TIAA-CREF Asset Management

Real Estate Quarterly Highlights

Second Quarter 2015

TIAA CREF

What's Inside

Real Estate Investment Quarterly Highlights features overviews of the following:

TIAA CREF

Financial Services

U.S. Commercial Real Estate Outlook

Capital Markets

Risk Spreads and Interest Rates

Capital Markets drive CRE pricing through Treasury rates and risk spreads. Ten-year Treasury yields, which hovered around 2.0% during 1Q, averaged 2.16% in 2Q. Credit spreads have again widened in 3Q as market volatility increased. The FOMC has signaled that it will likely raise rates later this year given ongoing improvement in the labor market. Higher Treasury yields should ultimately push cap rates higher, but increases in cap rates have historically lagged by 6 to 9 months.

Labor Market

Employment and Unemployment Rate

Employment growth drives demand for space. Employment grew by a healthy 678,000 jobs in 2Q15 vs. 586,000 jobs in 1Q15, pushing the unemployment rate down to 5.3%. July brought an increase of 215,000 jobs, reinforcing expectations of stronger gains in the coming quarters. Employment growth is expected to grow by about three million jobs in 2015. Growth of this magnitude is supportive of real estate demand.

Leading Indicators of U.S. Commercial Real Estate Performance — 2Q2015

Indicators	Position	Stall — Overheat
Interest rates	Historically low making real estate investment attractive	
Investor risk appetite	Credit spreads have again widened with increased volatility	
Debt for investors	Commercial mortgages available with easing standards	
Debt for construction	Easing, but not yet abundant	
Employment growth	Solid average gains; labor market continuing to tighten	
Unemployment rate	Much improved, but with low labor force participation	
Vacancy rates	Mostly declining to long-term averages and below	
Commercial property rents	Mixed across property types depending on new supply	

Source: TIAA-CREF, as of 2Q15

Debt Availability

Construction and Investor Financing

Debt Flows affect the amount of new construction and sales volume of existing properties. Solid total returns, improving rents and vacancy rates, and ample debt availability have generated a modest, but growing construction pipeline. Construction lending standards have eased somewhat, but recourse loans and moderate loan-to-cost ratios prevail. Availability of commercial mortgage financing is a positive for real estate investors, but hungry capital can become destructive if credit standards erode and new construction lending becomes dislodged from demand. There are some indications of credit quality erosion in CMBS lending.

CRE Fundamentals

Vacancy Rates and Rent Growth

CRE Market Fundamentals drive net operating income growth. Despite a modest uptick in construction, fundamentals generally continued to improve across all sectors in 2Q. Prospects remain most favorable for the office, industrial, and retail sectors due to limited new construction and expected demand growth. Multifamily markets bear monitoring given the construction pipeline and recent permitting, though most apartment markets have absorbed deliveries without a material increase in vacancies. While apartment rent growth has slowed, it has remained positive due to favorable demographic-driven demand.

Conclusions

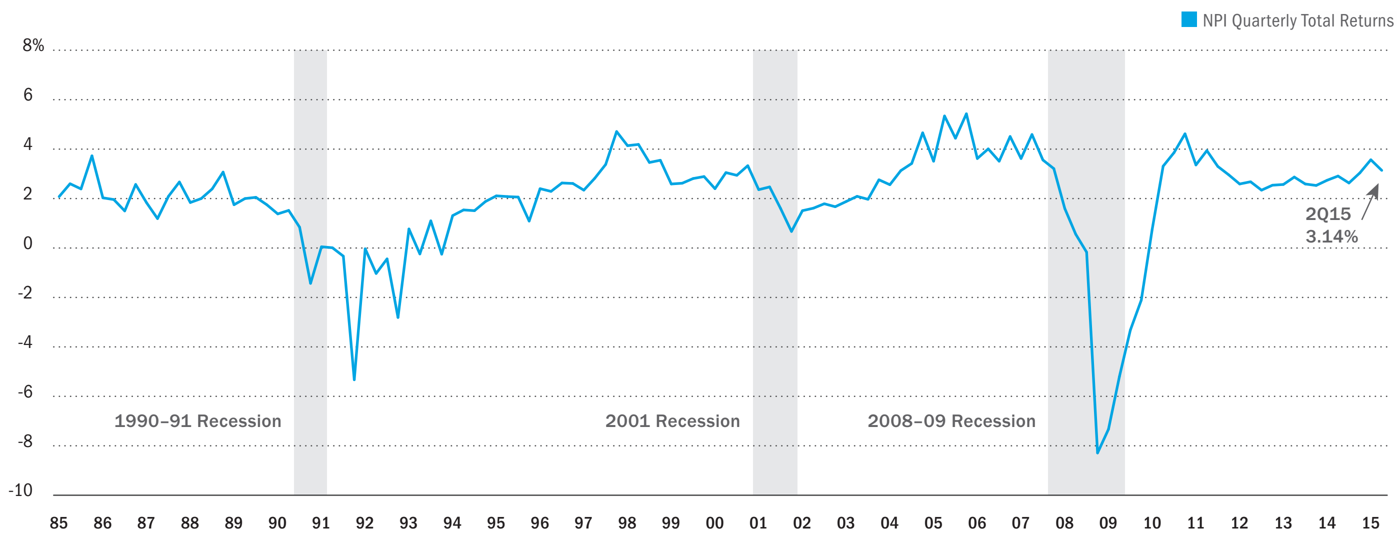
U.S. Gross Domestic Product (GDP) grew by a larger than expected 3.7% in the second quarter of 2015 following a modest 0.6% increase in the first quarter of 2015.

GDP growth at or above 3.0% has proven difficult to achieve thus far during the recovery. The Bureau of Labor Statistics reported stronger job growth in the second quarter when 678,000 jobs were added compared to 586,000 jobs during first quarter 2015. All major employment sectors contributed to growth, including the government sector. The unemployment rate declined to 5.3% at the end of June from 5.5% in March. As the economy pushes toward full employment, meaningful wage growth should ultimately occur. While benchmark revisions to historical GDP data suggest that the recovery has been softer than previously thought, the current economic climate appears supportive of an increase in the federal funds target rate during the second half of 2015.

While domestic forces are supportive of stronger growth, concerns about the global economy remain. Growth in China has slowed, and turbulence in the stock market has undermined consumer confidence. The European Central Bank's "quantitative easing" program has provided a boost to the sluggish European economy, but Greece's financial problems necessitated contentious negotiations and a last minute bailout agreement to avoid default and a forced exit from the European Union. For the U.S. economy, weaker global growth does not substantially affect near term prospects, but a sustained period of weaker global growth combined with continued strength in the value of the dollar would weaken U.S. exports and growth in the manufacturing sector. With GDP growth of 2.75% expected for the second half of 2015 and employment projected to grow by about 3 million jobs for the year, economic conditions would be in-line with the inherent growth potential of the U.S. economy.

With improving domestic economic growth, solid job creation, low interest rates, declining vacancy rates, rising rents, and modest new construction, the prospects for commercial real estate (CRE) in 2015 are favorable. It appears that the NPI is on track for another year of solid performance. The latest consensus forecast survey by the Pension Real Estate Association (PREA) shows a 10.6% total return expectation for the year.[1] But, it is important not to lose sight of the constraints on CRE performance that are also in play. Conditions in today's real estate market also make it ripe for new supply. New construction is expected to be the key differentiator of market performance in the next phase of the CRE cycle. Furthermore, there is likely limited potential for further compression of cap rates, especially for higher-quality properties in more desirable locations. This suggests that CRE performance will be more dependent on NOI growth. With "the return of volatility" continuing as a theme in 2015, real estate investors should examine their taste for risk and prepare for eventualities.

Economic and Real Estate Cycles



Sources: NBER; NCREIF, as of 2Q15; TIAA-CREF

U.S. Real Estate Performance Overview

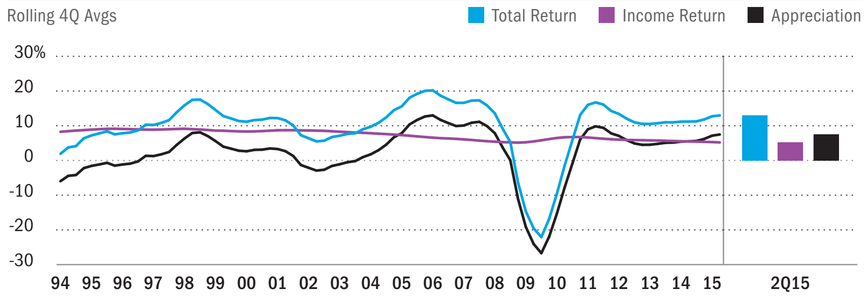
Total Return Remains Compelling
The NCREIF Property Index (NPI) ended 2Q15 with a 13.0% total return, compared with 12.7% in 1Q15. Income and appreciation returns were 5.2% and 7.5%, respectively. The NPI has now posted nineteen consecutive quarters of double-digit four-quarter rolling total returns. While the real estate cycle is mature, cycles do not expire. Instead, negative imbalances related to factors like real estate fundamentals, credit markets, investment markets, and the economy can accumulate and impact investment performance. At this time, accumulating negative imbalances are not evident, but total returns are anticipated to moderate and return to long-term historical averages.

Valuation Cap Rates Inch Lower
Cap rates implied by NPI property valuations averaged 5.42% for the four quarters ending June 2015 vs. 5.49% previously. Real estate investors worry that an uptick in 10-year Treasury yields from an anticipated FOMC rate hike will result in rising cap and discount rates. However, a growing economy coupled with a slow and gradual rise in interest rates would likely sustain the current real estate cycle. Treasury yields have dipped to 2.20% early in 3Q providing an additional cushion for investors. Current cap rate spreads over 10-year Treasuries are in-line with long-term averages and suggest that current property pricing is rational.

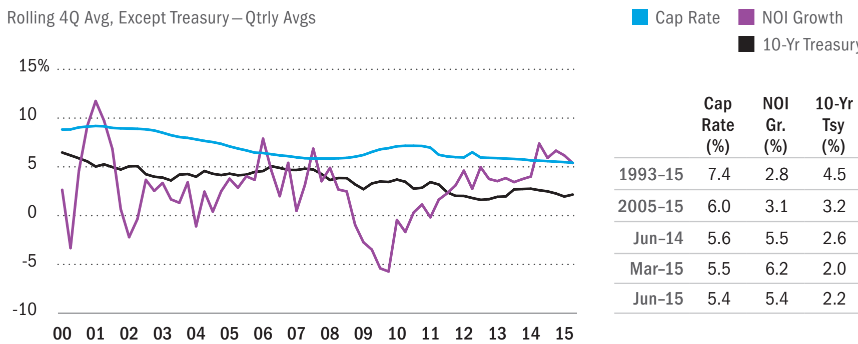
Solid Returns in Virtually All Markets
NPI returns were healthy across the nation, with positive one-year total returns recorded in all NCREIF markets, though just barely in Richmond (0.18%). For the second straight quarter, there were double-digit total returns in 70% of all markets. The West led for the third straight quarter, with average one-year total returns of 14.5%; the South followed with a 13.9% total return. Returns in the Midwest and East were also healthy at 12.5% and 11.0%, respectively. San Francisco, Oakland and Phoenix were once again top-performing major markets. Returns in Washington, DC and Bethesda continued to lag as these markets adjust to weaker federal government leasing and spending.

Transaction Activity Remains Healthy
Commercial property sales totaled $118 billion in 2Q15, compared with $137 billion in 1Q15. The Big Six—Manhattan, LA, San Francisco, Washington, DC, Boston, and Chicago—again accounted for the lion's share of total office volume, but activity in markets like San Jose, Seattle and Atlanta also picked up. LA, Chicago and Dallas were industrial sales leaders for the third straight quarter. New York City and LA were leading apartment investor markets once again. Fast growing major metros in the South and Southwest including Dallas, Atlanta, Houston and Denver also saw continued investor interest.

NCREIF Returns for All Property Types

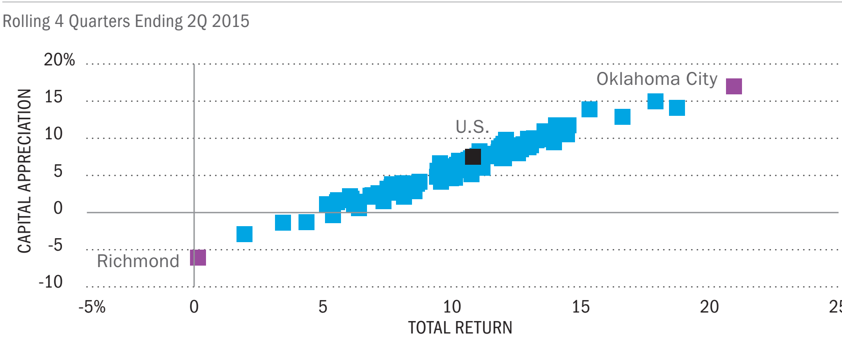


Pricing for All Property Types

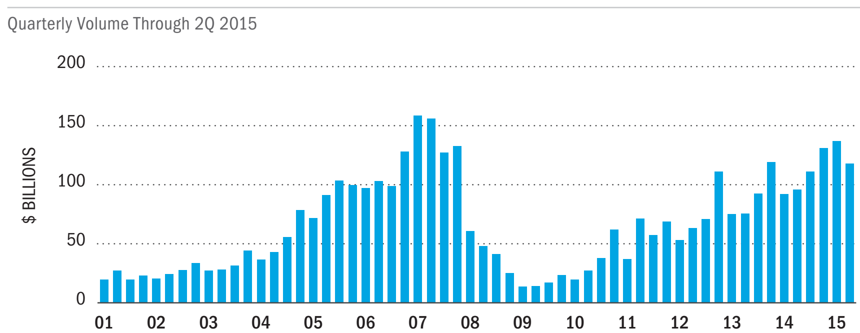


	Cap Rate (%)	NOI Gr. (%)	10-Yr Tsy (%)
1993–15	7.4	2.8	4.5
2005–15	6.0	3.1	3.2
Jun–14	5.6	5.5	2.6
Mar–15	5.5	6.2	2.0
Jun–15	5.4	5.4	2.2

NCREIF MSA Dispersion



RCA Transactions



Sources: CBRE-Econometric Advisors, NCREIF, RCA, Bloomberg and TIAA Research

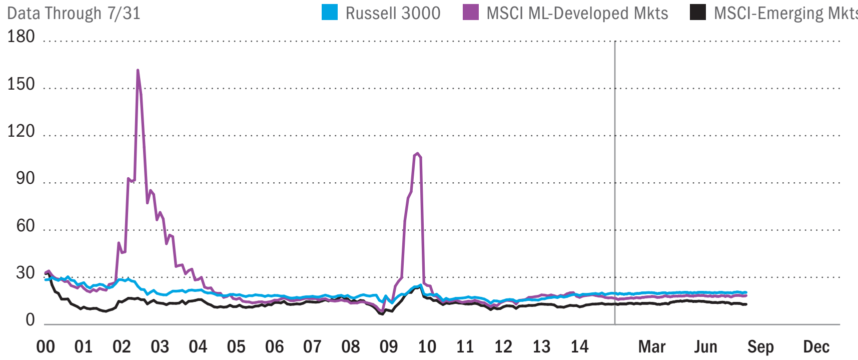
Financial Markets Overview

Equity Markets Remain Turbulent
Compared with a tumultuous 2014, financial markets were relatively calm during the first half of 2015. The Russell 3000 Index was flat in 1Q, but up 1.3% in 2Q. In Europe, Greece's financial problems proved distracting to global markets until a last minute bailout agreement was reached. Emerging stock markets were especially volatile, closing 2Q with a 7% decline and losing another 16% in early 3Q. A 37% drop in the Shanghai Composite Index in early 3Q forced the Chinese government to prop up the market with share purchases and new regulations, but it is unclear whether such measures will prove effective over the long term. In Russia, the ongoing bite of economic sanctions and soft commodity prices and demand continue to crimp the economy. Diverging economic growth trends and central bank policies have the potential to fuel volatility in equities, fixed income, and currencies for the remainder of the year.

Credit Spreads Remain Unsettled
Credit spreads, which tightened in 1Q15 when the 4Q14 flight to safety abated, were mixed in 2Q. However, early in 3Q spreads have again widened as market volatility has increased. High-yield B-quality corporate bond spreads declined from 511 bps at the start of 2Q to 503 bps at quarter end but have widened by 84 bps as of early 3Q. Investment grade BBB bond spreads increased 11 bps in 2Q, rising from 182 to 193 bps, and have increased another 33 bps as of early 3Q. Emerging markets bond spreads had the largest declines in the quarter, dropping 86 bps in 2Q, but giving back 47 bps as of early 3Q. Credit spreads are among the most volatile financial markets indicators, and with expectations of rising interest rates and heightened investor sensitivity, increased volatility in credit spreads should be anticipated in 2015.

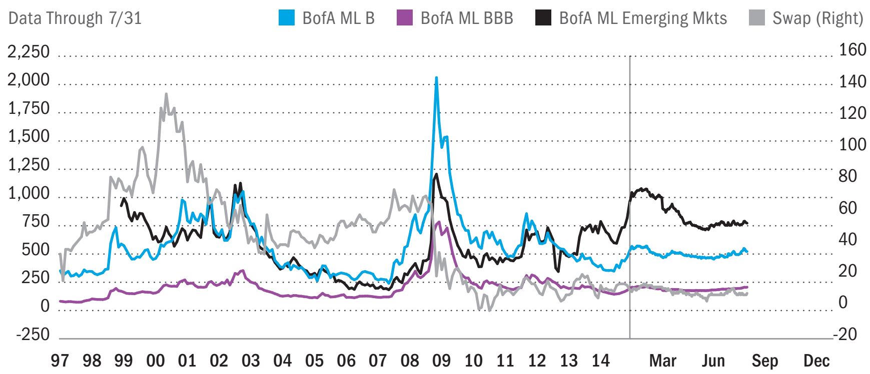
U.S. Enters Post-Tapering Period
Since the end of QE in October 2014, 10-year Treasury yields have remained low, even dropping below 2.0% in early 2015. Yields jumped in 2Q as the market anticipated an FOMC rate hike but have since fallen back to 2.20% in early 3Q. While a rate increase is expected, the FOMC has suggested that additional increases will occur gradually as the impact of higher rates on economic growth is assessed. By comparison, sovereign bond yields in Europe are largely below 2.0% and below 1% in the case of Germany, France and the Netherlands. Comparatively higher U.S. bond yields coupled with the strength of the U.S. dollar provide additional considerations for the FOMC as it contemplates raising the federal funds target rate. Investor sensitivity and reaction to global bond and interest rate movements are another potential source of volatility in 2015.

U.S. vs. Foreign Stocks



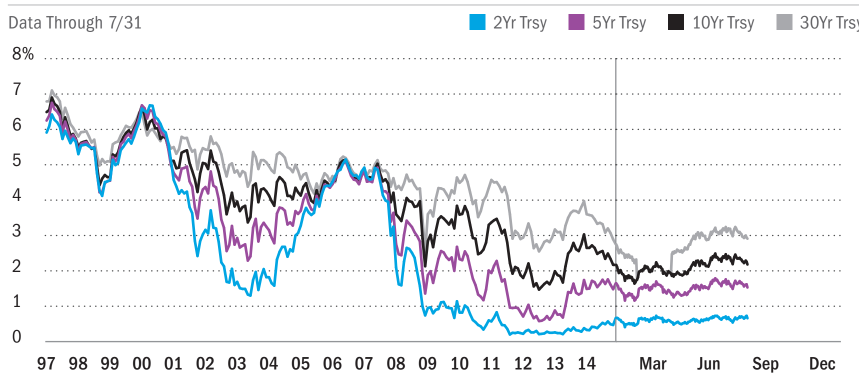
U.S. Russell and foreign Morgan Stanley Capital International (MSCI) stock index P/E ratio

Credit Spreads



BofA Merrill Lynch Global Indices Option-adjusted Spreads (OAS), except 10-yr Swap which is a simple spread over the 10-yr Treasury rate.

U.S. Treasury Rates



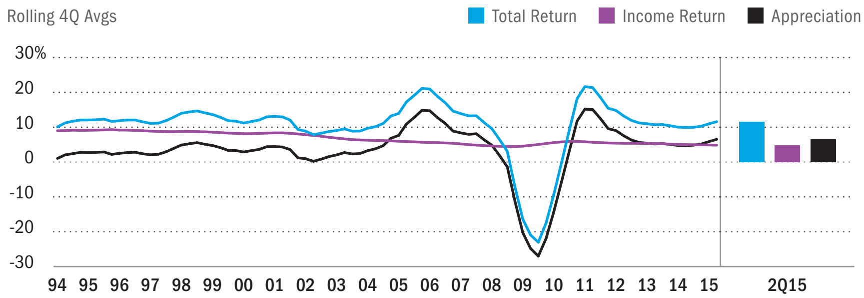
Sources: CBRE-Econometric Advisors, NCREIF, RCA, Bloomberg and TIAA Research

Apartment Market Overview

Apartment Properties Trail Yet Again

Apartment total return was the weakest of the four major property types for the fourth consecutive quarter. The sector nonetheless generated a double-digit total return of 11.6% for the four-quarter period ending June 2015 vs. 11.0% in 1Q15. Income returns contributed 4.8%, while appreciation returns increased to 6.5% from 5.9% previously. The uptick in appreciation is noteworthy given the moderation in rent growth that many markets are experiencing due to new supply.

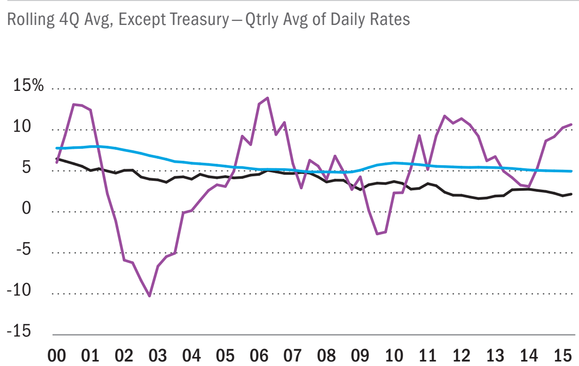
NCREIF Apartment Returns



Apartment Cap Rates Remain Stable

Cap rates implied by NPI apartment valuations averaged 5.0% for the four quarters ending June 2015, matching the prior three periods. Stabilization of cap rates is not surprising given the strong value growth of recent years combined with new supply. According to RCA, transaction cap rates averaged 6.0% nationally, but mid- and high-rise product and properties in the largest apartment markets averaged 5.0%. The best properties in top markets command cap rates of 4.0% or lower, which has spurred investor interest in higher-yielding secondary markets.

Apartment Property Pricing and Treasury

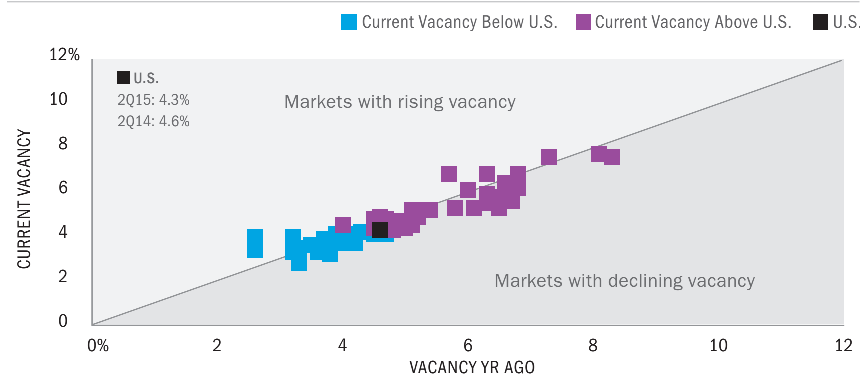


	Cap Rate (%)	NOI Gr. (%)	10-Yr Tsy (%)
1993–15	6.6	4.5	4.5
2005–15	5.3	6.6	3.2
Jun–14	5.1	5.4	2.6
Mar–15	5.0	10.3	2.0
Jun–15	5.0	10.6	2.2

Apartment Markets Maintain Strength

Apartment market conditions remained tight with the national vacancy rate averaging 4.3% in 2Q15 vs. 4.6% in 2Q14. (Year-over-year comparisons are necessary to account for seasonal leasing patterns.) Second quarter is a prime leasing period, so the improvement is indicative of still healthy market fundamentals and demand. Vacancy rates declined in 41 of the 62 markets tracked by CBRE-EA. While additional supply will be delivered in the remainder of 2015 and 2016, markets remain tight, with vacancy rates at or below 5% in 41 markets and at or below 4.5% in 31 markets.

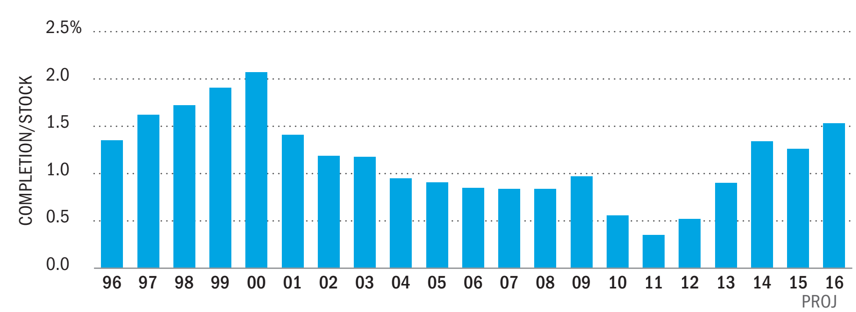
Apartment Vacancy Rate Dispersion



More Supply Coming

New product is being delivered in both high- and low-barrier-to-entry markets; construction nationally is expected to total 173,000 units in 2015 according to CBRE-EA. Construction is expected to peak in 2016 at 212,000 units. Minimal vacancy, demand generated by healthy job growth, and favorable demographic trends should provide a cushion for increased supply in many markets. Nonetheless, moderation in rent growth should be anticipated while new units are being absorbed.

Apartment Construction



Sources: CBRE-Econometric Advisors, NCREIF, RCA, Bloomberg and TIAA Research

Industrial Market Overview

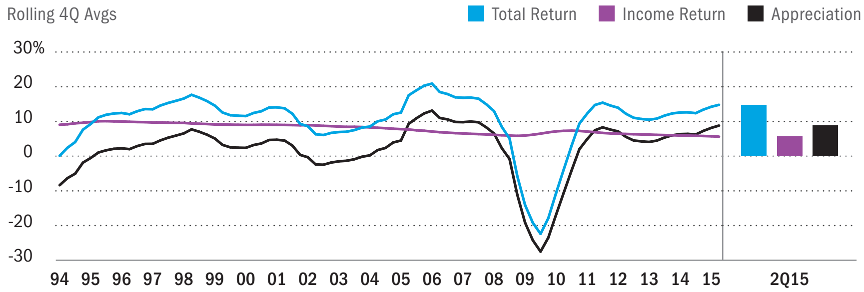
Industrial Sector Retains the Lead
Industrial total return was the highest among the four major property sectors for the third straight quarter. Total returns averaged 14.8% for the four-quarter period ending June 2015, up from 14.2% in the prior quarter. Income returns were steady at 5.6%, but appreciation returns jumped for the third straight quarter to 8.8% from 8.1% previously. The improvement in returns came despite a 1.4% decline in U.S. industrial production during 2Q15, which was due largely to a 3.7% decline in auto production. However, industrial production in June 2015 was 1.5% higher than in June 2014.

Cap Rates Dip While NOI Growth Slows
Valuation cap rates inched down to 5.6% for the four quarters ending June 2015 vs. 5.7% previously. Transaction cap rates reported by RCA averaged 6.9%, down from 7.0% previously, but cap rates for top properties in major industrial markets are 5.5% or less. Industrial NOI grew 3.7% on a four-quarter rolling basis, after growing 5–6% each of the previous four quarters. The continued strength in NOI growth is reflective of healthy market fundamentals and the rollover of leases signed at the 2009 market trough.

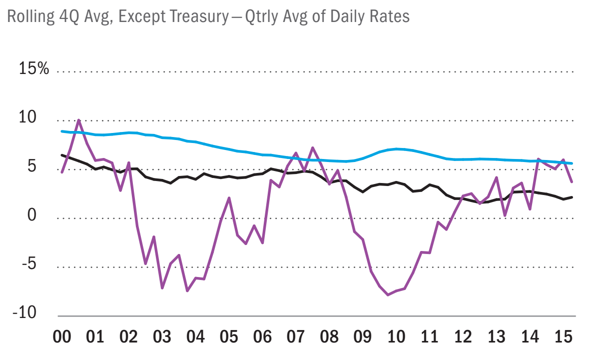
Industrial Availability Tightens Further
The US industrial availability rate fell to 9.8% vs. 10.1% in 1Q15, the eighteenth consecutive quarterly decline, and matching the pre-recession low in 4Q07. Market gains were broad-based, with the availability rate declining in 47 of the 55 markets tracked by CBRE-EA. Major markets with the lowest availability rates were almost exclusively in the West and included LA, Orange County, Seattle, Denver and Riverside. Nationally, absorption totaled 68 msf in 2Q, up from 50 msf in 1Q15; new construction totaled 48 msf in 2Q.

Construction on the Rise
Declining vacancies, modest rent growth, and strong acquisition activity has spurred an increase in construction, with the biggest pipelines in Riverside, Chicago, Dallas/Ft. Worth and Atlanta. A portion consists of build-to-suits prompted by a shortage of large blocks of space that meet tenant-specific requirements and pent-up demand from the lack of construction from 2010 to 2012. Speculative construction is on the rise but is expected to remain well below peak levels of the late-1990s and mid-2000s.

NCREIF Industrial Returns

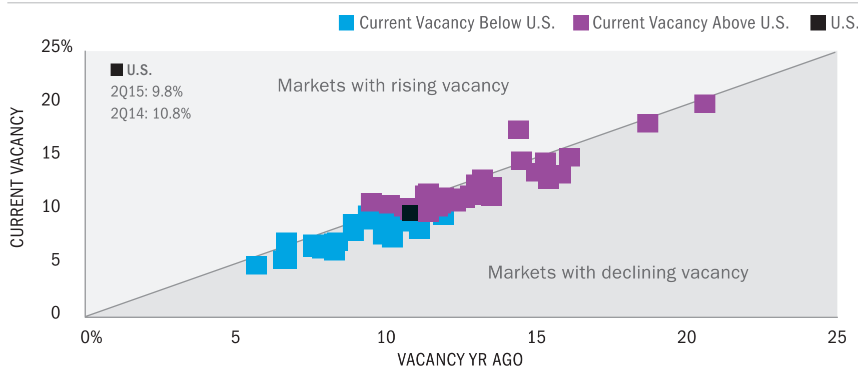


Industrial Property Pricing and Treasury

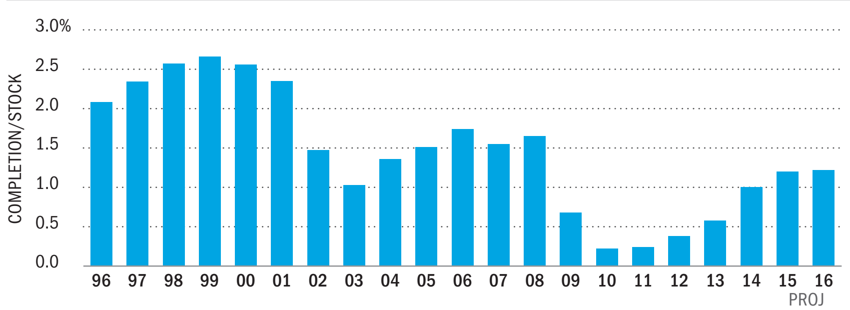


	Cap Rate (%)	NOI Gr. (%)	10-Yr Tsy (%)
1993–15	7.6	1.4	4.5
2005–15	6.2	0.9	3.2
Jun–14	5.9	6.1	2.6
Mar–15	5.7	6.0	2.0
Jun–15	5.6	3.7	2.2

Industrial Vacancy Rate Dispersion



Industrial Construction

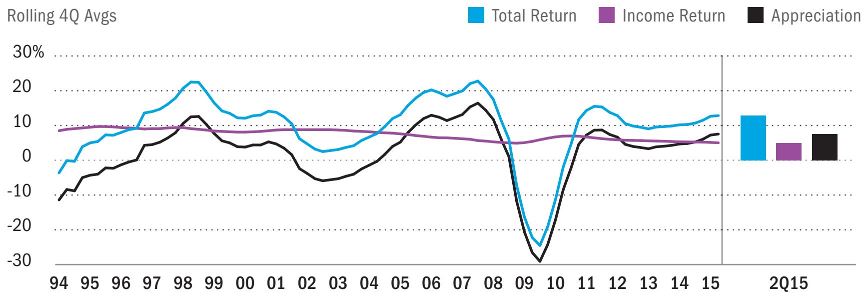


Sources: CBRE-Econometric Advisors, NCREIF, RCA, Bloomberg and TIAA Research

Office Sector Returns Jump

The office sector's total return moved up to 12.9% for the four-quarter period ending June 2015 vs. 12.7% previously. Income returns were steady at 5.0%, but capital returns climbed to 7.5% from 7.3% previously. The office sector has been the slowest of the four major property types to recover, but it is poised for further improvement as absorption has exceeded construction by a 2:1 margin over the past four quarters.

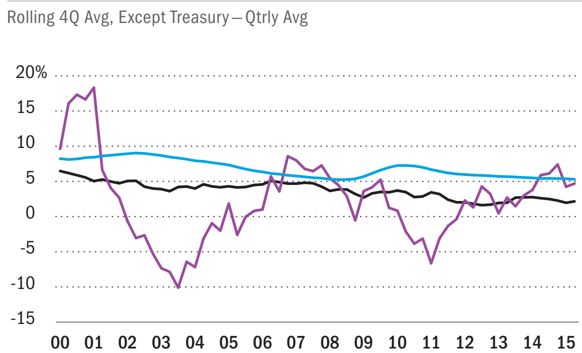
NCREIF Office Returns



Cap Rates Stable While NOI Grows

Office cap rates implied by NPI valuations have inched down over the past two years, but held steady at 5.3% in 2Q15. According to RCA, transaction cap rates in 2Q15 averaged 6.8% nationally, declining 20 basis points vs. 2Q14. An approximate 150 bps cap rate differential remains between major and secondary markets and CBDs and suburbs. Cap rates for top properties in major metro markets are even tighter at 4.0% to 4.5%. NOI growth on a four-quarter rolling basis increased to 4.7% in 2Q15 from 4.2% previously and is likely to remain healthy in the coming quarters given sector fundamentals.

Office Property Pricing and Treasury

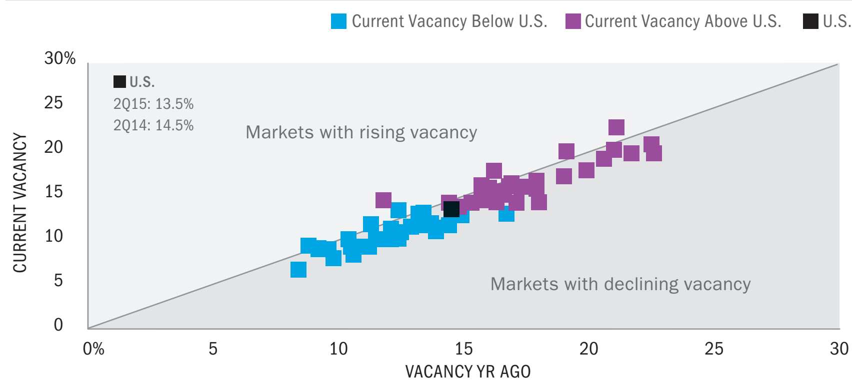


	Cap Rate (%)	NOI Gr. (%)	10-Yr Tsy (%)
1993–15	7.5	2.6	4.5
2005–15	6.0	2.6	3.2
Jun–14	5.4	5.9	2.6
Mar–15	5.4	4.2	2.0
Jun–15	5.3	4.7	2.2

Office Fundamentals Unchanged

The national office vacancy rate dipped to 13.5% in 2Q15 from 13.9% previously and down 100 bps year-over-year. Headwinds prevail—space reductions due to telecommuting and rightsizing by legal firms—but growth in professional and business services, tech, entertainment and media have been sizeable sources of demand in many markets. There was another strong showing at the market level with vacancy rates declining in 53 of the 62 markets tracked by CBRE-EA.

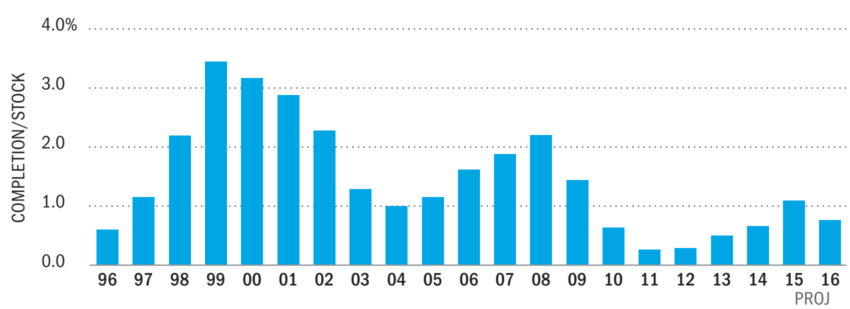
Office Vacancy Rate Dispersion



Office Pipeline Modest but Growing

With its long lead time, office construction is highly cyclical. Market conditions and rents do not yet support new construction in many markets. Exceptions include San Francisco, Houston and Dallas where employment and rent growth have been strong. Functional obsolescence of older buildings will likely drive demand for new construction in the future as technologically-efficient, state-of-the-art space provides operational benefits and lower costs for tenants and investors. While construction is picking up, it is expected to remain modest in 2015 and 2016, especially compared with prior cycles.

Office Construction

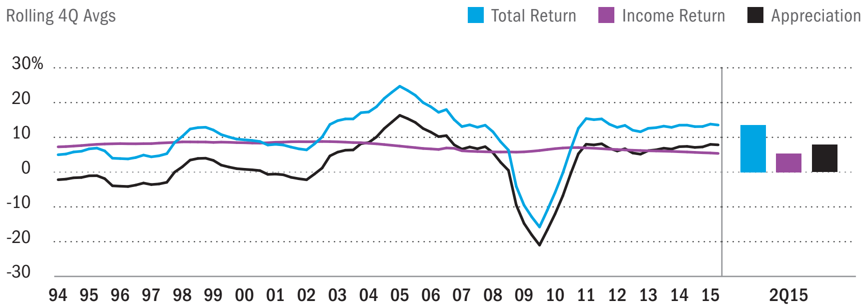


Sources: CBRE-Econometric Advisors, NCREIF, RCA, Bloomberg and TIAA Research

Retail Returns Steady

The retail sector's total return stayed in second place among the four major property sectors for the third straight quarter. Total return averaged 13.6% for the four-quarter period ending June 2015 vs. 13.8% previously. Income returns were largely unchanged from the prior quarter at 5.4%, while capital returns were also steady at 7.9% vs. 8.0% previously.

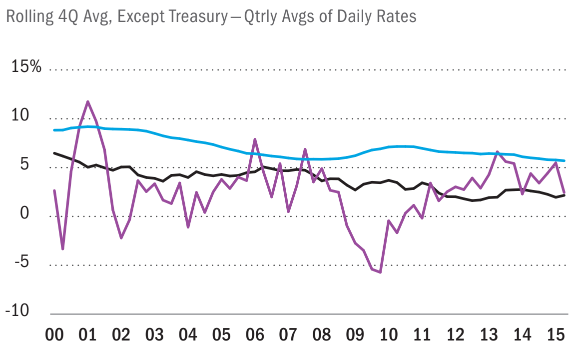
NCREIF Retail Returns



Retail Cap Rates Stabilizing

Retail cap rates, as implied by NPI property valuations, were largely unchanged at 5.7% for the four-quarter period ending June 2015 as compared with 5.8% in the prior two quarters. According to RCA, retail transaction cap rates averaged 6.6% in 2Q15, down 30 bps year-over-year. However, there is significant variation among property sub-types and markets. Super-regional malls and top properties in major metros are in especially strong demand and garner commensurately lower cap rates.

Retail Property Pricing and Treasury



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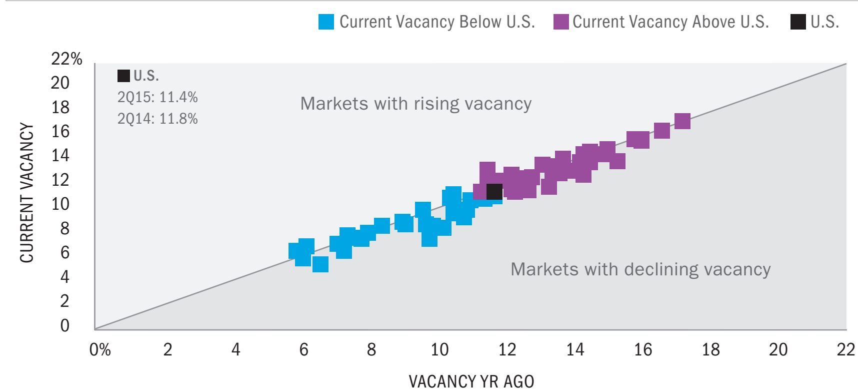
2005–15	6.4	2.4	3.2
Jun–14	6.0	4.4	2.6
Mar–15	5.8	5.5	2.0
Jun–15	5.7	2.4	2.2

Retail Fundamentals Still Soft

Availability rates in neighborhood and community centers inched down to 11.4% in 2Q15 vs. 11.5% in 1Q15. Retail sales excluding motor vehicles and parts increased 1.1% in 2Q and just 0.6% in 1Q. The expected boost to retail sales from lower gas and oil prices has not yet fully materialized as households have chosen to save rather than spend much of the windfall. While vacancy rates in community and neighborhood centers remain elevated, they declined in 41 of the 62 markets tracked by CBRE-EA. Strong job growth in the second half of 2015 is expected to generate meaningful wage growth which will provide a further impetus to spending, and combined with minimal construction, should benefit retail markets in the rest of the year.

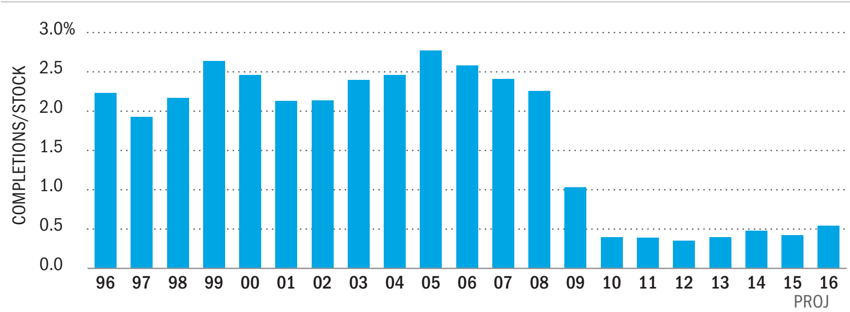
Retail Vacancy Rate Dispersion



Retail Construction at Historic Lows

Neighborhood and community center construction is expected to total just 12.5 msf in 2015. Completions should remain subdued through 2016, but increase modestly in subsequent years. Still, a meaningful increase is not expected until 2018 or 2019. Outlet centers are experiencing the most growth, driven by strong interest in bargain shopping. While not directly competitive with other segments, outlets do compete for consumers' dollars.

Retail Construction



Sources: CBRE-Econometric Advisors, NCREIF, RCA, Bloomberg and TIAA Research

[1] Pension Real Estate Association Consensus Forecast Survey of the NCREIF Property Index, 2nd Quarter 2015.

Real Estate Investment Quarterly Highlights: Second Quarter 2015 is prepared by TIAA-CREF Asset Management and represents the views of TIAA-CREF's Global Real Estate Group as of August 2015. These views may change in response to changing economic and market conditions. Past performance is not indicative of future results. The material is for informational purposes only and should not be regarded as a recommendation or an offer to buy or sell any product or service to which this information may relate. Certain products and services may not be available to all entities or persons.

Data is as of 6/30/2015 unless noted otherwise.

Real estate investing risks include fluctuations in property values, higher expenses or lower income than expected, higher interest rates which affect leveraged investments, and potential environmental problems and liability.

Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.

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