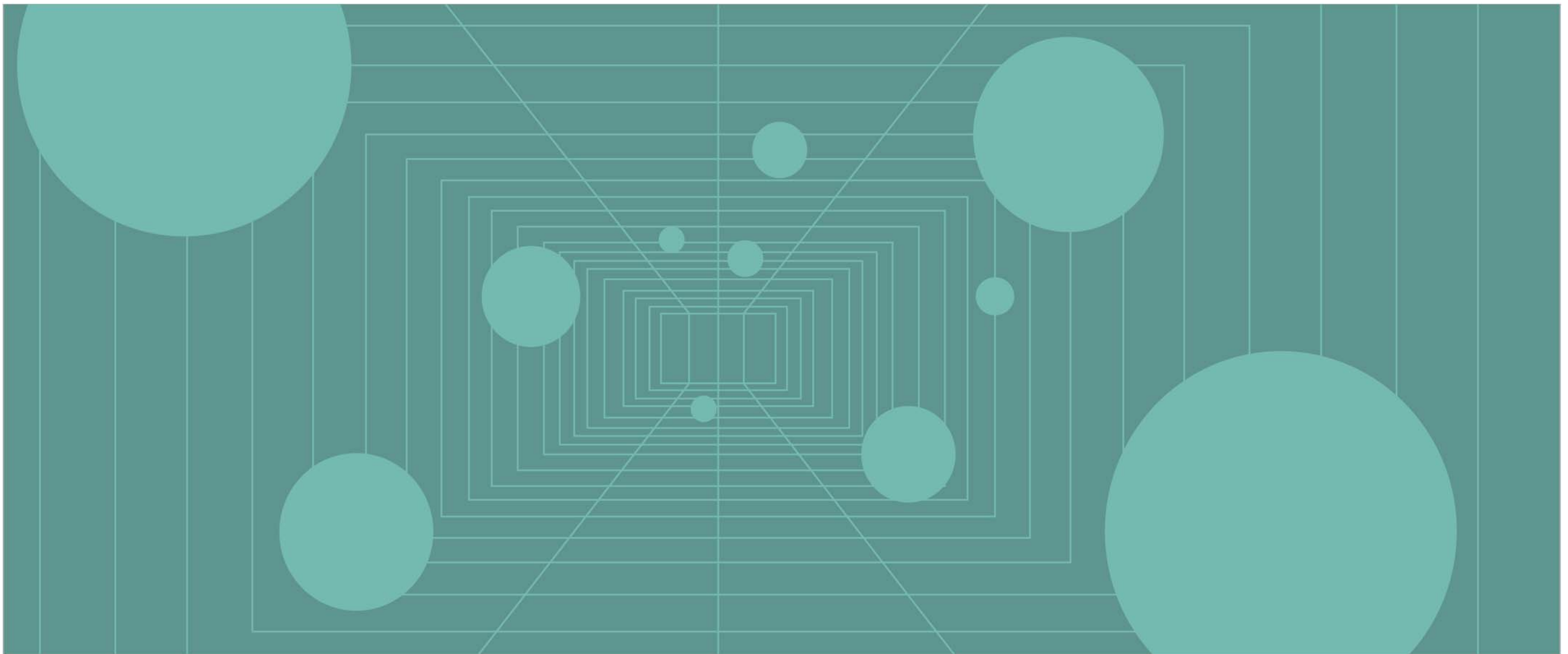
PRIVATE PROPERTY TRENDS

ANALYSIS OF OPERATING METRICS FOR US REAL ESTATE PROPERTIES



C|A CAMBRIDGE ASSOCIATES

Table of Contents

Market and Fundraising Overview 2

Commitment Observations 4

Occupancy Rate Trends 10

Capitalization Rate Trends 11

NOI Growth Trends 14

Capital Structure Trends 15

Notes on Data 16

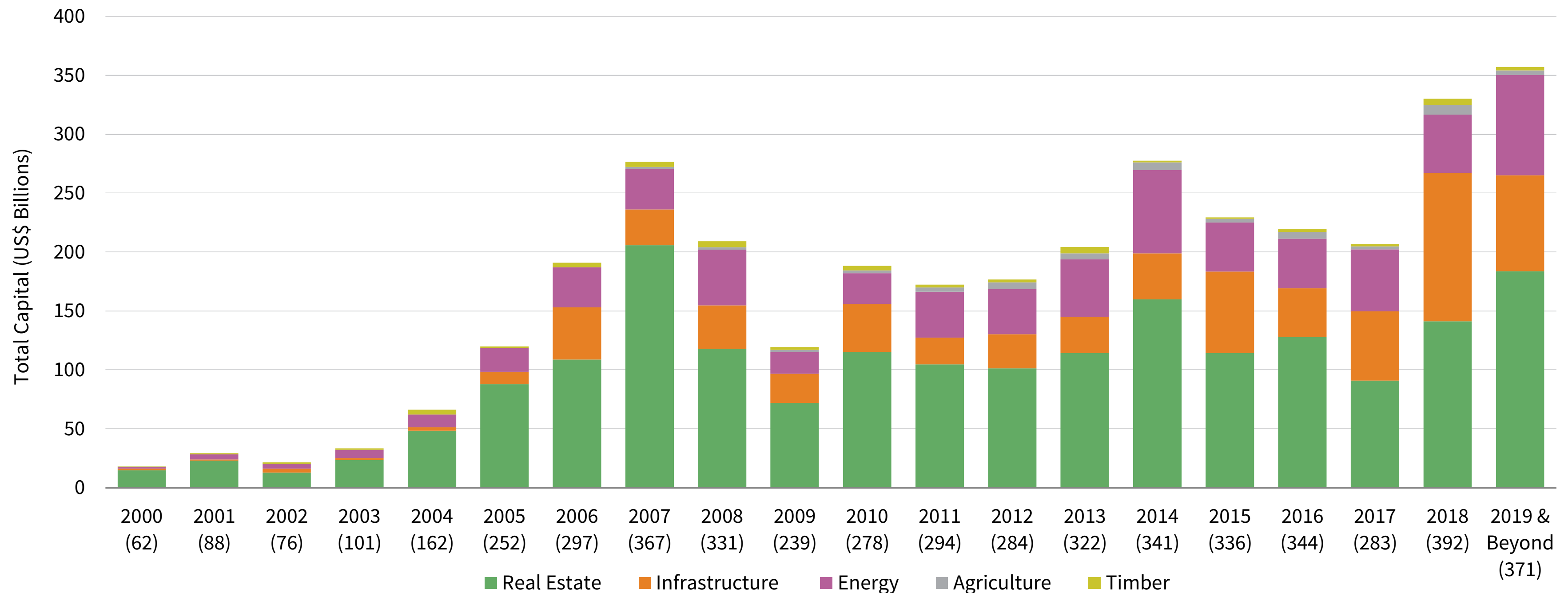
Record-breaking fundraising in 2018

The data in this report provide insight into the evolution of key real estate operating/investment metrics: private manager exposures by property type, risk profile, and market; trends in occupancy rates and capitalization (cap) rates at acquisition and exit; and use of debt financing. This report also provides an overview of how investment trends have been reflected in real estate fundraising activity.

Globally, real assets (including real estate, infrastructure, and natural resources) fundraising in 2018 was record breaking, with nearly 360 funds garnering more than $300 billion in commitments. Approximately 45% (or $137 billion) of capital raised by real estate managers has significant implications for real estate investment strategies, portfolio construction, and performance.

Going forward, investors should expect intense competition, upward pressure on asset values, relaxed underwriting, and possible alignment issues between limited partners and general partners. Returns are likely to decrease, but should be less volatile because of declining leverage and diversified return drivers.

ALL REAL ASSETS HISTORICAL FUNDRAISING



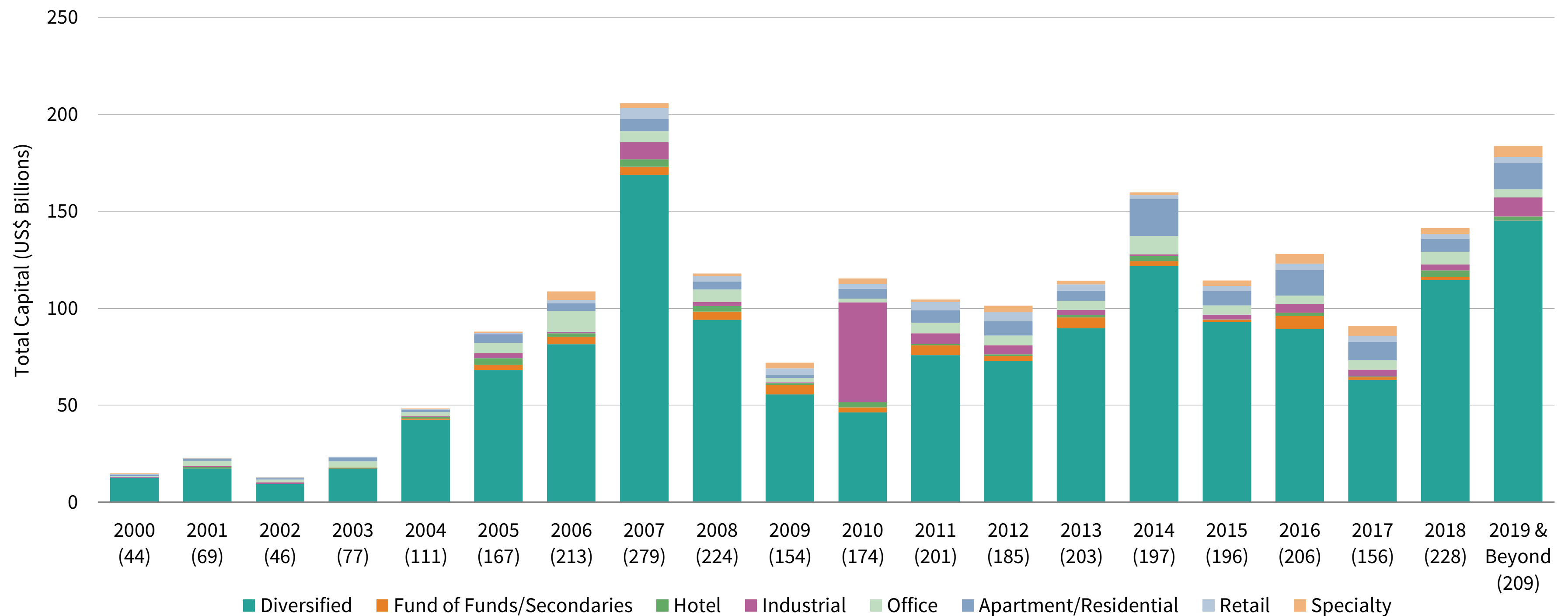
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Increase in demographic-driven real estate funds investments

Three themes—demographics, technology, and urbanization—have become the most significant drivers of real estate performance. Their influence is apparent in fundraising and property-level data, and they are expected to have an increasing impact on future returns.

Niche property types, such as senior housing, medical office, and lab space, have benefited most from structural demand stemming from an aging population, a favorable regulatory environment, and recent technological advances. Urbanization and the evolution of consumer behavior (particularly related to online shopping) has disrupted traditional retail and fueled demand for industrial properties, which accounted for nearly a quarter of all real estate transactions in 2018.

REAL ESTATE BY STRATEGY



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Investor interest in demographic-driven sectors is growing

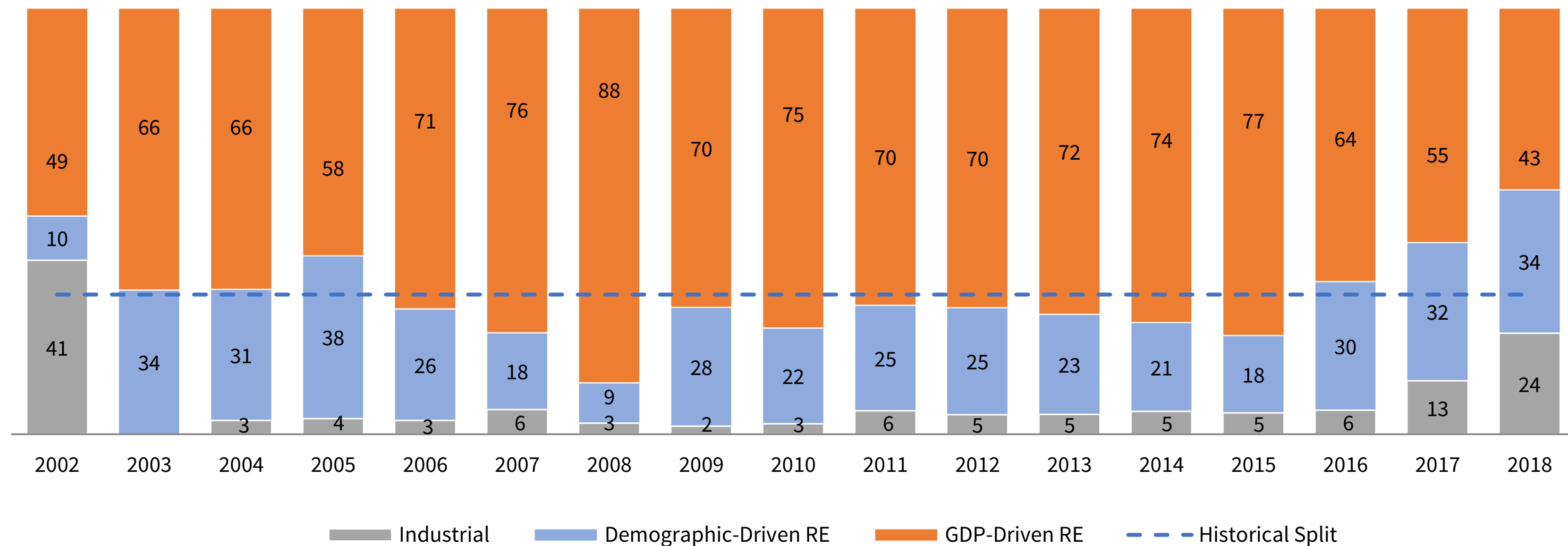
Performance of niche and industrial properties should be less correlated with GDP growth than that of traditional, pro-cyclical property types (such as office, retail, and hospitality), and they are likely to provide greater downside protection. In anticipation of a market correction, we observe a rising exposure to demographic-driven real estate (up from 9% in 2008) and a shift away from more cyclical property types.

These property types are expected to generate more stable cash flow, and include niche sectors, such as manufactured housing and student housing, which are often more fragmented, with low-hanging value-add opportunities from operational inefficiencies.

We expect these trends to continue as investors gravitate toward more defensive sectors, given the late stage of the current economic cycle.

COMMITTED CAPITAL TO DEMOGRAPHIC- AND GDP-DRIVEN SECTORS

As of December 31, 2018 • Percent (%)



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
Notes: Demographic-driven real estate is composed of apartment, residential, and some other property types that include senior housing, student housing, and medical office properties. GDP-driven real estate includes all property types excluding apartment, residential, and some other property types.

Industrial and apartment/residential lead property sectors

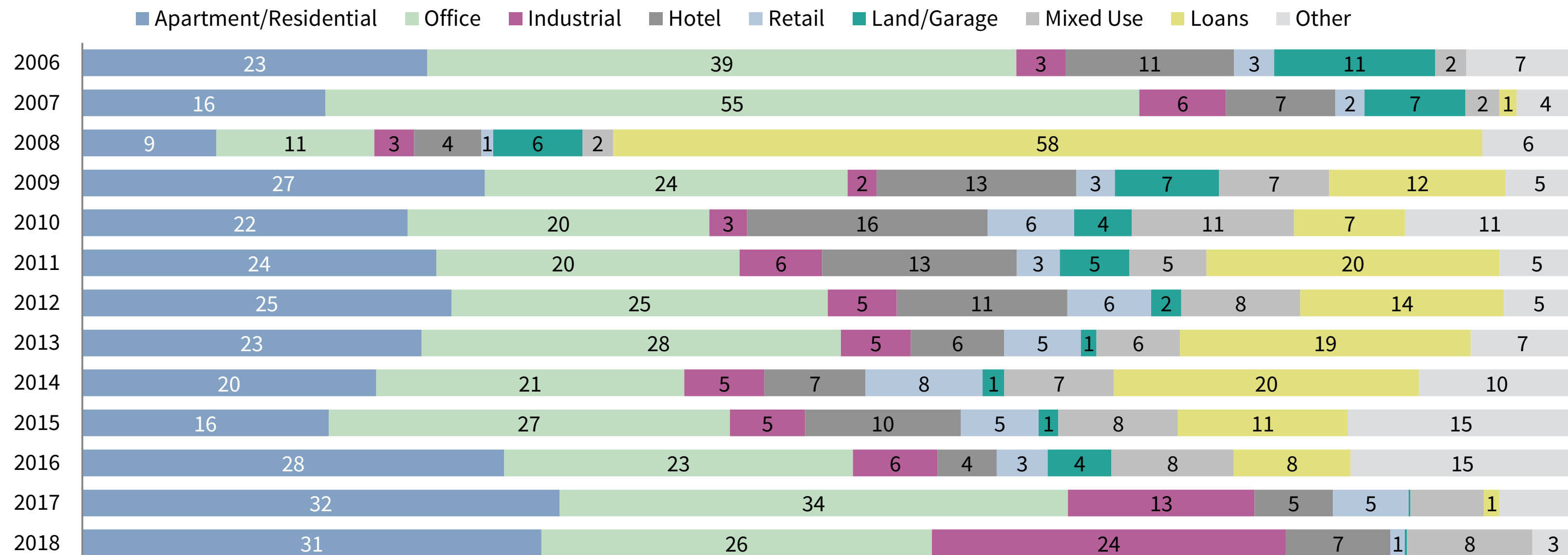
Apartments continued to be the largest demographically driven property type and accounted for almost a third of all transactions in 2018. Consistent with the rise of e-commerce and consumer preference for same-day delivery, the capital committed to industrial properties has grown dramatically since last year, accounting for almost a quarter of all 2018 committed capital.

At the same time, the percentage of retail acquisitions has declined sharply, representing slightly more than 1% in our surveyed pool. Exposure to the office sector, the darling of institutional investors for many years, has declined. We expect these trends to continue due to the inexorable growth in online sales and the corresponding demand for distribution facilities.

Development, as a share of total apartment and industrial capital, rose from 8% in 2010 to 31% in 2018.

Since 2010, capital committed to "other" property types has decreased, primarily due to a reduction in distressed investments. At the same time, we see an increase in allocations to niche property types.

COMMITTED CAPITAL BY PROPERTY TYPE
As of December 31, 2018 • Percent (%)



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
Notes: "Other" category includes loans, mixed use, and other properties. All capital is reflected during the year of initial investment.

Substantial capital flows and low interest rates impact returns

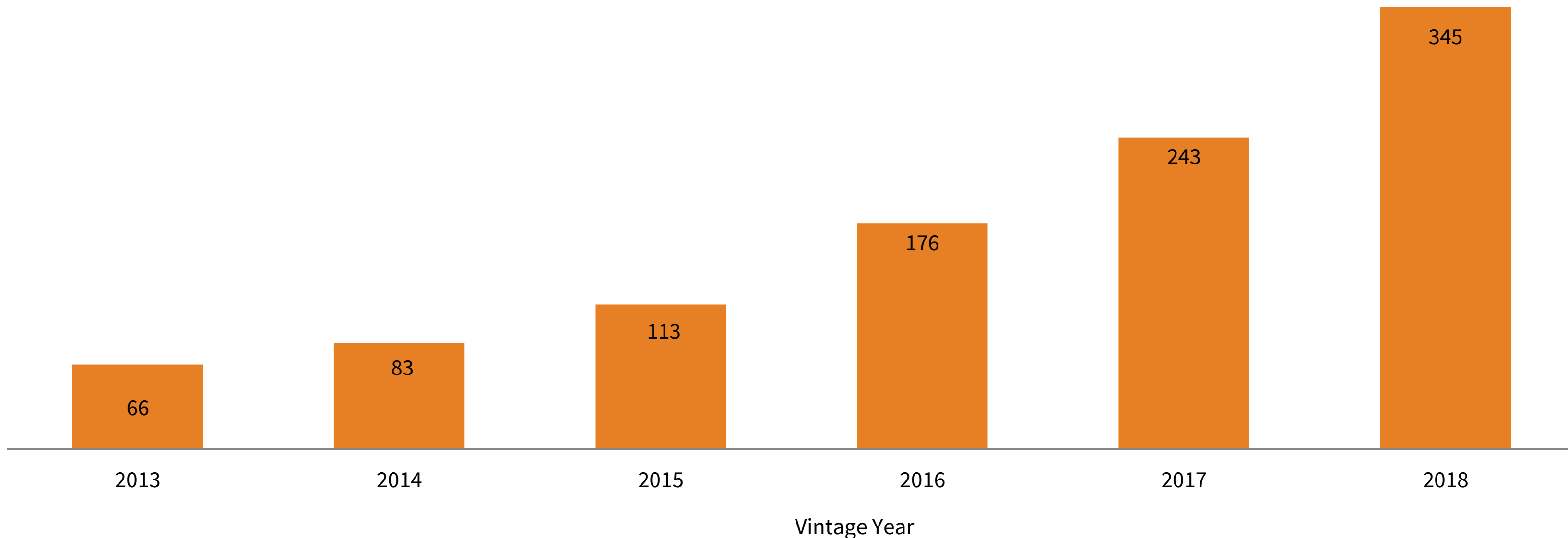
The substantial amount of capital raised by real estate managers in 2018 added to the industry's already considerable amount of dry powder (i.e., uninvested capital accumulated from prior vintage years).

According to our methodology (detailed in the footnote), by the end of 2018, dry powder totaled approximately $350 billion, of which one-third resided in funds raised in 2018 with the rest sitting in funds raised in the preceding five years (2013 through 2017).

While it is unlikely that all of the dry powder will translate into new investment activity (some is expected to be reserved for capital requirements for existing fund investments), the anticipated sizable capital flow into real estate could have a negative impact on returns.

REAL ESTATE: ANNUAL CUMULATIVE DRY POWDER

As of December 31, 2018 • Total Capital (US$ Billions)



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
Notes: We estimate dry powder by calculating the aggregated paid-in percentage for funds in each sector by vintage, using only funds in the CA database. The resulting percentage is used as an estimate for our broader fundraising universe, which leverages data from managers who do not report contributions, distributions, or other performance data. The resulting paid-in percentages for each sector and vintage year are then applied to the total fundraising for each sector, by vintage year, to arrive at total called capital. We then subtract the total called capital from the total committed capital to estimate remaining capital for funds in each vintage year. Next, we strip out estimated capital to be used for fees, applying management fees of 1.5% over an assumed 10-year fund life. The result of this difference (Total Fundraising – Total Paid-In – Remaining Fees) yields an annual estimate for dry powder. Instead of showing estimated dry powder by vintage year, we estimate it on a cumulative basis, assuming a five-year investment horizon for funds, in order to arrive at estimated dry powder in any given calendar year. Thus, 2018 dry powder reflects the sum of estimated dry powder remaining in funds from vintage years 2013 through 2018.

If returns are coming down, where to look for outperformance?

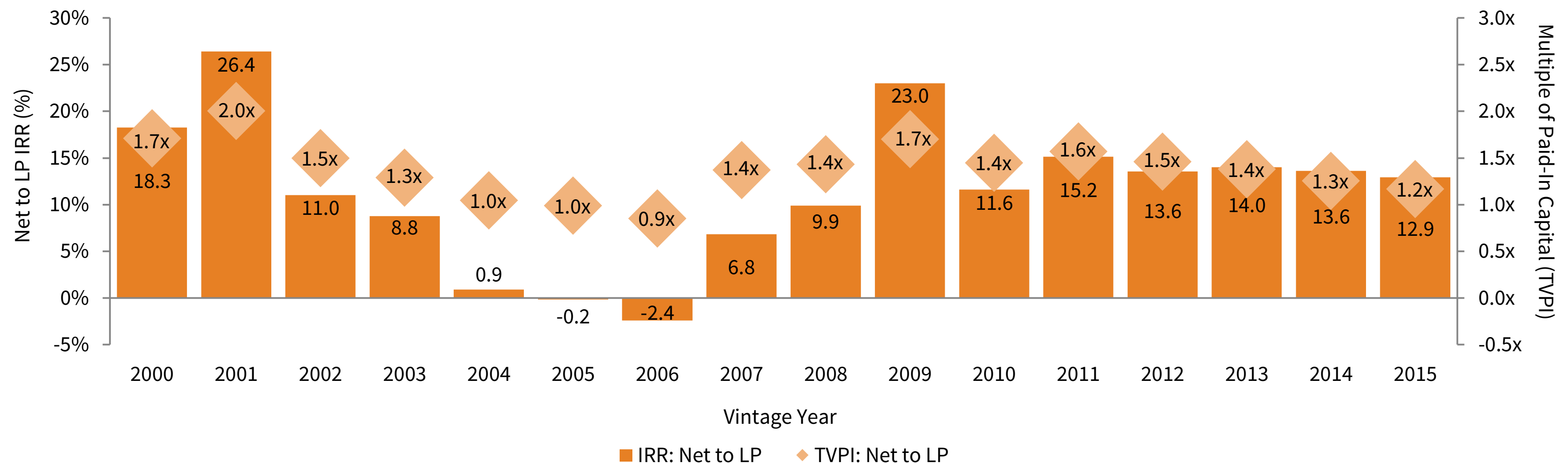
As of December 2018, the median since inception return for funds raised between 2000 and 2015 was 12.3% net internal rate of return (IRR), based on about 800 real estate funds. Unsurprisingly, net returns were the highest for the 2009 vintage funds due to attractive entry valuations (i.e., low cost basis) and a considerable cap rate compression.

In search of returns, and with a limited opportunity set of distressed transactions, managers continued to increase their exposure to development properties in 2018, which generally entail a greater level of risk than distressed deals.

The flow of capital to secondary markets has continued to increase as investors seek yield in less liquid markets; however, the rising volume has impacted pricing, and the cap rate differential between primary gateway cities and secondary markets is shrinking.

Across participating managers in 2018, leverage remained at approximately 61% loan-to-value. Greater discipline around the use of leverage is a notable difference relative to prior cycles, and likely reflects the application of lessons learned (on the part of both managers and investors) from the global financial crisis (GFC). Going forward, with rich valuations and low interest rates, we expect returns to shift toward the lower end of the target ranges.

REAL ESTATE: NET POOLED IRRS AND MULTIPLES BY VINTAGE YEAR
As of December 31, 2018



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Risk profiles converge in search of outperformance

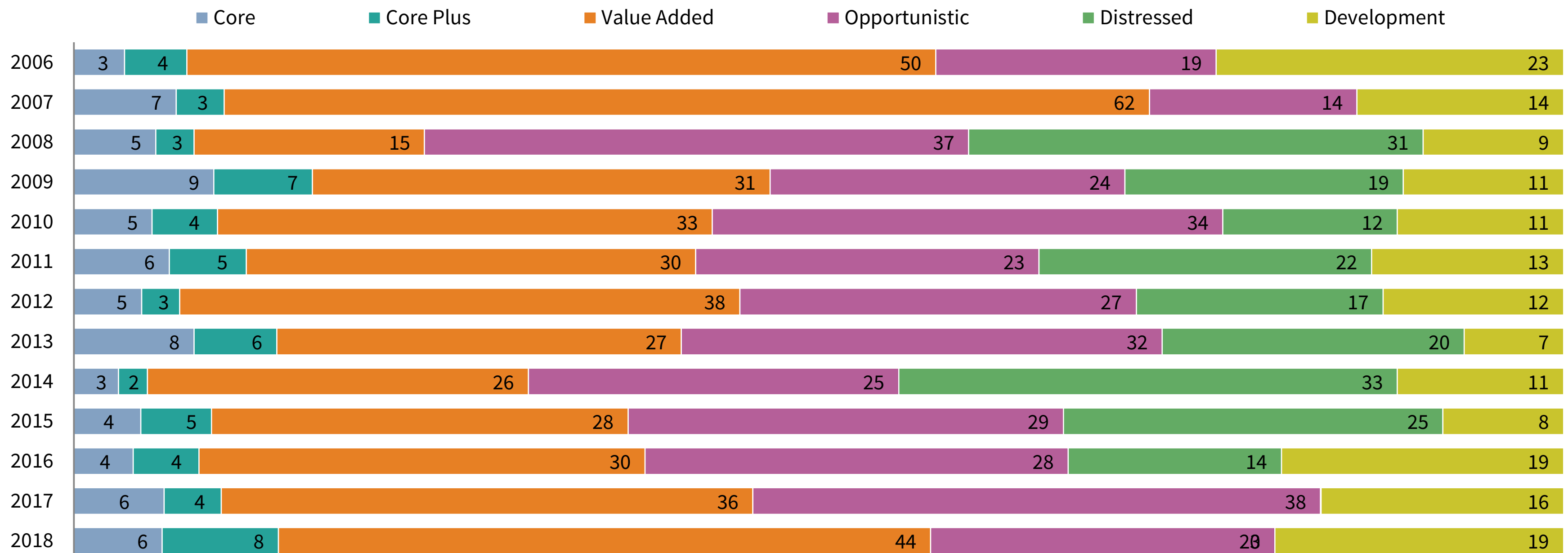
As investors seek more stable yields in anticipation of a market correction, we have seen growth in fundraising in the core and core-plus space. Yields are expensive, however, thanks to the low interest rate environment that has contributed to historically high asset values and compressing cap rates. As a result, investors expanded their definition of core real estate to include higher risk and return investments, including riskier value-add, operationally intensive, and development assets.

The line between value-add and opportunistic strategies has also been blurring. While historically distinct from one another in terms of leverage, operational risk, development exposure, and target returns, they converge in some way across all these parameters.

Nevertheless, investors have been shifting from opportunistic strategies to defensive ones. The combined share of value-add, core, and core-plus investments has been slowly trending upward and accounted for 58% of all capital committed in 2018. As actual and target returns fall, we expect this shift in risk profiles to continue.

COMMITTED CAPITAL BY RISK PROFILE

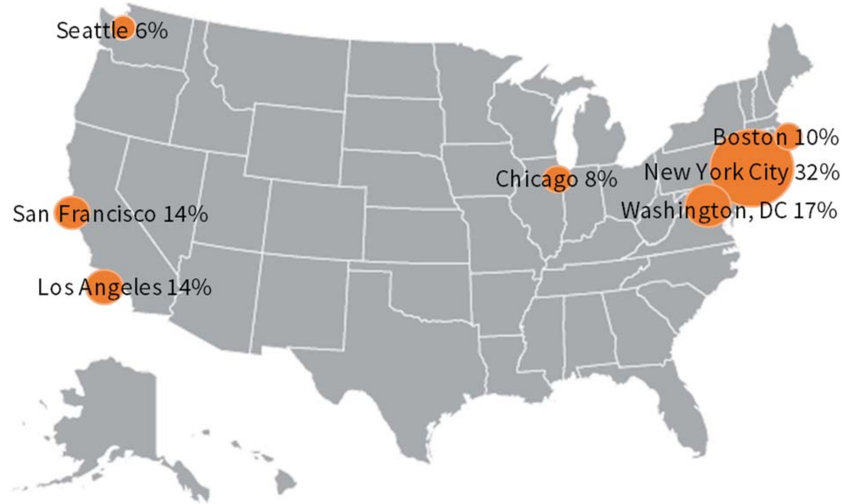
As of December 31, 2018 • Percent (%)



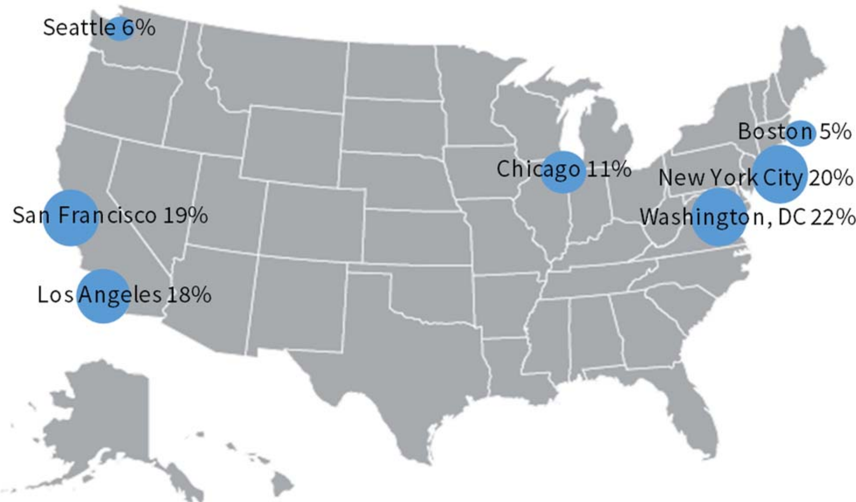
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
Note: Managers responding to survey are less likely to pursue core and core-plus strategies.

Primary and secondary market exposure is shifting

US PRIMARY MARKETS CAPITAL SHARE: 2006–18



US PRIMARY MARKETS CAPITAL SHARE: 2018



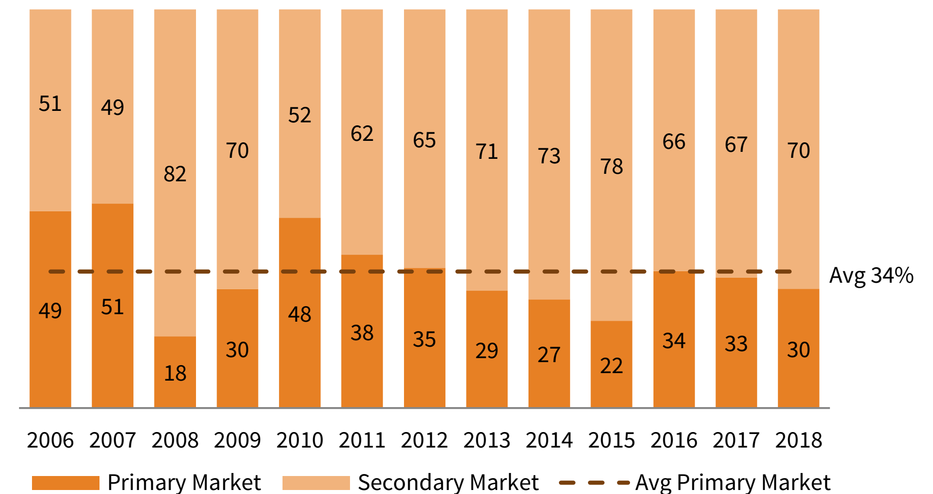
The flow of capital to secondary markets continued to increase as investors sought higher yield in less liquid markets. At about 30%, the share of capital allocated to primary markets was below the long-term average. In our view, primary markets include the cities highlighted in the bubbles on the maps.

The rising volume of secondary market investments has impacted pricing, and the cap rate differential between primary and secondary markets is shrinking.

Unsurprisingly, New York City has led the primary market space, accounting for 32% of aggregate primary market activity from 2006 to 2018. However, the share of East Coast markets (New York City, Boston, and Washington, DC) has declined from its peak of 72% in 2010 to about 47% in 2018, while the West Coast and Midwest saw an uptick in capital flow driven by a shift in capital allocation from East Coast office exposure to West Coast office exposure.

COMMITTED CAPITAL BY US MARKET

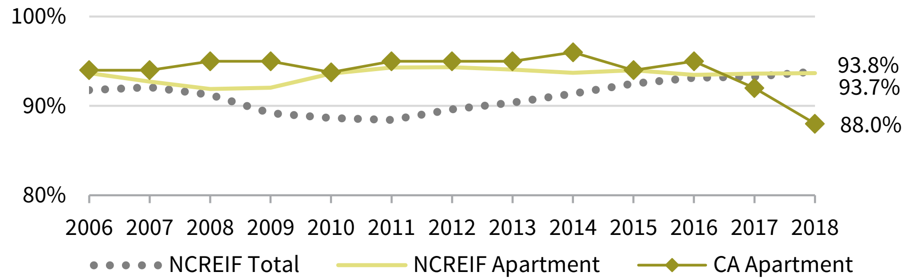
As of December 31, 2018 • Percent (%)

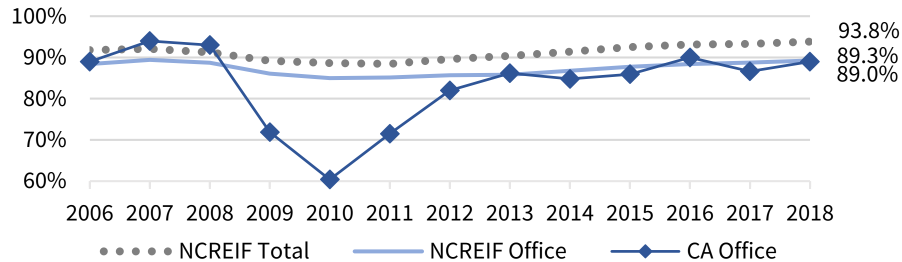


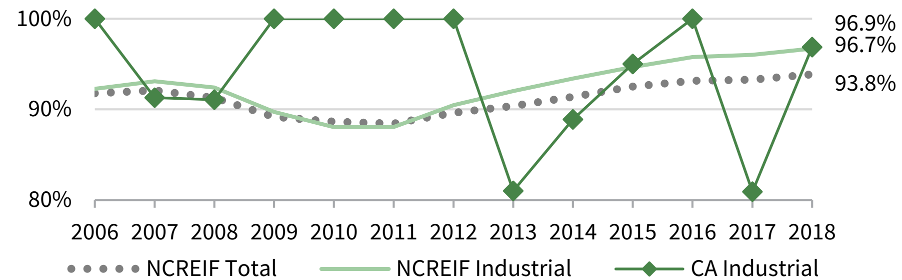
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).
Notes: Primary markets include the Boston, Chicago, Los Angeles, New York, San Francisco, Seattle, and Washington, DC metropolitan statistical areas. The total may not add up to 100% due to rounding.

Occupancy Rate Trends

AVERAGE OCCUPANCY RATE AT ACQUISITION
As of December 31, 2018







According to NCREIF, the average occupancy rate across all asset classes has trended upward since 2010, and was 94% by the end of 2018. This high level of initial occupancy may limit options for asset managers steering focus away from active leasing and toward capital improvement/repositioning and operational efficiency initiatives aimed at improving the bottom line.

The universe of properties analyzed is generally more volatile because the manager sample is skewed toward more opportunistic and value-add strategies.

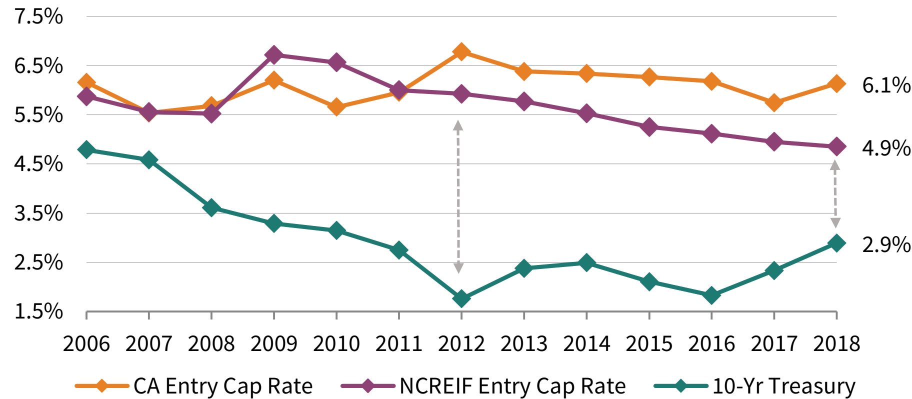
Nevertheless, the occupancy rates for apartments, office, and industrial are more or less in line with NCREIF.

Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers) and National Council of Real Estate Investment Fiduciaries.
Notes: NCREIF average occupancy represents a four-quarter average occupancy for that year either for all property types, shown as "NCREIF Total Occupancy" or for a particular property type.
CA occupancy shows average occupancy at acquisition for that year for a particular property type.

Capitalization Rate Trends

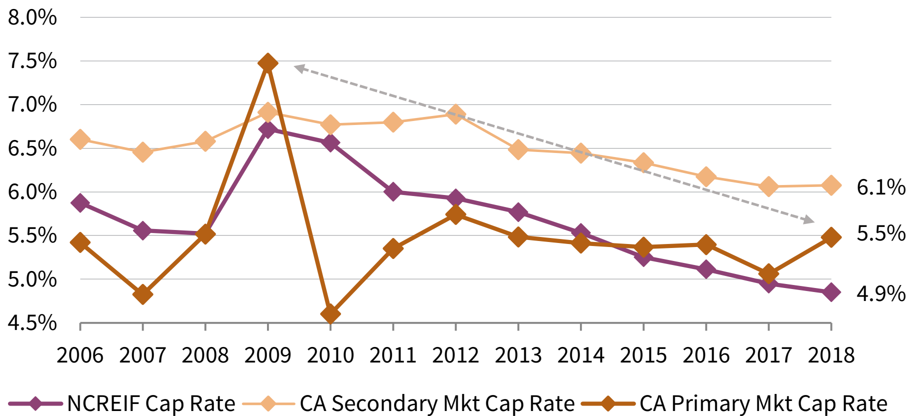
AVERAGE CAPITALIZATION AND INTEREST RATES

As of December 31, 2018



AVERAGE PRIMARY AND SECONDARY MARKET CAPITALIZATION RATES

As of December 31, 2018



Consistent with prior years' results, the average cap rate in the survey data is meaningfully higher than NCREIF cap rates, and likely reflects the valuation discount that managers achieve when acquiring properties with some element of complexity related to the seller, tenant mix, or physical condition of the asset.

The spread between the 2018 NCREIF average cap rate of 4.90% and the yield on ten-year Treasury, which represents a risk premium investors require of real estate, has compressed from 417 basis points (bps) in 2012 to 196 bps in 2018, still far above the historically low 97 bp spread in 2007.

Acquisition cap rates in primary markets have substantially compressed since peaking in 2009. Secondary markets did not benefit from declining cap rates to the same degree, as investors were concerned about the ease with which many secondary markets could add new supply.

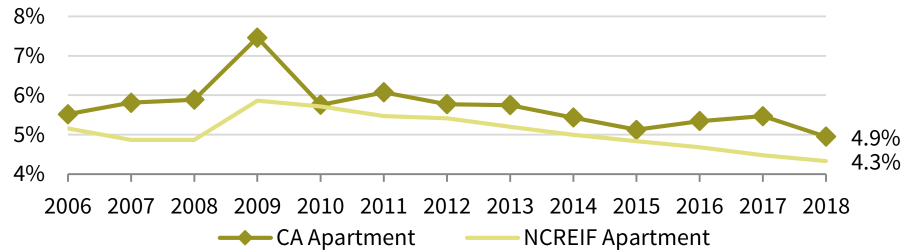
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), Federal Reserve, National Council of Real Estate Investment Fiduciaries, and Thomson Reuters Datastream.

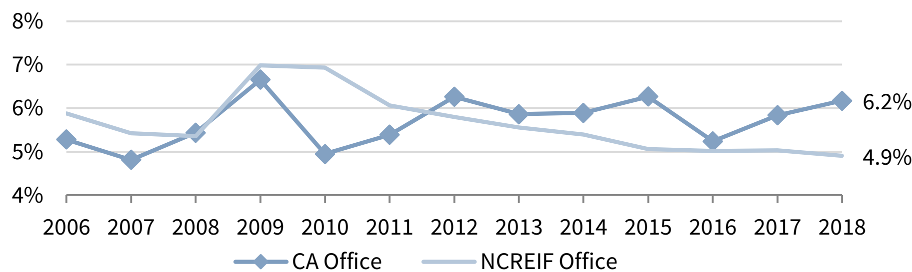
Notes: Annual NCREIF capitalization rate is calculated as four-quarter average. CA data represent capitalization rates for properties acquired in each year. Primary markets include the Boston, Chicago, Los Angeles, New York, San Francisco, Seattle, and Washington, DC metropolitan statistical areas. The total may not add up to 100% due to rounding.

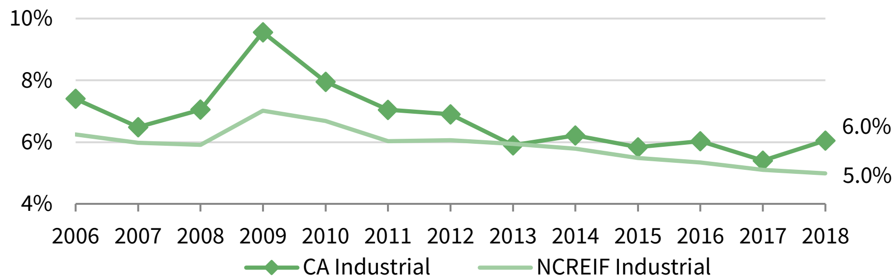
Capitalization Rates by Property Type

AVERAGE CAPITALIZATION RATE BY PROPERTY TYPE

As of December 31, 2018







Cap rates for the key property types in the CA universe (apartments, office, and industrial) have been generally higher than those for the NCREIF sample. This is consistent with the higher percentage of opportunistic and value-add transactions in the CA universe.

The average acquisition cap rates for apartment properties in our universe declined in all but two years since their peak in 2009, reaching a new low of 4.9% in 2018, compared to the NCREIF apartment cap rate of 4.3%.

Average office cap rates in our survey have continued to rise, reaching 6.2% in 2018 versus 4.9% for NCREIF. High office acquisition cap rates in our survey may reflect greater exposure to secondary markets.

Industrial transaction volume ramped up in 2017. Intense competition for properties has resulted in considerable cap rate compression and development activity.

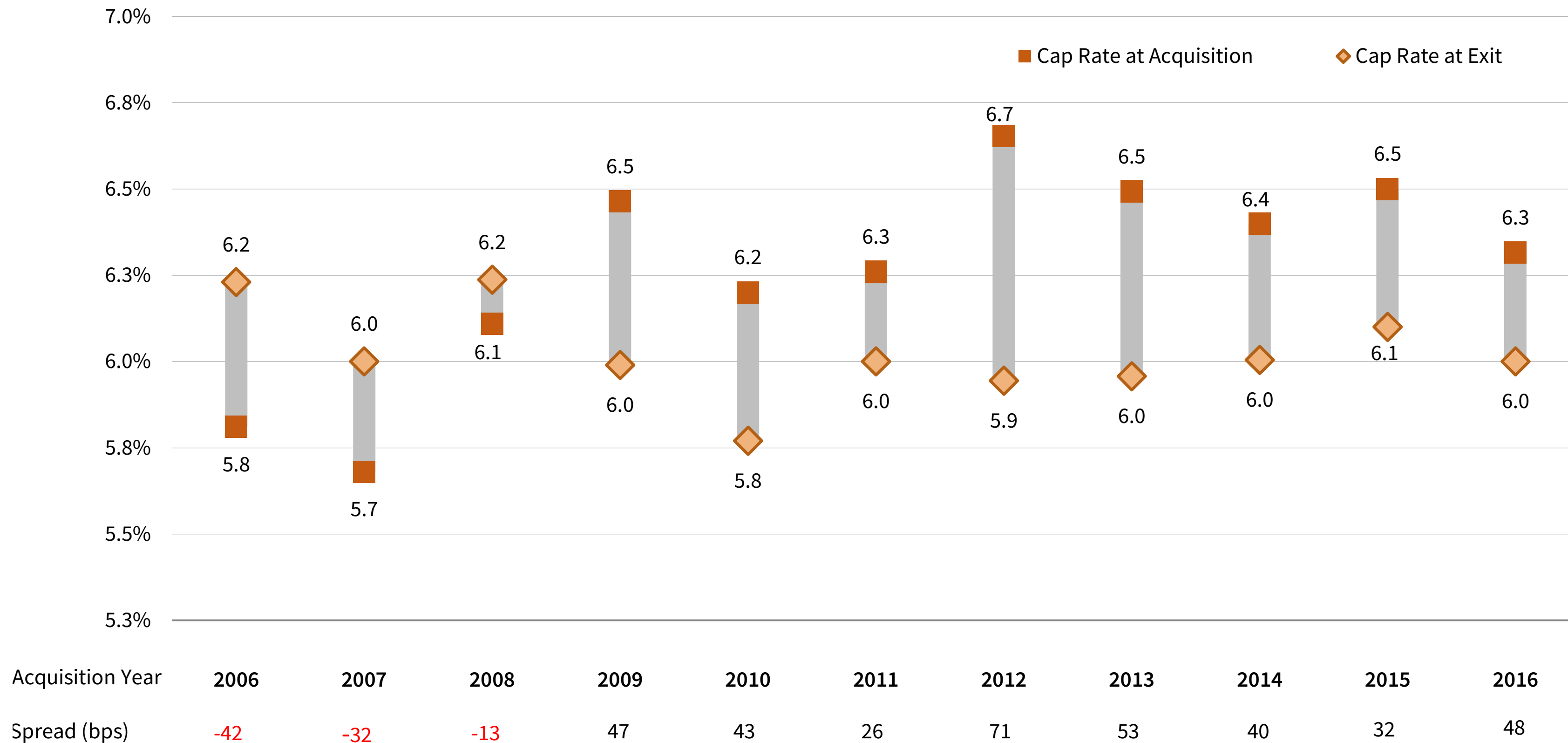
Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers) and National Council of Real Estate Investment Fiduciaries.

Notes: Annual NCREIF capitalization rate is calculated as four-quarter average. CA data represent capitalization rates for properties acquired in each year. Development deals are excluded.

Analysis of entry/exit capitalization rates over holding periods

Managers have generally benefited from cap rate compression on properties acquired since 2009, with an average cap rate compression of nearly 44 bps during the hold period.

With interest rates expected to stay relatively flat, we anticipate a more modest compression. As a result, net operating income (NOI) growth will likely be a more meaningful component of real estate returns over the next few years.



Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Analysis of NOI over holding periods

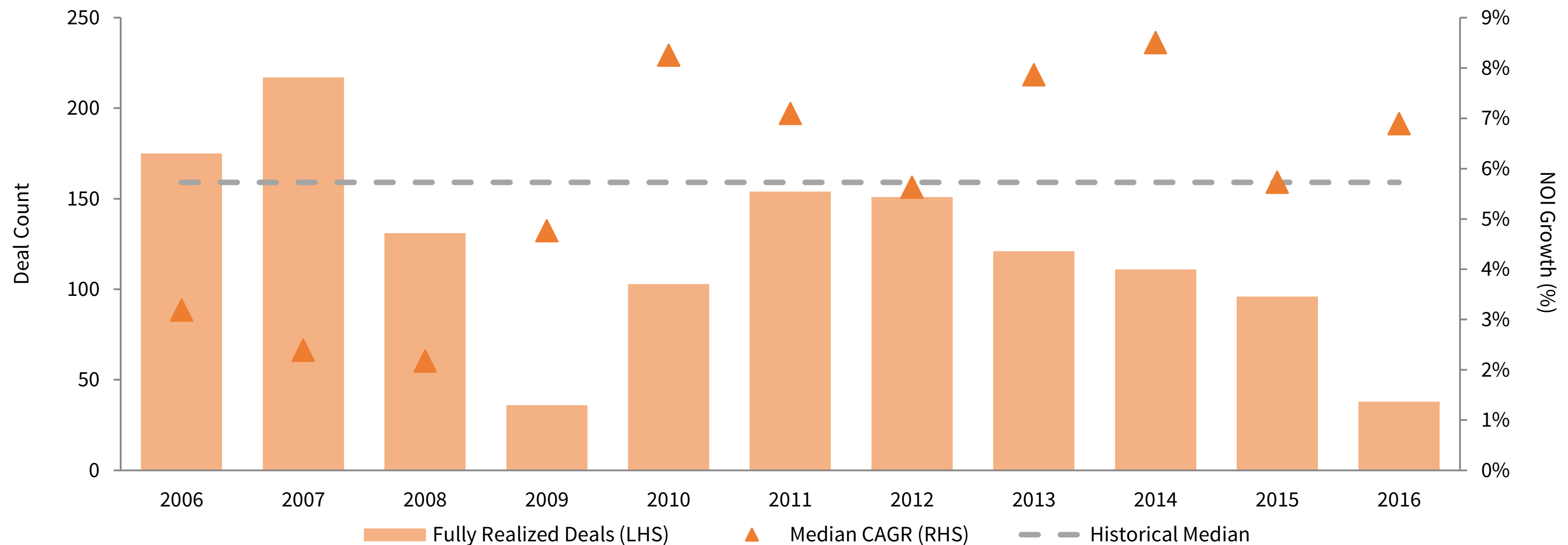
NOI growth over various holding periods was impacted by the GFC; properties acquired pre-GFC generated weaker NOI growth than those acquired post-GFC, which is not surprising. Furthermore, the hold periods for properties acquired pre-GFC have been longer, generally ranging from six to seven years. In aggregate, properties acquired prior to the GFC still generated positive NOI growth, though levels varied considerably by property type.

The median historical NOI growth is 5.7%, and deals acquired after 2013 have demonstrated stronger performance. However, consideration should be given to the relatively small size of the property pool. In addition, properties that have experienced higher NOI growth are more likely to be sold earlier and are more heavily represented in this data.

Consistent with NCREIF data, realized apartment transactions have generated an average compound annual growth rate in NOI of more than 10% for acquisition years 2010 through 2016, well above other property types.

NOI GROWTH RATE OF REALIZED DEALS BY ACQUISITION YEAR

As of December 31, 2018



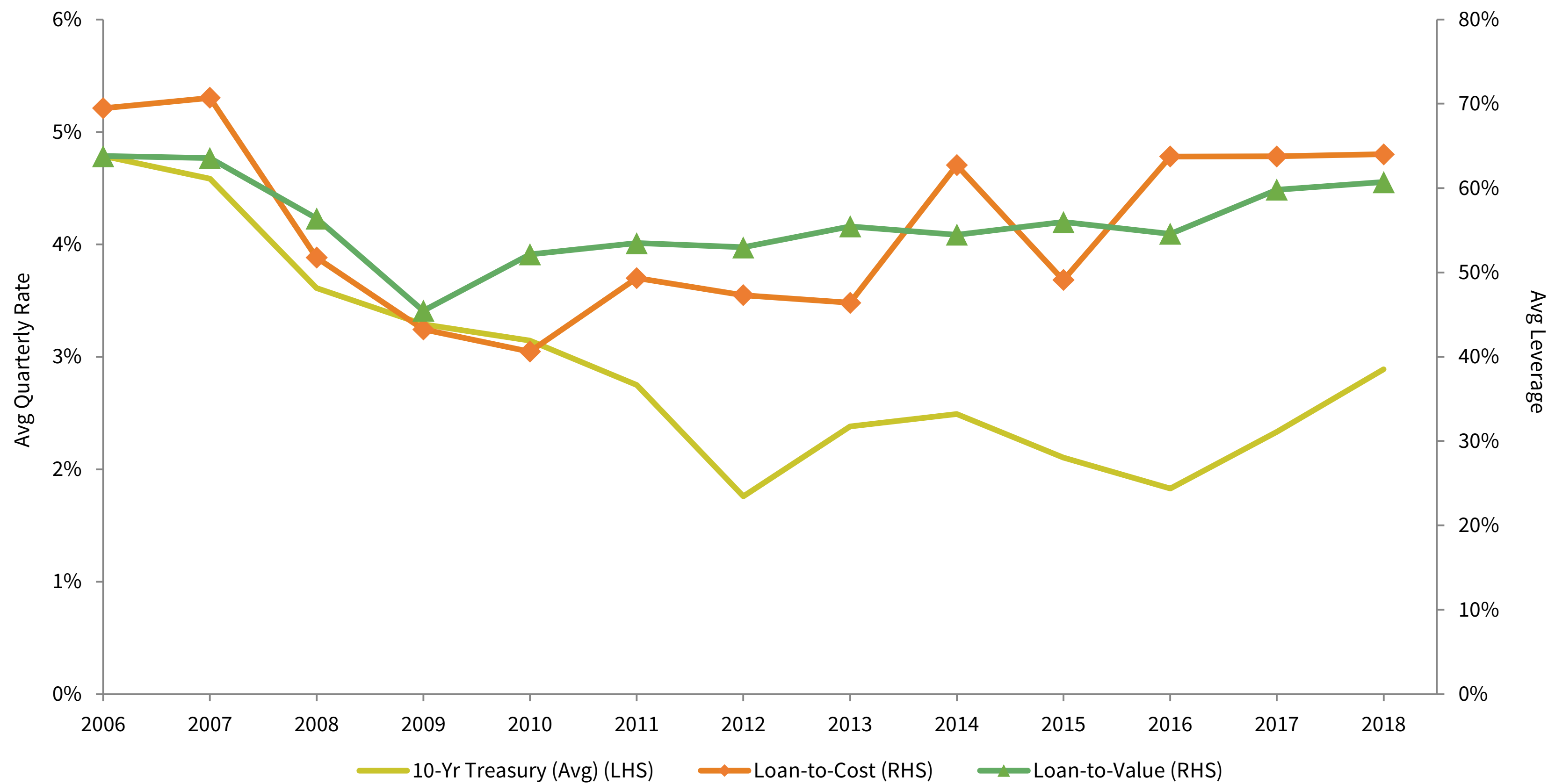
Source: Cambridge Associates LLC Private Investments Database (as reported by investment managers).

Capital structure trends

The use of debt when financing transactions, as measured by loan-to-cost (LTC) ratios, remained below the levels used prior to the GFC. LTC ratios peaked prior to the GFC and have declined sharply since, remaining a little more than 60%. This trend reflects both the limited availability of debt following the crisis, and the more recent desire by investors for their private equity real estate managers to reduce debt application.

AVERAGE 10-YR TREASURY VS AVERAGE LTV AND LTC

As of December 31, 2018



Sources: Cambridge Associates LLC Private Investments Database (as reported by investment managers), Federal Reserve, and Thomson Reuters Datastream.
Note: Average taken of sampling removing top and bottom 5% outliers.

Notes on the Data

- Cambridge Associates collected information from private equity real estate firms of all sizes with broad mandates, as well as regional- and property type-focused strategies. These firms pursue a variety of strategies, ranging from core to opportunistic. Cambridge Associates has captured and analyzed current and historical data from global real estate funds for seven consecutive years; this report includes data through December 31, 2018, from more than 5,000 properties in the United States. The properties in the universe range in size from equity commitments of less than $1 million to more than $1 billion and have a median equity commitment of $12.6 million. The sample of properties includes properties acquired from 2005 to 2018, with an aggregate equity commitment of nearly $160 billion. Within the report, depending on the metric analyzed, the set of properties represented may differ.
- Based on equity commitment over the time period analyzed, office properties make up 27% of the sample, and apartment/residential 21%—both nearly identical to last year's report sample. Hotels make up 9% and industrial properties make up 6%, again very similar to their respective weights in the sample for last year's report. The remainder of the sample includes a range of mixed-use properties, retail, condominiums, and land.
- Operating metrics data were collected directly from investment managers and have not been independently verified.
- Unless specified, the exhibits include unrealized and realized investments. Unrealized deals may represent a smaller share than displayed due to discontinued manager reporting.
- Data sets with fewer than ten transactions have been marked "NA" or excluded.
- Individual property operating metrics have not been adjusted for add-on acquisitions to existing properties.
- Because the operating metrics information is disaggregated into property types, the sample sizes are smaller and may be biased by one or several data points.
- Property counts are not necessarily consistent across exhibits, as managers do not always provide all data points requested.
- Past performance is not an indication of future performance, provides no guarantee for the future, and is not constant over time.

CAMBRIDGE
ASSOCIATES

Contributors to this report include Maria Surina, Marc Cardillo, Meagan Nichols, William Brockett, Jimmy Crivella, Sarah Grifferty, Caryn Slotsky, and Wyatt Yasinski.

Copyright © 2020 by Cambridge Associates LLC. All rights reserved.

This report may not be displayed, reproduced, distributed, transmitted, or used to create derivative works in any form, in whole or in portion, by any means, without written permission from Cambridge Associates LLC (“CA”). Copying of this publication is a violation of US and global copyright laws (e.g., 17 U.S.C.101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages.

This report is provided for informational purposes only. The information does not represent investment advice or recommendations, nor does it constitute an offer to sell or a solicitation of an offer to buy any securities. Any references to specific investments are for illustrative purposes only. The information herein does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Information in this report or on which the information is based may be based on publicly available data. CA considers such data reliable but does not represent it as accurate, complete, or independently verified, and it should not be relied on as such. Nothing contained in this report should be construed as the provision of tax, accounting, or legal advice. Past performance is not indicative of future performance. Broad-based securities indexes are unmanaged and are not subject to fees and expenses typically associated with managed accounts or investment funds. Investments cannot be made directly in an index. Any information or opinions provided in this report are as of the date of the report, and CA is under no obligation to update the information or communicate that any updates have been made. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified.

The terms "CA" or "Cambridge Associates" may refer to any one or more CA entity including: Cambridge Associates, LLC (a registered investment adviser with the US Securities and Exchange Commission, a Commodity Trading Adviser registered with the US Commodity Futures Trading Commission and National Futures Association, and a Massachusetts limited liability company with offices in Arlington, VA; Boston, MA; Dallas, TX; Menlo Park, CA, New York, NY; and San Francisco, CA), Cambridge Associates Limited (a registered limited company in England and Wales, No. 06135829, that is authorised and regulated by the UK Financial Conduct Authority in the conduct of Investment Business, reference number: 474331); Cambridge Associates Limited, LLC (a registered investment adviser with the US Securities and Exchange Commission, an Exempt Market Dealer and Portfolio Manager in the Canadian provinces of Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Nova Scotia, Ontario, Québec, and Saskatchewan, and a Massachusetts limited liability company with a branch office in Sydney, Australia, ARBN 109 366 654), Cambridge Associates Investment Consultancy (Beijing) Ltd (a wholly owned subsidiary of Cambridge Associates, LLC which is registered with the Beijing Administration for Industry and Commerce, registration No. 110000450174972), and Cambridge Associates Asia Pte Ltd (a Singapore corporation, registration No. 200101063G, which holds a Capital Market Services License to conduct Fund Management for Accredited and/or Institutional Investors only by the Monetary Authority of Singapore).