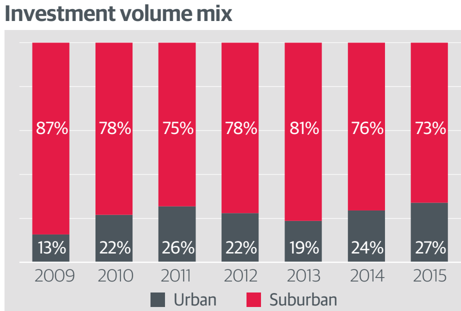
Property type	City/Infill		Suburbs	
	Cap rate	Chg* (bps)	Cap rate	Chg* (bps)
Class A	4.6%	-2	5.0%	-13
Class B	5.2%	2	5.6%	-4
Class C	6.1%	-2	6.6%	-9

Source: CBRE; * Change over H1 2015

While the bulk of multifamily investments continue to be driven by developers/real estate companies, those from equity funds are rising (from 8% in 2010 to 17% in 2015), having grown at a CAGR of 51% over the past five years. Investments in urban multifamily properties is on the rise, growing at a CAGR of 59% over the past six years, with its share increasing to 27% of total investment from 13% in 2009.

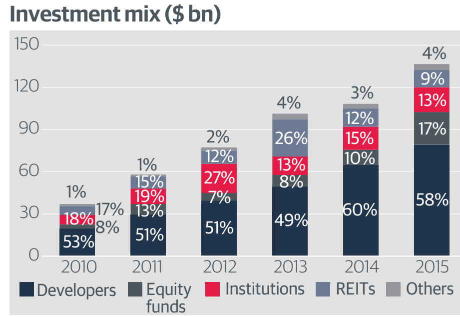
Demand for urban multifamily properties is growing faster than for suburban properties

Investment volume mix



Source: JLL

Investment mix ($ bn)



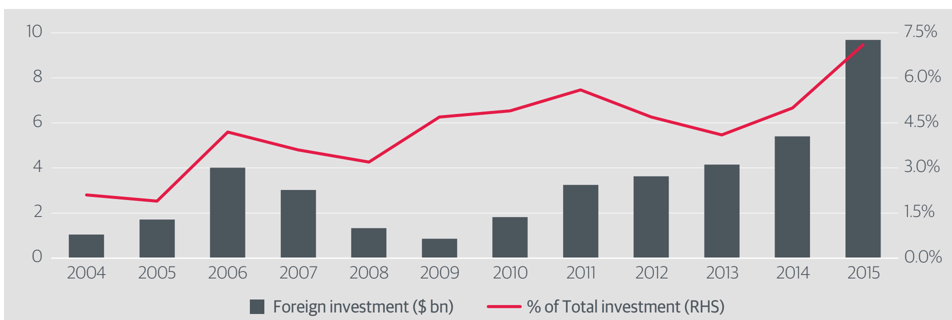
Source: RCA, JLL (Transactions greater than $5mn)

Foreign investments grew at a 5-yr CAGR of 40% to USD 8.6bn in 2015, with the share of Middle East increasing to 14% of foreign investment

Foreign investment in the sector is accelerating, growing at a 5-yr CAGR of 40% and by 80% in 2015 to USD 8.6bn, depicting the familiarity and comfort that foreign investors have with US multifamily assets. Canada remains the top investor with 58% share of cross-border investments, and growing 85% in 2015. Investments from the Middle East remain active, with USD 1.2bn of acquisitions in the multifamily sector, with its share increasing to 14% of foreign investment in 2015. Qatar Investment Authority acquired four multifamily properties in the Manhattan West Development project in New York for USD 353mn in Q4 2015.

The key primary markets for foreign investment in US multifamily are New York, Los Angeles, Dallas-Fortworth and Washington DC (together comprising 34% of total foreign investment), driven by the strong renter demand from continuing household formations, job growth and sheer size of these markets. The increasing appetite of foreign investors for multifamily assets is expected to continue in 2016.

Foreign investment



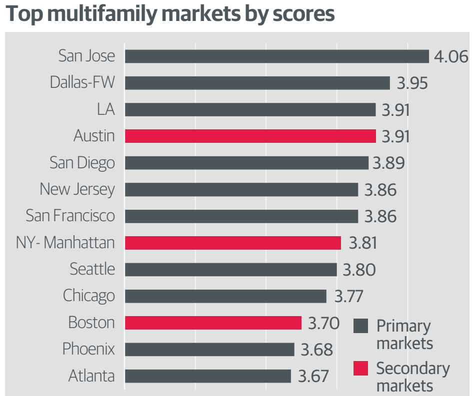
Source: RCA, JLL (Transactions greater than $5mn)

The top 3 of 50 markets account for 17% of total net absorption in 2015 with Washington DC topping the list

Key markets

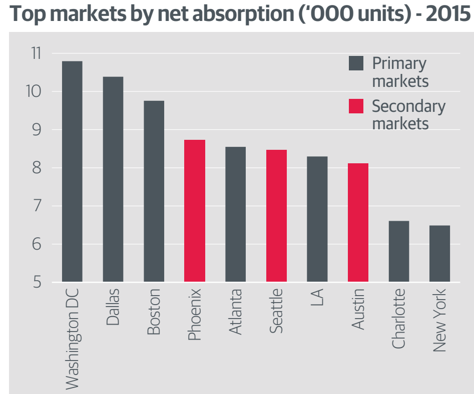
The major markets in terms of net absorption are the primary markets of Washington DC, Dallas and Boston, which totaled 31,000 units in 2015 or 17% of total absorption. The top three multifamily real estate markets based on investment prospects, as per PwC and ULI's Emerging Trends in Real Estate Survey 2016, are San Jose, Dallas-Fortworth and Austin.

Top multifamily markets by scores



Source: PwC and ULI's Emerging Trends in Real Estate Survey 2016

Top markets by net absorption ('000 units) - 2015



Source: CBRE

ii. Multifamily accommodations

a. Buoyant demand while supply remains strong

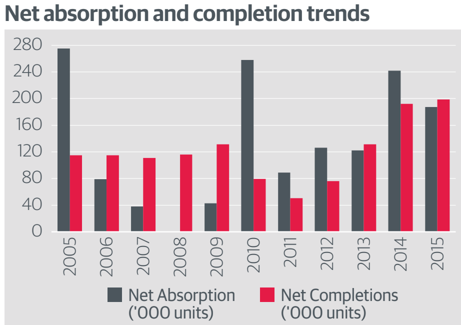
Completions outpace absorptions, growing to the highest level of 0.2mn since 2000, while building permits continue to report healthy growth

Demand remains healthy in the multifamily sector, with the net absorption of 187,200 units in 2015, above the past three- and five-year averages, although the 2015 level is lower than that in the previous year, which was an exceptional year when net absorption doubled. Washington DC and Dallas reported the highest net absorption of over 10,000 units each in 2015. Nationally, supply continues to grow, delivering a 5-yr CAGR of 20% in completions to 199,000 units in 2015, the highest level since the peak of the last construction cycle in 2000.

Building permits for multifamily apartments have been growing at a healthy rate (CAGR of 14% over the past five years) to 1.18mn in 2015. Permits issued in Q4 2015 (118,000) were the second highest quarterly permits (10-yr quarterly average of 76,000) since 1986. The highest permits were issued in Q2 2015 when New York City drove national permits after the property tax abatement for new residential construction expired in New York City, driving developers to apply for permits before the deadline. The strong permit numbers are expected to translate into significantly higher completions in 2016.

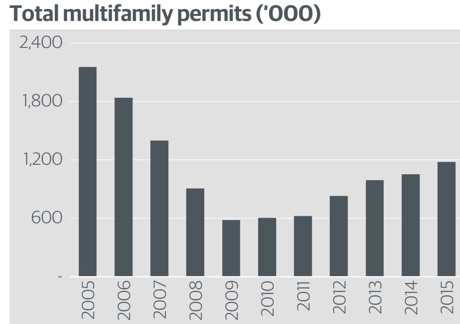
Multifamily trends

Net absorption and completion trends



Source: CBRE Econometric Advisors

Total multifamily permits ('000)



Source: CBRE Econometric Advisors

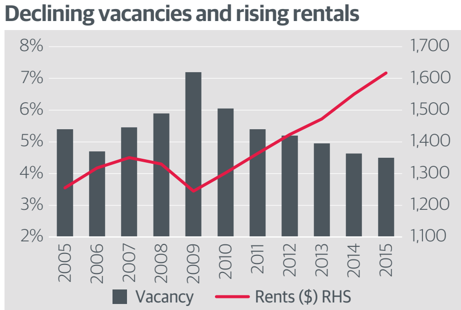
b. Vacancy and rental trends

Vacancy expected to increase with increase in supply, while rent growth expected to moderate to ~2% in the next two years

Vacancy has been trending downwards from the peak of 7.2% in 2009 to 4.3% in 2015, driven by strong demand. Rents have steadily grown at a CAGR of 4.4% over the past five years to USD 1,617 per unit. Going forward, vacancy rates are expected to increase as new supply kicks in, while the pace of growth in rents is expected to moderate to ~2% in the coming two years.

Multifamily vacancy & rental parameters

Declining vacancies and rising rentals



Source: CBRE Econometric Advisors

Key low vacancy markets (Q4 2015)

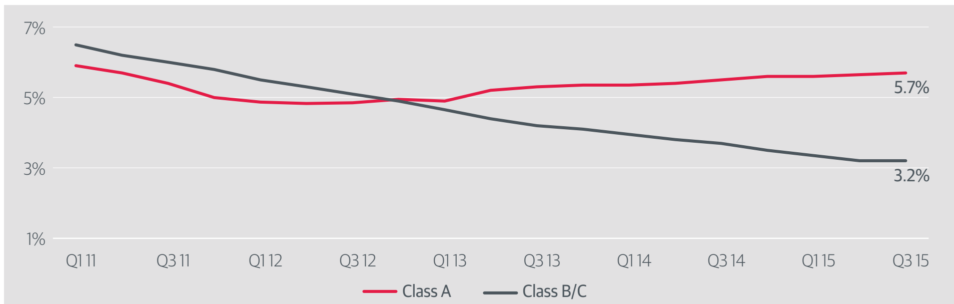
Market	Vacancy	Rent/ unit ($)	Rent growth
New York	3.4%	2,910	1.5%
Miami	3.4%	1,581	3.7%
Los Angeles	3.8%	2,047	6.0%
San Francisco	4.0%	3,032	7.4%
San Diego	4.0%	1,717	7.7%
Boston	4.2%	1,996	7.5%
Dallas	4.7%	1,012	6.1%
Washington DC	4.9%	1,593	2.7%

Source: CBRE

Demand for Class B/C properties is growing, while that for superior Class A properties is declining

While Class A vacancies have steadily increased over the past three years by 80 bps to 5.7% in Q3 2015, Class B and C vacancies have declined by 190 bps during this period to 3.2%. This suggests that demand for relatively older and inferior apartments with lower rents in lower income neighborhoods is rising, while the demand for superior apartments is moderately declining.

Multifamily vacancy mix



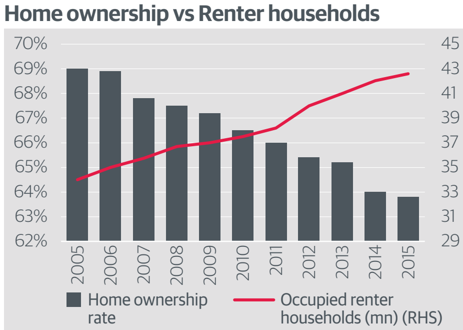
Source: JLL, REIS

c. Home ownership bottoming out - Strong rental demand in the short run

While demand for rental homes expected to be healthy in the short term, home ownership is expected to pick up in the long run

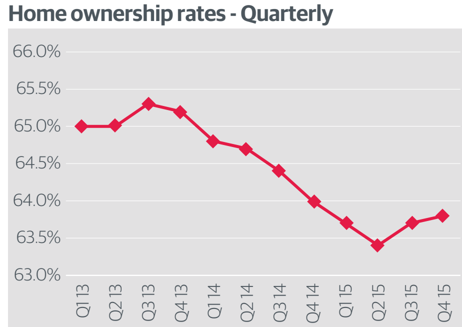
Home ownership rates have been steadily declining over the past 10 years to 63.8% at the end of Q4 2015, in line with the rise in occupied renter households, which grew at a 2.3% CAGR over this period to 42.6mn in 2015. However, home ownership has risen by 40 bps from the low of 63.4% in Q2 2015, coupled with a meager decline in occupied renter households, while owner-occupied households witnessed the third successive quarter of growth to 75mn households in Q4 2015. This is being driven by millennials looking to buy their first homes and baby boomers looking to retire to a new home. While the increase in home ownership rates and decline in occupied renter households are trends expected to pan out in the long term, demand for rented housing units are expected to continue in the short term.

Home ownership vs Renter households



Source: US Census Bureau

Home ownership rates - Quarterly



Source: US Census Bureau

iii. Senior housing- 65+ year olds driving demand

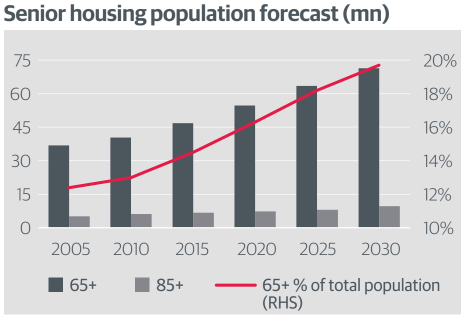
Rapid growth of 3% expected over the next 15 years for the 65-plus population will drive demand for senior housing properties

The 65-plus population in US is expected to grow at a CAGR of ~3% during 2015-30 to 71mn[21], with its share expected to rise from 14.5% (2015) to 19.7% (2030), while the 85-plus population is expected to grow at a CAGR of 2.3% to 10mn in 2030. The average life expectancy of a 65-year-old in the US has increased from an age of 80.2 (in 1972) to 85.5 years in 2015. This is associated with the unintended consequences of increased cases of chronic diseases among the elderly population, thereby necessitating the need for more professional care providers, and related real estate accommodation, such as the following:

Key metrics in top LS markets

Housing subtype	Building features	Services offered
Independent living (IL)	Apartments with kitchen, dining room & common area amenities	Restaurant-style dining, social activities housekeeping, transportation
Assisted living (AL)	Most units without kitchen, have small refrigerator & microwave	IL services + assistance for daily living activities like bathing, eating, etc.
Memory care	Units without kitchen, have small refrigerator & microwave	AL services + special behavior care + secured access only
Nursing care (Skilled nursing)	Units are like hotel rooms	AL services + 24 hour care by a licensed personnel

Senior housing population forecast (mn)



Source: American Seniors Housing Association

Senior housing key subtype parameters

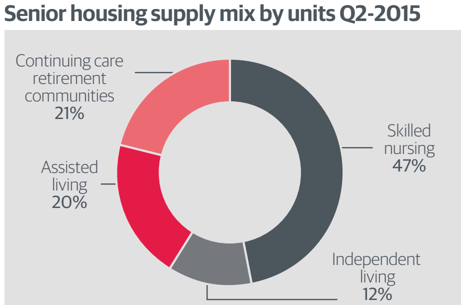
Subtype	Avg. Monthly Rent ($)	% Revenue from services
Independent living	2,985	45%
Assisted living	4,494	65%
Memory care	6,090	incl. with AL
Skilled nursing	9,038	75%

Source: NIC Map Data & Analysis Service (Q2 2015), CBRE

Skilled nursing investment volumes remain solid, although construction is slowing down

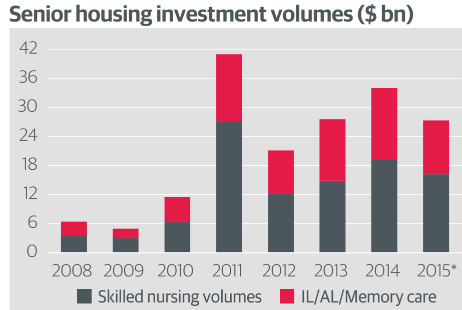
Skilled nursing is the largest subtype, with 62% share in terms of investment volume and 47% share in terms of total units in Q2 2015. Investment volumes of this subtype have grown at a CAGR of 26% from 2012-14 and by 11% in 9M 2015, more than offsetting the decline in volumes of the independent living/ assisted living/memory care segments in 9M 2015.

Senior housing supply mix by units Q2-2015



Source: NIC Map Data & Analysis Q2 2015 (top 100 metro mkts)

Senior housing investment volumes ($ bn)



Source: NIC Map Data & Analysis Service (Q2 2015), * 9M 2015

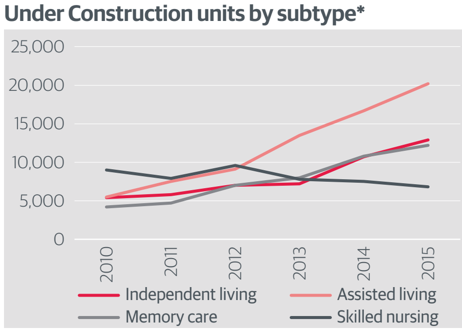
[21] American Seniors Housing Association

Boom in senior housing construction is being led by assisted living properties, followed by Independent living

There is a boom in construction activity in the senior housing sector supported by abundant capital availability, with the highest number of units under construction reported since 2008, at 52,000 as of Q3 2015 across the subtypes of senior housing properties. Construction is being led by the assisted living subtype of senior housing, which is cheaper to develop, perceived to be relatively more recession-proof and construction financing is more readily available than other senior housing projects. Development has also been picking up in the independent living segment, where occupancy levels are on the rise, at over 91% in Q3 2015. Construction in the skilled nursing segment is more directed towards the replacement of old/obsolete units as compared to new construction, which has been impacted by declining occupancy rates.

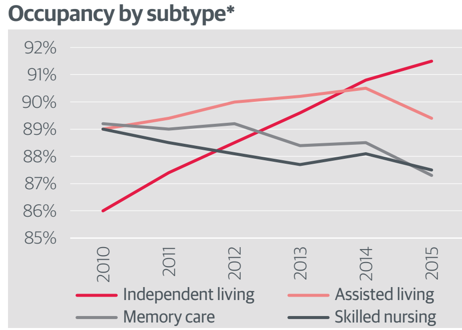
Senior housing subtype metrics

Under Construction units by subtype*



Source: IRR; * All data is as of Q3 of the respective year

Occupancy by subtype*



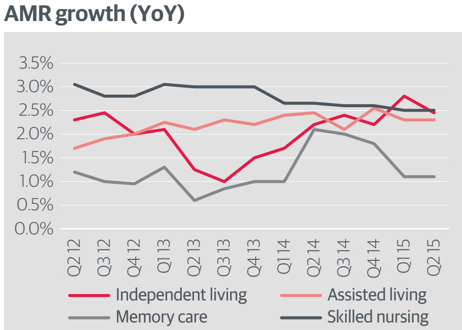
Source: IRR

Average rents for skilled nursing grew by 2.8% over the past 5 years, the highest among the senior housing subtypes

Average monthly rents (AMR) have been growing steadily over the past three years, at between 1% and 3% YoY across the senior housing subtypes, with skilled nursing witnessing the highest growth. Over the past five years, cap rates have declined faster for skilled nursing (210 bps decline) compared to the cap rates of the other subtypes (80 bps decline).

Senior housing rent growth by subtypes

AMR growth (YoY)



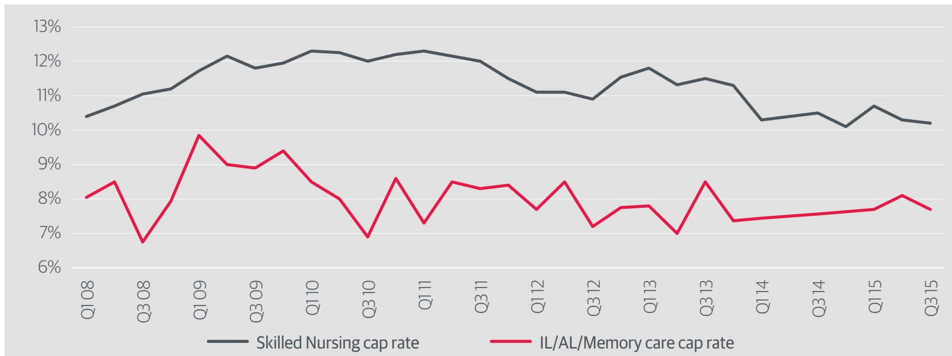
Source: NIC Map Data & Analysis Service (Q2 2015), CBRE

AMR growth over Q2 '12 – Q2 '15

Subtype	Avg. rent growth
Independent living	2.0%
Assisted living	2.2%
Memory care	1.2%
Skilled nursing	2.8%

Source: NIC Map Data & Analysis Service (Q2 2015), CBRE

Senior housing cap rates by subtypes



Source: IRR

Skilled nursing market in Washington DC

Washington DC's skilled nursing homes are the top ranked nursing homes in the US, with an overall Medicare 5-star quality rating of 4.1. The city has 19 certified nursing homes (having a total of 2,766 beds), with 63% rated as 5-star. Almost three-fourths of the nursing homes in the city have both counseling and resident facilities, while 26% of the nursing homes are located within hospitals. The average monthly cost for skilled nursing in Washington DC is USD 8,213, higher than the national average of USD 6,692 and the cost in Virginia (USD 6,707).

iv. Key promising markets

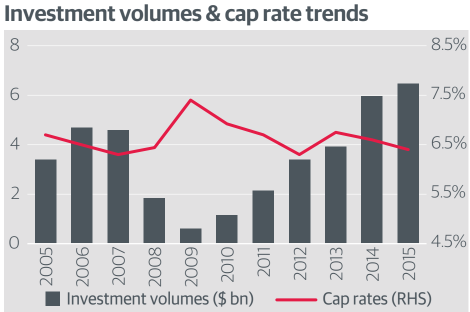
Atlanta (South)

A 'young' population with well-educated millennials and growing 55-plus cohort, are driving demand for rental apartments in Atlanta

Demand continues to be strong in Atlanta's multifamily market, with 2015 reporting the second highest net absorption in the past five years at 12,484 units, while completions amounted to 9,076 units. Atlanta possesses strong demographics with a fairly young population (over 60% are below the age of 45) and a large well-educated millennial population, which bode well for multifamily market demand, which is further supported by the fast growing 55-plus cohort who are attracted by the low maintenance associated with multifamily apartments. Corporate expansion and relocations in the city are the other factors driving rental demand in Atlanta.

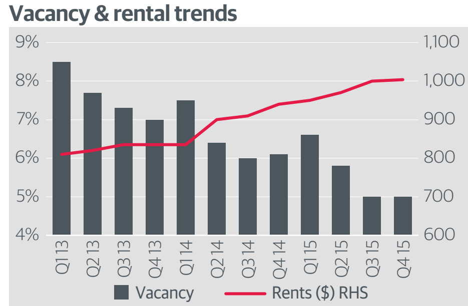
Atlanta multifamily metrics

Investment volumes & cap rate trends



Source: Colliers International

Vacancy & rental trends



Source: Colliers International

Atlanta's rent growth of 6.8% is higher than the national average, while prices remain stable

Investment volumes continue to post new highs, growing at a CAGR of 41% over the past five years to USD 6.5bn in 2015, with nearly 69,850 units across 268 properties sold in the year. The average price of multifamily apartments has been flat in 2015 at USD 94,200 with the average cap rate declining slightly to 6.4%. Vacancy is at the lowest level since 2006, at 5%. Rental growth in Atlanta continues to outpace the national average, with 6.8% growth in 2015. Construction is also gathering steam with 11,510 units under construction, with most of the development happening in the Midtown, Buckhead and Northern submarkets.

Atlanta multifamily outlook

Rising development in Atlanta to provide a floor to vacancy at 5% in 2016, while rents are expected to rise 4%

Demand is expected to remain strong in Atlanta in 2016, while completions are expected to grow by 8% to 9,800 units as development gathers pace. Multifamily demand in Atlanta is expected to be boosted by the development of major sports stadiums having mixed-use development or a neighborhood development component, such as the Mercedes-Benz Stadium, Suntrust baseball Stadium fueling apartment demand in the Cumberland region and redevelopment of Turner Field stadium into a sports facility, student housing and single-family homes in the surrounding area. Higher supply is expected to keep vacancies from falling further and remain at ~5% in 2016, while asking rents are expected to continue rising by 4%[22] p.a. in 2016 and 2017. Overall, 2016 is expected to be another strong year for the multifamily sector.

New York (North East)

Prices in Manhattan grew by 6.3% in 2015, with cap rates declining to 3.7%

New York City witnessed a stellar year in 2015, posting 52% growth in multifamily investment volume to USD 19bn across 781 transactions, which grew by 2% YoY. This was led by the huge Stuyvesant Town & Peter Cooper Village deal amounting to USD 5.5bn, excluding which 2015 was on par with the record year of 2014. Manhattan dominates the city's deals (58% share) with USD 10.9bn of investment in 2015, followed by other boroughs of Brooklyn and North Manhattan. Prices of multifamily units in Manhattan rose by 6.3% in 2015 to USD 935 psf, with cap rate declining by 11bps to 3.7%, the lowest among all boroughs. All other boroughs posted higher price increases and higher compression in cap rates. The average price per unit was USD 730,000 in Manhattan, which is 2.5x the average price in the next largest borough of Brooklyn.

Phoenix (West)

Rising demand (employment growth), property prices (15% CAGR), rents (5.5% CAGR) augur well for investors in Phoenix

The multifamily market in Greater Phoenix remains strong as investments surge to the highest level in a decade in 2015, with continued rise in property prices to USD 80,000 per unit growing at a 4-yr CAGR of 15%. Cap rates declined from 6.5% in 2011 to 5.6% in 2015. Rents have been rising faster over the past two years at a CAGR of 5.5% to USD 872 per month, while vacancies continue to slide from 10.4% in 2010 to 5.7% in 2015. Development continues to surge as 2015 witnessed completions of 6,600 units, the highest since 2000. The slowing down of building permits in 2015 by 35% to 5,500 from the record levels in 2014, are expected to result in lower supply to 5,000 completions in 2016. This is expected to keep 2016 vacancy at similar low levels as in 2015, driving rents higher by ~5% in 2016. Renter demand for apartment units is expected to remain healthy in 2016, driven by acceleration in employment growth and corporate in-migration. Going forward, investor sentiment and outlook remain positive for Phoenix.

[22] REIS

v. Top multifamily deals in 2015

Buyer	Investor type	Assets purchased - market	Market	Deal value ($ mn)	Price ($/unit)	Area (#)
Portfolio:						
Lone Star	PE firm	Home Properties Buyout	New York, Florida	6,812	186,952	36,435
Brookfield Asset Management	Investment firm	Associated Estates Buyout	National	2,500	104,129	1,114
Blackstone	Investment firm	Greystar Real Estate Apartment portfolio	National	2,000	192,326	10,399
UDR	REIT	Home Properties Apt portfolio	Washington DC	901	277,572	3,246
Blackstone	Investment firm	Caiola Family Residential portfolio	New York	693	695,386	997
Single-asset:						
Blackstone JV Ivanhoe	Real estate firm	Peter Cooper Village	New York	5,300	471,866	11,232
Rockpoint group/ Maximus RE Part	Real estate PE firm	Tower Two at One Rincon Hill	San Francisco	410	1,375,839	298
Bell Partners	Real estate PE firm	Bell Flatirons	Denver	255	211,028	1,206

Source: JLL

Record completions to lift vacancies up and slow rental growth in 2016 & 2017, portending a cautious outlook for multifamily

Outlook

While absorption levels are expected to moderately decline over the coming two years, demand remains steady, driven by millennials and baby boomers. Completions are accelerating to levels not seen in recent history given the rapid growth in permits, with 287,000 units expected in 2016 led by New York and Washington DC, followed by over 0.2 mn deliveries in 2017. While rental demand currently remains buoyant, increasing supplies are expected to reverse the downward trend in vacancy in 2016, with vacancy expected to rise to 5.2% in 2016 and 5.6% in 2017, impacting demand in the longer term. Multifamily rental growth is expected to slow down to 2.4% in 2016 and 2% in 2017, after growing between 3-4% p.a. for the past five years. Overall, the multifamily sector's fundamentals have mellowed down with a cautious outlook.

9. Conclusion

The US real estate sector is poised for another strong year in 2016, even as the US macro environment gradually recovers. The sector is witnessing rising interest from overseas investors looking for a safe haven investment that offers stable, reasonable returns amidst a volatile global economy and strong US dollar. Fundamentals across all property subtypes have been improving as absorption continues to report positive trends, with a decline in vacancies. Construction activity is picking up across sectors, particularly accelerating in the industrial and multifamily segments, which is expected to halt the declining vacancy trends for these sectors. Rents are expected to rise in 2016 for all the property types, although the pace of growth is likely to slow down, with the industrial and retail sectors expected to deliver relatively higher growth. As of 2015, cap rates for all the property types lie in the 5.8%-6.9% band, with MOBs at the upper end (6.9%) and multifamily at the lower end (5.8%), offering spreads between 390–500 bps over the 10-yr treasury yield. The decline in cap rates seen over the past five years across all the property types are expected to moderate, as price growth tempers down.

While all the real estate sectors are witnessing growing investments from foreign investors, the industrial sector is attracting the highest foreign investment, where investors have so far been underweight, with its contribution rising to 30% of total foreign investment in 2015, from 5% in 2014. It is expected to continue gaining traction from the investor community (including overseas), along with the office, multifamily and MOB sectors.

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