

TIAA-CREF Asset Management

Real Estate Quarterly Highlights

Fourth Quarter 2014



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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 declined to 2.2% during the fourth quarter, and dipped below 2.0% in early 2015 due to market volatility and global growth concerns. Investors are anticipating a rate hike in the latter half of 2015, but any move will be data dependent and the Fed “judges that it can be patient in beginning to normalize monetary policy.” With the recent drop in Treasury yields, cap rate spreads exceed long-term historical averages; this should provide some comfort to real estate investors.

Labor Market

Employment and Unemployment Rate

Employment Growth drives demand for space. Employment grew by 3.1 million jobs in 2014 vs. 2.4 million jobs in 2013. Gains have been broad-based and accelerating across most sectors. Solid additions continue into 2015, with an increase of 257,000 jobs in January and employment totals for November and December 2014 revised upwards. Forecasts are for job growth to increase to around 3.3 million jobs in 2015. This healthy level of employment growth bodes well for real estate demand.

Leading Indicators of U.S. Commercial Real Estate Performance — 4Q2014

Indicators	Position	Stall	Overheat
Interest rates	Historically low making real estate investment attractive	■	■
Investor risk appetite	Spreads are tightening but not to last cycle peak	■	■
Debt for investors	Commercial mortgages available with easing standards	■	■
Debt for construction	Easing but not yet abundant	■	■
Employment growth	Improving to absorb labor force growth	■	■
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 Research

Debt Availability

Construction and Investor Financing

Debt Flows affect the amount of new construction and the volume of transactions for existing properties. Solid total returns, strong capital flows, and expanding debt availability have prompted a still 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 determine net operating income growth prospects. Despite a modest pickup in construction, fundamentals generally continued to improve across all sectors in 4Q. Prospects remain most favorable for the office, industrial, and retail sectors due to limited new construction and expected demand growth. Multifamily markets bear monitoring as an increasing number of new units will likely be delivered in 2015. In most apartment markets, 2014 supply was readily absorbed allowing vacancy rates to remain stable. Rent growth slowed, but has remained positive due to favorable demographic-driven demand.

Conclusions

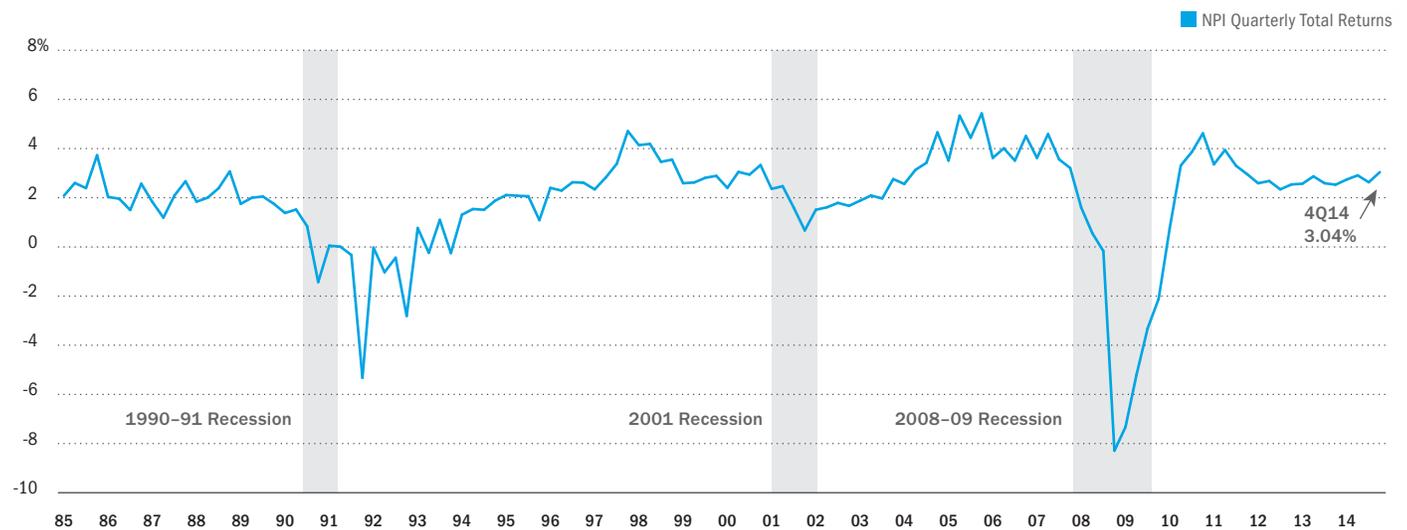
U.S. commercial real estate investment performance closed out 2014 with an 11.8% total return, the fifth straight year of double-digit total returns and an uptick from 11.0% in 2013. For 2015, the stage is set for another strong year albeit with heightened vulnerability to macro-economic and geo-political shocks.

This year's performance will likely benefit from the roughly balanced contributions of NOI growth and cap rate compression that were solidly in force through the end of 2014. In contrast to the early years of the recovery when cap rate compression dominated, property is now generating NOI growth of more than two times its long-term average: 6.7% vs. 2.8%. The power behind NOI growth is a combination of the material strengthening of employment growth, improvement in business confidence, and the very constrained flow of new construction. At the same time, interest rates have been falling and offering some further opportunity for cap rate compression, especially as investors widen their appetite to include markets outside of the top primary metros. With macro-economic prospects expected to strengthen further in 2015 and little change in the anemic inflow of new space, these forces should continue to generate attractive property investment returns. Forecasters' expectations for NCREIF total return are conservative, calling for a reversion to a more trend-like 8% to 9% performance. We share this conservative expectation, but more for 2016 than 2015 where we see some further upside.

Strong investment performance has been pulling abundant capital into U.S. property with sales volume up 17% in 2014 vs. the prior year. Despite the strong flow, cap rate spreads vs. the ten-year Treasury are holding well above their long-term average of roughly 300 bps. Cap rates on transactions in the NCREIF portfolio averaged 6.10% in the fourth quarter, offering a spread of 383 bps. As always, individual transactions are pricing in a wide range around the average, reflecting property quality and location.

Our eight leading indicators of U.S. commercial real estate performance affirm expectations for solid fundamental performance and modestly rising prices in 2015. The eight include an array of macro-economic factors that propel demand for space combined with measures of space market balance. These indicators include employment growth and the unemployment rate, showing that there is still enough labor market slack to accommodate the intensified pace of job growth. In the space market, vacancy rates across all property types are near or approaching long-term averages and rent growth is becoming increasingly pervasive across geographies. Interest rates remain historically low even with the unanimous expectation that the Fed will tighten a bit around mid-year. The ongoing low rate environment continues to stimulate the real economy with no sign of inflation.

Economic and Real Estate Cycles



Conclusions (continued)

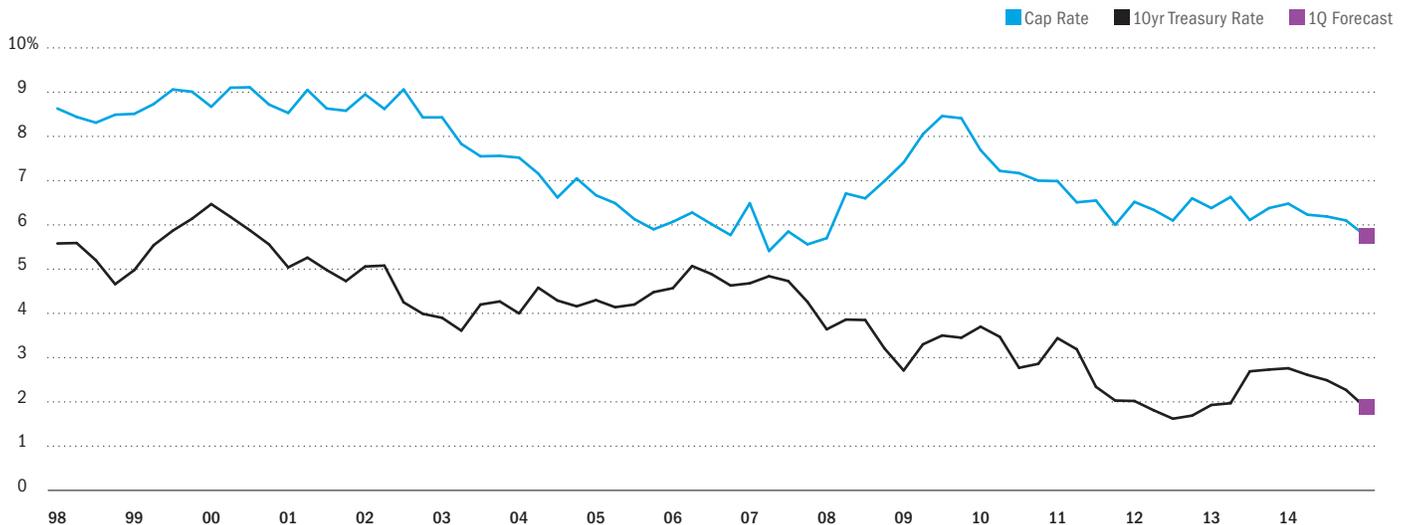
Interest rates are also a factor affecting the financial performance of property. Ongoing low interest rates are a positive because they establish a low hurdle for returns which attracts capital into the sector that generates capital gains from cap rate compression. Commercial mortgage debt availability is another financial factor that is contributing positively to performance by offering readily available and accretive leverage to facilitate liquidity. Debt availability for construction, on the other hand, is currently a positive because it is not abundant. In the current environment, construction lending continues to be constrained accounting in part for the generally anemic pace of construction. The last factor in our heat map is investor risk appetite which we track using daily public market spreads on high yield corporate bonds as a proxy. Our modelling identified this indicator as a powerful leading influence on cap rate spreads. During the second half of 2014 and through January, high yield bond spreads widened indicating that investors were becoming more cautious. This caution should keep a floor under property cap rate spreads as well in the quarters ahead.

Our cap rate spread model uses the heat map factors to assess the potential for shifts in commercial real estate pricing going forward. The two most important factors currently are the decline

in the 10-year Treasury and widening in high yield bond spreads. Their effects are largely offsetting with our model projecting very slight decline in cap rates in the quarters ahead. The chart below shows the 10-year Treasury yield in black and the NCREIF transactions cap rate in blue.

Heightened investor caution despite the solid prospects for the U.S. economy and U.S. commercial real estate is an obvious response to the uptick in geo-political and financial market volatility during the second half of 2014. That volatility fed safe haven capital flight into U.S. Treasuries pushing the 10-year yield below the 2% mark and delaying expectations for monetary policy tightening. In addition, appetite for safety remixed bond purchases and real estate purchases toward higher quality. Volatility itself is not a threat to the solid U.S. commercial real estate performance expected for 2015. It is rather a catalyst that could ignite disturbances in real economic growth or financial market liquidity that would affect real estate later. The return of volatility is therefore a signal for real estate investors to examine their taste for risk and prepare for eventualities.

NCREIF Transaction Cap Rates & 10-Year U.S. Treasury Yields



Sources: Quarterly average Treasury, Federal Reserve. Quarterly transaction cap rate, NCREIF (4Q 2014).

U.S. Real Estate Performance Overview

Total Return Remains Strong

The NCREIF Property Index (NPI) ended 2014 with an 11.8% total return, compared with 11.0% at year-end 2013. Income and appreciation returns were 5.4% and 6.2%, respectively. The NPI has now posted seventeen consecutive quarters of double-digit four-quarter rolling total returns. While there is recognition that the real estate cycle is maturing, cycles do not expire. Instead, negative imbalances can accumulate and impact investment performance. At this time, accumulating negative imbalances are not expected to derail property performance, but total return may moderate in the near term.

Valuation Cap Rates Lowering

Cap rates implied by NPI property valuations averaged 5.53% for the four quarters ending December 2014 vs. 5.59% previously. While investors worry about rising interest rates, they remain low and may remain so over the near term. A “lower-rates-for-longer” environment benefits real estate by prolonging the current phase of the real estate cycle. Cap rate spreads over 10-year Treasuries remain above long-term historical averages. As investor appetite for real estate intensifies, cap rate spreads could tighten below their long-term average.

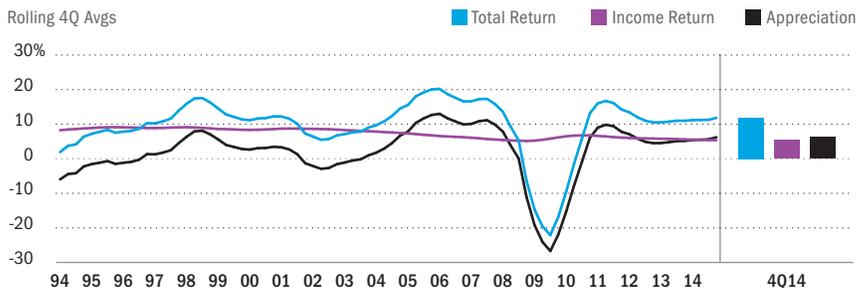
Solid Returns in Virtually All Markets

NPI returns were healthy across the nation, with positive one-year total returns recorded in all NCREIF markets except Tucson, AZ; 67 of 101 markets recorded double-digit total returns. The West led for the first time in six quarters, with average one-year total returns of 13.6%, followed by the South, the prior leader, at 13.2%. For the second straight quarter, San Francisco and San Jose were the top-performing major markets; Miami, Oakland and Houston followed. Returns in Washington, DC and Bethesda continued to lag due to ongoing weakness from federal government spending cuts.

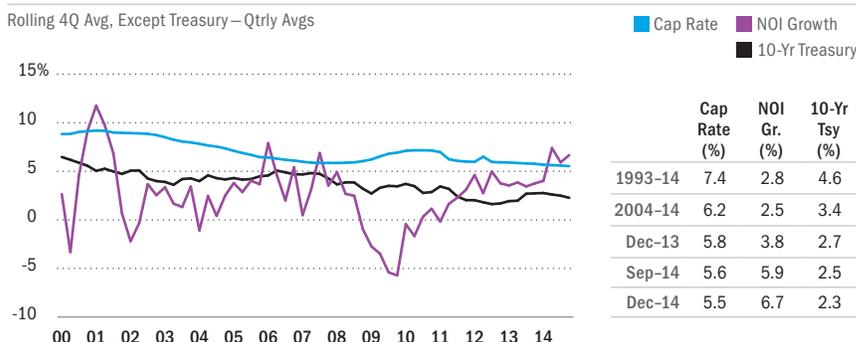
Transaction Activity Remains Strong

Commercial property sales (excluding hotels and land) totaled \$126 billion in 4Q, compared with \$111 billion in 3Q. For 2014, sales totaled \$424 billion, up 17% from 2013. The Big Six — Manhattan, LA, San Francisco, Washington, DC, Boston, and Chicago — accounted for 60% of total office volume. LA, Chicago, and Dallas were industrial sales leaders. Manhattan and LA were leading apartment investor markets, with major metros in the South, Southeast, and West, including Dallas, Atlanta, Houston, Seattle, Denver, and Phoenix, seeing healthy sales activity.

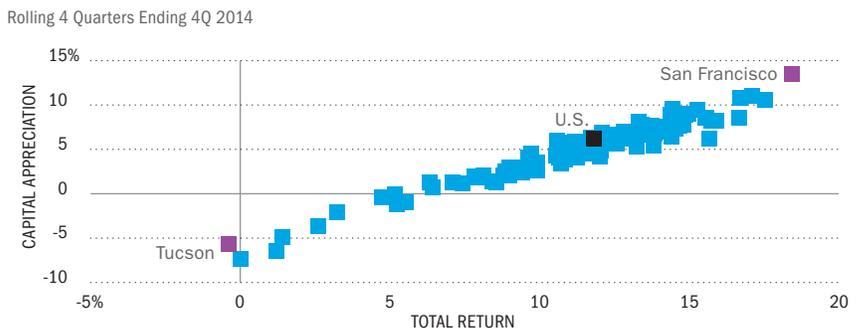
NCREIF Returns for All Property Types



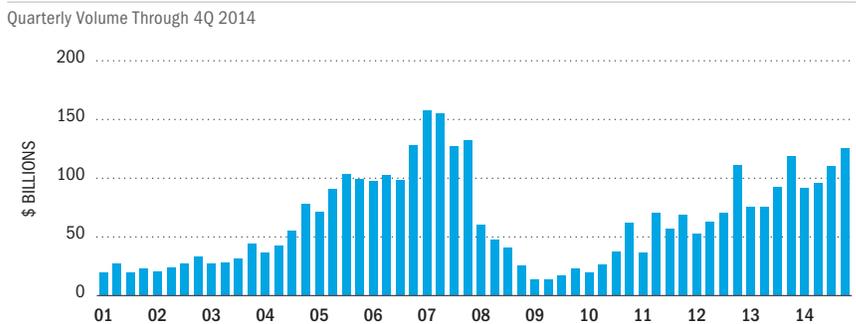
Pricing for All Property Types



NCREIF MSA Dispersion



RCA Transactions



Equity Markets Remain Volatile

Financial markets closed out 2014 with yet more turmoil after having weathered a number of headwinds throughout the year. The Russell 3000 Index gained 5% in 4Q, even after a flat December caused by concerns about slowing global growth and plunging oil prices. Developed markets outside the U.S. experienced similar volatility, ending the quarter with a small decrease. In Europe, the ECB announced plans for its own quantitative easing program which spurred hopes of an economic recovery, but contentious negotiations with Greece about its outstanding debt burden are indicative of the underlying hurdles. Emerging markets like Brazil were hit hard by the decline in oil and commodity prices. Russia's deteriorating economy is a concern to many, especially with additional sanctions and continuing tension in Ukraine. Diverging central bank policies and political risk in Europe are likely to sustain volatility in equities, fixed income, and currencies in 2015.

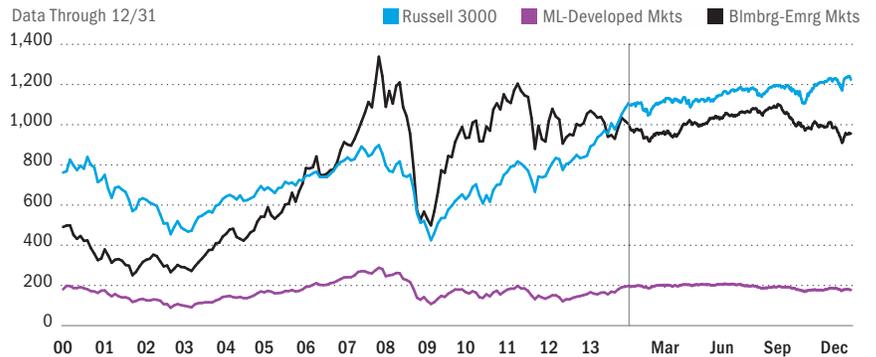
Credit Spreads Still Widening

Credit spreads widened in 4Q as a flight to safety was caused by market volatility. The Swiss National Bank's announcement that it would no longer cap the value of the franc against the euro also created additional global capital markets turmoil. High-yield B-quality corporate spreads jumped from 449 bps at the start of 4Q to 533 bps at the end of the quarter and have widened further in early 2015. Similarly, investment grade BBB's widened from 161 bps to 198 bps at quarter's end and have risen to 212 bps as of early 1Q15. Emerging markets followed a similar trend with spreads widening from 746 bps at the start of 4Q to 1,076 bps in early 2015. Investor appetite for emerging market paper remains tepid despite wider spreads.

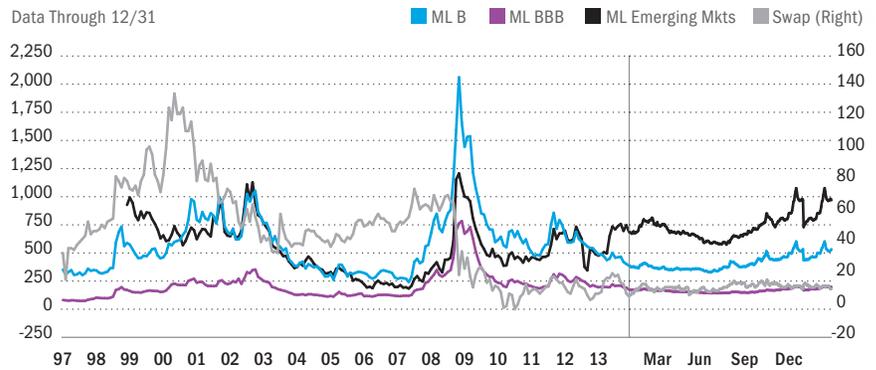
U.S. Enters Post-Tapering Period

Since the formal end of the FOMC's quantitative easing in October, ten-year Treasury yields have remained low, even dropping below 2.0% in early 2015, suggesting that strong external demand has more than offset the former Fed purchases. At its late January meeting, the FOMC reaffirmed its commitment to keeping interest rates in the 0 to 0.25 percent range for a considerable time. However, recent economic and employment data, including a slight uptick in wages in January, suggest the Federal Reserve could begin raising interest rates by mid-year as previously anticipated. Any rate increases are likely to be modest and gradual. The Treasury curve may flatten if short-term yields rise faster than long-term yields, which will be tempered by safe haven capital inflows, low inflation and weak global growth. Investors are advised to watch capital flows carefully.

U.S. vs. Foreign Stocks

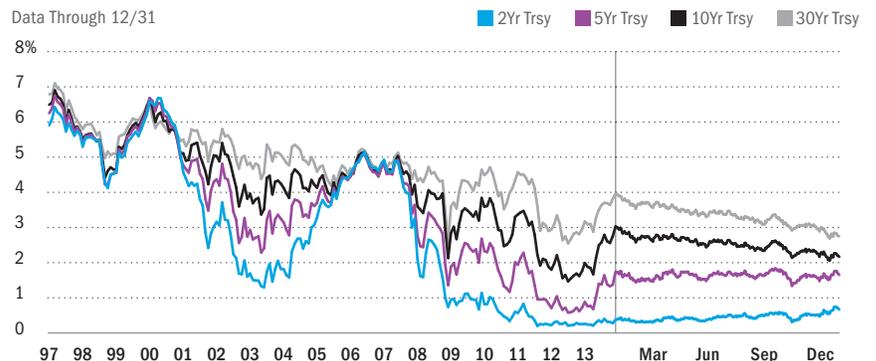


Credit Spreads



* Merrill Lynch Global Indices Option-Adjusted Spreads, except 10-yr Swap which is a simple spread over the 10-yr Treasury rate.

U.S. Treasury Rates

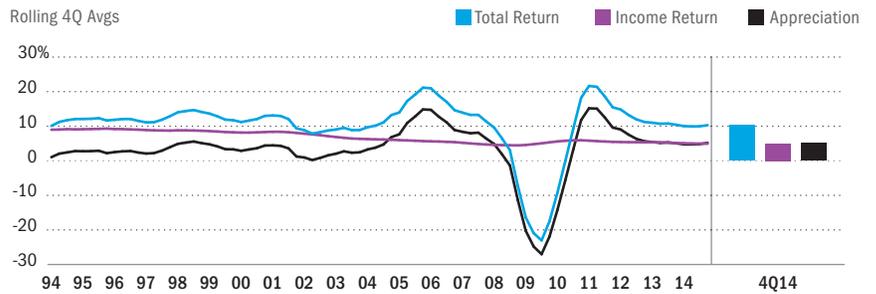


Apartment Market Overview

Apartment Properties Trail Again

Apartment total return placed fourth among the four major property types for the third consecutive quarter. Total return nonetheless remained in the double-digits at 10.3% for the four-quarter period ending December 2014 vs. 10.0% as of third quarter. Income and appreciation returns contributed 4.9% and 5.2%, respectively. The uptick in returns is noteworthy given the moderation in rent growth resulting from new supply in many markets.

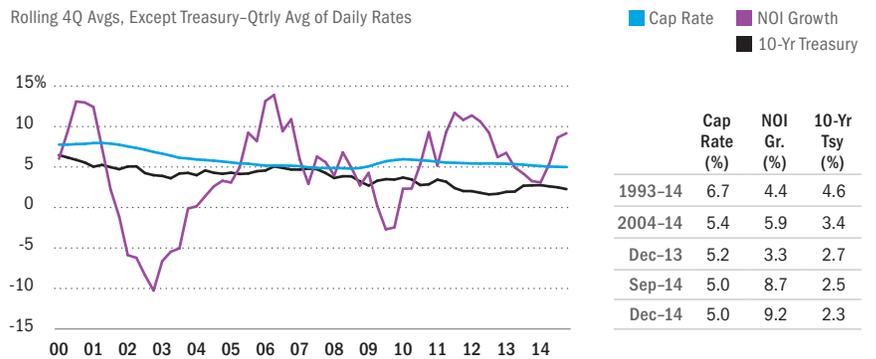
NCREIF Apartment Returns



Apartment Cap Rates Remain Stable

Cap rates implied by NPI apartment valuations averaged 5.0% for the four quarters ending December 2014, same as in the prior two quarters. Stabilization of cap rates is not surprising given the strong value growth of recent years combined with new supply. Transaction cap rates averaged 6% nationally according to RCA, but 5% for mid- and high-rise product and properties in the largest apartment markets. The best properties in top markets command cap rates of 3.5% or lower, which has spurred investor interest in higher-yielding secondary markets.

Apartment Property Pricing and Treasury



Apartment Markets Remain Strong

Apartment market conditions remained tight with the national vacancy rate averaging 4.4% in 4Q14 vs. 4.9% in 4Q13. (Year-over-year comparisons are necessary to account for seasonal leasing patterns.) The fourth quarter is not a prime leasing period, so the improvement is indicative of still healthy market fundamentals. Vacancy rates declined in 56 of the 62 markets tracked by CBRE-EA. While additional supply will be delivered in 2015, markets are tight, with vacancy at or below 5% in 40 markets and 4% or less in 26 metros.

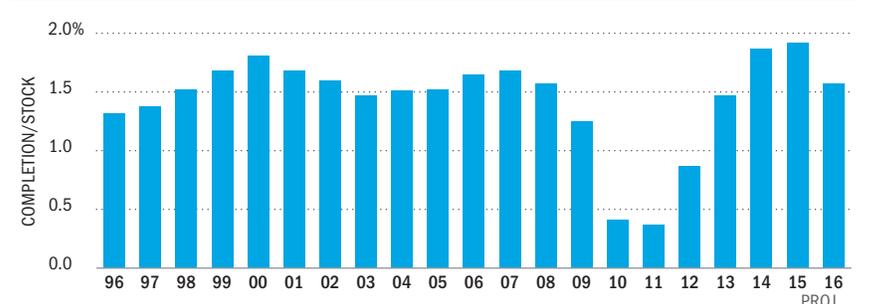
Apartment Vacancy Rate Dispersion



More Supply Coming

New product is being delivered in both high- and low-barrier-to-entry markets; construction nationally is expected to total almost 300,000 units in 2015. While construction is expected to peak in 2015, only a modest decline is expected in 2016 and beyond. Minimal vacancy, demand generated by healthy job growth, and favorable demographic trends should provide a cushion for new supply in many markets. Nonetheless, moderation in rent growth should be anticipated while new supply is being absorbed.

Apartment Construction



Industrial Market Overview

Industrial Sector Takes the Lead

Industrial total return moved into first place among the four major property sectors after five consecutive second place finishes. Total returns averaged 13.4% for the four-quarter period ending December 2014, up from 12.4% in the prior quarter. Income returns were steady at 5.8%, but appreciation returns jumped to 7.3% from 6.2% previously. Market drivers include industrial production which grew at a 5.6% annual rate in 4Q14.

Cap Rates Steady While NOI Grows Strongly

Valuation cap rates remained steady at 5.8% for the four quarters ending December 2014, having inched down from 6.0% at the start of 2013. Transaction cap rates reported by RCA averaged 7.0%, but cap rates for top properties in major industrial markets averaged 5.2% in 4Q. NOI grew 5.0% on a four-quarter rolling basis, following a 5.5% gain previously. The continued strength is reflective of improving market fundamentals and the rollover of leases signed at the 2009 market trough.

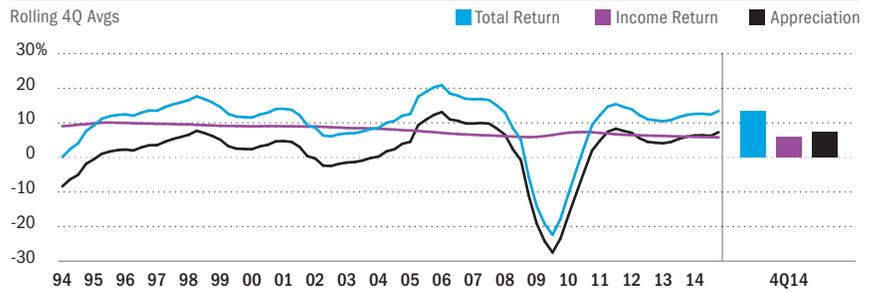
Industrial Availability Rate Drops Yet Again

The U.S. industrial availability rate fell to 10.3% vs. 10.6% in 3Q14, the eighteenth consecutive quarterly decline. Year-over-year, the decline was 90 bps. Market gains were broad-based, with the availability rate declining in 52 of the 59 markets tracked by CBRE-EA. Major markets with the lowest availability rates were concentrated in the West and included LA, Orange County, Seattle, Denver and Riverside. Nationally, absorption totaled 225 million sf in 2014. By comparison, absorption peaked at 288 million sf in 2005.

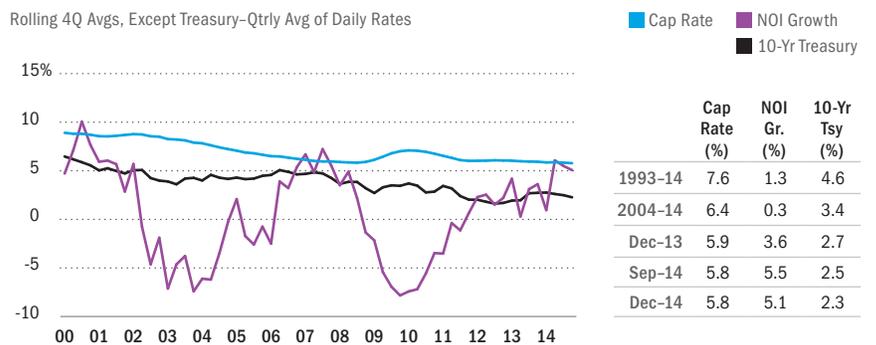
Rising Construction

Declining vacancies, modest rent growth, and strong acquisition activity has spurred a pickup in construction, with the biggest pipelines in Riverside, Chicago, Dallas/Ft. Worth, and Atlanta. A portion consists of build-to-suits caused 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, although aggregate completions are expected to remain well below peak levels of the late-1990s and 2005 to 2008.

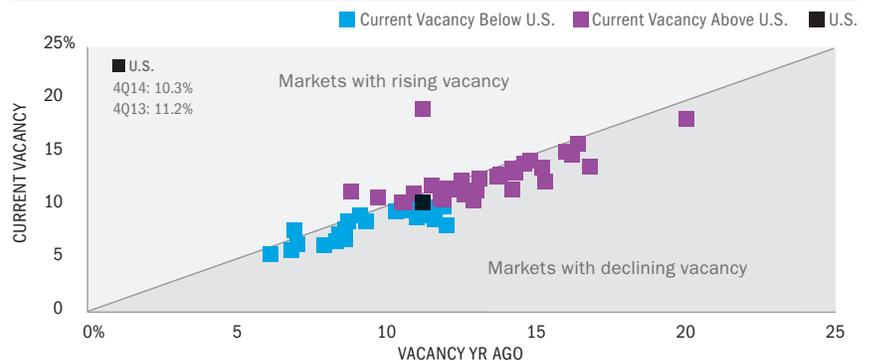
NCREIF Industrial Returns



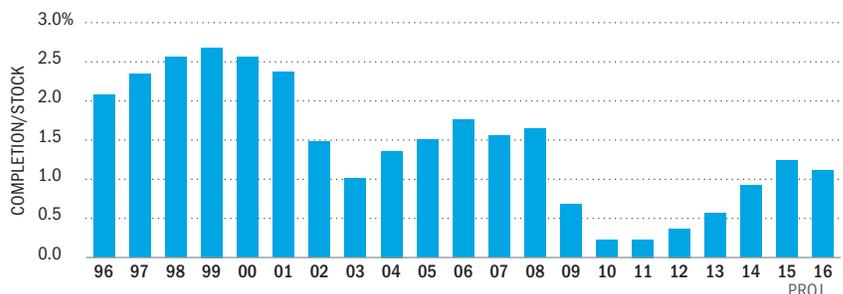
Industrial Property Pricing and Treasury



Industrial Vacancy Rate Dispersion



Industrial Construction



Office Market Overview

Office Sector Maintains Third Position

The office sector's total return retained third position for the fourth consecutive quarter. Total returns were 11.5% for the four-quarter period ending December 2014 vs. 10.7% previously. Income returns were steady at 5.2%, but capital returns jumped to 6.1% from 5.2% previously. Office has been the slowest of the four major property types to recover, but it appears to be gaining steam as four-quarter rolling total returns have now increased for seven consecutive quarters.

Cap Rates Drop and NOI Surges

Office cap rates implied by NPI valuations have inched down over the past two years, but held steady at 5.4% in 4Q. Transaction cap rates averaged just below 7.0% nationally according to RCA, but there has been considerable variation between major and secondary markets and the CBD and suburbs. Cap rates for top properties in major metro markets declined 50 bps in 2014, averaging 4%. With NOI growth of 7.4% over the last four quarters vs. 6.1% previously, market momentum is accelerating.

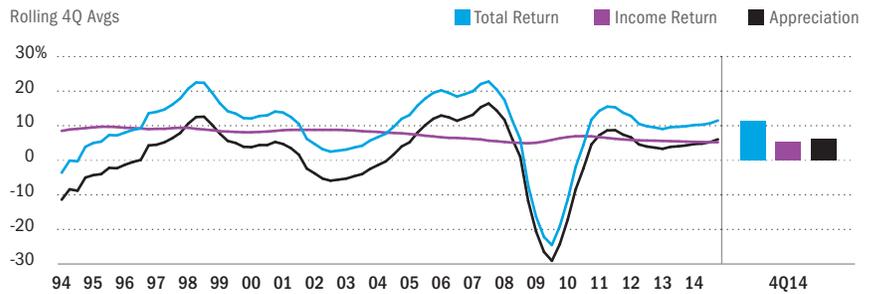
Office Fundamentals Improve Further

The national office vacancy rate dipped to 13.9% in 4Q14 vs. 14.1% in 3Q14. Year-over-year, the decline was 100 bps. Headwinds prevail—including open floor layouts which reduce average space per employee—but growth in professional and business services, tech, entertainment, and media have been a sizeable source of demand in many markets. There was another strong showing at the market level with vacancy rates declining in 54 of the 63 markets tracked by CBRE-EA.

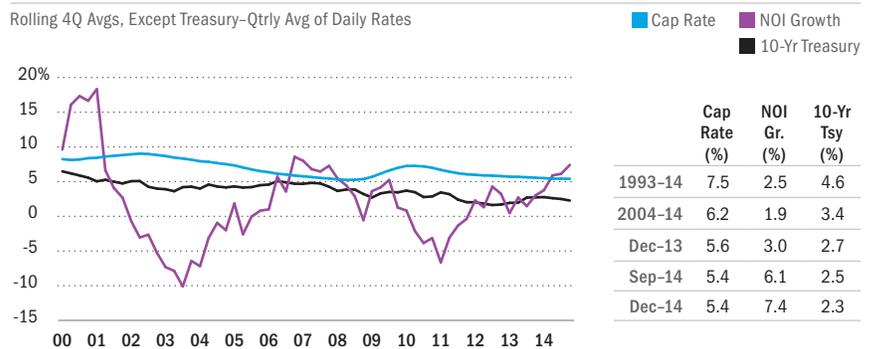
Office Pipeline Still Modest but Growing

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 growth and rent growth have been strong. Functional obsolescence of older buildings will likely drive demand for new construction in the future as highly technical, state-of-the-art space provides operational efficiencies and lower costs for tenants and investors. Nonetheless, only modest construction is expected in 2015 and 2016.

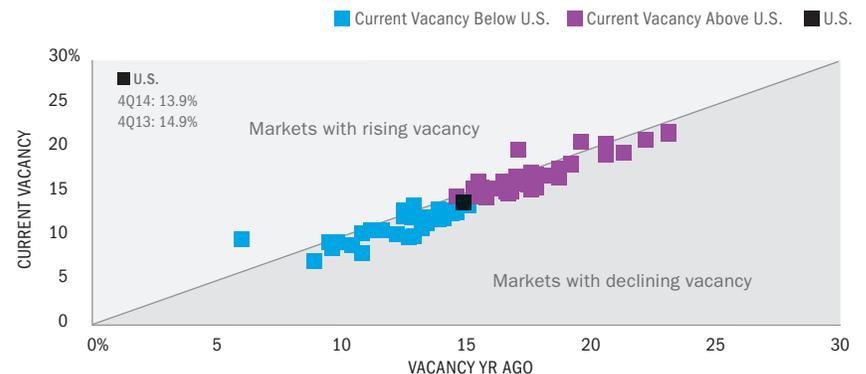
NCREIF Office Returns



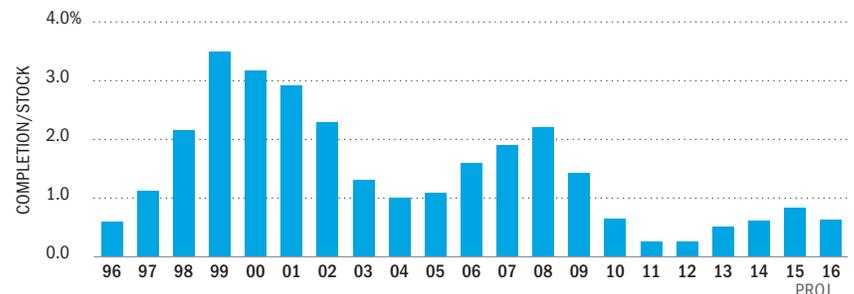
Office Property Pricing and Treasury



Office Vacancy Rate Dispersion



Office Construction



Retail Market Overview

Retail Falls to Second Place

After generating the highest total return of the four major property types for nine consecutive quarters, the retail sector slipped to second place in 4Q. Total return averaged 13.1% for the second straight quarter. Income and capital returns were largely unchanged from the prior quarter at 5.6% and 7.2%, respectively.

Retail Cap Rates Bottoming

Retail cap rates, as implied by NPI property valuations, were largely unchanged at 5.8% for the four-quarter period ending December 2014 vs. 5.9% previously. According to RCA, retail transaction cap rates averaged 6.7% in 4Q, down 30 bps year-over-year. However, there is significant variation among property sub-types and markets. As with other property types, top properties in major metros are in especially strong demand with cap rates averaging 4.4% in 4Q.

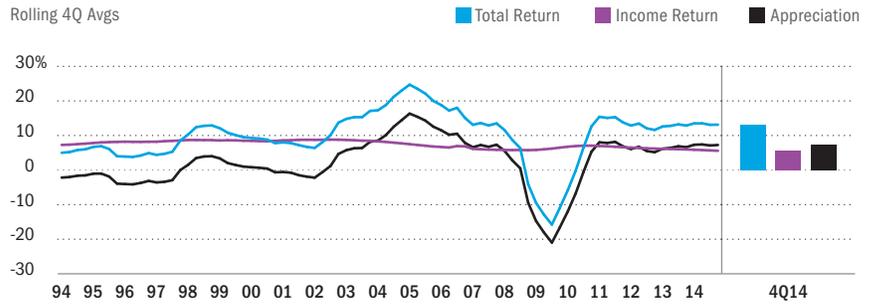
Improving Retail Fundamentals Still Soft

Availability rates in neighborhood and community centers inched down to 11.4% in 4Q14 vs. 11.5% in 3Q14. Retail sales excluding motor vehicles and parts increased just 0.1% from 3Q14, but rose 3.0% compared with 4Q13. Retail markets have benefitted from the modest growth in retail sales throughout 2014. Mall and lifestyle fundamentals are strong and strip center conditions are improving. Availability rates remained elevated, but declined in 51 of the 63 markets tracked by CBRE-EA. The increase in consumer spending in 4Q14 coupled with stronger employment growth and the sharp decline in oil and gasoline prices should provide a boost to spending in the coming months.

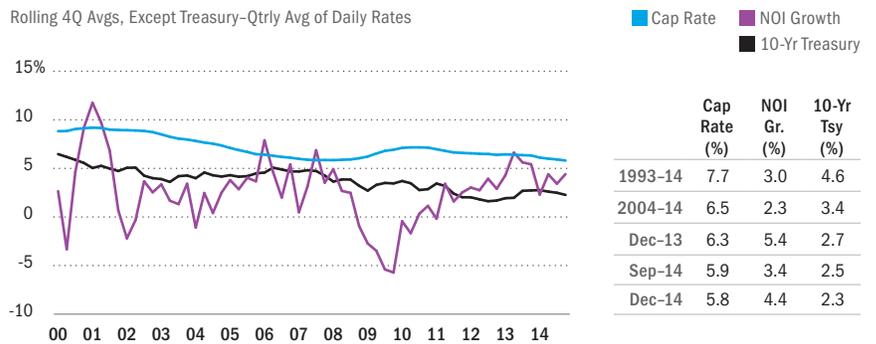
Retail Construction Historically Low

Neighborhood and community center construction was projected to total just 13 million sf in 2014. While completions are expected to remain subdued through 2015, subsequent years should slowly gain momentum. Still, a meaningful increase is not expected until 2016 to 2017. Outlet centers experienced the most growth, driven by strong interest in bargain shopping. While not directly competitive with other segments, outlets do compete for consumers' dollars. Nonetheless, modest construction coupled with labor market gains should benefit retail market fundamentals over the short and longer terms.

NCREIF Retail Returns



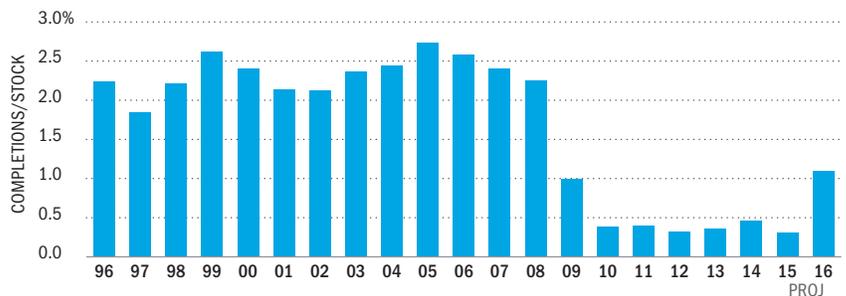
Retail Property Pricing and Treasury



Retail Vacancy Rate Dispersion



Retail Construction



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Data is as of 12/31/2014 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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