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Looking Beyond Traditional CRE Investments

PwC Real Estate Investor Survey™

Third Quarter 2017

pwc

30th Anniversary

Dear Reader:

After a short absence, we are pleased to reintroduce a *National Self-Storage Market* into the Survey with a debut article that can be found on page 20. Investing in noncore commercial real estate, like self storage, has grown in popularity among institutional investors. We explore some reasons for the allure of niche property types in our lead story, "Looking Beyond Traditional CRE Investments."

In this issue we also continue with our new quarterly feature titled *Survey Trends*, which focuses on the retail sector this quarter, incorporating the long history of our Survey data to highlight trends and unique findings. This section starts on page 18.

Our semiannual hospitality write-up, extracted from PwC Hospitality & Leisure's August 2017 *Hospitality Directions US*, is also in this issue and begins on page 54. As uncertainty weighs on the economy, softening lodging industry growth is expected to continue.

Lastly, *Emerging Trends in Real Estate*® 2018 is set for release in late October, so remember to check your inbox. We will be hosting a webinar to discuss the findings of *Emerging Trends* on Monday, October 30, 2017 from 12:30 p.m. to 2:00 p.m. (Eastern Standard Time). An invitation will be emailed to all active subscribers in October – please mark your calendars!

As always, I thank you for subscribing to our quarterly publication. And remember, you can receive more timely findings relating to the Survey during its three-month production process by following senior editor Amy Olson on Twitter @amyolsonatl.

Sincerely,

Susan Smith

Susan M. Smith
Editor-in-Chief

In need of data for your commercial real estate analyses and reports?

With over 30 years of quarterly history, data from the *PwC Real Estate Investor Survey* could be just what you need.

Survey averages are available for the following key stats:

Overall capitalization rates

Discount rates

Residual capitalization rates

Initial-year market rent change rates

Expense growth rates

A complete list of survey markets and their debut dates can be found by clicking here.

Special packages that include the complete histories for various national markets and city-specific office markets are also available.

For more details, click wwww.pwc.com/us/realestatesurvey then click "Order" at the bottom and then click "Historical Data in Excel Format"

If you have questions, or to customize a package for a specific time period and/or property type, please email susan.m.smith@pwc.com.

In This Issue

PwC Real Estate Investor Survey

National Highlights

Looking Beyond Traditional CRE Investments

Diversity. Uncertainty. Yield. These are three reasons investors cite for looking at noncore, less-traditional commercial real estate (CRE) for opportunities. Diversity – to better safeguard returns and balance portfolios, many investors are more open to diversity in terms of both property type and geography than they have been. Uncertainty – at this point in the cycle, many investors remain cautious about buying core assets due to the uncertainty of continued growth and the likelihood of a downward pricing shift. Their anxieties seem fewer for the near-term performance of niche sectors, like self storage, medical office buildings, and student housing, which are need-driven by growing key demographics. Yield – achieving yield through growing revenue and mitigating risk is a priority for investors and while no real estate sector is "recession proof," a few investors feel that certain niche sectors come very close. "During hard economic times, yields do not fluctuate in student housing and self storage like they can in core asset categories, and we like that," shares an investor.

The allure of investing in niche property types is evident when looking at the initial yields in our Survey this quarter. For our newly included national self-storage market, for example, the average overall cap rate is 5.78%. Only 33 basis points separates this average from the aggregate average overall cap rate for the eight core national markets in the Survey. When you consider the limited recurring capital costs and low re-leasing expenses of self storage compared to office, apartment, and warehouse assets, as well as the existing CRE environment and late-cycle uncertainties, the growing appeal of self storage ownership becomes clearer.

Even though capital expenditures and re-leasing costs are higher for owners of medical office buildings (MOBs) compared to those that own self storage, its much higher initial return (averaging 6.71% this quarter) continues to draw investors to a segment supported by health care, one of the fastest growing employment sectors in the country, as well as by the aging baby-boomer generation. "The MOB market remains strong," affirms a participant. According to Real Capital Analytics, MOB sales grew 36.6% year over year in the second quarter of 2017. In addition, the average sale price for MOB assets rose 11.5% on a quarterly basis.

The student-housing sector continues to benefit from incessant growth in college enrollments, particularly among Millennials, as well as the need to replace aging blocks of college dormitories. This sector's occupancy rate was 95.0% in 2016 and it posted an average annual rent growth of 2.3%, according to Axiometrics. "We like the growth prospects and steady income stream potential of student housing," notes a participant. Even though numerous student-housing properties are under construction, demand is expected to remain ahead of supply in the near term. The National Center for Education Statistics reports that enrollment in post-secondary institutions increased 20.0% from 2003 to 2013, and it is projected to increase an average of 1.4% every year through 2023.

The rising popularity of investing in niche property sectors reflects a broadening of the commercial real estate industry and its participants, which appear more in tune with the ever-changing economics and demographics of today's world. While only a few institutional investors once considered ownership of niche, noncore assets as viable investment options, their growing capital investments thus far suggest that some of these niche sectors may one day be considered mainstream. ✦

Overall Cap Rate Analysis

In the third quarter of 2017, the average overall capitalization (cap) rate decreases in 18 Survey markets, increases in nine, and holds steady in eight compared to the second quarter of 2017. This is the highest number of markets posting quarterly declines since the third quarter of 2016 when the total was 19 markets.

Most of the cap rate decreases are in city-specific office markets. As shown in Exhibit 1, ten city office markets post declines in their average cap rates this quarter – this total was eight last quarter and six in the first quarter of 2017.

Looking Forward

Over the next six months, most surveyed investors foresee overall cap rates holding steady in 32 of the 35 markets analyzed (see Exhibit 2). In the national net lease and the Houston office markets, most of them forecast rates to increase.

Exhibit 1

OVERALL CAPITALIZATION RATES

Third Quarter 2017

National Markets	Average	Quarterly Change*
Warehouse	5.22%	– 5
Apartment	5.35%	– 5
CBD Office	5.66%	– 2
Strip Shopping Center	6.19%	– 7
Regional Mall	6.23%	3
Power Center	6.40%	5
Suburban Office	6.69%	5
Net Lease	6.71%	– 17
MOB**	6.71%	– 5
Flex/R&D	7.10%	0
Secondary Office	7.46%	6
Regional Warehouse		
Pacific Region	4.83%	– 15
ENC*** Region	5.35%	– 8
Apartment Markets		
Pacific Region	4.49%	0
Mid-Atlantic Region	5.04%	3
Southeast Region	5.13%	3
Office Markets		
Manhattan	4.94%	– 4
Washington, DC	5.27%	– 2
San Francisco	5.45%	0
Los Angeles	5.74%	– 10
Seattle	5.79%	– 3
Pacific Northwest	5.99%	– 2
Boston	6.27%	0
Dallas	6.48%	– 2
San Diego	6.51%	0
Phoenix	6.53%	– 9
Denver	6.56%	0
Northern Virginia	6.77%	14
Charlotte	6.93%	3
Atlanta	7.19%	– 2
Southeast Florida	7.26%	0
Chicago	7.28%	4
Philadelphia	7.29%	– 14
Houston	7.31%	0
Suburban Maryland	7.35%	– 13

* Basis points; ** Medical office buildings; *** East North Central
Source: PwC Real Estate Investor Survey

Exhibit 2

OVERALL CAPITALIZATION RATE FORECASTS

Third Quarter 2017

	OVERALL CAP RATE	SIX-MONTH EXPECTATIONS		
MARKET	3Q 2017	INCREASE	DECREASE	HOLD STEADY
National				
Regional Mall	6.23%	50%	0%	50%
Power Center	6.40%	29%	14%	57%
Strip Shopping Center	6.19%	33%	0%	67%
CBD Office	5.66%	29%	14%	57%
Suburban Office	6.69%	13%	0%	88%
Net Lease	6.71%	80%	0%	20%
Medical Office Buildings	6.71%	20%	0%	80%
Secondary Office	7.46%	27%	0%	73%
Industrial				
National Flex/R&D	7.10%	0%	20%	80%
National Warehouse	5.22%	0%	10%	90%
ENC Region Warehouse	5.35%	0%	0%	100%
Pacific Region Warehouse	4.83%	0%	0%	100%
Apartment				
National	5.35%	44%	0%	56%
Mid-Atlantic Region	5.04%	20%	0%	80%
Pacific Region	4.49%	20%	0%	80%
Southeast Region	5.13%	20%	0%	80%
Office				
Atlanta	7.19%	20%	0%	80%
Boston	6.27%	17%	17%	67%
Charlotte	6.93%	0%	0%	100%
Chicago	7.28%	43%	0%	57%
Dallas	6.48%	17%	0%	83%
Denver	6.56%	40%	0%	60%
Houston	7.31%	50%	25%	25%
Los Angeles	5.74%	14%	0%	86%
Manhattan	4.94%	0%	0%	100%
Northern Virginia	6.77%	0%	17%	83%
Pacific Northwest	5.99%	0%	0%	100%
Philadelphia	7.29%	40%	0%	60%
Phoenix	6.53%	17%	17%	67%
San Diego	6.51%	40%	0%	60%
San Francisco	5.45%	20%	0%	80%
Seattle	5.79%	0%	0%	100%
Southeast Florida	7.26%	20%	0%	80%
Suburban Maryland	7.35%	0%	0%	100%
Washington, DC	5.27%	0%	0%	100%

Source: PwC Real Estate Investor Survey

Breakout of Key Indicators

Overall cap rates, discount rates, and residual cap rates for the CBD and suburban submarkets of each individual office market are presented in Exhibit 3.

As shown, average overall cap rates remain lower for all CBD submarkets than for their suburban counterparts since higher barriers to entry and a lack of land for new development tend to keep supply and demand a bit more balanced in a market's CBD. As a result, CBD assets typically maintain higher rental rates and occupancy levels.

In addition, downtown cores tend to provide better forms of mass transportation and embody 18- or 24-hour, live-work lifestyles that appeal to many individuals and firms. As a result, CBD assets are generally perceived as providing less investment risk to the owner – less risk, lower overall cap rate.

This quarter, a 108-basis-point spread exists between the composite average for the overall cap rates of the CBDs included in our table and the composite average for the suburbs.

For the Survey's individual office markets that have both a CBD and suburban component, the Chicago office market reports the largest gap between its CBD and suburban average overall cap rates this quarter – a difference of 266 basis points. The next highest is Boston with a gap of 172 basis points followed closely by Denver and Southeast Florida with spreads of 138 and 128 basis points, respectively. ✦

Exhibit 3

BREAKOUT OF KEY INDICATORS

Third Quarter 2017

	DISCOUNT RATE		OVERALL CAPITALIZATION RATE		RESIDUAL CAPITALIZATION RATE	
CBD OF:	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
Atlanta	6.00% – 9.25%	8.03%	5.25% – 8.50%	6.73%	6.00% – 8.50%	7.03%
Boston	5.75% – 8.00%	6.77%	4.00% – 8.50%	5.41%	5.00% – 8.50%	6.15%
Charlotte	6.50% – 9.00%	8.00%	5.00% – 7.50%	6.55%	5.50% – 7.75%	6.63%
Chicago	5.50% – 10.00%	7.45%	4.50% – 8.00%	5.95%	5.50% – 9.00%	6.54%
Dallas	6.00% – 11.00%	7.60%	5.00% – 8.50%	6.21%	6.00% – 8.00%	6.90%
Denver	6.50% – 10.00%	7.66%	5.00% – 7.00%	5.88%	5.75% – 8.50%	6.84%
Houston	6.50% – 12.00%	8.51%	5.00% – 8.00%	6.77%	5.75% – 9.50%	7.12%
Los Angeles	5.50% – 9.50%	7.25%	4.00% – 7.00%	5.46%	5.00% – 8.00%	6.29%
Manhattan	5.50% – 9.00%	6.81%	3.00% – 8.50%	4.94%	3.00% – 8.50%	5.63%
Pacific Northwest	5.25% – 9.00%	7.00%	4.25% – 8.00%	5.55%	5.00% – 9.00%	6.17%
Philadelphia	7.00% – 10.00%	8.08%	5.00% – 8.00%	6.83%	6.00% – 9.00%	7.29%
Phoenix	7.00% – 11.00%	8.93%	5.00% – 8.00%	6.40%	5.50% – 8.00%	6.68%
San Diego	6.50% – 10.50%	8.25%	5.50% – 8.50%	6.50%	5.75% – 8.75%	6.91%
San Francisco	5.00% – 8.00%	6.40%	3.50% – 7.00%	5.00%	5.00% – 8.00%	5.70%
Seattle	5.25% – 9.00%	6.90%	4.25% – 8.00%	5.40%	5.00% – 9.00%	6.13%
Southeast Florida	6.00% – 10.00%	7.88%	5.00% – 9.50%	6.63%	5.00% – 10.50%	6.88%
Washington, DC	5.00% – 8.00%	6.48%	4.25% – 6.50%	5.27%	5.00% – 6.50%	5.65%
Secondary Office	6.50% – 11.00%	8.56%	4.50% – 9.50%	7.06%	6.00% – 9.00%	7.40%
	DISCOUNT RATE		OVERALL CAPITALIZATION RATE		RESIDUAL CAPITALIZATION RATE	
SUBURBS OF:	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
Atlanta	7.00% – 10.50%	8.55%	6.00% – 9.00%	7.65%	6.50% – 9.00%	7.73%
Boston	6.75% – 10.00%	8.08%	5.25% – 10.00%	7.13%	6.50% – 10.50%	7.50%
Charlotte	7.00% – 10.00%	8.73%	6.00% – 8.75%	7.30%	6.50% – 8.50%	7.50%
Chicago	8.00% – 12.00%	9.77%	7.00% – 10.00%	8.61%	7.50% – 10.50%	8.96%
Dallas	6.75% – 9.00%	8.13%	5.50% – 8.50%	6.75%	5.50% – 9.00%	7.35%
Denver	7.00% – 11.00%	8.25%	6.00% – 9.00%	7.25%	6.50% – 9.50%	7.75%
Houston	7.50% – 13.50%	9.53%	6.50% – 10.00%	7.85%	6.50% – 10.00%	7.81%
Los Angeles	5.00% – 11.00%	7.57%	4.25% – 8.00%	6.02%	5.00% – 8.00%	6.64%
Northern Virginia	6.00% – 9.50%	7.71%	5.00% – 8.50%	6.77%	5.50% – 8.50%	6.85%
Pacific Northwest	5.50% – 10.00%	7.88%	5.00% – 7.75%	6.44%	5.00% – 8.00%	6.67%
Philadelphia	8.00% – 11.00%	9.17%	5.50% – 9.50%	7.75%	6.50% – 10.00%	8.29%
Phoenix	7.00% – 11.00%	8.63%	5.50% – 8.00%	6.67%	5.50% – 8.00%	6.92%
San Diego	6.50% – 11.00%	8.18%	5.25% – 8.50%	6.53%	5.75% – 8.75%	6.95%
San Francisco	6.00% – 9.50%	7.33%	5.00% – 8.00%	5.91%	5.00% – 9.00%	6.73%
Seattle	5.50% – 10.00%	7.58%	5.00% – 7.00%	6.19%	5.00% – 7.50%	6.41%
Southeast Florida	7.00% – 10.50%	8.75%	6.50% – 10.00%	7.90%	6.50% – 10.50%	8.10%
Suburban Maryland	7.00% – 10.00%	8.65%	5.50% – 9.00%	7.35%	6.00% – 9.50%	7.73%
Secondary Office	6.50% – 13.00%	9.42%	5.50% – 10.00%	7.86%	6.50% – 11.00%	8.17%

Source: PwC Real Estate Investor Survey

Valuation Issues

Rent Spikes

A rent spike is an increase in market rent that is markedly higher than the general inflation rate. For example, if inflation is 3.0%, one might expect a spike to be at least 50.0% to 100.0% higher, or say 4.5% to 6.0%. According to participants, rent spikes typically occur during the first five years of a ten-year forecast. Although they are most often applied in a series of years, an unusually high spike may be applied for a single year only.

Exhibit 4
RENT SPIKES
Third Quarter 2017

	% OF PARTICIPANTS USING RENT SPIKES	
	CURRENT QUARTER	YEAR AGO
National Markets		
Regional Mall	0.0%	0.0%
Power Center	29.0%	33.0%
Strip Shopping Center	0.0%	11.0%
CBD Office	29.0%	57.0%
Suburban Office	38.0%	38.0%
Flex/R&D	50.0%	60.0%
Warehouse	20.0%	40.0%
Net Lease	17.0%	20.0%
MOB*	0.0%	0.0%
Secondary Office	36.0%	50.0%
Regional Markets		
ENC** Warehouse	40.0%	40.0%
Pacific Warehouse	20.0%	20.0%
Office Markets		
Atlanta	0.0%	40.0%
Boston	17.0%	17.0%
Charlotte	20.0%	40.0%
Chicago	0.0%	0.0%
Dallas	17.0%	25.0%
Denver	0.0%	17.0%
Houston	13.0%	13.0%
Los Angeles	63.0%	60.0%
Manhattan	17.0%	17.0%
Northern Virginia	0.0%	0.0%
Pacific Northwest	18.0%	27.0%
Philadelphia	0.0%	0.0%
Phoenix	50.0%	60.0%
San Diego	50.0%	33.0%
San Francisco	0.0%	0.0%
Seattle	17.0%	33.0%
Southeast Florida	0.0%	33.0%
Suburban Maryland	0.0%	3.0%
Washington, DC	17.0%	17.0%

* Medical office buildings
** East north central
Source: PwC Real Estate Investor Survey

Participants who apply rent spikes maintain that they are both extremely property specific and heavily dependent on submarket conditions. Specifically, they are used "where and when appropriate" in markets where hard evidence exists that rents will increase substantially in the future. Such evidence includes a diversified economic base, strong job growth, and an above-average rate of absorption. Furthermore, since many participants time the use of rent spikes according to anticipated supply-demand conditions, they most commonly apply them during the latter part of an expansion.

Rent spikes are also used, but to a lesser extent, at the beginning of the recovery phase of the market cycle. The expectation is that rents will initially rise slowly until space demand gets ahead of acceptable supply. At that point, there is often a rent spike of relatively short duration until construction picks up the slack on the supply side.

Of the 31 Survey markets included in Exhibit 4, the use of rent spikes decreases in 16 of them, increases in two, and remains unchanged in 13 of them since the third quarter of 2016. Declines in usage since last year have occurred in the office markets of Atlanta, Charlotte, and Southeast Florida. The only two office markets that have experienced an increase use of rent spikes over the past year are Los Angeles and San Diego.

In fact, the Los Angeles office market has the greatest percentage of investors using rent spikes (63.0%). The next highest usage is in both the Phoenix office market and the San Diego office market – both at 50.0%.

In the Survey's national warehouse and flex/R&D markets, the use of rent spikes has declined over the past year, but it has remained steady in the East North Central and Pacific warehouse regions. In the Survey's three retail markets, rent spikes are no longer used by investors in both the national regional mall and national strip shopping center markets. However, 29.0% of investor participants are using rent spikes in the national power center market.

With fewer surveyed investors now using rent spikes, reporting specific amounts of spikes for all markets remains difficult. In the Los Angeles office market, most investors who use rent spikes use two of them. The first occurs between year one and five and ranges from 5.0% and 10.0%. The second occurs between year two and four and ranges from 5.0% to 9.0%.

Debt Service

Survey participants indicate that debt remains readily available, but requires due diligence and "smart underwriting" on the part of borrowers. Overall, loan-to-value percentages (LTV ratios) for the Survey's 39 markets indicate a range from 30.0% to 90.0% and an average of 61.0% (see Exhibit 5).

Surveyed investors report that they have had little difficulty obtaining debt for deals, both for existing assets and new development projects. However, debt for new construction may soon become more difficult as interest rates rise. "Debt for new construction will become more difficult to get, which is a win for the industry's fundamentals," says an investor.

Current interest rate levels for each

market are also shown in Exhibit 5. Overall, our surveyed investors indicate that interest rates range from 1.75% to 8.00% and average 4.51% – seven basis points higher than the Survey average a year ago.

When the cost of debt capital is below the rate of return (IRR) on equity and the financed portion of a sale is in the 50.0%-to-60.0% range, some buyers can use positive leverage to bid up prices by a small margin above the all-cash price. Buyers who can access economical debt capital to finance a portion of the sale price can anticipate a better yield than the indicated property yield, offer slightly more for a property than an all-cash buyer, and thus win the bid.

By doing so, they can increase their equity IRR above the property IRR and thus fare better than they would have in an all-cash deal. Furthermore, they perceive only minimal additional risk as long as the financed portion is small enough to offset the possibility that the leverage might become negative. Current leverage premiums are included in Exhibit 5.

Exhibit 5
DEBT SERVICE
Third Quarter 2017

	INTEREST RATES (%)			LTV DEBT RATIO (%)			PREMIUM ADDED (1)		
	LOW	HIGH	AVERAGE	LOW	HIGH	AVERAGE	LOW	HIGH	AVERAGE
National & Regional Markets									
Regional Mall	3.25	8.00	4.79	40	75	60			
Power Center	3.00	6.00	4.78	30	75	59	0	300	94
Strip Shopping Center	3.65	7.50	4.93	45	75	61	0	300	75
CBD Office	3.75	6.00	4.63	40	75	58	0	400	141
Suburban Office	4.00	5.50	4.71	40	75	60			
Flex/R&D									
Warehouse									
National									
ENC Region									
Pacific Region									
Apartment									
National	3.00	7.00	4.53	50	80	69	25	300	141
Mid-Atlantic Region	2.50	6.00	3.94	30	80	61	25	300	172
Pacific Region	3.00	4.50	3.79	30	85	59	50	500	231
Southeast Region	3.00	5.00	3.94	50	80	70			
Net Lease	3.50	6.00	4.73	50	75	61	0	150	60
Medical Office Buildings	3.25	7.00	4.75	40	90	64	0	1,000	231
Secondary Office	3.75	7.00	4.86	50	75	65	150	900	310
Office Markets									
Atlanta	3.00	5.50	4.25	50	75	62	0	300	77
Boston	3.00	6.00	4.53	50	70	58	0	500	206
Charlotte	3.50	5.50	4.33	50	75	65	0	600	250
Chicago	2.75	6.50	4.36	40	90	63	0	600	250
Dallas	2.50	5.50	4.34	40	75	58	0	300	158
Denver	3.80	6.50	4.64	50	80	63	0	400	188
Houston	3.25	8.00	5.10	35	75	54	0	750	258
Los Angeles	1.75	7.00	4.20	40	75	60	6	800	157
Manhattan	3.00	7.00	4.28	50	75	60	50	250	115
Northern Virginia	3.50	6.00	4.41	50	72	58			
Pacific Northwest	3.50	5.50	4.51	40	75	61	50	300	163
Philadelphia	3.00	7.00	4.51	50	75	61	7	1,100	163
Phoenix	3.00	6.50	4.53	50	75	64			
San Diego	3.00	5.00	4.25	50	75	60			
San Francisco	3.00	5.50	3.99	40	65	54	50	300	188
Seattle	3.50	5.25	4.44	40	75	61	50	300	154
Southeast Florida	3.00	7.00	4.83	50	75	62	0	600	233
Suburban Maryland	3.50	5.50	4.42	50	75	63			
Washington, DC	3.25	5.00	3.96	35	65	56			
Lodging Markets									
Full Service	3.00	8.00	5.17	40	70	57	0	500	155
Limited-Service Midscale & Economy	3.50	6.50	5.06	50	80	63	0	700	313
Luxury/Upper Upscale	3.50	6.00	4.72	40	70	57	0	1,200	400
Select Service									

(1) Basis points added to "all cash" IRR (discount rate); empty spaces mean an insufficient number of responses; LTV = loan to value
Source: PwC Real Estate Investor Survey

Lodging NOI Timing

Our lodging participants indicate that they use one of the following three NOI timing scenarios in direct capitalization: prior 12 months; forecast (next) 12 months; or both (see Income Capitalized in Direct Capitalization on page 106).

The NOI used in direct capitalization varies among each hotel segment. While most full-service, limited-service midscale & economy,

Exhibit 6

LODGING RESERVES AND MANAGEMENT FEES

Third Quarter 2017

	REPLACEMENT RESERVES (1) (% OF TOTAL REVENUE)			MANAGEMENT FEE (% OF TOTAL REVENUE)		
SEGMENT	LOW	HIGH	AVERAGE	LOW	HIGH	AVERAGE
Full Service	2.50%	6.00%	4.25%	1.00%	4.00%	2.58%
Limited-Service Midscale & Economy	2.00%	5.00%	4.10%	2.00%	5.00%	3.60%
Luxury/Upper Upscale	4.00%	6.00%	4.40%	2.50%	5.00%	3.50%
Select Service	2.00%	5.00%	3.60%	2.50%	4.00%	3.20%

Source: PwC Real Estate Investor Survey; (1) for FF&E and structural repairs

and luxury/upper-upscale investors analyze forecasted incomes, select-service investors are more inclined to evaluate prior 12 months income.

Lodging Replacement Reserves

As a percentage of total revenue, average replacement reserves for the lodging industry range from 3.60% to 4.40% (see Exhibit 6). This reserve is for both FF&E and structural repairs. All hotel participants indicate that they deduct this replacement reserve from NOI before capping.

Some surveyed investors use the above percentage for structural reserves and add a separate FF&E reserve based on a per-room rate. In the instances where two separate reserves are used, all participants deduct the FF&E reserve prior to capitalization, but only 75.0% subtract the structural component before capping.

Lodging Management Fees

As a percentage of total revenue, average base management fees for the lodging industry range from 2.58% to 3.60% (see Exhibit 6). These rates are relatively unchanged from a year ago.

Incentive management fees are extremely diverse across each hotel category and very few of our surveyed investors report them.

Buyers vs. Sellers

While sellers continue to dictate investment pricing in many markets, it appears that the industry is at an inflection point. When analyzing the Survey's 35 markets, 38.0% of investor participants believe market conditions favor sellers – down from 53.0% last year and 58.0% in 2015.

Even though only 15.0% of our participants feel that market conditions favor buyers, this percentage is up from 10.0% last year and 5.0% in 2015. However, the greatest evidence of a turning point is that the largest portion of investors (47.0%) now feel that markets are neutral – equally favoring buyers and sellers. This percentage is up from 37.0% a year ago and 27.0% in 2015. ✦

Exhibit 7

BUYERS vs. SELLERS

Third Quarter 2017

	BUYERS' MARKET	SELLERS' MARKET	NEUTRAL MARKET*
National Markets			
Regional Mall	40%	40%	20%
Power Center	17%	33%	50%
Strip Shopping Center	11%	44%	44%
CBD Office	0%	43%	57%
Suburban Office	38%	13%	50%
Flex/R&D	0%	0%	100%
Net Lease	0%	40%	60%
Medical Office Buildings	0%	100%	0%
Secondary Office	36%	27%	36%
Warehouse Markets			
National	0%	60%	40%
Pacific Region	0%	80%	20%
East North Central Region	0%	100%	0%
Apartment Markets			
National	0%	44%	56%
Mid-Atlantic Region	20%	0%	80%
Pacific Region	0%	20%	80%
Southeast Region	0%	100%	0%

	BUYERS' MARKET	SELLERS' MARKET	NEUTRAL MARKET*
Office Markets			
Atlanta	20%	20%	60%
Boston	0%	67%	33%
Charlotte	0%	50%	50%
Chicago	43%	43%	14%
Dallas	17%	67%	17%
Denver	0%	20%	80%
Houston	80%	0%	20%
Los Angeles	0%	43%	57%
Manhattan	0%	50%	50%
Northern Virginia	33%	17%	50%
Pacific Northwest	0%	18%	82%
Philadelphia	33%	0%	67%
Phoenix	50%	17%	33%
San Diego	20%	20%	60%
San Francisco	0%	40%	60%
Seattle	0%	33%	67%
Southeast Florida	25%	25%	50%
Suburban Maryland	20%	20%	60%
Washington, DC	17%	33%	50%

Note: Figures may not total 100% due to rounding; figures represent participants' opinions relating to market favorability.
*A neutral market equally favors buyers and sellers.
Source: PwC Real Estate Investor Survey

PwC Real Estate Barometer

Real estate cycles vary across markets and geographic areas, as well as within markets and geographic locations based on property type – office, retail, industrial, and multifamily. This observation means that national cycles differ for the same property type across individual markets. It also means that within a specific location, the cycle for each property type can be in a different phase at any given time.

Real estate markets are dynamic over time and influenced by a host of factors. An in-depth analysis of historical and forecast stock data provided by CBRE Economic Advisors and Reis allows us to gauge each sector's likely shifts over the near term. The results of our PwC real estate barometer research are shown in Chart REB-1 through Chart REB-4.

These charts represent the cumulative number of U.S. metro areas analyzed for each property type and the aggregate positions in our barometer analysis. Individual barometer readings for U.S. regions, as well as various metro areas, are shown for each sector in Forecast-1 through Forecast-4.

Office

While the U.S. office sector still has the most individual markets in expansion compared to the other commercial real estate sectors in our analysis, our forecast shows that 2017 will be the peak for office fundamentals in this cycle (see Chart REB-1). Due to the amount of new supply being delivered and the anticipation of slower tenant demand, an increasing portion of markets is forecast to be in contraction through 2020. By year-end 2018, 58.0% of the metros in our analysis are expected to be in contraction. This figure is forecast to rise to 63.7% by year-end 2019 and to 70.0% by year-end 2020.

Retail

The U.S. retail sector's continuing transformation is making it difficult for many cities to show any improvement and by year-end 2018 most metros in our analysis will be in recession (see Chart REB-2). As this sector moves through 2019 and into 2020, the recovery and expansion phases are forecast to represent a larger portion of markets. Over the next four years, the southern region of the country looks to outperform the others, particularly Palm Beach County, Austin, San Antonio, and Charleston.

Industrial

Nonstop growth in e-commerce continues to fuel demand for space in the U.S. industrial sector, keeping vacancy trends in favor of property owners throughout much of the country. In fact, of the 55 cities included in our analysis, none of them are forecast to be in recession in 2017. As additional supply is added, however, the contraction phase of the cycle is expected to take hold of a growing number of cities, including Chicago, Portland, and Tampa (see Forecast-3). Only Pittsburgh is expected to stay in expansion over the next four years.

Multifamily

Despite steady leasing demand, additions to supply are running slightly ahead of demand in a number of markets, keeping the bulk of this sector in the contraction phase through year-end 2017 (see Chart REB-4). While the new supply will eventually get absorbed, it is expected to take a bit more time than originally forecasted. Thus, 2019 could be a year when the expansion phase once again dominates this sector, particularly in Tampa, Salt Lake City, and St. Louis. ✦

Definitions

Contraction: The phase following the market peak, characterized by softening market conditions and a shift in the supply/demand balance leading to increasing vacancy rates, slowing rent growth, and rising overall cap rates.

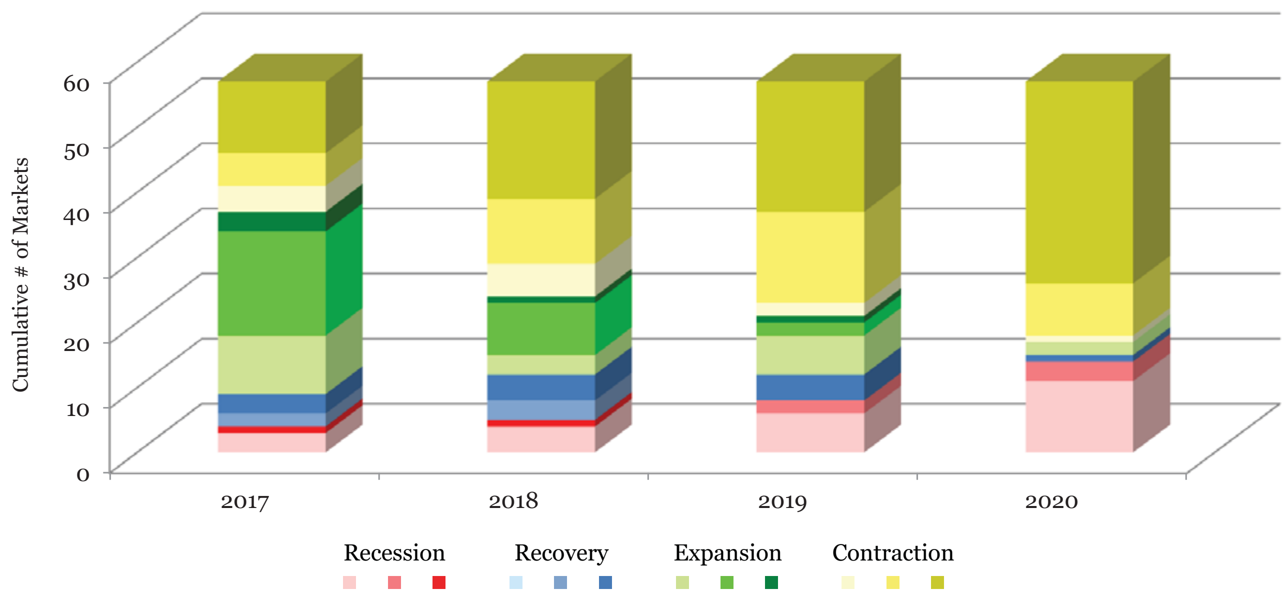
Expansion: The phase following recovery, characterized by strong demand and increasingly tight market conditions leading to low vacancy rates, robust rent growth, and decreasing overall cap rates.

Recession: The phase following contraction, characterized by very low demand and high levels of supply that were added during the previous two phases. Typically involves high vacancies, negative rent growth, and high overall cap rates.

Recovery: The phase following the market bottom, characterized by tightening market conditions and a shift in supply/demand balance leading to reduced vacancy rates, more balanced rent growth, and a stabilization of overall cap rates.

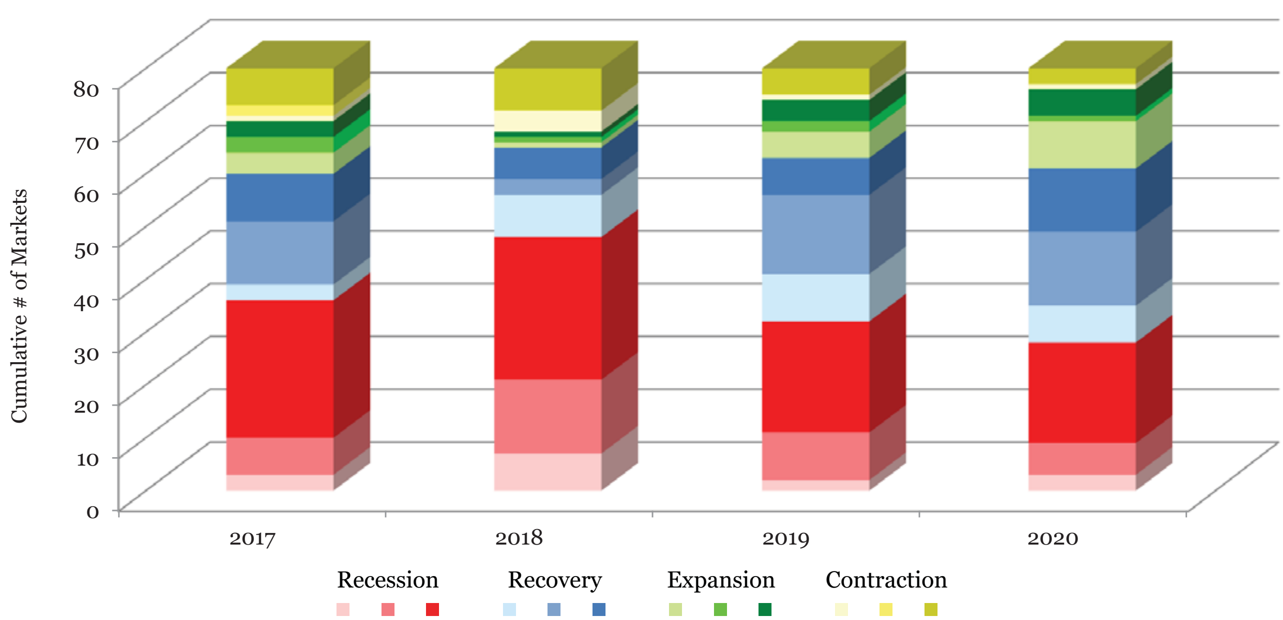
Stock: The total inventory of space, in square feet or units, in a given market.

Chart REB-1
PwC REAL ESTATE BAROMETER
U.S. Office Markets – 2017 to 2020



Source: Data provided by CBRE; compiled and analyzed by PwC

Chart REB-2
PwC REAL ESTATE BAROMETER
U.S. Retail Markets – 2017 to 2020

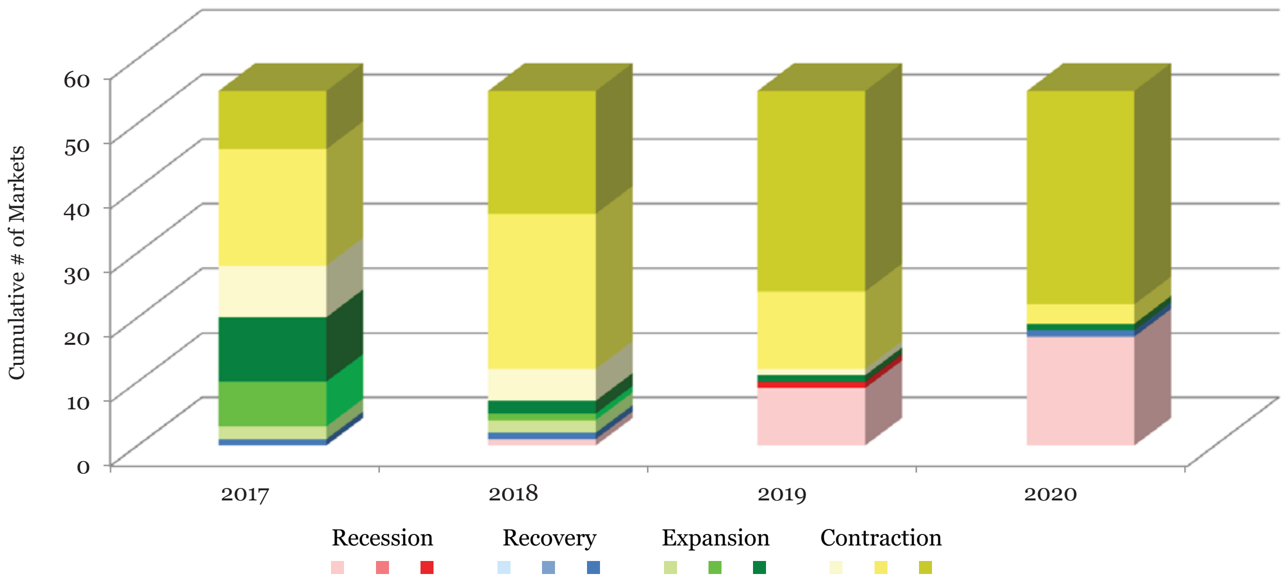


Source: Data provided by Reis; compiled and analyzed by PwC

Chart REB-3

PwC REAL ESTATE BAROMETER

U.S. Industrial Markets – 2017 to 2020

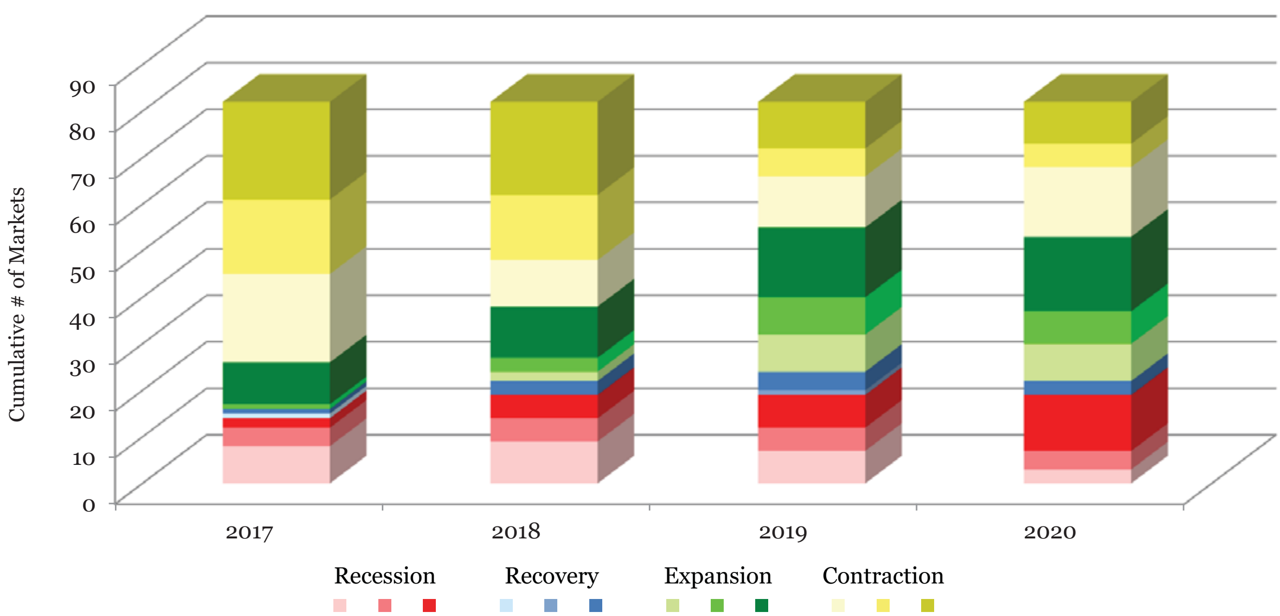


Source: Data provided by CBRE; compiled and analyzed by PwC

Chart REB-4

PwC REAL ESTATE BAROMETER

U.S. Multifamily Markets – 2017 to 2020



Source: Data provided by Reis; compiled and analyzed by PwC

Forecast-1

PwC Real Estate Barometer

U.S. Office Market Forecasts (2017 to 2020)

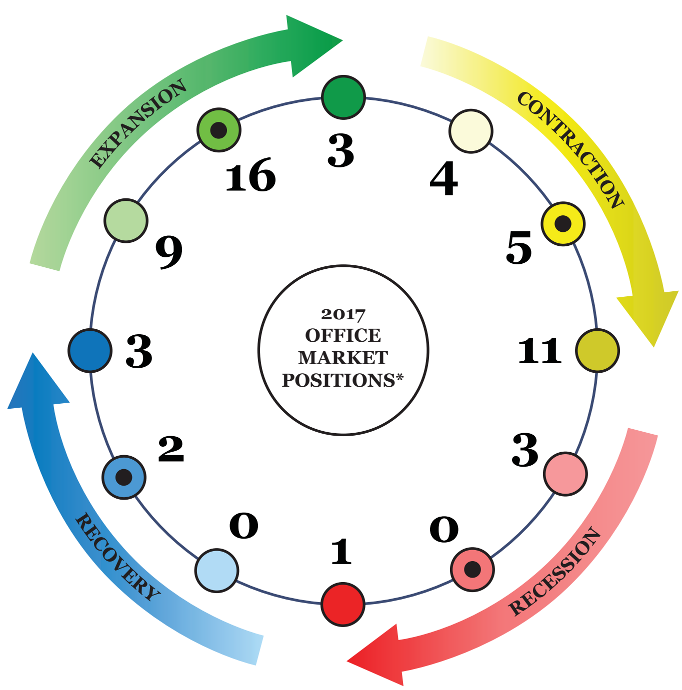
	2017	2018	2019	2020
United States				

NORTHEAST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Boston				
Hartford				
Long Island				
New York				
Newark				
Philadelphia				
Pittsburgh				
Stamford				
Trenton				

MIDWEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Chicago				
Cincinnati				
Cleveland				
Columbus				
Detroit				
Indianapolis				
Kansas City				
Minneapolis				
St. Louis				
Toledo				

WEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Albuquerque				
Denver				
Honolulu				
Las Vegas				
Los Angeles				
Oakland				
Orange County				
Phoenix				
Portland				
Riverside				
Sacramento				
Salt Lake City				
San Diego				
San Francisco				
San Jose				
Seattle				
Tucson				
Ventura				

SOUTH REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Atlanta				
Austin				
Baltimore				
Charlotte				
Dallas				
Fort Lauderdale				
Fort Worth				
Houston				
Jacksonville				
Memphis				
Miami				
Nashville				
Orlando				
Raleigh				
Richmond				
San Antonio				
Tampa				
Washington, DC				
West Palm Beach				
Wilmington				



*=Number of MSAs in position in 2017

Forecast-2

PwC Real Estate Barometer

U.S. Retail Market Forecasts (2017 to 2020)

	2017	2018	2019	2020
United States				

NORTHEAST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Boston				
Buffalo				
Central New Jersey				
Fairfield County				
Hartford				
Long Island				
New Haven				
Northern New Jersey				
Philadelphia				
Pittsburgh				
Rochester				
Syracuse				
Westchester				

MIDWEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Chicago				
Cincinnati				
Cleveland				
Columbus				
Dayton				
Detroit				
Indianapolis				
Kansas City				
Milwaukee				
Minneapolis				
Omaha				
St. Louis				
Wichita				

*=Number of MSAs in position in 2017

WEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Albuquerque				
Colorado Springs				
Denver				
Las Vegas				
Los Angeles				
Oakland-East Bay				
Orange County				
Phoenix				
Portland				
Sacramento				
Salt Lake City				
San Bernardino				
San Diego				
San Francisco				
San Jose				
Seattle				
Tacoma				
Tucson				
Ventura				

SOUTH REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Atlanta				
Austin				
Baltimore				
Birmingham				
Charleston				
Charlotte				
Chattanooga				
Columbia				
Dallas				
Fort Lauderdale				
Fort Worth				
Greensboro/Winston-Salem				
Greenville				
Houston				
Jacksonville				
Knoxville				
Lexington				
Little Rock				
Louisville				
Memphis				
Miami				
Nashville				
New Orleans				
Norfolk				
Oklahoma City				
Orlando				
Palm Beach County				
Providence				
Raleigh				
Richmond				
San Antonio				
Suburban Maryland				
Suburban Virginia				
Tampa				
Tulsa				

Forecast-3

PwC Real Estate Barometer

U.S. Industrial Market Forecasts (2017 to 2020)

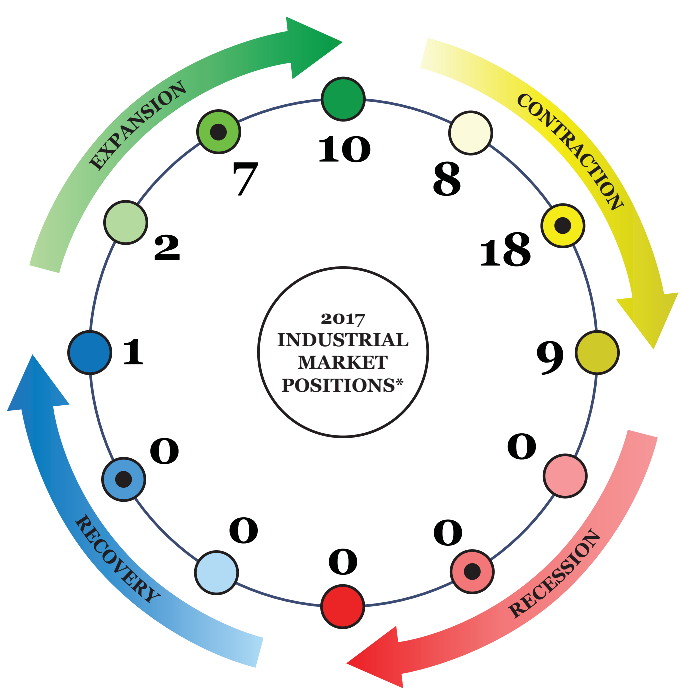
	2017	2018	2019	2020
United States				

NORTHEAST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Allentown				
Boston				
Hartford				
Long Island				
New York				
Newark				
Philadelphia				
Pittsburgh				
Stamford				
Trenton				

MIDWEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Chicago				
Cincinnati				
Cleveland				
Columbus				
Detroit				
Indianapolis				
Kansas City				
Minneapolis				
St. Louis				

WEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Albuquerque				
Denver				
Las Vegas				
Los Angeles				
Oakland				
Orange County				
Phoenix				
Portland				
Riverside				
Sacramento				
Salt Lake City				
San Diego				
San Francisco				
San Jose				
Seattle				
Tucson				
Vallejo				
Ventura				

SOUTH REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Atlanta				
Austin				
Baltimore				
Charlotte				
Dallas				
Fort Lauderdale				
Fort Worth				
Houston				
Jacksonville				
Memphis				
Miami				
Nashville				
Orlando				
Raleigh				
Tampa				
Washington, DC				
West Palm Beach				
Wilmington				



*=Number of MSAs in position in 2017

Forecast-4

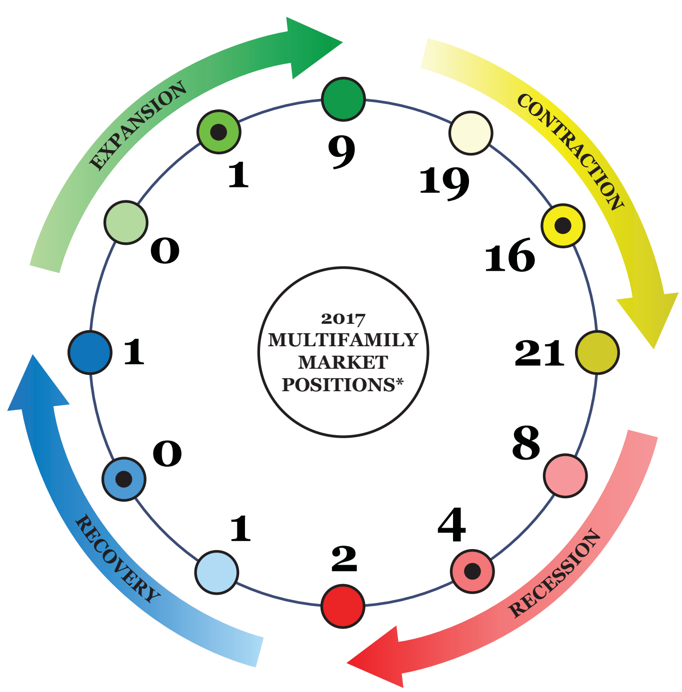
PwC Real Estate Barometer

U.S. Multifamily Market Forecasts (2017 to 2020)

	2017	2018	2019	2020
United States				

NORTHEAST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Boston				
Buffalo				
Central New Jersey				
Fairfield County				
Hartford				
Long Island				
New Haven				
New York				
Northern New Jersey				
Philadelphia				
Pittsburgh				
Providence				
Rochester				
Syracuse				
Westchester				

MIDWEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Chicago				
Cincinnati				
Cleveland				
Columbus				
Dayton				
Detroit				
Indianapolis				
Kansas City				
Milwaukee				
Minneapolis				
Omaha				
St. Louis				
Wichita				



*=Number of MSAs in position in 2017

WEST REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Albuquerque				
Colorado Springs				
Denver				
Las Vegas				
Los Angeles				
Oakland-East Bay				
Orange County				
Phoenix				
Portland				
Sacramento				
Salt Lake City				
San Bernardino				
San Diego				
San Francisco				
San Jose				
Seattle				
Tacoma				
Tucson				
Ventura County				

SOUTH REGION				
MSA Name	**2017**	**2018**	**2019**	**2020**
Atlanta				
Austin				
Baltimore				
Birmingham				
Charleston				
Charlotte				
Chattanooga				
Columbia				
Dallas				
District of Columbia				
Fort Lauderdale				
Fort Worth				
Greensboro/Winston-Salem				
Greenville				
Houston				
Jacksonville				
Knoxville				
Lexington				
Little Rock				
Louisville				
Memphis				
Miami				
Nashville				
New Orleans				
Norfolk				
Oklahoma City				
Orlando				
Palm Beach County				
Raleigh				
Richmond				
San Antonio				
Suburban Maryland				
Suburban Virginia				
Tampa				
Tulsa				

U.S. CRE Stock Acquisition Trends

This quarterly feature investigates CRE acquisition trends for the four major property sectors of the commercial real estate (CRE) industry – office, retail, industrial, and apartments. This analysis is unique in that trends are analyzed based on stock transaction volume as a percent of total stock, not dollar volume.

To analyze each sector peer to peer, the metro data is first divided into quartiles, defined as "one of the three points that divide a range of data or population into four equal parts."

Charts CAT-1 through CAT-4 display the stock acquisition trends for the four main property types divided into their appropriate quartiles. Our analysis covers the rolling 12-month period ending with the second quarter of 2017.

Analyzing CRE acquisitions is a common practice among industry professionals as it reflects the health of the industry, each property type, and geographic areas. During cyclical downturns and times of uncertainty, CRE transaction volume usually slows as investors are more indecisive about the future and pricing can be more difficult to determine. The opposite typically occurs during cyclical recoveries as investors look to "buy low" and capitalize on a recovering industry.

Most CRE reports focus on dollar volumes, giving accolades to U.S. metros that report the highest levels of capital sales. Not surprisingly, high-priced U.S. metros, like Manhattan and San Francisco, generally rise to the "top" of these sales volume reports not only because they tend to be more preferred by investors, but because they are pricier compared to most other markets on a dollar-per-square-foot basis. On the other hand, U.S. cities like Dallas and Charlotte tend to be viewed as "less preferred" because their dollar volumes and price-per-square-foot achievements are generally lower.

Many factors drive pricing, such as local economic performances, tenancy, building amenities, and supply-demand dynamics. These variables are often reflected in a property's price per square foot, lending support to why most assets in "top" markets, like Manhattan and San Francisco, garner the prices they do. But sales volume can sometimes tell only one side of the CRE capital story.

Stock Acquisition Analysis

Our analysis reveals the following trends.

- ♦ Compared to the same period a year ago, the current stock acquisition percentages are lower for each property sector.
- ♦ Over the past three months, the stock acquisition percentages for three of the four property sectors analyzed (apartment, office, and retail) have increased.
- ♦ At 12.8%, the office sector maintains the highest average stock acquisition percentage among the four property types. Still, this average is down 110 basis points from a year ago (see Chart CAT-1).
- ♦ In the industrial sector, the average stock acquisition percentage holds steady this quarter at 4.2% compared to the prior quarter, but is 100 basis points below the average from a year ago (see Chart CAT-3).
- ♦ Similar to last quarter, just over half of the cities analyzed in the retail sector have stock acquisition percentages above this sector's average of 12.2% (see Chart CAT-2).
- ♦ As the apartment sector moves further into the contraction phase, its average stock acquisition percentage stayed relatively steady this quarter at 9.5% – similar to last quarter's 9.3% (see Chart CAT-4).
- ♦ Six cities have above-average stock acquisition percentages in each of the four property sectors – Atlanta, Austin, Charlotte, Dallas, Nashville, and Seattle.

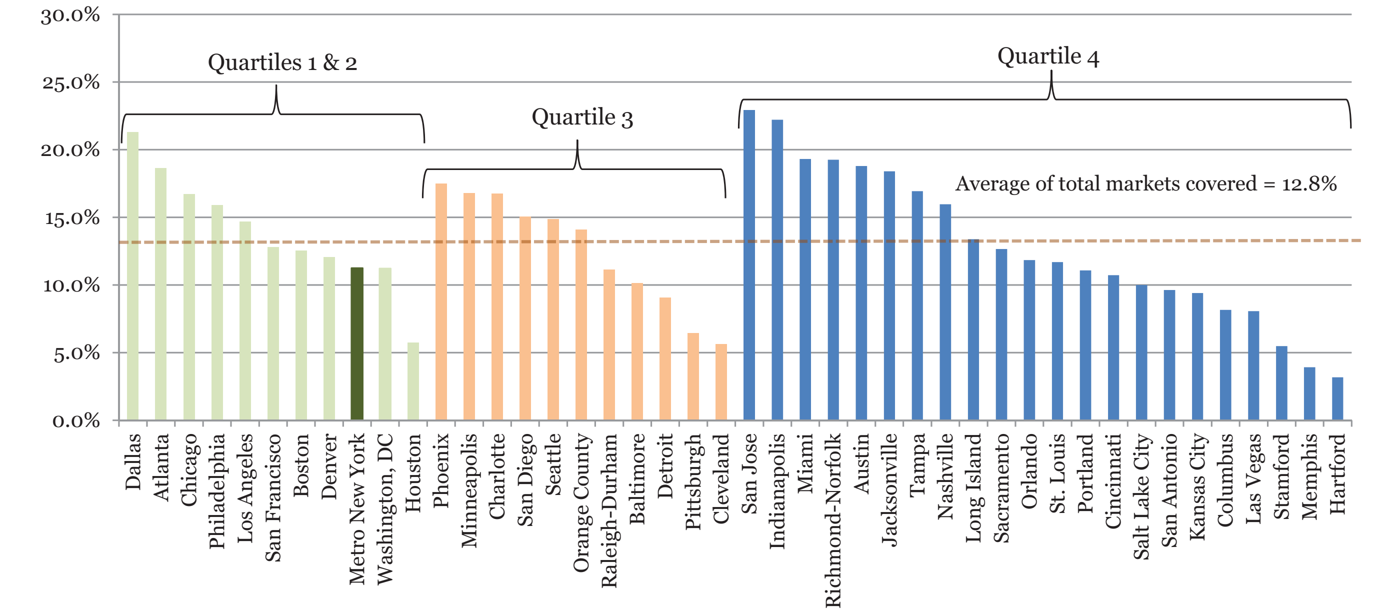
Locational Differences

While economic and demographic trends within a specific metro may pique investor interest for a certain property type, those same trends may not have the same impact on the other property types within that market. In our analysis, many top-performing markets were diverse in each property type with the exception of the six markets previously noted. Such diversity opens up broad investment options for investors not just in terms of geography, but with regard to property type as well. ✦

Chart CAT-1

OFFICE CRE TRANSACTIONS TO TOTAL STOCK

4-Quarter Rolling Percentages through 2Q 2017

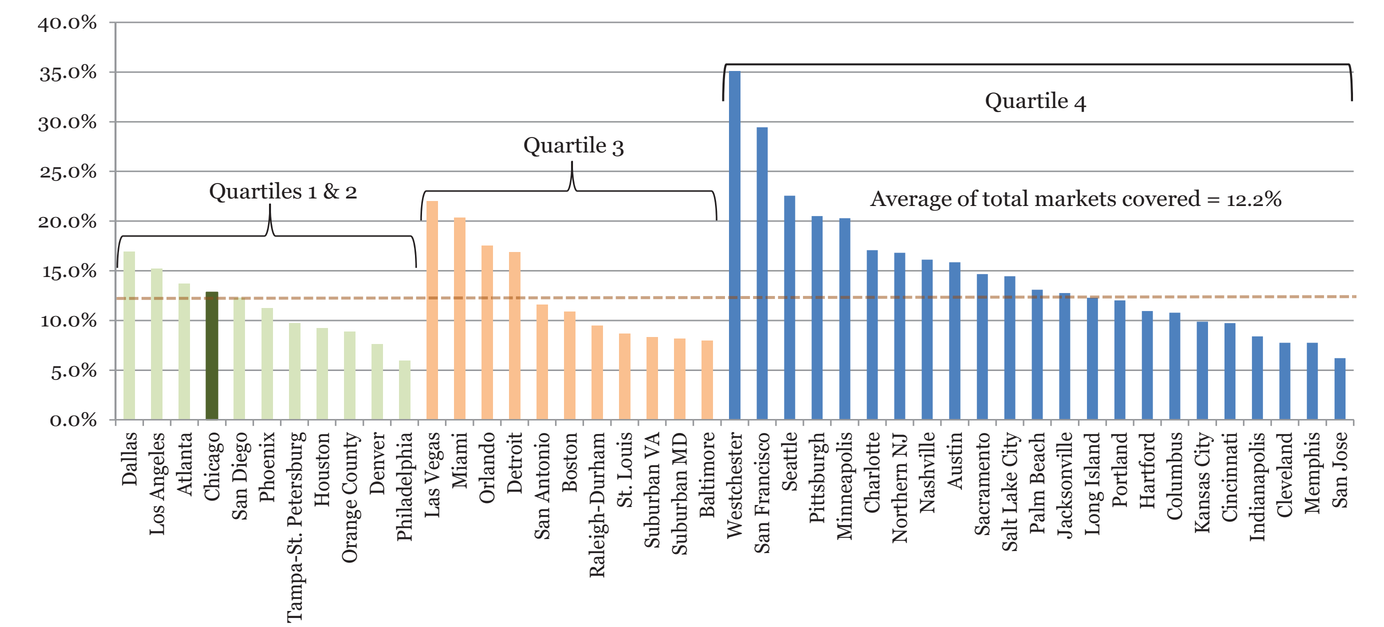


Source: Data provided by Real Capital Analytics and CBRE; compiled and analyzed by PwC   Note: Quartiles are based on markets' total CRE stock

Chart CAT-2

RETAIL CRE TRANSACTIONS TO TOTAL STOCK

4-Quarter Rolling Percentages through 2Q 2017

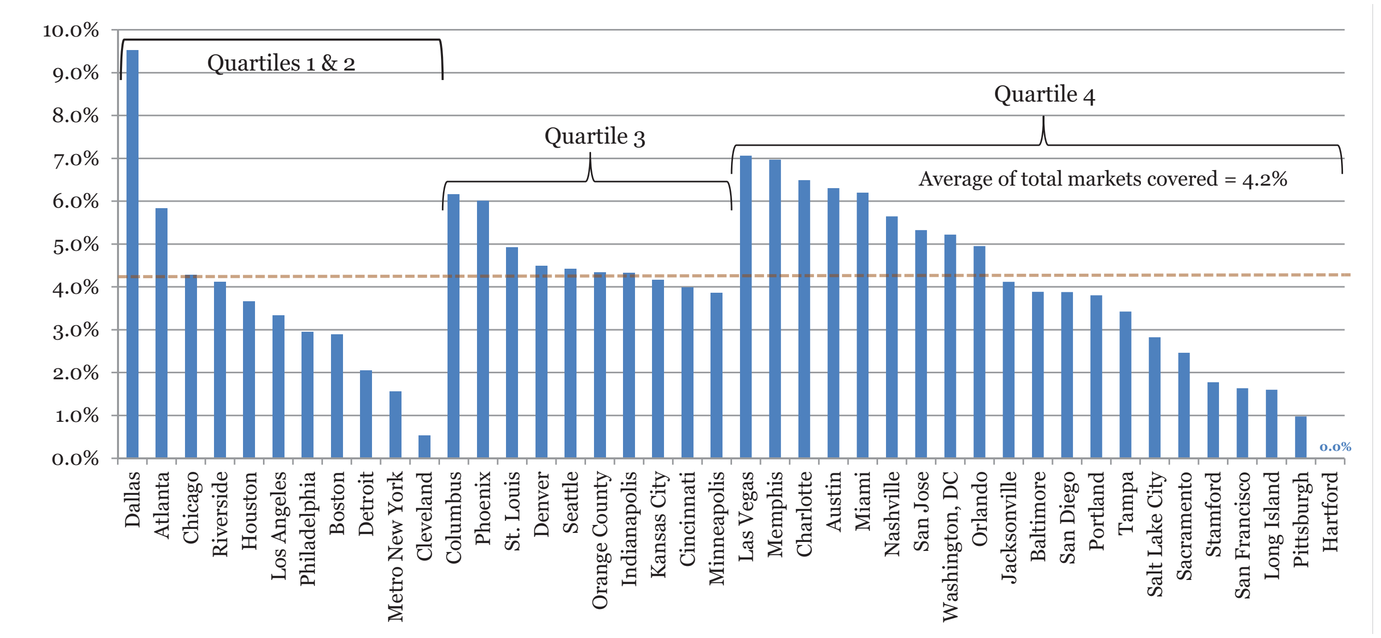


Source: Data provided by Real Capital Analytics and Reis; compiled and analyzed by PwC   Note: Quartiles are based on markets' total CRE stock

Chart CAT-3

INDUSTRIAL CRE TRANSACTIONS TO TOTAL STOCK

4-Quarter Rolling Percentages through 2Q 2017

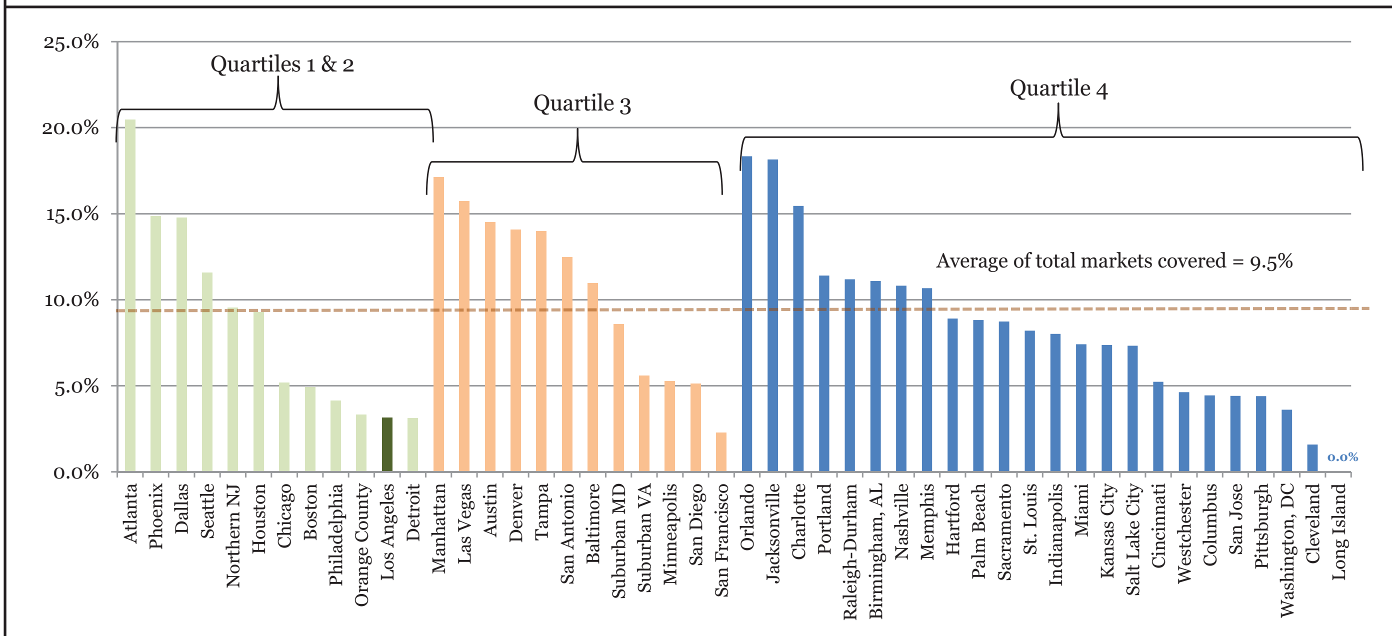


Source: Data provided by Real Capital Analytics and CBRE; compiled and analyzed by PwC   Note: Quartiles are based on markets' total CRE stock

Chart CAT-4

APARTMENT CRE TRANSACTIONS TO TOTAL STOCK

4-Quarter Rolling Percentages through 2Q 2017



Source: Data provided by Real Capital Analytics and Reis; compiled and analyzed by PwC   Note: Quartiles are based on markets' total CRE stock

Survey Trends: *Retail Sector*

The retail sector continues to be challenged by the growing popularity of e-commerce, which is negatively impacting each retail segment to some degree.

- In the each of the Survey's retail markets – regional mall, power center, and strip shopping center, cash flow assumptions stayed relatively steady this quarter, suggesting that most investors are taking a more cautious attitude toward acquisitions.
- Interestingly, the average overall cap rate remains quite low for each retail market compared to averages from the past 11 years (see Chart ST-1).
- Currently, the average overall cap rate in each retail market remains below the respective average from the last market peak (midyear 2007).
- The national regional mall market has posted the lowest average in each year analyzed – coming very close to the power center's average in 2014.

Various average overall cap rates are shown for each retail Survey market in the Trends Tracker on this page. Since debuting in the Survey, the national strip shopping center has posted the greatest decline in its average overall cap rate, dropping 328 basis points since the fourth quarter of 1991. The national power center market is next with a decline of 315 basis points over the past 21 years followed by the national regional mall market, where the average has decreased only 50 basis points since debuting in 1990. ✦

TRENDS TRACKER

Average Overall Cap Rates

	Mall	Power	Strip
3Q 2007	7.00%	7.00%	7.20%
3Q 2009	7.98%	8.63%	8.41%
3Q 2011	7.50%	7.50%	7.20%
3Q 2013	6.52%	6.67%	6.95%
3Q 2015	6.13%	6.54%	6.91%
3Q 2017	6.20%	6.35%	6.26%

Regional Mall(1):
Lowest OAR: 6.00% in 1Q & 2Q 2016

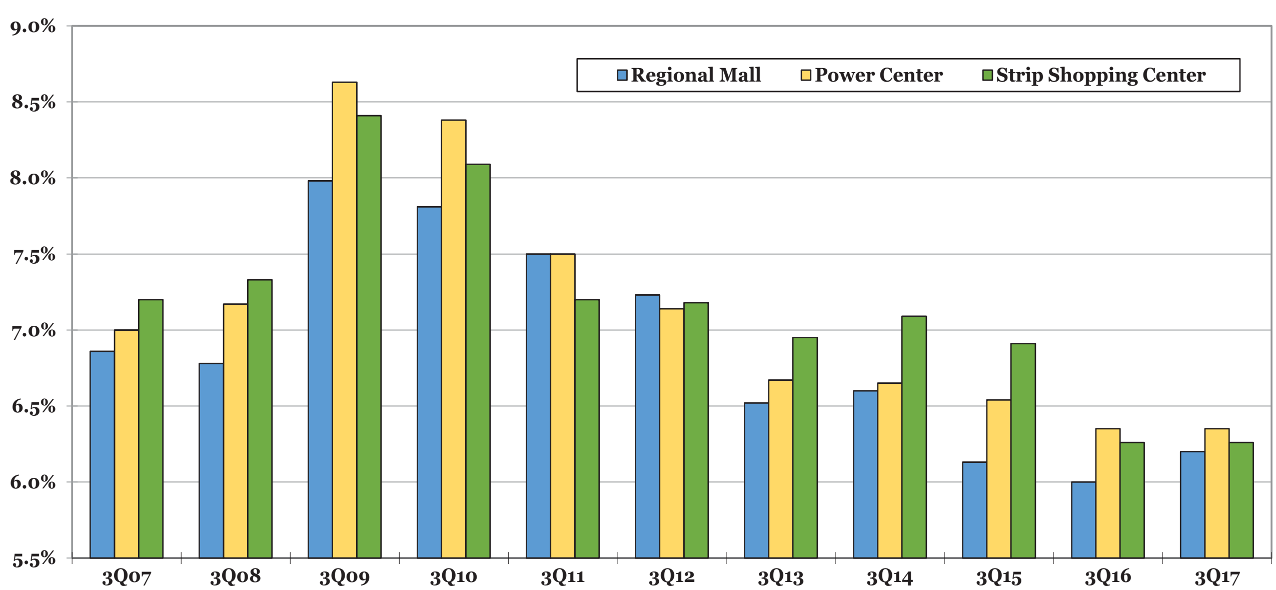
Power Center(2):
Lowest OAR: 6.31% in 3Q/4Q 15; 3Q 16

Strip Shopping Center(3):
Lowest OAR: 6.18% in 4Q 2016

OAR = overall cap rate
(1) over 28-year history; (2) over 22-year history; (3) over 27-year history

Source: PwC Real Estate Investor Survey

Chart ST-1
AVERAGE OVERALL CAP RATE TRENDS
3Q 2007 to 3Q 2017



Source: *PwC Real Estate Investor Survey;* national retail markets

Survey Trends: *Retail Sector*

As the retail sector's performance has fluctuated due to the recession and the growth of e-commerce, the average tenant retention rate used by investors has also varied.

- Prior to the impact of the U.S. economic recession, the average tenant retention rates in the Survey's retail markets were quite high, ranging from 70.0% to 73.0% (see Chart ST-2).
- Following the end of "the great recession," investors' expectations of tenant retention dropped dramatically in the national power center market, declining to 61.0% in the third quarter of 2009.
- Although the average tenant retention rate for the national power center market recovered during the next two years, it has been erratic recently due to the burgeoning growth of e-commerce.

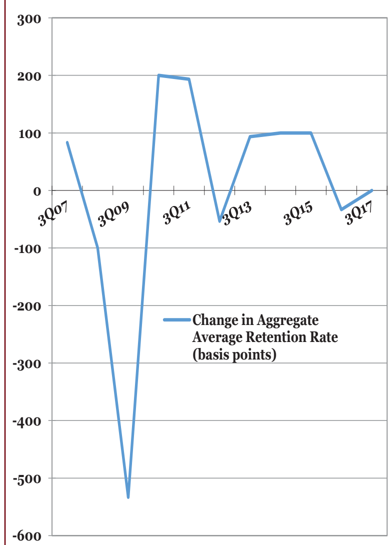
The combined annual changes for the average retention rates of the Survey's three national retail markets are shown in Chart ST-3. This chart shows the depth to which the composite average declined following the 18-month recession from December 2007 to June 2009. During this time period, there were numerous store closings and consolidations.

While the average retention rates have rebounded in each segment, the retail sector's ongoing transformation is making it difficult for this key market indicator to establish a consistent trend. ✦

Chart ST-3

AVERAGE RETENTION RATE CHANGE*

3Q 2007 to 3Q 2017



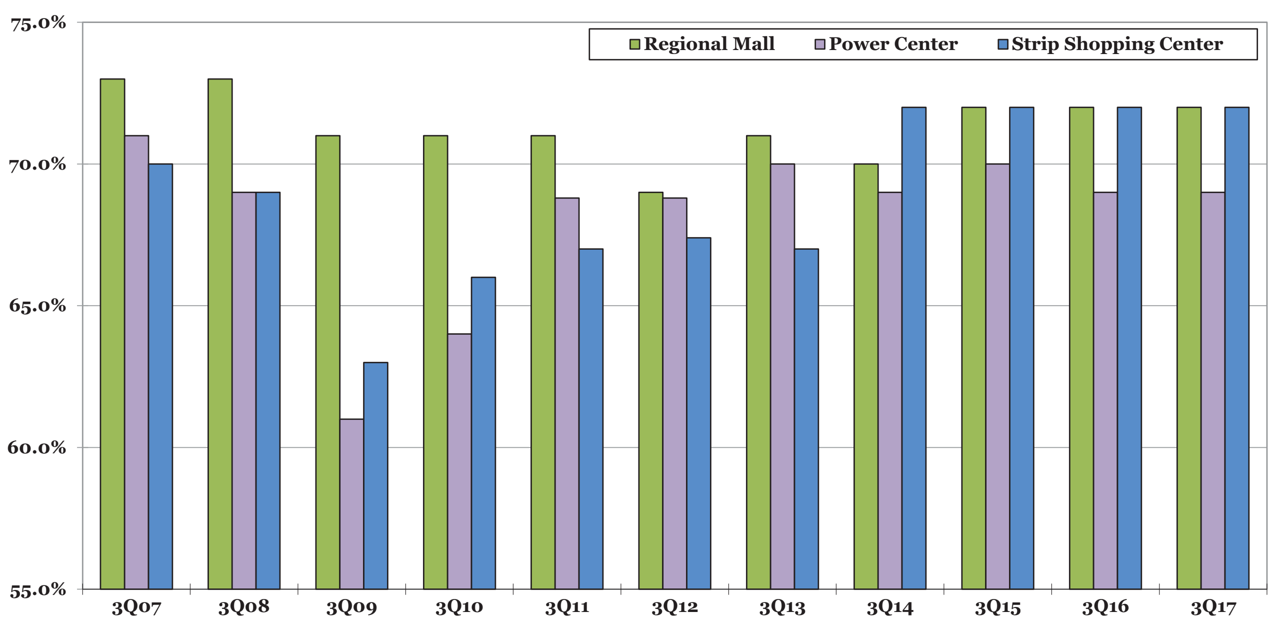
*for national regional mall, power center, & strip shopping center markets

Source: PwC Real Estate Investor Survey

Chart ST-2

AVERAGE TENANT RETENTION RATES

3Q 2007 to 3Q 2017



Source: *PwC Real Estate Investor Survey*; national retail markets

Special Report: *National Self Storage*

From an occupancy standpoint, demand remains strong for self-storage units as consumers continue to buy goods at a time when apartment occupancy and the desire to "live small" are on the rise. As a result, the need exists for storage – whether it is for the "old" being replaced with the "new" or simply the excess. In the early years of self-storage operations, owners were mostly small, mom-pop types. Now, however, institutional investors have been lured by steady revenue, low capital expenditures, and low turnover costs. "We like this investment because it has solid cash flow margins – limited recurring capex and low re-leasing expenses," shares an investor.

Our Survey this quarter reveals the following:

- Trade areas range from one to five miles and average 2.70 miles.
- Concessions continue to be offered and depend on unit size and term; ranging from 1/2 month to one month of free rent.
- Most participants (80.0%) believe self-storage fundamentals favor sellers.
- The average overall cap rate sits at 5.78% and is the lowest among the other niche property types in our Survey (see Chart SS-1).
- This sector's outlook for future rent growth is very optimistic with an average of 3.38% – the highest among the niche property types in our Survey (see Chart SS-1). ✦

KEY INDICATORS - 3Q17

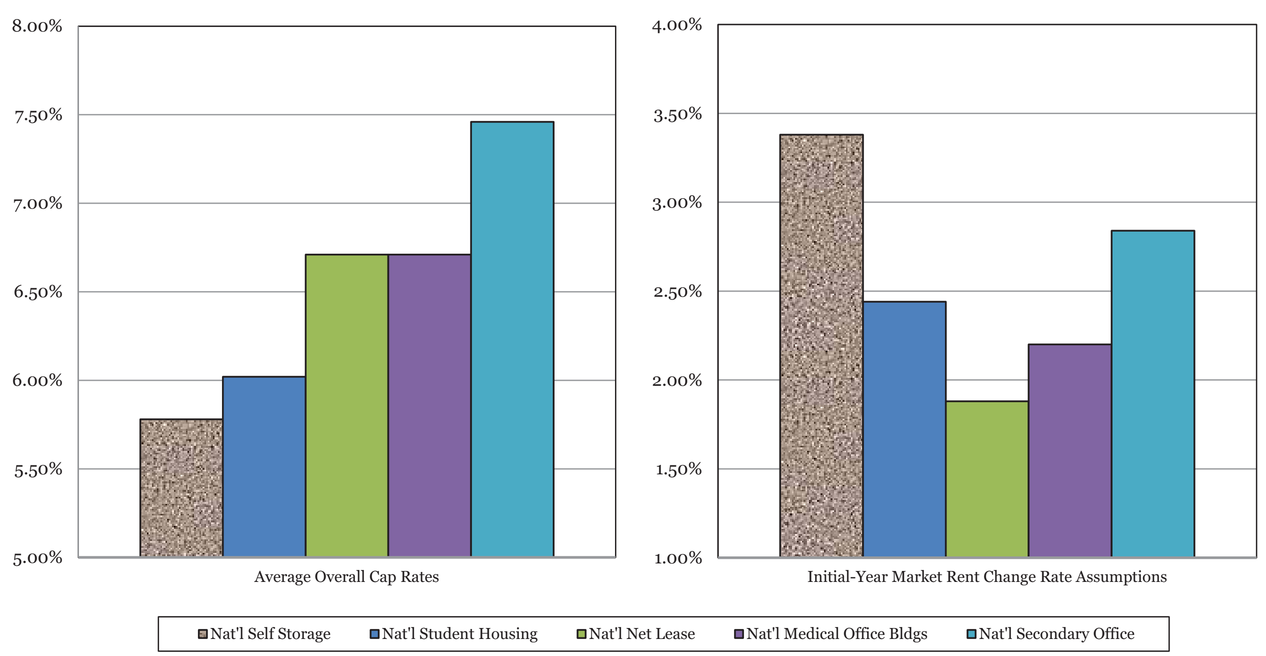
DISCOUNT RATE (IRR)		
	Range	5.00% – 8.00%
	Average	6.38%
OVERALL CAP RATE (OAR)		
	Range	5.00% – 7.00%
	Average	5.78%
RESIDUAL CAP RATE		
	Range	5.00% – 8.00%
	Average	6.50%
MARKET RENT CHANGE[b]		
	Range	1.00% – 5.00%
	Average	3.38%
EXPENSE CHANGE[b]		
	Range	1.00% – 3.00%
	Average	2.63%
MARKETING TIME[c]		
	Range	1 – 6
	Average	2.9

a. Rate on unleveraged, all cash transactions
b. Initial rate of change c. In months

Chart SS-1

3Q2017 OVERALL CAPITALIZATION RATES AND MARKET RENT CHANGE RATES

Niche Survey Markets



Source: *PwC Real Estate Investor Survey*

National Secondary Office Market

Changes in two key cash flow assumptions this quarter suggest an increasingly cautious outlook for the national secondary office market. First, the average overall cap rate inches up for the second consecutive quarter to 7.46%. As shown in the Key 3Q17 Survey Stats, the average CBD cap rate holds steady at 7.06% while the suburban average increases 12 basis points. "The CBD is attractive, but the suburbs should be approached carefully on a case-by-case basis," warns an investor active in Sacramento.

Secondly, this market's average initial-year market rent change rate falls for the fourth consecutive quarter to land at 2.84% (see Table SEC-1). While the outlook for future rent growth has tempered over the past several quarters, it remains above both the Survey's national CBD and national suburban office markets, at 2.54% and 2.00%, respectively.

As investors exercise greater scrutiny of potential acquisitions in this market, they highlight strong parking ratios and diversified tenant rent rolls as crucial property characteristics. "Location and creative space typically get a premium," states a participant. Another cites job and population growth, limited speculative development, a strong residential market, and corporate expansions as necessary market traits. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:		
Average	72.0%	▼
Range	60.0% to 80.0%	
Months of Free Rent[(1)]:		
Average	6	▲
Range	1 to 11	
% of participants using	100.0%	=
Average Overall Cap Rates:		
Market (as a whole)	7.46%	▲
CBD	7.06%	=
Suburbs	7.86%	▲

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table SEC-1
NATIONAL SECONDARY OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.50% – 13.00%	6.50% – 13.00%	5.75% – 13.00%	6.50% – 14.00%	6.75% – 14.00%
Average	8.99%	8.95%	8.80%	9.19%	9.53%
Change (Basis Points)		+ 4	+ 19	– 20	– 54
OVERALL CAP RATE (OAR)[a]					
Range	4.50% – 10.00%	4.50% – 9.50%	4.50% – 10.00%	4.50% – 10.00%	4.00% – 11.00%
Average	7.46%	7.40%	7.37%	7.81%	8.11%
Change (Basis Points)		+ 6	+ 9	– 35	– 65
RESIDUAL CAP RATE					
Range	6.00% – 11.00%	6.00% – 10.00%	6.00% – 10.00%	4.50% – 10.00%	6.00% – 10.50%
Average	7.79%	7.72%	7.69%	7.95%	8.30%
Change (Basis Points)		+ 7	+ 10	– 18	– 51
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 5.00%	0.00% – 10.00%	0.00% – 10.00%	0.00% – 12.00%
Average	2.84%	2.88%	3.65%	3.52%	2.88%
Change (Basis Points)		– 4	– 81	– 56	– 4
EXPENSE CHANGE[b]					
Range	1.50% – 3.50%	1.50% – 3.00%	1.50% – 3.00%	2.00% – 3.00%	2.00% – 3.00%
Average	2.52%	2.48%	2.48%	2.58%	2.54%
Change (Basis Points)		+ 4	+ 4	0	– 2
MARKETING TIME[c]					
Range	3 – 9	3 – 9	2 – 9	2 – 9	2 – 12
Average	5.8	5.7	5.8	5.8	6.3
Change (▼, ▲, =)		▲	=	=	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Table SOM-1

NATIONAL SECONDARY OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	GEOGRAPHY	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	REGION/ CITY	MARKET RENT	EXPENSES	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
FULL-SERVICE ADVISORY FIRM ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	West/ Sacramento	0.0%	2.5%	6.75% to 7.00% (CBD); 7.75% to 8.25% (suburbs)	2.5% to 5.0%	9.00% to 11.00% (CBD); 11.00% to 13.00% (suburbs)	6.00% to 7.00% (CBD); 7.75% to 8.25% (suburbs)	6	75.0%	5.0%	$0.15 to $0.20	6 to 9
REAL ESTATE FIRM ✦ Forecast Period: 1 to 3 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to increase 25 to 50 basis points over the next six months; may use a rent spike.	Mountain/ Las Vegas	4.0% to 5.0%	2.0% to 2.5%	7.50% to 8.25% in both CBD & suburbs	2.0% to 3.0%	8.00% to 9.00% in both CBD & suburbs	7.00% to 7.75% in both CBD & suburbs	6 to 9	75.0%	10.0%	$0.10 to $0.15	3 to 5
REAL ESTATE ADVISOR ✦ Forecast Period: 3 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to increase over the next six months; does not use rent spikes.	Southeast/ Tampa	3.0% to 5.0%	3.0%	7.25% to 8.00% (CBD); 8.00% to 9.00% (suburbs)	1.0% to 3.0%	7.75% to 8.50% (CBD); 8.50% to 9.75% (suburbs)	6.25% to 7.25% (CBD); 7.50% to 9.00% (suburbs)	6 to 10	70.0% to 75.0%	5.0% to 7.5%	$0.15 to $0.25	4 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions currently favor buyers; expects cap rates to hold steady over the next six months.	South/ Orlando	1.0% to 3.0%	2.0% to 3.0%	6.75% to 7.25% (CBD); 7.75% to 8.50% (suburbs)	2.0% to 3.0%	8.00% to 9.25% (CBD); 9.00% to 11.00% (suburbs)	6.00% to 7.25% (CBD); 7.25% to 8.75% (suburbs)	3 to 9	70.0% to 75.0%	2.0% to 8.0%	$0.10 to $0.25	6 to 9
REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions equally favor buyers and sellers; uses face rents and reflects concessions when they are scheduled to occur.	Southwest/ San Antonio	3.0% to 5.0%	2.0% to 3.0%	6.50% to 8.50% (CBD); 7.00% to 9.00% (suburbs)	1.0% to 5.0%	7.25% to 9.25% (CBD); 8.75% to 11.00% (suburbs)	6.00% to 8.00% (CBD); 7.00% to 9.50% (suburbs)	5 to 9	70.0% to 75.0%	5.0% to 7.0%	$0.10 to $0.20	5 to 8

Source: Personal survey conducted by PwC during July 2017.

Table SOM-2

NATIONAL SECONDARY OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	GEOGRAPHY	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	REGION/ CITY	MARKET RENT	EXPENSES	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
REAL ESTATE COMPANY ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions currently favor sellers; no longer uses rent spikes.	West/ San Jose	2.0%	2.0% to 3.0%	6.50% to 7.50% in both CBD & suburbs	1.0% to 1.5%	6.50% to 7.50% in both CBD & suburbs	5.00% to 7.00% (CBD); 5.50% to 7.50% (suburbs)	6 to 9	60.0% to 70.0%	3.0% to 7.0%	Does not use	3 to 6
REAL ESTATE INVESTOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions favor buyers; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	East North Central/ Indianapolis	2.5% to 4.0%	2.0% to 3.0%	8.00% to 9.00% (CBD); 8.50% to 10.00% (suburbs)	1.5% to 3.0%	8.00% to 10.00% (CBD); 8.00% to 12.00% (suburbs)	8.00% to 9.50% (CBD); 8.25% to 9.50% (suburbs)	8 to 10	70.0% to 75.0%	8.0% to 10.0%	Does not use	3 to 5
REAL ESTATE SERVICE FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions currently favor sellers; expects overall cap rates to hold steady over the next six months; may use rent spikes.	Northeast/ Pittsburgh	2.0%	1.5% to 2.0%	6.50% to 7.25% (CBD); 7.25% to 7.75% (suburbs)	2.0% to 3.0%	8.25% to 8.50% (CBD); 8.75% to 9.00% (suburbs)	6.50% to 7.50% (CBD); 7.25% to 8.25% (suburbs)	6 to 12	70.0% to 80.0%	5.0% to 8.0%	$0.15 to $0.25	6 to 9
REAL ESTATE ADVISOR ✦ Forecast Period: 3 to 15 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions currently favor sellers; expects cap rates to hold steady over the next six months; no longer uses rent spikes.	Southwest/ Austin	3.0% to 5.0%	2.0% to 3.0%	6.00% to 7.00% (CBD); 7.25% to 8.50% (suburbs)	0.5% to 6.0%	6.50% to 9.00% (CBD); 7.00% to 10.00% (suburbs)	4.50% to 7.75% (CBD); 5.50% to 8.50% (suburbs)	5 to 9	70.0% to 75.0%	5.0% to 7.0%	$0.10 to $0.20	5 to 8
INVESTMENT FIRM ✦ Forecast Period: 5 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions equally favor buyers and sellers; expects overall cap rates to hold steady over the next six months.	Southeast/ Jacksonville	3.0%	2.5% to 3.0%	8.00% to 8.50% in both CBD & suburbs	2.0% to 3.0%	9.00% to 11.00% (CBD); 9.00% to 10.50% (suburbs)	8.00% to 9.00% (CBD); 7.50% to 8.50% (suburbs)	6 to 10	70.0% to 75.0%	5.0% to 10.0%	$0.20 to $0.30	4

Source: Personal survey conducted by PwC during July 2017.

National Regional Mall Market

Key indicators stayed relatively steady for the national regional mall market this quarter, suggesting that most investors are not aggressively pursuing deals and instead are taking a more cautious "wait-and-see" attitude. A watchful approach is appropriate given the recent increase in this sector's vacancy and the expected store closings for 2017. Specifically, the vacancy rate for the U.S. regional mall sector increased to 8.1% in the second quarter of 2017, the highest quarterly average since 2013, as per Reis.

In terms of store closings, the number so far this year is triple what it was at this time last year, according to Fung Global Retail & Technology. Based on its research, there have been 5,300 store closing announcements through June 20, 2017, making it the second-worst year on record at the six-month mark. Traditional regional mall merchants closing stores this year include Gymboree, True Religion, Bebe, Rue21, Radio Shack, Wet Seal, Guess, and GameStop. In addition, anchor stores, like Sears, Kmart, Macy's, and J.C. Penney, are also closing stores in 2017.

Since 2017 is poised to be the worst year for store closures on record, it is not surprising that investors are taking extra care to focus on rent rolls and tenant balance sheets, as well as rent and retail sales growth rates. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	72.0%	=
Range	50.0% to 85.0%	

Months of Free Rent(1):

Average	(2)	
Range	(2)	
% of participants using	(2)	

Average Overall Cap Rates:

Class A+	4.72%	▲
Class A	5.44%	=
Class B+	6.59%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease
(2) 60% are not using free rent

Table 1

NATIONAL REGIONAL MALL MARKET[d]

Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.00% – 11.50%	5.00% – 11.50%	5.50% – 11.50%	5.50% – 12.00%	5.75% – 14.00%
Average	7.60%	7.60%	7.75%	8.63%	9.38%
Change (Basis Points)		0	– 15	– 103	– 178
OVERALL CAP RATE (OAR)[a]					
Range	4.00% – 10.00%	4.00% – 10.00%	4.00% – 9.00%	4.00% – 10.00%	4.50% – 10.50%
Average	6.23%	6.20%	6.05%	6.58%	7.06%
Change (Basis Points)		+ 3	+ 18	– 35	– 83
RESIDUAL CAP RATE					
Range	4.00% – 10.00%	4.00% – 10.00%	4.00% – 9.00%	4.50% – 11.00%	4.75% – 12.00%
Average	6.70%	6.70%	6.45%	6.94%	7.38%
Change (Basis Points)		0	+ 25	– 24	– 68
MARKET RENT CHANGE[b]					
Range	1.00% – 4.00%	1.00% – 4.00%	1.00% – 5.00%	1.00% – 5.00%	(2.00%) – 5.00%
Average	2.50%	2.45%	2.85%	2.67%	2.00%
Change (Basis Points)		+ 5	– 35	– 17	+ 50
EXPENSE CHANGE[b]					
Range	2.00% – 5.00%	2.00% – 5.00%	2.00% – 5.00%	0.00% – 3.00%	0.00% – 3.00%
Average	3.00%	3.00%	3.00%	2.25%	2.17%
Change (Basis Points)		0	0	+ 75	+ 83
MARKETING TIME[c]					
Range	3 – 18	3 – 18	3 – 12	3 – 18	3 – 24
Average	9.0	9.0	7.8	9.0	9.4
Change (▼, ▲, =)		=	▲	=	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months d. relates to Class A+, A, B+, and B malls

National Power Center Market

When looking at potential properties to acquire in the national power center market, many investors are searching for assets with quality anchor stores and locations. "Given the recent headlines about the struggling retail sector, location is more important than ever for this property type," says a participant. "A center needs to have good ingress and egress, as well as a good demographic base within close proximity," shares another.

Many buyers are also focused on tenant credit when analyzing deals, as well as the local trends for market rent and retail sales growth due to the growing popularity of online sales. "We are super concerned about the negative impact that Amazon has on sales and tenancy," reveals a participant. Investors' trepidation about this market's near-term performance is reflected in its average overall cap rate, which moves up to 6.40% this quarter, as well as in its average initial-year market rent change rate, which stays relatively stagnant at 1.97%.

Currently, most Survey participants (50.0%) feel that this market's fundamentals are neutral – equally favoring buyers and sellers. A year ago, sellers were thought to hold the upper hand at 50.0% with buyers continuing to be least in control at 17.0%. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	69.0%	=
Range	55.0% to 80.0%	

Months of Free Rent[1]:

Average	5	=
Range	0 to 12	
% of participants using	57.0%	▲

Average Overall Cap Rates:

75.0% big-box space	6.38%	▲
85.0% big-box space	6.60%	▲
100.0% big-box space	6.81%	▲

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 2
NATIONAL POWER CENTER MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 10.00%	6.00% – 10.00%	6.00% – 10.00%	6.00% – 10.00%	6.00% – 11.00%
Average	7.53%	7.56%	7.67%	8.13%	8.29%
Change (Basis Points)		– 3	– 14	– 60	– 76
OVERALL CAP RATE (OAR)[a]					
Range	5.25% – 8.00%	5.25% – 8.00%	5.00% – 8.00%	5.50% – 8.00%	6.00% – 8.75%
Average	6.40%	6.35%	6.35%	6.65%	7.04%
Change (Basis Points)		+ 5	+ 5	– 25	– 64
RESIDUAL CAP RATE					
Range	5.50% – 9.00%	5.50% – 9.00%	5.50% – 9.00%	6.00% – 9.00%	6.00% – 9.00%
Average	6.88%	7.00%	6.92%	7.15%	7.44%
Change (Basis Points)		– 12	– 4	– 27	– 56
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 3.00%	0.00% – 3.00%
Average	1.97%	1.96%	1.96%	1.40%	1.17%
Change (Basis Points)		+ 1	+ 1	+ 57	+ 80
EXPENSE CHANGE[b]					
Range	1.00% – 5.00%	0.00% – 5.00%	2.00% – 3.00%	2.00% – 3.00%	0.00% – 3.00%
Average	2.89%	2.75%	2.75%	2.80%	2.46%
Change (Basis Points)		+ 14	+ 14	+ 9	+ 43
MARKETING TIME[c]					
Range	2 – 18	2 – 18	2 – 18	2 – 18	2 – 18
Average	5.2	5.6	6.1	6.3	7.5
Change (▼, ▲, =)		▼	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Strip Shopping Center Market

Even though additions to supply, store closures, and growing e-commerce sales have combined to push up the vacancy rate for the U.S. neighborhood and community shopping center sector at mid-year 2017, the increase is alarming few prospective buyers for now. "Our goal is unchanged – focus on tenant credit, trade area stats, and maintaining a competitive edge," shares an investor. Data from Reis puts the vacancy rate for this sector at 10.0% for the second quarter of 2017, up from 9.9% in the prior quarter.

While it's still a prominent opinion among investors that grocery-anchored centers are "isolated" from downturns and the impact of growth in e-commerce, that thought may soon change. Based on a report by CoStar Group, commercial retail space allocated to grocery sales set a record in 2016 at 4.15 square feet per person – nearly 30 times the amount of space allocated to groceries at major chains in 1950.

Part of this expansion has come from grocers, but it has also come from club chains, dollar stores, big-box merchants, and online sites that have increased food offerings to drive traffic and boost profits. When combined with the fact that Americans are eating out more than they are dining home, these trends bare watching. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:		
Average	72.0%	=
Range	50.0% to 100.0%	
Months of Free Rent(1):		
Average	2	=
Range	0 to 6	
% of participants using	44.0%	=
Market Conditions Favor:		
Buyers	11.0%	=
Sellers	44.0%	=
Neither	45.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 3
NATIONAL STRIP SHOPPING CENTER MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.50% – 10.50%	5.50% – 10.50%	5.50% – 10.75%	6.25% – 11.00%	6.50% – 12.50%
Average	7.25%	7.32%	7.46%	8.23%	8.43%
Change (Basis Points)		– 7	– 21	– 98	– 118
OVERALL CAP RATE (OAR)[a]					
Range	4.00% – 9.50%	4.00% – 9.50%	4.50% – 9.50%	5.00% – 10.00%	5.25% – 9.50%
Average	6.19%	6.26%	6.24%	7.05%	7.06%
Change (Basis Points)		– 7	– 5	– 86	– 87
RESIDUAL CAP RATE					
Range	4.75% – 9.75%	4.75% – 9.75%	4.75% – 9.75%	5.00% – 10.00%	6.00% – 12.00%
Average	6.57%	6.50%	6.44%	7.34%	7.69%
Change (Basis Points)		+ 7	+ 13	– 77	– 112
MARKET RENT CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	0.00% – 5.00%	0.00% – 4.00%
Average	1.69%	1.72%	1.89%	1.78%	1.73%
Change (Basis Points)		– 3	– 20	– 9	– 4
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	2.50% – 3.00%	2.50% – 4.00%
Average	2.67%	2.69%	2.69%	2.97%	3.03%
Change (Basis Points)		– 2	– 2	– 30	– 36
MARKETING TIME[c]					
Range	2 – 18	2 – 18	2 – 12	2 – 12	2 – 18
Average	6.1	6.2	5.9	6.1	7.0
Change (▼, ▲, =)		▼	▲	=	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National CBD Office Market

Many surveyed investors are taking a more cautious approach when looking at potential acquisitions in the national CBD office market today compared to a year ago due to "flattened tenant demand" and "an expanding supply pipeline." As one investor says, "The level of new competitive supply being built in the coming years is a key issue impacting our investment strategy." Unfortunately, new supply is occurring at a time when several tenants are downsizing and/or returning space to the market. In turn, sublease space has risen for the national CBD office market over the past year.

Sublease space totaled 16.6 million square feet in the national CBD office market in the second quarter of 2017, as per Cushman & Wakefield. This total is up from 13.2 million square feet a year ago. Over the past year, CBDs that experienced large increases in sublease space include Midtown Manhattan, Chicago, and Washington, DC. Two metros where sublease space decreased over the past year are Charlotte and San Francisco.

Other key issues being monitored by investors since they are thought to greatly impact property values in this market are local job growth, foreign capital trends, and tenant improvement (TI) costs – "avoiding high TI costs is crucial," says an investor. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:		
Average	69.0%	=
Range	50.0% to 85.0%	
Months of Free Rent(1):		
Average	7	▲
Range	1 to 15	
% of participants using	86.0%	=
Market Conditions Favor:		
Buyers	0.0%	▼
Sellers	43.0%	▲
Neither	57.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 4
NATIONAL CBD OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.50% – 9.50%	5.50% – 9.50%	5.50% – 10.00%	5.50% – 11.00%	5.25% – 12.00%
Average	7.13%	7.05%	7.23%	7.54%	8.50%
Change (Basis Points)		+ 8	– 10	– 41	– 137
OVERALL CAP RATE (OAR)[a]					
Range	3.50% – 7.50%	3.50% – 7.50%	3.50% – 7.50%	3.75% – 8.00%	4.25% – 10.00%
Average	5.66%	5.68%	5.57%	6.16%	6.85%
Change (Basis Points)		– 2	+ 9	– 50	– 119
RESIDUAL CAP RATE					
Range	4.75% – 7.50%	4.75% – 7.50%	5.00% – 7.50%	5.00% – 9.00%	5.25% – 11.00%
Average	6.11%	6.13%	6.05%	6.64%	7.48%
Change (Basis Points)		– 2	+ 6	– 53	– 137
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 6.00%	0.00% – 6.00%	0.00% – 7.00%	(1.50%) – 10.00%
Average	2.54%	2.57%	2.57%	2.43%	2.59%
Change (Basis Points)		– 3	– 3	+ 11	– 5
EXPENSE CHANGE[b]					
Range	2.00% – 4.00%	0.00% – 5.00%	2.00% – 4.00%	1.00% – 3.00%	2.00% – 3.00%
Average	2.82%	2.79%	2.79%	2.61%	2.69%
Change (Basis Points)		+ 3	+ 3	+ 21	+ 13
MARKETING TIME[c]					
Range	2 – 18	2 – 18	2 – 15	2 – 15	2 – 18
Average	6.8	6.8	6.8	6.9	7.8
Change (▼, ▲, =)		=	=	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Suburban Office Market

The desire to acquire suburban office assets has been a low priority for many investors for a variety of reasons. This quarter, a growing number of surveyed investors make positive comments when asked about investment opportunities in the national suburban office market. "We like suburban office because a maturing millennial workforce is now moving to the suburbs to raise their families," remarks an investor. "Certain suburbs are providing better yields with minimal additional risk compared to CBD assets, which are still aggressively priced," says another.

While sales activity involving CBD office properties lost steam in the second quarter of 2017 compared to the prior year, volume for suburban office building sales climbed 22.0% year over year in the second half of 2017, as per Real Capital Analytics, who reports that sales activity over the last two quarters is only $2.7 billion off the pace set in the first half of 2015 and on pace to exceed this sector's 2015 peak.

Despite this positive sales activity, our investors note that investing in this market remains challenging due to the threat of new supply, a slowdown in tenant demand and rent growth, and the unknown effect of upcoming government policies set by the new administration. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	63.0%	=
Range	40.0% to 75.0%	

Months of Free Rent(1):

Average	8	▲
Range	0 to 18	
% of participants using	88.0%	=

Market Conditions Favor:

Buyers	38.0%	▲
Sellers	12.0%	▼
Neither	50.0%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 5

NATIONAL SUBURBAN OFFICE MARKET

Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 11.50%	6.00% – 11.50%	5.75% – 10.00%	6.25% – 11.00%	6.00% – 12.50%
Average	8.03%	7.97%	7.59%	7.97%	8.60%
Change (Basis Points)		+ 6	+ 44	+ 6	– 57
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 10.00%	5.00% – 10.00%	4.50% – 9.00%	5.00% – 9.00%	5.00% – 10.50%
Average	6.69%	6.64%	6.43%	6.72%	7.53%
Change (Basis Points)		+ 5	+ 26	– 3	– 84
RESIDUAL CAP RATE					
Range	5.75% – 11.50%	6.00% – 11.50%	5.50% – 10.00%	6.00% – 10.00%	6.00% – 11.00%
Average	7.42%	7.45%	7.28%	7.34%	7.98%
Change (Basis Points)		– 3	+ 14	+ 8	– 56
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	(3.00%) – 4.00%
Average	2.00%	2.03%	2.25%	2.50%	1.42%
Change (Basis Points)		– 3	– 25	– 50	+ 58
EXPENSE CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	2.00% – 4.00%	1.00% – 3.50%	2.00% – 4.00%
Average	2.72%	2.75%	2.91%	2.69%	2.75%
Change (Basis Points)		– 3	– 19	+ 3	– 3
MARKETING TIME[c]					
Range	1 – 12	1 – 12	3 – 12	3 – 12	2 – 18
Average	6.0	6.0	6.1	7.6	8.5
Change (▼, ▲, =)		=	▼	▼	▼

a. Rate on unleveraged, all-cash transactions   b. Initial rate of change   c. In months

Atlanta Office Market

Our Survey results reveal three primary hot-button issues for investors active in the Atlanta office market, including future economic growth, a shortage of offerings, and the pricing of for-sale assets. Investors are concerned that growth is slowing for jobs, population, and rental rates. "Uncertainty definitely affects our decisions in this market," explains a participant. "The threat of a national economic slowdown is causing the capital markets to be particularly conservative in Atlanta," remarks another.

This cautious outlook is further reflected in this market's average initial-year market rent change rate, which drops 44 basis points to 2.60%, falling below 3.00% for the first time since the start of 2015 (see Table 6). Nevertheless, this key cash flow assumption exceeds the aggregate average of 2.46% for the Survey's 19 city-specific office markets.

Although total transaction volume is up 29.2% year over year through June 2017, according to Real Capital Analytics, investors cite a "lack of available product on the market" as a challenge to completing acquisitions here. In addition, competitive pricing for assets is also making it difficult to maintain discipline when investing as this market's average price per square foot rose 20.3% year over year through midyear 2017. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	68.0%	▼
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	6	=
Range	1 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	7.19%	▼
CBD	6.73%	▼
Suburbs	7.65%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 6

ATLANTA OFFICE MARKET

Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 10.50%	6.00% – 10.25%	6.00% – 10.00%	6.00% – 10.00%	7.50% – 11.00%
Average	8.29%	8.33%	8.11%	8.50%	8.93%
Change (Basis Points)		– 4	+ 18	– 21	– 64
OVERALL CAP RATE (OAR)[a]					
Range	5.25% – 9.00%	5.25% – 9.00%	5.25% – 9.00%	6.00% – 9.25%	6.75% – 9.25%
Average	7.19%	7.21%	7.07%	7.80%	8.08%
Change (Basis Points)		– 2	+ 12	– 61	– 89
RESIDUAL CAP RATE					
Range	6.00% – 9.00%	6.00% – 9.00%	6.00% – 9.00%	6.50% – 9.25%	7.00% – 10.00%
Average	7.38%	7.48%	7.37%	7.80%	8.23%
Change (Basis Points)		– 10	+ 1	– 42	– 85
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	(1.00%) – 2.00%
Average	2.60%	3.04%	3.50%	2.08%	0.60%
Change (Basis Points)		– 44	– 90	+ 52	+ 200
EXPENSE CHANGE[b]					
Range	1.50% – 3.50%	1.50% – 5.00%	1.50% – 4.00%	0.00% – 3.50%	0.00% – 3.00%
Average	2.68%	2.90%	2.88%	2.33%	2.35%
Change (Basis Points)		– 22	– 20	+ 35	+ 33
MARKETING TIME[c]					
Range	2 – 12	2 – 12	1 – 12	1 – 12	1 – 12
Average	6.1	5.8	5.0	4.1	6.5
Change (▼, ▲, =)		▲	▲	▲	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Boston Office Market

On the surface, the Boston office market continues to post solid statistics compared to other major cities across the country, but some investors are sensing some cracks forming in this market's foundation mainly due to increasing levels of supply. "Tenant improvement (TI) allowances are creeping up because some landlords can't fill spaces," says a participant. This quarter, TIs for new deals range from $10.00 to $90.00 per square foot and average $48.75 per square foot – up 6.8% from a year ago.

Additions to supply, tenant relocations into these new buildings, and an inability to back-fill empty space is also pressuring some property owners to lower asking rental rates in the face of negative net absorption. This quarter, the average initial-year market rent change rate assumption used by surveyed investors falls 21 basis points to 3.33% (see Table 7). This rate is 34 basis points below the average from a year ago.

While this market's overall cap rates remain steady in terms of both range and average for the third consecutive quarter, our Survey participants are keeping an eye on cap rates, particularly "the end of cap rate compression and how this trend will impact not only asset values, but buyers' perceptions of this market's investment attractiveness." ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	67.0%	=
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	6	=
Range	1 to 10	
% of participants using	83.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.27%	=
CBD	5.41%	▼
Suburbs	7.13%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 7
BOSTON OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.75% – 10.00%	5.75% – 10.00%	5.75% – 10.00%	6.25% – 11.00%	6.50% – 15.00%
Average	7.43%	7.43%	7.45%	8.21%	9.29%
Change (Basis Points)		0	– 2	– 78	– 186
OVERALL CAP RATE (OAR)[a]					
Range	4.00% – 10.00%	4.00% – 10.00%	4.00% – 9.00%	4.25% – 9.50%	4.75% – 12.00%
Average	6.27%	6.27%	6.21%	6.58%	7.67%
Change (Basis Points)		0	+ 6	– 31	– 140
RESIDUAL CAP RATE					
Range	5.00% – 10.50%	5.00% – 10.50%	5.00% – 9.50%	5.50% – 11.00%	6.00% – 12.00%
Average	6.82%	6.82%	6.79%	7.22%	7.89%
Change (Basis Points)		0	+ 3	– 40	– 107
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 6.00%	0.00% – 6.00%	0.00% – 6.00%	0.00% – 5.00%
Average	3.33%	3.54%	3.67%	3.54%	1.67%
Change (Basis Points)		– 21	– 34	– 21	+ 166
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	2.50% – 4.00%	0.00% – 4.50%
Average	2.71%	2.71%	2.71%	3.04%	2.88%
Change (Basis Points)		0	0	– 33	– 17
MARKETING TIME[c]					
Range	2 – 9	2 – 12	2 – 12	2 – 12	2 – 12
Average	5.5	5.8	6.2	5.5	7.1
Change (▼, ▲, =)		▼	▼	=	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Charlotte Office Market

Overall vacancy rose in the Charlotte office market during the first half of 2017 as several speculative Class-A towers were added to the existing inventory. More than one million square feet were delivered in the first six months of this year and another 690,000 square feet will be added by year-end, as per Cushman & Wakefield. This level of new construction is somewhat concerning to investors in the near term, particularly for the CBD. "Generally, preleasing has been good, but there will be blocks of vacant space left behind," states an investor.

In addition to supply-side worries, Survey participants mention job growth, leasing trends, and rent rolls as main issues for this market's performance. "The lack of consistent, strong leasing demand in the CBD makes underwriting deals challenging," says an investor. As of June 2017, total leasing fell 31.0% year over year in the CBD and 17.4% in the suburbs.

Despite the delivery of new space and a slowdown in leasing activity, surveyed investors unanimously foresee positive value appreciation of as much as 15.0% in this market in the coming year. In fact, this market's average expected value increase of 4.9% is the highest among the Survey's 19 city-specific office markets. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	72.0%	=
Range	65.0% to 80.0%	

Months of Free Rent[1]:

Average	6	=
Range	1 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.93%	▲
CBD	6.55%	▲
Suburbs	7.30%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 8
CHARLOTTE OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.50% – 10.00%	6.50% – 10.00%	6.50% – 11.00%	7.00% – 11.50%	7.50% – 12.00%
Average	8.36%	8.36%	8.50%	8.85%	9.39%
Change (Basis Points)		0	– 14	– 49	– 103
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 8.75%	5.00% – 8.75%	5.00% – 8.75%	6.00% – 9.00%	6.00% – 9.50%
Average	6.93%	6.90%	6.89%	7.43%	7.92%
Change (Basis Points)		+ 3	+ 4	– 50	– 99
RESIDUAL CAP RATE					
Range	5.50% – 8.50%	5.50% – 8.50%	5.50% – 8.50%	6.00% – 9.00%	6.00% – 9.25%
Average	7.06%	7.18%	7.19%	7.53%	7.92%
Change (Basis Points)		– 12	– 13	– 47	– 86
MARKET RENT CHANGE[b]					
Range	2.00% – 4.50%	2.00% – 4.50%	2.00% – 5.00%	0.00% – 4.50%	0.00% – 5.00%
Average	3.10%	3.10%	3.40%	2.42%	1.63%
Change (Basis Points)		0	– 30	+ 68	+ 147
EXPENSE CHANGE[b]					
Range	1.50% – 4.00%	1.50% – 4.00%	1.80% – 3.00%	1.75% – 3.00%	2.00% – 4.00%
Average	2.45%	2.45%	2.41%	2.58%	2.94%
Change (Basis Points)		0	+ 4	– 13	– 49
MARKETING TIME[c]					
Range	1 – 9	1 – 9	1 – 9	1 – 12	2 – 12
Average	3.9	3.9	4.2	4.3	5.6
Change (▼, ▲, =)		=	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Chicago Office Market

As a result of Illinois' financial troubles, rising real estate taxes is a key issue that surveyed investors believe will impact the value of assets in the Chicago office market and shape their strategies going forward. "The fiscal sinkhole facing both Chicago and the State will put upward pressure on real estate taxes, negatively impacting values," says an investor. "The dire situation of Illinois' finances will likely depress NOI's going forward," remarks another.

Other concerns noted by investors in this market are a lack of job growth and slipping rent growth. This quarter, Chicago's average initial-year market rent change rate drops 43 basis points to 1.71% – this market's lowest average since 2014. In addition, the high end of the range for free rent moves from 12 to 15 months this quarter. "Effective rents are very low, which means long payback periods," explains an investor.

Much uncertainty surrounds Chicago's near-term performance, but investors are still looking for opportunities, mostly in its CBD. "Institutions are not investing in Chicago's suburbs, and the cap rate spread between CBD and suburban office assets is close to an all-time high," adds an investor. In the Key 3Q17 Survey Stats table, the spread rises to 266 basis points this quarter. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	70.0%	=
Range	60.0% to 85.0%	

Months of Free Rent[1]:

Average	10	=
Range	6 to 15	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	7.28%	▲
CBD	5.95%	=
Suburbs	8.61%	▲

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 9
CHICAGO OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.50% – 12.00%	5.75% – 12.00%	5.75% – 12.00%	6.25% – 13.00%	6.50% – 13.00%
Average	8.61%	8.64%	8.61%	9.00%	9.13%
Change (Basis Points)		– 3	0	– 39	– 52
OVERALL CAP RATE (OAR)[a]					
Range	4.50% – 10.00%	4.50% – 10.00%	4.50% – 10.00%	4.75% – 11.00%	5.75% – 11.00%
Average	7.28%	7.24%	7.33%	7.88%	8.17%
Change (Basis Points)		+ 4	– 5	– 60	– 89
RESIDUAL CAP RATE					
Range	5.50% – 10.50%	5.50% – 11.00%	5.50% – 11.00%	6.00% – 11.00%	6.50% – 11.00%
Average	7.75%	7.75%	7.76%	8.05%	8.22%
Change (Basis Points)		0	– 1	– 30	– 47
MARKET RENT CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 5.00%	0.00% – 4.50%	0.00% – 3.00%	(10.00%) – 3.00%
Average	1.71%	2.14%	2.00%	1.50%	0.44%
Change (Basis Points)		– 43	– 29	+ 21	+ 127
EXPENSE CHANGE[b]					
Range	2.00% – 6.00%	2.00% – 6.00%	2.00% – 5.00%	2.00% – 3.00%	2.00% – 3.00%
Average	3.21%	3.29%	3.21%	2.86%	2.94%
Change (Basis Points)		– 8	0	+ 35	+ 27
MARKETING TIME[c]					
Range	2 – 9	2 – 9	2 – 8	2 – 8	3 – 12
Average	4.7	4.7	4.2	4.1	6.8
Change (▼, ▲, =)		=	▲	▲	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Dallas Office Market

Copious new construction in the Dallas office market is shifting its supply-demand balance, holding it in the contraction phase of the real estate cycle, according to our PwC real estate barometer (see page 8). "There is a lot of new construction here, and it will be interesting to see if the leasing momentum can get it filled," states an investor.

As of June 2017, overall vacancy in the local CBD was 19.9%, compared to 12.8% a year ago, as per Cushman & Wakefield. Similarly, the local suburban vacancy rate was 15.1%, up from 11.0% in the prior year. Despite these increased vacancy levels, investors feel that this market's performance is highly submarket specific. In the Legacy-Frisco submarket, for example, midyear vacancy was 11.8% and it captured 50.0% of the total net absorption for the second quarter. In the Dallas CBD, which an investor describes as "finally in transition," it absorbed nearly 25.0% of the market's quarterly total.

Besides rising vacancy rates, the contraction phase includes slowing rent growth and rising overall cap rates. While this market's average overall cap rate has yet to rise, it has held nearly steady over the past three quarters. Likewise, its average initial-year market rent change rate has been static for the past four quarters. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	68.0%	=
Range	60.0% to 75.0%	

Months of Free Rent[1]:

Average	6	=
Range	3 to 10	
% of participants using	67.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.48%	▼
CBD	6.21%	▼
Suburbs	6.75%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 10
DALLAS OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 11.00%	6.00% – 11.00%	6.00% – 11.00%	7.00% – 11.00%	7.00% – 11.00%
Average	7.86%	7.87%	8.13%	8.15%	8.76%
Change (Basis Points)		– 1	– 27	– 29	– 90
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 8.50%	5.00% – 8.50%	5.00% – 9.00%	5.25% – 9.00%	5.50% – 10.00%
Average	6.48%	6.50%	6.81%	7.14%	7.85%
Change (Basis Points)		– 2	– 33	– 66	– 137
RESIDUAL CAP RATE					
Range	5.50% – 9.00%	5.50% – 9.00%	6.00% – 9.00%	6.25% – 9.00%	7.00% – 11.00%
Average	7.12%	7.15%	7.34%	7.52%	8.19%
Change (Basis Points)		– 3	– 22	– 40	– 107
MARKET RENT CHANGE[b]					
Range	2.00% – 6.00%	2.00% – 6.00%	0.00% – 6.00%	1.00% – 7.00%	0.00% – 5.00%
Average	3.46%	3.46%	3.47%	4.25%	2.00%
Change (Basis Points)		0	– 1	– 79	+ 146
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.50% – 4.00%	2.50% – 3.00%
Average	2.88%	2.88%	2.91%	3.13%	2.95%
Change (Basis Points)		0	– 3	– 25	– 7
MARKETING TIME[c]					
Range	1 – 12	1 – 12	1 – 12	1 – 12	3 – 24
Average	5.3	5.3	4.6	4.1	8.4
Change (▼, ▲, =)		=	▲	▲	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Denver Office Market

As new Class-A buildings continue to open in the Denver office market, a flight to quality is occurring among tenants, especially in the urban core. "There has been a supply shift in the CBD, where tenants are favoring the newer office properties over their older Class-A counterparts," observes an investor. Most new towers feature higher parking ratios, larger floor-plates, and comprehensive building amenities. Additional options will soon become available to tenants as 4.2 million square feet of space are under construction as of midyear 2017, as per Cushman & Wakefield.

Investors' outlook for future rent growth reflects this flight-to-quality trend despite the fact that average asking rental rates have increased moderately in the past year. As shown in Table 11, this key cash flow assumption declines for the fifth consecutive quarter, falling 30 basis points to 2.50% this quarter.

Despite these near-term concerns, sturdy competition for assets is pushing up sale prices. "Denver is a good, long-term market with encouraging fundamentals that continue to pique investor interest," confirms a participant. Even though the pace of sales activity has leveled off here, Real Capital Analytics reports that the average sale price per square foot increased 5.7% year over year as of June 2017. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	68.0%	=
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	4	=
Range	0 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.56%	=
CBD	5.88%	=
Suburbs	7.25%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 11
DENVER OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.50% – 11.00%	6.75% – 11.00%	6.50% – 11.00%	6.50% – 11.00%	7.50% – 15.00%
Average	7.95%	7.98%	7.98%	8.03%	9.88%
Change (Basis Points)		– 3	– 3	– 8	– 193
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	6.00% – 11.00%
Average	6.56%	6.56%	6.45%	6.71%	7.84%
Change (Basis Points)		0	+ 11	– 15	– 128
RESIDUAL CAP RATE					
Range	5.75% – 9.50%	5.75% – 9.50%	5.75% – 9.50%	6.25% – 9.50%	6.50% – 11.00%
Average	7.30%	7.32%	7.33%	7.53%	8.25%
Change (Basis Points)		– 2	– 3	– 23	– 95
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	2.00% – 4.00%	3.00% – 5.00%	2.00% – 8.00%	(20.00%) – 5.00%
Average	2.50%	2.80%	3.58%	4.20%	(0.30%)
Change (Basis Points)		– 30	– 108	– 170	+ 280
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	3.00% – 3.00%
Average	2.90%	2.90%	2.83%	2.90%	3.00%
Change (Basis Points)		0	+ 7	0	– 10
MARKETING TIME[c]					
Range	1 – 6	1 – 6	1 – 6	1 – 6	2 – 12
Average	3.7	3.7	4.0	3.9	5.2
Change (▼, ▲, =)		=	=	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Houston Office Market

Surveyed investors agree that the ongoing softness in the oil industry is the primary issue impacting the performance of the Houston office market. "Global energy prices and OPEC policy heavily influence this market's outlook," states a participant. In fact, consolidation in the energy industry is increasing the amount of both vacant space and sublease space in this market.

Total sublease space totaled 5.1 million square feet in June of 2017, of which 70.0% was located in the CBD, according to Cushman & Wakefield. As a result, the CBD's overall vacancy rate increased to 19.7% in the second quarter of 2017 – up from 15.2% a year ago. "The lack of leasing velocity is incredibly challenging here, especially as it relates to larger tenants," laments an investor.

The uncertainty in the energy sector and the current imbalance between supply and demand combine to dim the outlook for property value appreciation here. "The current atmosphere is creating pressure to exit this market because income growth will be difficult to achieve," warns a participant. In fact, investors expect an average property value change of -6.5% in the coming year – the lowest average of the Survey's 19 city-specific office markets and well below their aggregate average of 1.6%. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:		
Average	63.0%	=
Range	50.0% to 80.0%	
Months of Free Rent[(1)]:		
Average	10	=
Range	2 to 24	
% of participants using	100.0%	=
Average Overall Cap Rates:		
Market (as a whole)	7.31%	=
CBD	6.77%	=
Suburbs	7.85%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 12
HOUSTON OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.50% – 13.50%	6.50% – 14.00%	6.50% – 12.00%	7.00% – 14.00%	7.00% – 14.00%
Average	9.02%	9.19%	8.79%	8.96%	9.20%
Change (Basis Points)		– 17	+ 23	+ 6	– 18
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 10.00%	5.00% – 10.00%	5.50% – 11.00%	5.00% – 11.00%	5.00% – 12.00%
Average	7.31%	7.31%	7.21%	7.58%	7.90%
Change (Basis Points)		0	+ 10	– 27	– 59
RESIDUAL CAP RATE					
Range	5.75% – 10.00%	5.75% – 10.00%	6.00% – 10.00%	5.00% – 11.00%	5.00% – 11.00%
Average	7.46%	7.53%	7.42%	7.76%	7.94%
Change (Basis Points)		– 7	+ 4	– 30	– 48
MARKET RENT CHANGE[b]					
Range	(8.00%) – 3.00%	(8.00%) – 3.00%	(8.00%) – 3.00%	2.00% – 6.00%	2.00% – 7.00%
Average	(1.53%)	(1.57%)	(0.94%)	3.42%	3.58%
Change (Basis Points)		+ 4	– 59	– 495	– 511
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%
Average	2.51%	2.50%	2.69%	2.67%	2.67%
Change (Basis Points)		+ 1	– 18	– 16	– 16
MARKETING TIME[c]					
Range	3 – 12	3 – 12	1 – 12	3 – 12	3 – 12
Average	8.5	8.5	7.9	6.7	7.3
Change (▼, ▲, =)		=	▲	▲	▲

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Los Angeles Office Market

Steady growth in office-space-using job sectors, like professional-and-business services and financial activities, has allowed the Los Angeles office market to thrive in a variety of areas, including leasing, development, rent growth, and sales activity. "There's a high level of foreign capital targeting this market," affirms a participant. As a whole, sales activity in the Los Angeles office market totaled $4.7 billion in the first half of 2017 – the third most active office market, based on data from Real Capital Analytics.

Even though this sales volume is down 25.0% year over year, buildings in the Los Angeles office market are still highly sought after by investors. But as one participant notes, "One needs to be sensitive to the various submarkets throughout Los Angeles, as location of assets and demand drivers within these submarkets are important in evaluating the investment quality of potential assets for acquisition."

Another element that bears watching is the gap between rising tenant improvement (TI) costs and the length of term to which tenants are willing to commit. "Tenants need to pay for TIs above and beyond the market TI, so they need longer lease terms for deals to make sense," explains a participant. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	69.0%	▲
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	6	▲
Range	0 to 10	
% of participants using	63.0%	▼

Average Overall Cap Rates:

Market (as a whole)	5.74%	▼
CBD	5.46%	▼
Suburbs	6.02%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 13
LOS ANGELES OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.00% – 11.00%	5.00% – 10.00%	5.00% – 9.00%	5.75% – 10.00%	6.50% – 11.00%
Average	7.41%	7.21%	6.93%	7.33%	8.20%
Change (Basis Points)		+ 20	+ 48	+ 8	– 79
OVERALL CAP RATE (OAR)[a]					
Range	4.00% – 8.00%	4.25% – 8.00%	4.50% – 7.50%	4.50% – 7.50%	4.50% – 8.50%
Average	5.74%	5.84%	5.75%	5.95%	6.78%
Change (Basis Points)		– 10	– 1	– 21	– 104
RESIDUAL CAP RATE					
Range	5.00% – 8.00%	5.00% – 8.00%	5.00% – 8.00%	5.00% – 8.00%	6.00% – 9.00%
Average	6.46%	6.54%	6.70%	6.60%	7.45%
Change (Basis Points)		– 8	– 24	– 14	– 99
MARKET RENT CHANGE[b]					
Range	1.50% – 6.00%	1.50% – 6.00%	2.00% – 7.00%	0.00% – 7.00%	0.00% – 7.50%
Average	3.75%	3.67%	3.80%	3.75%	2.54%
Change (Basis Points)		+ 8	– 5	0	+ 121
EXPENSE CHANGE[b]					
Range	2.00% – 3.50%	2.00% – 3.50%	2.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%
Average	2.78%	2.71%	2.70%	2.75%	2.75%
Change (Basis Points)		+ 7	+ 8	+ 3	+ 3
MARKETING TIME[c]					
Range	1 – 12	1 – 12	1 – 12	1 – 12	1 – 12
Average	4.2	4.4	4.4	4.8	5.5
Change (▼, ▲, =)		▼	▼	▼	▼

a. Rate on unleveraged, all-cash transactions   b. Initial rate of change   c. In months

Manhattan Office Market

From a performance standpoint, moderating demand and increasing supply levels are expected to push the Manhattan office market into the contraction phase of the real estate cycle by year-end 2018, according to our PwC real estate barometer (see page 8). This phase of the cycle is characterized by a shift in the supply-demand balance leading to increasing vacancy rates, slowing rent growth, and rising overall cap rates.

A few signs have already surfaced that suggest the Manhattan office market is moving off its peak. First, the vacancy rates in two of its three main submarkets have increased over the past year. Specifically, they have risen in Midtown and Midtown South, based on data from Cushman & Wakefield. "The key issue impacting this office market is all the space being returned and increasing availability rates," confirms a participant. Second, this market's average initial-year market rent change rate declines 17 basis points to 2.96% this quarter – the first time this average has dipped below 3.00% since 2011.

Rising tenant improvement (TI) costs is another concern for owners in this market. "TIs are creeping up," attests an investor. This quarter, the average TI for both second-generation and new space is up $1.50 per square foot compared to last quarter. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	69.0%	=
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	9	=
Range	0 to 15	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	0.0%	=
Sellers	50.0%	=
Neither	50.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 14
MANHATTAN OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.50% – 9.00%	5.75% – 9.00%	5.50% – 9.00%	6.00% – 9.00%	6.00% – 10.00%
Average	6.81%	6.85%	6.88%	7.25%	7.48%
Change (Basis Points)		– 4	– 7	– 44	– 67
OVERALL CAP RATE (OAR)[a]					
Range	3.00% – 8.50%	3.50% – 8.50%	3.50% – 8.00%	4.00% – 8.00%	4.00% – 8.00%
Average	4.94%	4.98%	4.98%	5.23%	5.25%
Change (Basis Points)		– 4	– 4	– 29	– 31
RESIDUAL CAP RATE					
Range	3.00% – 8.50%	3.50% – 8.50%	4.00% – 8.00%	5.00% – 8.00%	5.00% – 7.50%
Average	5.63%	5.65%	5.67%	6.06%	6.04%
Change (Basis Points)		– 2	– 4	– 43	– 41
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 5.00%	0.00% – 7.00%	0.00% – 7.00%	3.00% – 10.00%
Average	2.96%	3.13%	4.04%	3.58%	4.92%
Change (Basis Points)		– 17	– 108	– 62	– 196
EXPENSE CHANGE[b]					
Range	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	1.00% – 4.00%	2.00% – 3.00%
Average	2.75%	2.75%	2.75%	2.92%	2.92%
Change (Basis Points)		0	0	– 17	– 17
MARKETING TIME[c]					
Range	1 – 9	1 – 9	1 – 6	1 – 6	3 – 6
Average	4.8	4.8	4.3	4.1	4.1
Change (▼, ▲, =)		=	▲	▲	▲

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Northern Virginia Office Market

A lack of new space deliveries combined with a number of large tenant move-ins during the quarter attributed to positive net absorption of 650,000 square feet in the Northern Virginia office market in the second quarter of 2017 – this market's largest quarterly figure in over five years, according to Cushman & Wakefield. Companies that recently leased space in Northern Virginia include Volkswagen and WeWork.

While these leasing trends have helped to lower this market's overall vacancy rate, our surveyed investors are quick to point out that "vacancy remains a challenge, especially for buildings that have dated lobbies and amenities." In addition, investors continue to comment that the performance of this market is very submarket specific. "There are pockets of tremendous growth and pockets of no growth," says a participant. Another echoes, "Areas of strength include Tysons-Toll Road and Alexandria, but other areas like Rosslyn-Ballston Corridor are crippled by mid-20.0% vacancy rates and traditional suburban office parks are dismal."

As expected, location remains a key driver of acquisitions here and office properties in proximity to metro stations are receiving the most interest and the best prices from prospective buyers. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	67.0%	▲
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	8	▲
Range	2 to 13	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	33.0%	▲
Sellers	17.0%	▼
Neither	50.0%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 15
NORTHERN VIRGINIA OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 9.50%	6.00% – 9.50%	6.00% – 9.50%	6.50% – 9.50%	7.00% – 9.50%
Average	7.71%	7.55%	7.75%	8.10%	8.33%
Change (Basis Points)		+ 16	– 4	– 39	– 62
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 8.50%	5.00% – 8.50%	5.00% – 8.50%	5.00% – 9.00%	5.75% – 8.75%
Average	6.77%	6.63%	6.90%	7.10%	7.23%
Change (Basis Points)		+ 14	– 13	– 33	– 46
RESIDUAL CAP RATE					
Range	5.50% – 8.50%	5.75% – 8.50%	5.75% – 8.50%	6.00% – 9.00%	5.00% – 9.00%
Average	6.85%	6.85%	7.25%	7.48%	7.44%
Change (Basis Points)		0	– 40	– 63	– 59
MARKET RENT CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	(5.00%) – 3.00%	0.00% – 3.00%
Average	1.63%	1.40%	1.30%	1.00%	1.75%
Change (Basis Points)		+ 23	+ 33	+ 63	– 12
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	2.00% – 3.00%
Average	2.17%	1.90%	2.40%	2.60%	2.82%
Change (Basis Points)		+ 27	– 23	– 43	– 65
MARKETING TIME[c]					
Range	1 – 8	1 – 8	3 – 9	3 – 9	2 – 9
Average	4.1	4.2	4.7	4.9	5.5
Change (▼, ▲, =)		▼	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Pacific Northwest Office Market

The Pacific Northwest office market has long been dominated by the performance of Seattle. Now, however, both Portland and Bellevue are demonstrating to investors that they are equally as vibrant and strong. "Bellevue has come a long way. What appeared to be years of vacant space was leased in nearly six months. It's a stronger market than most think," notes an investor. "Portland has started to attract a variety of institutional investors, and we will watch how the deeper pool of buyers impacts pricing here," says another.

For investors looking to acquire office properties in Portland, few assets are being offered for sale. "Portland is a strong market that many investors now have on their radar, but there is not much product coming to market," says a participant. In Bellevue, quality offerings are also hard to come by as many owners are content to hold assets and continue to benefit from growing rental rates and incessant leasing activity.

One recent Bellevue office building sale shows the strength of this market. 90 East, a three-building campus totaling 587,000 square feet, sold for $153.0 million ($260.00 per square foot) in May 2017. In 2015, the seller purchased the campus for $128.25 million, or 19.0% less than the property's price tag a few months ago. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	70.0%	▼
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	5	=
Range	0 to 12	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	5.99%	▼
CBD	5.55%	▼
Suburbs	6.44%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 16
PACIFIC NORTHWEST OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.25% – 10.00%	5.25% – 10.00%	5.50% – 10.50%	5.75% – 10.50%	6.50% – 12.00%
Average	7.44%	7.32%	7.45%	7.69%	8.60%
Change (Basis Points)		+ 12	– 1	– 25	– 116
OVERALL CAP RATE (OAR)[a]					
Range	4.25% – 8.00%	4.25% – 8.00%	4.50% – 8.00%	4.00% – 9.00%	4.50% – 10.00%
Average	5.99%	6.01%	6.01%	6.35%	7.02%
Change (Basis Points)		– 2	– 2	– 36	– 103
RESIDUAL CAP RATE					
Range	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	5.00% – 10.00%
Average	6.42%	6.42%	6.49%	6.80%	7.36%
Change (Basis Points)		0	– 7	– 38	– 94
MARKET RENT CHANGE[b]					
Range	2.00% – 5.00%	2.00% – 5.00%	2.00% – 6.00%	0.00% – 10.00%	0.00% – 8.00%
Average	3.24%	3.33%	3.52%	4.15%	4.29%
Change (Basis Points)		– 9	– 28	– 91	– 105
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%
Average	2.91%	2.86%	2.86%	2.85%	2.75%
Change (Basis Points)		+ 5	+ 5	+ 6	+ 16
MARKETING TIME[c]					
Range	1 – 12	1 – 12	1 – 12	1 – 12	1 – 12
Average	4.8	4.9	4.9	5.0	5.0
Change (▼, ▲, =)		▼	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Philadelphia Office Market

The shortage of available Class-A space in the Philadelphia office market is a concern for investors whether they prefer a CBD or suburban location. In the CBD, the Class-A sector had an overall vacancy rate of 10.0% as of June 2017, as per Cushman & Wakefield. "Landlords continue to push up Class-A rental rates, but tenants are adjusting slowly," says an investor. For tenants, Class-A space options are dwindling as rising construction costs are dampening the prospects for new Class-A speculative construction.

The suburban Class-A vacancy rate at midyear 2017 was 11.3% and speculative construction there is also limited. When looking at buying suburban assets, investors are paying close attention to the building's access to public transit. Even though suburban office buildings without proximity to public transportation are being redeveloped into more modern properties, one investor wonders "how these assets will perform in comparison to transit-served ones."

Amid tight market conditions, our investors' outlook for value appreciation remains upbeat for the coming year. Survey participants unanimously foresee property values rising – the high end of the range is 5.0% while the average is 1.8% – above the aggregate average of 1.6% for the Survey's 19 city-specific office markets. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	67.0%	▲
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	7	▲
Range	3 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	7.29%	▼
CBD	6.83%	▲
Suburbs	7.75%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 17
PHILADELPHIA OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	7.00% – 11.00%	7.00% – 11.00%	7.00% – 10.50%	7.00% – 12.00%	8.00% – 11.00%
Average	8.63%	8.51%	8.51%	9.15%	9.16%
Change (Basis Points)		+ 12	+ 12	– 52	– 53
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 9.50%	6.00% – 9.50%	6.00% – 9.00%	6.00% – 10.50%	7.00% – 10.00%
Average	7.29%	7.43%	7.48%	7.90%	8.46%
Change (Basis Points)		– 14	– 19	– 61	– 117
RESIDUAL CAP RATE					
Range	6.00% – 10.00%	6.00% – 10.00%	6.00% – 9.00%	6.50% – 10.00%	7.00% – 11.00%
Average	7.79%	8.00%	7.90%	8.31%	8.74%
Change (Basis Points)		– 21	– 11	– 52	– 95
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%
Average	2.13%	1.85%	1.85%	1.55%	1.00%
Change (Basis Points)		+ 28	+ 28	+ 58	+ 113
EXPENSE CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 3.00%	1.00% – 3.00%	2.75% – 3.00%
Average	2.50%	2.40%	2.30%	2.63%	2.96%
Change (Basis Points)		+ 10	+ 20	– 13	– 46
MARKETING TIME[c]					
Range	2 – 12	3 – 12	3 – 12	3 – 12	4 – 18
Average	5.5	6.0	5.4	6.1	7.6
Change (▼, ▲, =)		▼	▲	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Phoenix Office Market

Based on strong leasing trends, falling vacancy, and steady rent growth, our PwC real estate barometer places the Phoenix office market in the expansion phase of the real estate cycle through the end of 2018 (see page 8). While demand for office space is generated by a broad range of tenants, tech firms like Amazon and Orbital Sciences are an expanding source of demand here. However, one investor questions, "Is demand from the tech sector sustainable and what could cause it to weaken?"

Tenants' particularly keen interest in Class-A office space has led to a 13.9% vacancy rate as of June 2017, as per Cushman & Wakefield. By comparison, the Class-B rate was 20.2%. "Given limited space options for tenants seeking Class-A space in prime submarkets, it will be interesting to see if they pursue space in lesser submarkets or consider building," remarks a participant.

As local market conditions have tightened, investor confidence in this market's near-term performance is highlighted in this quarter's average initial-year market rent change rate assumption, which averages 4.00% – the highest quarterly average of the Survey's 19 city-specific office markets. The Los Angeles office market posts the next highest average at 3.75%. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	69.0%	=
Range	60.0% to 75.0%	

Months of Free Rent[1]:

Average	7	=
Range	2 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.53%	▼
CBD	6.40%	▼
Suburbs	6.67%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 18
PHOENIX OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	7.00% – 11.00%	7.00% – 10.00%	6.50% – 11.00%	7.00% – 14.50%	7.75% – 16.00%
Average	8.78%	8.33%	8.37%	9.19%	11.00%
Change (Basis Points)		+ 45	+ 41	– 41	– 222
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 8.00%	5.00% – 8.00%	5.00% – 8.50%	5.50% – 10.00%	7.00% – 11.00%
Average	6.53%	6.62%	6.84%	7.35%	9.20%
Change (Basis Points)		– 9	– 31	– 82	– 267
RESIDUAL CAP RATE					
Range	5.50% – 8.00%	6.00% – 8.00%	5.50% – 9.00%	6.25% – 9.50%	7.00% – 10.00%
Average	6.80%	7.08%	7.10%	7.56%	8.85%
Change (Basis Points)		– 28	– 30	– 76	– 205
MARKET RENT CHANGE[b]					
Range	2.00% – 7.00%	2.00% – 7.00%	2.00% – 7.00%	0.00% – 5.00%	(0.60%) – 1.00%
Average	4.00%	4.10%	4.10%	1.88%	0.04%
Change (Basis Points)		– 10	– 10	+ 212	+ 396
EXPENSE CHANGE[b]					
Range	1.00% – 4.00%	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	2.00% – 3.00%
Average	2.67%	2.50%	2.70%	2.75%	2.80%
Change (Basis Points)		+ 17	– 3	– 8	– 13
MARKETING TIME[c]					
Range	1 – 18	1 – 18	1 – 12	1 – 9	2 – 12
Average	7.1	7.5	5.1	5.5	5.5
Change (▼, ▲, =)		▼	▲	▲	▲

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

San Diego Office Market

Along with a slowdown in transaction activity in the San Diego office market over the past 12 months, the composition of buyers has also shifted. In 2013, private capital investors were the dominant buyers in this market, but decreased in activity from 2014 through 2016 when institutional buyers became more active, as per Real Capital Analytics. As of midyear 2017, these positons have flipped as institutions represent just 14.0% of the capital invested here and private capital accounts for 65.0%. "Some may feel that San Diego is not an institutional market, but we are watching institutional capital creep back into this market," observes a participant.

As the investment environment has quieted, the average overall cap rate holds steady this quarter – a trend that investors foresee continuing in the next six months. Also, this market's average initial-year market rent change rate falls for the second consecutive quarter, dipping to 3.50% (see Table 19). However, this figure remains well above the aggregate average of 2.46% for the Survey's 19 city-specific office markets.

Overall, investors' outlook for property value appreciation remains upbeat here. Our Survey participants expect property value changes to range from -5.0% to +10.0%, with an average of +2.3% over the next 12 months. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	67.0%	=
Range	60.0% to 75.0%	

Months of Free Rent[1]:

Average	4	=
Range	1 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.51%	=
CBD	6.50%	=
Suburbs	6.53%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 19
SAN DIEGO OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.50% – 11.00%	6.50% – 10.50%	6.25% – 10.50%	6.50% – 11.50%	7.00% – 12.50%
Average	8.21%	7.83%	7.83%	8.13%	9.28%
Change (Basis Points)		+ 38	+ 38	+ 8	– 107
OVERALL CAP RATE (OAR)[a]					
Range	5.25% – 8.50%	5.25% – 8.50%	5.00% – 8.50%	5.50% – 8.50%	6.00% – 10.00%
Average	6.51%	6.51%	6.78%	6.97%	7.88%
Change (Basis Points)		0	– 27	– 46	– 137
RESIDUAL CAP RATE					
Range	5.75% – 8.75%	5.50% – 8.75%	5.75% – 8.75%	6.00% – 8.00%	6.75% – 9.00%
Average	6.93%	6.82%	7.11%	7.06%	7.86%
Change (Basis Points)		+ 11	– 18	– 13	– 93
MARKET RENT CHANGE[b]					
Range	2.00% – 5.00%	2.00% – 5.00%	2.00% – 6.00%	0.00% – 6.00%	(10.00%) – 5.00%
Average	3.50%	3.70%	3.80%	3.40%	0.30%
Change (Basis Points)		– 20	– 30	+ 10	+ 320
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%
Average	2.80%	2.80%	2.80%	2.90%	2.90%
Change (Basis Points)		0	0	– 10	– 10
MARKETING TIME[c]					
Range	3 – 12	3 – 12	1 – 6	1 – 6	1 – 9
Average	5.1	5.1	4.3	4.3	4.8
Change (▼, ▲, =)		=	▲	▲	▲

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

San Francisco Office Market

While the ongoing expansion of the U.S. tech sector remains a driving force behind demand for space in the San Francisco office market, there is a sense among surveyed investors that the tech expansion here has "started to slow." As a result, current and prospective owners continue to monitor the growth of this sector and ponder when growth of ancillary services that support the tech sector will follow. For now, however, property owners are pleased with this market's single-digit vacancy rates, which stand well below the national averages.

Investors looking to acquire assets in this market are finding "a lack of offerings." One participant comments, "A significant amount of the city's skyline has sold to long-term holders so there is a dearth of investment opportunities available." According to our CRE stock acquisition analysis on page 16, 12.8% of the office stock in the San Francisco office market sold during the 12 months ending with the second quarter of 2017. This percentage is comparable to the national average, but is well below other West Coast cities like San Jose (22.9%), San Diego (15.1%), and Los Angeles (14.7%).

The San Francisco office market is expected to perform well over the near term and remain a target for investors' capital – if they can find deals. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	69.0%	=
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	5	=
Range	0 to 10	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	5.45%	=
CBD	5.00%	=
Suburbs	5.91%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 20
SAN FRANCISCO OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.00% – 9.50%	5.00% – 9.50%	5.00% – 9.50%	6.00% – 10.00%	6.00% – 11.00%
Average	6.86%	6.89%	6.80%	7.36%	8.27%
Change (Basis Points)		– 3	+ 6	– 50	– 141
OVERALL CAP RATE (OAR)[a]					
Range	3.50% – 8.00%	3.50% – 8.00%	3.50% – 8.00%	3.50% – 9.00%	4.00% – 9.50%
Average	5.45%	5.45%	5.36%	5.92%	6.88%
Change (Basis Points)		0	+ 9	– 47	– 143
RESIDUAL CAP RATE					
Range	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	5.00% – 10.00%
Average	6.21%	6.25%	6.25%	6.46%	7.33%
Change (Basis Points)		– 4	– 4	– 25	– 112
MARKET RENT CHANGE[b]					
Range	1.00% – 5.00%	1.00% – 5.00%	2.00% – 6.00%	2.00% – 10.00%	0.00% – 13.00%
Average	3.00%	3.00%	3.90%	6.33%	5.38%
Change (Basis Points)		0	– 90	– 333	– 238
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	0.00% – 4.00%	0.00% – 3.00%
Average	2.60%	2.60%	2.60%	2.75%	2.63%
Change (Basis Points)		0	0	– 15	– 3
MARKETING TIME[c]					
Range	1 – 6	1 – 6	1 – 6	1 – 8	1 – 9
Average	3.9	3.9	3.9	4.4	4.9
Change (▼, ▲, =)		=	=	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Seattle Office Market

The performance of the Seattle office market remains heavily driven by the strength of the U.S. technology industry. "Amazon's growth has a huge impact on this market, as does the strength of many tech firms, like Google and Microsoft," states a participant. As the local tech sector continues to flourish, it has spurred job growth and tremendous demand for office space – keeping the overall vacancy rate in the CBD (6.1%) well below the national level (12.4%) in the second quarter of 2017, as per Cushman & Wakefield.

Despite this market's strength, it gives some investors reason to be cautious. "When buying in this market, owners need to be cognizant of the risks associated with investing in a city dominated by one sector," remarks an investor. "As Microsoft and Amazon increase their real estate holdings here, we pause," shares another. While a growing number of investors feel that the strength of Seattle's economy has moved it from a secondary market to a primary market, they can't help but wonder "what will trigger a slowdown in a market that has done nothing but grow for the past seven years."

For now, however, many investors continue to look for buying opportunities in this market, paying close attention to sale prices, the supply pipeline, and cycle trends. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	70.0%	=
Range	50.0% to 80.0%	

Months of Free Rent[(1)]:

Average	5	=
Range	0 to 12	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	5.79%	▼
CBD	5.40%	▼
Suburbs	6.19%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 21
SEATTLE OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO
DISCOUNT RATE (IRR)[a]				
Range	5.25% – 10.00%	5.25% – 10.00%	5.50% – 10.00%	5.75% – 11.00%
Average	7.24%	7.19%	7.33%	7.81%
Change (Basis Points)		+ 5	– 9	– 57
OVERALL CAP RATE (OAR)[a]				
Range	4.25% – 8.00%	4.25% – 8.00%	4.50% – 8.00%	4.00% – 9.00%
Average	5.79%	5.82%	5.81%	6.43%
Change (Basis Points)		– 3	– 2	– 64
RESIDUAL CAP RATE				
Range	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%	5.00% – 9.00%
Average	6.27%	6.27%	6.33%	6.65%
Change (Basis Points)		0	– 6	– 38
MARKET RENT CHANGE[b]				
Range	2.50% – 5.00%	2.50% – 5.00%	2.50% – 5.00%	2.50% – 8.00%
Average	3.38%	3.54%	3.71%	4.25%
Change (Basis Points)		– 16	– 33	– 87
EXPENSE CHANGE[b]				
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	1.00% – 3.00%
Average	2.88%	2.79%	2.79%	2.75%
Change (Basis Points)		+ 9	+ 9	+ 13
MARKETING TIME[c]				
Range	1 – 12	1 – 12	1 – 12	1 – 12
Average	4.5	4.8	4.8	5.0
Change (▼, ▲, =)		▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Southeast Florida Office Market

Positive economic trends in the region are keeping tenant demand quite steady throughout the Southeast Florida office market. "Tenant demand remains positive, but conservative, so I am expecting continued steady growth in both occupancy and net operating income at our properties for the near term," shares an investor. When looking at the three main areas that comprise this market – Miami, Palm Beach County, and Fort Lauderdale – overall vacancy rates have declined in each suburban subsector, as well as two of the three downtown areas over the past year.

Of the three main areas, Palm Beach County has experienced the greatest decline in its overall vacancy in the past year. In its CBD, the rate fell from 18.2% to 12.6% while it dropped from 18.6% to 12.7% in its suburbs, as per Cushman & Wakefield. As availabilities have declined, rental rates have increased. In the CBD of Palm Beach, the average asking rental rate increased 12.7% over the past year, while it grew 9.9% in its suburbs.

Despite this market's favorable trends, its key indicators hold steady this quarter as some investors anticipate a slowdown in tenant demand in the near term. In addition, they are monitoring the rush of foreign capital targeting this market and its impact on pricing and cap rates. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	65.0%	=
Range	40.0% to 80.0%	

Months of Free Rent[1]:

Average	6	=
Range	1 to 12	
% of participants using	100.0%	=

Average Overall Cap Rates:

Market (as a whole)	7.26%	=
CBD	6.63%	=
Suburbs	7.90%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 22
SOUTHEAST FLORIDA OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 10.50%	6.00% – 10.50%	6.00% – 10.50%	6.50% – 12.00%	7.00% – 13.00%
Average	8.31%	8.31%	8.23%	8.86%	9.33%
Change (Basis Points)		0	+ 8	– 55	– 102
OVERALL CAP RATE (OAR)[a]					
Range	5.00% – 10.00%	5.00% – 10.00%	5.00% – 10.00%	5.00% – 10.50%	6.00% – 12.00%
Average	7.26%	7.26%	7.08%	7.74%	8.41%
Change (Basis Points)		0	+ 18	– 48	– 115
RESIDUAL CAP RATE					
Range	5.00% – 10.50%	5.00% – 10.50%	5.00% – 10.00%	5.00% – 10.50%	7.00% – 10.50%
Average	7.49%	7.49%	7.26%	7.76%	8.46%
		0	+ 23	– 27	– 97
MARKET RENT CHANGE[b]					
Range	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	(5.00%) – 4.00%	(10.00%) – 4.00%
Average	2.20%	2.20%	2.25%	0.95%	(0.17%)
Change (Basis Points)		0	– 5	+ 125	+ 237
EXPENSE CHANGE[b]					
Range	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%
Average	2.70%	2.70%	2.75%	2.55%	2.58%
Change (Basis Points)		0	– 5	+ 15	+ 12
MARKETING TIME[c]					
Range	3 – 12	3 – 12	2 – 12	2 – 12	2 – 18
Average	5.4	5.4	5.1	6.0	6.6
Change (▼, ▲, =)		=	▲	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Suburban Maryland Office Market

Weak leasing velocity and tenant move-outs continue to challenge the performance of the Suburban Maryland office market. "There is slow to no growth here," laments an investor. In the second quarter of 2017, this market registered 211,728 square feet of negative absorption, representing a dramatic downward shift since the second quarter of 2016, as per Cushman & Wakefield. While move-outs caused an uptick in quarterly vacancy, year-over-year vacancy is actually lower – 19.8% compared to 21.2%.

Most of the positive trends in this market are happening in submarkets in Montgomery County, like Silver Spring and Rockville, where year-to-date leasing activity and net absorption have been positive. Two companies that recently leased space in these areas include Montgomery County Mental Health Agency in Silver Spring and Guggenheim Partners in the I-270 Rockville submarket.

In outlying areas, however, the story is very different. "Outside of Bethesda/Chevy Chase, market conditions are dismal with double-digit vacancies and no apparent catalyst for improvement," says a participant. Plus, a considerable amount of space is obsolete, adding to this market's uneven performance and prolonging its ability to push vacancy below its historical average. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	68.0%	=
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	9	=
Range	5 to 12	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	20.0%	=
Sellers	20.0%	=
Neither	60.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 23
SUBURBAN MARYLAND OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	7.00% – 10.00%	7.00% – 10.00%	7.25% – 10.00%	7.00% – 10.00%	7.25% – 10.00%
Average	8.65%	8.65%	8.78%	8.68%	8.78%
Change (Basis Points)		0	– 13	– 3	– 13
OVERALL CAP RATE (OAR)[a]					
Range	5.50% – 9.00%	5.50% – 9.00%	5.50% – 9.00%	5.25% – 9.00%	5.00% – 9.00%
Average	7.35%	7.48%	7.28%	7.45%	7.58%
Change (Basis Points)		– 13	+ 7	– 10	– 23
RESIDUAL CAP RATE					
Range	6.00% – 9.50%	6.50% – 9.50%	6.50% – 9.75%	6.50% – 9.75%	5.00% – 9.75%
Average	7.73%	7.73%	7.88%	8.03%	7.98%
Change (Basis Points)		0	– 15	– 30	– 25
MARKET RENT CHANGE[b]					
Range	0.00% – 1.50%	0.00% – 1.50%	0.00% – 1.50%	(2.00%) – 3.00%	(2.00%) – 3.00%
Average	0.25%	0.35%	0.35%	0.60%	0.83%
Change (Basis Points)		– 10	– 10	– 35	– 58
EXPENSE CHANGE[b]					
Range	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	2.00% – 3.00%
Average	2.00%	2.00%	2.00%	2.60%	2.83%
Change (Basis Points)		0	0	– 60	– 83
MARKETING TIME[c]					
Range	3 – 9	3 – 9	3 – 9	3 – 9	1 – 9
Average	6.1	6.1	6.1	6.1	5.5
Change (▼, ▲, =)		=	=	=	▲

a. Rate on unleveraged, all-cash transactions   b. Initial rate of change   c. In months

Washington, DC Office Market

The desire to own office property in the Washington, DC office market remains strong among both domestic and foreign investors even though fundamentals have been lackluster recently. "Leasing fundamentals are weak, but capital flows are strong," summarizes a participant. Since the start of 2017, overall absorption in the District has totaled close to 260,000 square feet, according to Cushman & Wakefield. Three years ago, this figure was just over one million square feet. "There are too many tenants looking to reduce their space needs," comments an investor.

The struggle to both entice and keep tenants at properties has caused the level of free rent to rise in this market. This quarter, one investor notes that they may offer up to 18 months of free rent on a ten-year lease now. As a whole, free rent averages eight months in this market this quarter – unchanged from last quarter and the fifth highest average of the Survey's 19 city-specific office markets.

To maximize tenant retention, one participant suggests that owners "be strategic with capital expenditures to improve an asset's competitive position." Another emphasizes "the need to lure tech firms – the market's third driver of space demand behind the GSA and the legal sector." ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	68.0%	=
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	8	=
Range	0 to 18	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	17.0%	=
Sellers	33.0%	=
Neither	50.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 24
WASHINGTON, DC OFFICE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.00% – 8.00%	5.00% – 8.00%	5.50% – 8.00%	6.00% – 8.00%	6.00% – 9.00%
Average	6.48%	6.48%	6.73%	6.83%	7.44%
Change (Basis Points)		0	– 25	– 35	– 96
OVERALL CAP RATE (OAR)[a]					
Range	4.25% – 6.50%	4.25% – 6.50%	4.25% – 6.50%	4.25% – 6.50%	4.25% – 8.00%
Average	5.27%	5.29%	5.33%	5.48%	5.88%
Change (Basis Points)		– 2	– 6	– 21	– 61
RESIDUAL CAP RATE					
Range	5.00% – 6.50%	5.00% – 6.50%	5.00% – 6.50%	5.00% – 6.50%	5.25% – 8.25%
Average	5.65%	5.69%	5.81%	5.95%	6.42%
Change (Basis Points)		– 4	– 16	– 30	– 77
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 4.00%	0.00% – 4.00%	0.00% – 4.00%
Average	1.58%	1.58%	1.42%	1.67%	2.36%
Change (Basis Points)		0	+ 16	– 9	– 78
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	1.50% – 3.00%
Average	2.33%	2.33%	2.75%	2.92%	2.89%
Change (Basis Points)		0	– 42	– 59	– 56
MARKETING TIME[c]					
Range	1 – 6	1 – 6	2 – 6	2 – 6	2 – 12
Average	3.6	3.6	4.0	4.1	5.3
Change (▼, ▲, =)		=	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Flex/R&D Market

Although underlying fundamentals for the national flex/R&D market continued to post positive trends in the second quarter of 2017, many investors remain extremely selective when acquiring flex/R&D properties. "We are only looking for opportunities in cities where life-science growth is strong, like Boston and Los Angeles, where companies have been converting flex space to lab space," comments a participant. Overall, the national flex/R&D market posted a vacancy rate of 10.5% in the second quarter of 2017, down from 11.5% a year ago and 12.3% two years ago, according to Reis.

In Los Angeles, flex/R&D space totals 38.8 million square feet, of which 2.8% was vacant as of the first quarter of 2017. With very little new supply entering this flex/R&D market, this percentage is not expected to change dramatically over the near term. Tight market conditions in Los Angeles' flex market have allowed some property owners to increase rental rates in certain situations.

As a whole, however, key assumptions for the Survey's national flex/R&D market remain unchanged this quarter – its average initial-year market rent change rate stays at 2.50% – only five basis points below the average for the Survey's national warehouse market, which remains at 2.55% this quarter. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	67.0%	=
Range	50.0% to 80.0%	

Months of Free Rent[1]:

Average	3	=
Range	0 to 6	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	0.0%	=
Sellers	0.0%	=
Neither	100.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 25

NATIONAL FLEX/R&D MARKET

Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.75% – 10.00%	6.75% – 10.00%	6.75% – 10.50%	7.25% – 12.00%	7.50% – 13.00%
Average	8.08%	8.08%	8.13%	8.83%	9.27%
Change (Basis Points)		0	– 5	– 75	– 119
OVERALL CAP RATE (OAR)[a]					
Range	5.50% – 9.50%	5.50% – 9.50%	5.50% – 9.00%	6.00% – 10.00%	7.00% – 12.00%
Average	7.10%	7.10%	7.10%	7.58%	8.54%
Change (Basis Points)		0	0	– 48	– 144
RESIDUAL CAP RATE					
Range	6.00% – 9.50%	6.00% – 9.50%	6.00% – 9.00%	6.50% – 10.00%	7.00% – 10.00%
Average	7.38%	7.38%	7.38%	7.80%	8.31%
Change (Basis Points)		0	0	– 42	– 93
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 4.00%	0.00% – 5.00%	0.00% – 3.00%
Average	2.50%	2.50%	2.50%	2.40%	1.33%
Change (Basis Points)		0	0	+ 10	+ 117
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%
Average	2.60%	2.60%	2.70%	2.90%	2.92%
Change (Basis Points)		0	– 10	– 30	– 32
MARKETING TIME[c]					
Range	2 – 12	2 – 12	2 – 12	2 – 12	2 – 18
Average	6.6	6.6	6.7	6.7	7.4
Change (▼, ▲, =)		=	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Warehouse Market

So far, tenant demand continues to eclipse supply in the national warehouse market, keeping investors actively pursuing deals and developers looking for speculative and build-to-suit opportunities. "Developing functional warehouses is our goal," shares an investor. "We are bullish on acquiring core warehouse properties," says another, who is focused on newer warehouses with functional attributes that can accommodate the changing needs of tenants. Older assets in infill locations are also in high demand by buyers.

In the second quarter of 2017, sales volume climbed 10.0% year over year for the U.S. industrial sector, the strongest growth across all commercial real estate sectors, according to Real Capital Analytics. Over this time period, total sales volume grew 13.0% for warehouse properties. It is not surprising that strong buyer interest and a positive outlook have combined to keep overall cap rates low for this sector.

Based on our Survey, the average overall cap rate for this market dips five basis points to 5.22% this quarter – the second lowest average reported for this market since it debuted in 2002. Over the next six months, 90.0% of surveyed investors expect cap rates to hold steady in this market while the remainder sees declines. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	68.0%	=
Range	50.0% to 80.0%	

Months of Free Rent(1):

Average	3	=
Range	0 to 7	
% of participants using	80.0%	=

Market Conditions Favor:

Buyers	0.0%	=
Sellers	60.0%	=
Neither	40.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 26
NATIONAL WAREHOUSE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.50% – 9.00%	5.50% – 9.00%	5.50% – 9.25%	5.75% – 9.00%	5.75% – 12.00%
Average	6.65%	6.66%	6.88%	7.31%	8.00%
Change (Basis Points)		– 1	– 23	– 66	– 135
OVERALL CAP RATE (OAR)[a]					
Range	4.00% – 6.90%	4.00% – 6.90%	3.00% – 7.00%	5.00% – 7.00%	5.25% – 12.00%
Average	5.22%	5.27%	5.21%	5.93%	7.13%
Change (Basis Points)		– 5	+ 1	– 71	– 191
RESIDUAL CAP RATE					
Range	5.00% – 7.00%	5.00% – 7.00%	5.00% – 8.50%	5.50% – 8.50%	6.00% – 12.00%
Average	5.96%	5.95%	6.20%	6.60%	7.58%
Change (Basis Points)		+ 1	– 24	– 64	– 162
MARKET RENT CHANGE[b]					
Range	0.00% – 6.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%
Average	2.55%	2.55%	2.50%	2.50%	1.86%
Change (Basis Points)		0	+ 5	+ 5	+ 69
EXPENSE CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	3.00% – 3.00%	2.50% – 3.00%	2.00% – 3.00%
Average	2.48%	2.45%	3.00%	2.98%	2.88%
Change (Basis Points)		– 3	– 52	– 50	– 40
MARKETING TIME[c]					
Range	1 – 9	1 – 9	1 – 12	2 – 12	2 – 18
Average	3.8	3.8	4.5	5.1	6.8
Change (▼, ▲, =)		=	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

ENC Region Warehouse Market

Strong tenant demand is fueling a rise in both rental rates and new construction in the East North Central warehouse region, but very few investors seem concerned about supply pulling ahead of demand in the near term. "Market conditions are some of the best I've ever witnessed," exclaims an investor. From a performance standpoint, many of the key cities in the ENC region, like Chicago, Cincinnati, Indianapolis, Columbus, and Cleveland, continue to do quite well despite additions to supply.

In Chicago, for example, the industrial vacancy rate increased by ten basis points to 6.69% during the second quarter of 2017 due to the delivery of vacant speculative space and Motorola's move from its one-million-square-foot facility in suburban Schaumburg, according to Colliers. Despite this slight uptick in vacancy, the current vacancy rate remains 22 basis points below the percentage posted a year ago.

And in Cleveland, the local industrial market posted positive net absorption of over 1.7 million square feet, causing the overall vacancy rate to drop to 4.4%. Over half of the gain in occupancy can be attributed to occupiers of warehouse-distribution space – a category that recorded a drop in vacancy to 5.3% over the same time period. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	65.0%	=
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	3	=
Range	0 to 5	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	0.0%	=
Sellers	100.0%	=
Neither	0.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 27
EAST NORTH CENTRAL (ENC) REGION WAREHOUSE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO
DISCOUNT RATE (IRR)[a]				
Range	5.75% – 7.00%	5.75% – 7.00%	5.75% – 7.50%	6.50% – 8.25%
Average	6.38%	6.43%	6.68%	7.45%
Change (Basis Points)		– 5	– 30	– 107
OVERALL CAP RATE (OAR)[a]				
Range	4.25% – 6.00%	4.25% – 6.00%	4.50% – 6.00%	5.25% – 7.25%
Average	5.35%	5.43%	5.45%	6.30%
Change (Basis Points)		– 8	– 10	– 95
RESIDUAL CAP RATE				
Range	5.00% – 7.00%	5.00% – 7.00%	5.50% – 7.00%	5.75% – 8.25%
Average	6.05%	6.08%	6.40%	6.98%
Change (Basis Points)		– 3	– 35	– 93
MARKET RENT CHANGE[b]				
Range	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%
Average	2.70%	2.65%	2.90%	2.67%
Change (Basis Points)		+ 5	– 20	+ 3
EXPENSE CHANGE[b]				
Range	2.50% – 3.00%	2.00% – 3.00%	2.00% – 4.00%	3.00% – 4.00%
Average	2.90%	2.90%	3.00%	3.08%
Change (Basis Points)		0	– 10	– 18
MARKETING TIME[c]				
Range	2 – 9	2 – 9	2 – 9	2 – 9
Average	4.7	4.7	5.0	5.0
Change (▼, ▲, =)		=	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Pacific Region Warehouse Market

When looking at potential acquisitions in the Pacific region warehouse market, surveyed investors cite location, tenancy, supply constraints, and functionality as desired characteristics. "The quality and stability of the rent roll are quite important," says a participant. "The durability of the income and the supply constraints in a trade area are top factors for us," shares another.

With most properties in this market at full occupancy and rental rates in favor of owners, competition is strong among buyers who seem undeterred by declining overall cap rates. As shown in Table 28, the average overall cap rate for this market slips 15 basis points this quarter to 4.83% – 32 basis points lower than the average a year ago and the sixth consecutive quarterly decline for this key investment indicator.

Over the next six months, most investors foresee overall cap rates in this market holding steady. At the same time, they expect initial-year market rents to rise an average of 2.25%, resulting in an expected average property value appreciation rate of 2.7% over the next 12 months. This forecasted average change in value is below what is expected for both the Survey's ENC region warehouse market (3.5%) and its national warehouse market (3.7%). ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	62.0%	=
Range	50.0% to 75.0%	

Months of Free Rent[1]:

Average	3	=
Range	1 to 6	
% of participants using	100.0%	=

Market Conditions Favor:

Buyers	0.0%	=
Sellers	80.0%	=
Neither	20.0%	=

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 28
PACIFIC REGION WAREHOUSE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.50% – 8.50%	5.50% – 8.50%	5.50% – 8.50%	6.00% – 8.00%	6.50% – 8.50%
Average	6.48%	6.53%	6.58%	7.21%	7.48%
Change (Basis Points)		– 5	– 10	– 73	– 100
OVERALL CAP RATE (OAR)[a]					
Range	3.75% – 7.00%	3.75% – 7.00%	3.75% – 7.00%	4.50% – 7.00%	5.00% – 7.75%
Average	4.83%	4.98%	5.15%	5.77%	6.38%
Change (Basis Points)		– 15	– 32	– 94	– 155
RESIDUAL CAP RATE					
Range	4.50% – 8.00%	4.50% – 8.00%	4.50% – 8.00%	5.50% – 7.50%	6.00% – 8.75%
Average	5.70%	5.70%	5.80%	6.40%	6.90%
Change (Basis Points)		0	– 10	– 70	– 120
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 3.00%
Average	2.25%	2.25%	2.40%	3.08%	1.75%
Change (Basis Points)		0	– 15	– 83	+ 50
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%
Average	2.80%	2.80%	2.80%	2.92%	2.88%
Change (Basis Points)		0	0	– 12	– 8
MARKETING TIME[c]					
Range	1 – 6	1 – 6	1 – 6	1 – 12	1 – 18
Average	3.3	3.3	3.3	4.1	5.3
Change (▼, ▲, =)		=	=	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Apartment Market

Some investors sense a chink in the armor of the national apartment market as new supply continues to deliver at a steady pace. "How can you not be concerned? Developers are gluttons!" exclaims an investor. "We are absolutely concerned because this new supply will put downward pressure on rents going forward," warns another.

During the first six months of this year, roughly 87,700 new apartment units were added in this market; however, by year's end this figure is forecast to rise to 288,981 units, according to Reis. In the face of mounting new supply, overall vacancy is projected to move from 4.4% at midyear 2017 to 4.8% at year-end 2017. In addition, the average growth for effective rent is forecast to slip to 3.2%, down from 3.8% in 2016.

Despite these trends, many investors see the impact of new supply as submarket-specific and not detrimental in the long term. "There is enough demand to handle the new supply," confirms an investor. Evidence of this viewpoint is visible in the outlook for value appreciation in this market. Overall, investors foresee property value changes ranging from -5.0% to +10.0% and averaging +2.6% in the coming year – above the aggregate average expected value change of +1.5% for all the national Survey markets. ✦

KEY 3Q17 SURVEY STATS*

Total Vacancy Assumption:

Average	6.0%	=
Range	2.0% to 10.0%	

Months of Free Rent[1]:

Average	1	=
Range	0 to 2	
% of participants using	78.0%	=

Market Conditions Favor:

Buyers	0.0%	=
Sellers	44.0%	▲
Neither	56.0%	▼

* ▼, ▲, = change from prior quarter
(1) on a one-year lease

Table 29
NATIONAL APARTMENT MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.00% – 10.00%	5.50% – 10.00%	5.50% – 10.00%	6.00% – 12.00%	5.25% – 14.00%
Average	7.28%	7.28%	7.25%	7.92%	8.28%
Change (Basis Points)		0	+ 3	– 64	– 100
OVERALL CAP RATE (OAR)[a]					
Range	3.50% – 7.50%	3.50% – 8.00%	3.50% – 7.50%	3.50% – 9.00%	3.75% – 10.00%
Average	5.35%	5.40%	5.25%	5.51%	5.74%
Change (Basis Points)		– 5	+ 10	– 16	– 39
RESIDUAL CAP RATE					
Range	4.25% – 7.75%	4.50% – 8.00%	4.25% – 7.50%	4.25% – 9.00%	4.50% – 9.75%
Average	5.79%	5.82%	5.74%	5.97%	6.20%
Change (Basis Points)		– 3	+ 5	– 18	– 41
MARKET RENT CHANGE[b]					
Range	(1.00%) – 5.00%	(1.00%) – 5.00%	0.00% – 5.00%	0.00% – 8.00%	(2.00%) – 10.00%
Average	2.69%	2.64%	2.88%	2.75%	2.73%
Change (Basis Points)		+ 5	– 19	– 6	– 4
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 4.00%	1.00% – 4.00%	1.00% – 3.50%
Average	2.72%	2.69%	2.81%	2.76%	2.69%
Change (Basis Points)		+ 3	– 9	– 4	+ 3
MARKETING TIME[c]					
Range	1 – 9	1 – 9	1 – 9	0 – 9	0 – 18
Average	3.8	3.8	3.6	3.8	5.3
Change (▼, ▲, =)		=	▲	=	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Regional Apartment Markets

Investor sentiment regarding the impact of new supply in the Mid-Atlantic, Pacific, and Southeast regional apartment markets ranges from optimistic to cautious, but similar to sentiment in the national apartment market, most do not view the situation as threatening for the long-term health of this sector. "The supply pipeline may present short-term challenges for existing properties but not over the long term," summarizes an investor active in the Southeast region.

While a Pacific region participant states, "We are currently contemplating the use of lower rent growth and concessions in our underwriting due to the impact of new supply;" a Mid-Atlantic region investor counters, "A supply issue is definitely on our radar, and we consider it a buying opportunity." For those looking to purchase apartment assets in these three regions, prices range from a low of 70.0% of replacement cost in the Mid-Atlantic region to a high of 150.0% of replacement cost in the Pacific region. The Pacific region also reveals the highest average price of 107.3% of replacement cost, followed by the Mid-Atlantic region at 99.0%, and the Southeast region at 98.8%.

Even with supply-side concerns, key cash flow assumptions do not reveal any dramatic shifts this quarter. Even though the average overall cap rate ticks up in both the Mid-Atlantic and Southeast regions, it holds steady in the Pacific region and maintains the lowest average of the three areas. Over the next six months, most investors foresee cap rates holding steady in each region while some anticipate increases of up to 25 basis points in the Pacific and Southeast regions and as much as 75 basis points in the Mid-Atlantic region.

At the same time, Survey participants' outlook for future rent growth holds steady in the Southeast and Pacific regions at 3.05% and 2.85%, respectively. However, this key indicator dips ten basis points to 1.75% in the Mid-Atlantic region this quarter. ✦

Table 30

SOUTHEAST REGION APARTMENT MARKET

Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.75% – 10.00%	5.75% – 10.00%	5.75% – 10.00%	6.00% – 10.00%	6.50% – 11.00%
Average	7.50%	7.50%	7.53%	7.70%	8.20%
Change (Basis Points)		0	– 3	– 20	– 70
OVERALL CAP RATE (OAR)[a]					
Range	3.50% – 6.50%	3.50% – 6.50%	3.50% – 6.50%	4.00% – 7.25%	4.75% – 7.00%
Average	5.13%	5.10%	5.10%	5.55%	5.96%
Change (Basis Points)		+ 3	+ 3	– 42	– 83
RESIDUAL CAP RATE					
Range	4.50% – 7.00%	4.50% – 7.00%	4.50% – 7.00%	5.00% – 7.00%	5.50% – 9.75%
Average	5.75%	5.75%	5.75%	6.13%	6.71%
Change (Basis Points)		0	0	– 38	– 96
MARKET RENT CHANGE[b]					
Range	1.00% – 4.00%	1.00% – 4.00%	1.00% – 4.00%	2.00% – 4.00%	(10.00%) – 4.00%
Average	3.05%	3.05%	3.05%	3.15%	1.21%
Change (Basis Points)		0	0	– 10	+ 184
EXPENSE CHANGE[b]					
Range	2.00% – 3.00%	2.00% – 3.00%	2.00% – 3.00%	2.00% – 4.00%	1.00% – 3.00%
Average	2.80%	2.80%	2.80%	3.00%	2.50%
Change (Basis Points)		0	0	– 20	+ 30
MARKETING TIME[c]					
Range	1 – 6	1 – 6	1 – 6	1 – 6	1 – 18
Average	3.3	3.3	3.1	3.0	6.5
Change (▼, ▲, =)		=	▲	▲	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

Table 31
REGIONAL APARTMENT MARKETS
Third Quarter 2017

	MID-ATLANTIC REGION					PACIFIC REGION				
	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]										
Range	5.25% – 10.00%	5.25% – 10.00%	5.50% – 10.00%	6.00% – 11.00%	5.50% – 14.00%	5.25% – 10.00%	5.25% – 10.00%	5.50% – 9.00%	5.00% – 12.00%	5.25% – 12.50%
Average	7.33%	7.35%	7.50%	8.08%	9.25%	6.73%	6.75%	6.80%	7.40%	8.60%
Change (Basis Points)		– 2	– 17	– 75	– 192		– 2	– 7	– 67	– 187
OVERALL CAP RATE (OAR)[a]										
Range	3.00% – 6.75%	3.00% – 6.75%	3.00% – 7.50%	4.00% – 7.50%	4.00% – 7.50%	3.50% – 6.00%	3.50% – 6.00%	3.50% – 6.00%	3.50% – 6.25%	4.00% – 7.00%
Average	5.04%	5.01%	5.20%	5.50%	5.67%	4.49%	4.49%	4.52%	4.81%	5.19%
Change (Basis Points)		+ 3	– 16	– 46	– 63		0	– 3	– 32	– 70
RESIDUAL CAP RATE										
Range	4.00% – 6.75%	4.00% – 6.75%	4.25% – 7.00%	4.50% – 9.00%	4.50% – 9.75%	4.25% – 6.00%	4.25% – 6.00%	4.00% – 6.00%	4.00% – 7.00%	4.00% – 7.50%
Average	5.53%	5.53%	5.53%	6.04%	6.27%	5.00%	5.00%	5.05%	5.54%	5.58%
Change (Basis Points)		0	0	– 51	– 74		0	– 5	– 54	– 58
MARKET RENT CHANGE[b]										
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 4.00%	0.00% – 5.00%	(5.00%) – 6.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 5.00%	2.00% – 7.00%	0.00% – 10.00%
Average	1.75%	1.85%	2.10%	2.50%	2.58%	2.85%	2.85%	3.15%	4.13%	3.96%
Change (Basis Points)		– 10	– 35	– 75	– 83		0	– 30	– 128	– 111
EXPENSE CHANGE[b]										
Range	0.00% – 4.00%	0.00% – 4.00%	1.00% – 3.00%	1.00% – 3.00%	1.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%	2.00% – 3.00%	2.00% – 4.00%	2.00% – 3.00%
Average	2.50%	2.50%	2.70%	2.75%	2.58%	2.23%	2.23%	2.83%	2.96%	2.79%
Change (Basis Points)		0	– 20	– 25	– 8		0	– 60	– 73	– 56
MARKETING TIME[c]										
Range	1 – 9	1 – 9	2 – 9	2 – 8	1 – 18	1 – 9	1 – 9	1 – 9	1 – 9	1 – 12
Average	3.9	3.9	4.2	4.4	5.4	4.1	4.1	4.5	4.0	5.4
Change (▼, ▲, =)		=	▼	▼	▼		=	▼	▲	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Net Lease Market

Unwavering investor interest and a steady pace of transactions in the national net lease market during the recent upcycle have allowed sellers to hold the advantage in negotiations; however, a prolonged cycle and limited quality offerings have many buyers standing their ground. "Sellers have achieved their objectives of low cap rates, shorter lease terms, and dubious credit tenants sold at low yields in the recent past," quips an investor. "Buyers are not willing to pay a premium for anything but A+ real estate with very strong credit and 15+ years of term," explains another.

Given the growing disparity between buyers' and sellers' expectations, the period of time between the initial offering of a property and the closing of the sale has lengthened. As shown in Table 32, marketing time ranges from two to 12 months and averages 5.3 months – up from 4.5 months three years ago.

The outlook for value appreciation in this market also reflects the gap between buyers' and sellers' mindsets. Specifically, Survey participants see values declining as much as 20.0% and rising up to 10.0%. The average expected value change is -3.0% over the next 12 months. This figure is better than last quarter's average of -3.8%, but well below the average of +4.7% a year ago. ✦

KEY 3Q17 SURVEY STATS*

Market Conditions Favor:

Neutral	60.0%	▲
Sellers	40.0%	▼

Months of Free Rent:

Average	(1)
Range	(1)
% of participants using	(1)

Portfolio Allocation:

Sale leasebacks	15.0%	▼
Net lease sales	39.0%	▼
1031 exchanges	36.0%	▲
Build to suit	10.0%	=

* ▼, ▲, = change from prior quarter
(1) 60.0% of participants are not using free rent.

Table 32
NATIONAL NET LEASE MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.00% – 10.00%	6.00% – 10.00%	6.00% – 10.00%	7.00% – 9.00%	7.00% – 9.00%
Average	7.81%	8.00%	8.20%	7.94%	8.16%
Change (Basis Points)		– 19	– 39	– 13	– 35
OVERALL CAP RATE (OAR)[a]					
Range	5.25% – 8.50%	5.25% – 9.00%	5.25% – 9.00%	6.00% – 8.50%	6.00% – 8.75%
Average	6.71%	6.88%	6.85%	6.98%	7.44%
Change (Basis Points)		– 17	– 14	– 27	– 73
RESIDUAL CAP RATE					
Range	6.00% – 9.00%	6.00% – 9.00%	6.00% – 9.00%	7.00% – 9.00%	7.00% – 9.00%
Average	7.40%	7.60%	7.70%	7.81%	8.34%
Change (Basis Points)		– 20	– 30	– 41	– 94
MARKET RENT CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 3.00%	0.00% – 3.00%	(3.00%) – 3.00%
Average	1.88%	1.92%	1.80%	1.85%	0.88%
Change (Basis Points)		– 4	+ 8	+ 3	+ 100
EXPENSE CHANGE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 3.00%	0.00% – 3.00%	0.00% – 3.00%
Average	1.67%	1.67%	1.70%	2.15%	1.88%
Change (Basis Points)		0	– 3	– 48	– 21
MARKETING TIME[c]					
Range	2 – 12	2 – 12	2 – 12	2 – 12	1 – 12
Average	5.3	5.4	4.8	4.5	4.7
Change (▼, ▲, =)		▼	▲	▲	▲

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Medical Office Buildings Market

While a scarcity of institutional quality offerings in the national medical office buildings (MOBs) market continues to challenge willing buyers, total sales volume ticked up in the first half of 2017. In the 12 months leading up to midyear 2017, total sales reached $14.7 billion, compared to $10.3 billion at midyear 2016, as per Real Capital Analytics. Moreover, the average sale price per square foot increased 9.8% during that time.

For buyers seeking to purchase MOB assets, prices can reach as much as 150.0% of replacement cost with an average price of 116.3% of replacement cost. "Construction costs are increasing primarily due to labor shortages, which means pro-forma rental rates will be increasing and may lead to bumps in pricing for existing product in the coming quarters," remarks an investor.

The expectation of higher rental rates is not yet reflected in this market's quarterly average initial-year market rent change rate, which holds steady at 2.20% this quarter (see Table 33). At the same time, however, its average overall cap rate slips five basis points to 6.71% – the lowest level since this market debuted in 2008. Over the next six months, the majority of Survey participants foresee cap rates holding steady in this market. ✦

KEY 3Q17 SURVEY STATS*

Tenant Retention Rate:

Average	81.0%	=
Range	70.0% to 90.0%	

Months of Free Rent(1):

Average	2	=
Range	1 to 6	
% of participants using	80.0%	=

Average Overall Cap Rates:

Market (as a whole)	6.71%	▼
On campus	6.40%	▼
Off campus	7.03%	▼

* ▼, ▲, = change from prior quarter
(1) on a ten-year lease

Table 33
NATIONAL MEDICAL OFFICE BUILDINGS MARKET
Third Quarter 2017

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	5.75% – 11.00%	5.75% – 11.00%	5.50% – 11.00%	6.00% – 11.00%	6.50% – 13.00%
Average	7.80%	7.85%	8.04%	8.42%	8.97%
Change (Basis Points)		– 5	– 24	– 62	– 117
OVERALL CAP RATE (OAR)[a]					
Range	4.75% – 10.00%	4.75% – 10.00%	4.50% – 10.00%	5.00% – 11.00%	5.75% – 11.00%
Average	6.71%	6.76%	6.78%	7.60%	7.94%
Change (Basis Points)		– 5	– 7	– 89	– 123
RESIDUAL CAP RATE					
Range	5.25% – 10.25%	5.50% – 10.25%	5.25% – 10.25%	5.50% – 10.50%	6.00% – 12.00%
Average	6.98%	7.00%	7.12%	7.71%	8.17%
Change (Basis Points)		– 2	– 14	– 73	– 119
MARKET RENT CHANGE[b]					
Range	0.00% – 3.00%	0.00% – 3.00%	0.00% – 4.00%	(5.00%) – 3.00%	(5.00%) – 3.00%
Average	2.20%	2.20%	2.46%	1.65%	0.97%
Change (Basis Points)		0	– 26	+ 55	+ 123
EXPENSE CHANGE[b]					
Range	1.00% – 4.00%	1.00% – 4.00%	1.00% – 4.00%	0.00% – 4.00%	0.00% – 4.00%
Average	2.50%	2.50%	2.43%	2.45%	2.22%
Change (Basis Points)		0	+ 7	+ 5	+ 28
MARKETING TIME[c]					
Range	1 – 12	1 – 12	1 – 12	1 – 12	1 – 12
Average	4.8	4.8	4.5	5.2	5.4
Change (▼, ▲, =)		=	▲	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Lodging Highlights

The following data and narrative is extracted from "Hospitality Directions US" updated August 2017, published by PwC Hospitality & Leisure.

As uncertainty weighs on the economy, softening lodging industry growth expected to continue. Following a weak first quarter, the U.S. economy strengthened in the second quarter. An initial second-quarter GDP estimate of 2.7% and further solid contributions from consumer spending suggest that the U.S. economy will remain on solid footing for the balance of 2017. Overall, moderate demand growth in the second quarter supported increases in both occupancy and ADR, resulting in a RevPAR increase of 2.7%.

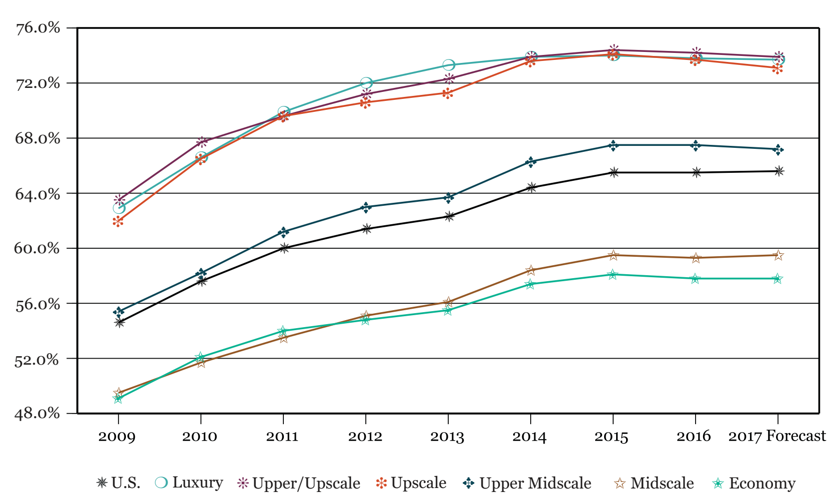
Despite ongoing political uncertainty, consumer and business spending are expected to continue to support economic growth in the second half of 2017. Benefiting from rising employment, real disposable income, and household wealth, consumers have been a driving force of economic growth this cycle. Business fixed investment is also expected to contribute meaningfully to economic growth, according to IHS-Markit. For the U.S. lodging industry, this increase in domestic spending is expected to support growth in demand and ADR, though supply growth continues to be a meaningful downside risk. ADR growth of 2.1% is expected to continue to outpace inflation, resulting in a 2.3% increase in RevPAR in 2017.

Looking ahead to 2018, policy uncertainty and Congressional gridlock, combined with the accelerating timeline to midterm elections, pose as significant overhangs to business and consumer confidence. The U.S. dollar is anticipated to continue to weaken in 2018, which could help support inbound international travel. However, it may also weigh negatively on domestic consumer spending, as prices on imported goods increase and consumers reallocate discretionary spending.

Though inflation is forecast to remain well below the 2.0% targeted by the Federal Reserve, ADR is expected to continue to grow, albeit at a slower pace. Overall, we continue to anticipate RevPAR growth of 2.0%, the lowest increase since the beginning of the economic recovery.

Exhibit L-1

OCCUPANCY



Source: STR (2009 thru 2016); PwC (2017 Forecast)

Supply

Supply growth for the U.S. lodging industry is expected to accelerate to 1.9% in 2017 (up from 1.5% in 2016). PwC's updated lodging outlook for 2018 anticipates supply growth peaking in the first quarter and tapering throughout the balance of the year.

For 2018, the upper midscale chain-scale segment is forecast to see the greatest increase in supply, growing at 4.0% (up from its expected growth of 3.2% in 2017). In contrast, the economy chain-scale segment is expected to realize a 0.5% increase in supply in 2018.

Demand

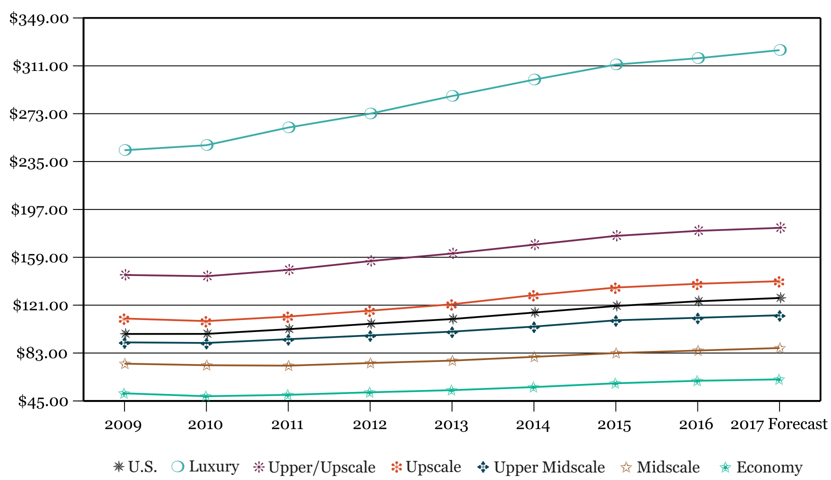
For 2017, PwC's lodging outlook anticipates demand growing 2.1% for the industry and also increasing in each chain-scale segment (between 0.3% in the economy chain-scale segment to 5.1% in the upscale chain-scale segment).

Demand is expected to largely follow the same trends as supply in 2018. As a result, the supply-demand balance is expected to shift in 2018 for the first time this cycle, resulting in a minor decline in occupancy for the U.S. lodging industry.

In 2018, PwC forecasts demand growth to decelerate for the industry as a whole, as well as in the upscale and midscale chain-scale segments.

Exhibit L-2

AVERAGE DAILY RATE (ADR)



Source: STR (2009 thru 2016); PwC (2017 Forecast)

Occupancy

As shown in Exhibit L-1, only two of the six chain-scale segments included in our lodging analysis are forecast to see increases in annual occupancy in 2017, led by the midscale segment.

For 2018, acceleration of supply growth paired with a continued deceleration in the rate of demand growth is expected to result in a decline in the industry's occupancy for the first time this cycle. Specifically, PwC forecasts the industry's occupancy level to decrease to 65.5% in 2018.

Average Daily Rate (ADR)

As shown in Exhibit L-2, ADR growth is forecast for each chain-scale segment in 2017. However, the overall rate of growth is 100 basis points below the average in 2016.

For 2018, PwC forecasts ADR for the U.S. lodging industry to grow 2.1% – equal to the rate projected for full-year 2017.

Manhattan

Despite a strong April for both occupancy and ADR, which increased 2.4% and 3.0%, respectively, the months of May and June failed to maintain this strength. Several national headwinds, including political uncertainty and the potential for reduced inbound international travel, still remain a concern for the Manhattan lodging market. However, as supply growth continues to moderate, it could prove to be an eventual tailwind for pricing power.

Hotel performance was mixed in Manhattan's five neighborhoods. While hotels in Midtown South were the only ones to increase ADR, they reported the largest decrease in occupancy and RevPAR in the second quarter. Hotels in Upper Manhattan performed best, increasing RevPAR 1.2%, as a 4.3% increase in occupancy more than offset a 2.9% decline in ADR. Hotels in Midtown East experienced the largest increase in occupancy, at 5.4%, but also the most dramatic decline in ADR, at 4.9%. On a year-to-date basis, Upper Manhattan was the only are to experience an increase in RevPAR, albeit minimal, of 0.4%.

Investment Activity

U.S. hotel sales totaled $13.5 billion for the first half of 2017 – comparable to the same period in 2016, as per Real Capital Analytics. While portfolio and entity-level activity boosted hotel sales in the second quarter of 2017, these "megadeals" were concentrated in non-major markets.

On a year-over-year basis, hotel sales volume in major markets was down 29.0% in the first half of 2017. By comparison, it was up 58.0% in tertiary markets.

When looking at specific metros, volume was up in 19 of the top-25 markets year over year in 2017. The top-five metros in terms of sales volume for the first half of 2017 are in Table NLH-1. Only one had the distinction of being in the top five for 2016 while four are new to the list. ✦

Table NLH-1

HOTEL SALES VOLUME FIRST-HALF 2017

Top U.S. Metros

Metro	Total Volume ($M)	Rank 2016
1. Los Angeles	$1,054	5
2. Honolulu	$527	7
3. Atlanta	$516	12
4. Charlotte	$489	54
5. Dallas	$436	15

Source: Real Capital Analytics, Inc.

Trends and forecasts have been extracted from *Hospitality Directions US*, published by PwC Hospitality & Leisure. Released August 2017, this report provides historical data and forecasts for the U.S. lodging industry and seven chain-scale segments with respect to ADR, supply, demand, occupancy, RevPAR, and revenue. For more information, email contact.hospitality@pwc.com.

National Full-Service Lodging Segment

For the second half of 2017, most surveyed investors expect a steady performance for the national full-service lodging sector, albeit with slower growth, especially in locations with additions to supply. "This sector's performance should be stable with only some negative impact in cities with substantial supply growth," remarks a participant. "We foresee a relatively flat outlook for 2017," says another.

In the upscale chain-scale segment, PwC forecasts supply to grow 6.0% in 2017 – well above the U.S. lodging industry's forecast average of 1.9%. For 2018, the rate of supply growth in the upscale segment is expected to decrease to 3.1%, but will remain well above the industry's average forecast of 1.9%. In the upper-midscale segment, supply growth is forecast to increase 3.2% in 2017 and 4.0% in 2018.

Both chain-scale segments are forecast to post higher demand growth in 2017 compared to 2016. However, demand growth is expected to lag the growth of supply, causing occupancy to fall slightly in each segment in 2017 (see Table FSM-1). ✦

Table FSM-1

LODGING FORECASTS

Segment	2017	Annual Change
Upscale		
Occupancy	73.1%	– 0.9%
ADR	$140.04	+ 1.3%
RevPAR	$102.35	+ 0.4%
Upper Midscale		
Occupancy	67.2%	– 0.4%
ADR	$113.00	+ 1.4%
RevPAR	$75.93	+ 1.0%

Source: *Hospitality Directions US, August 2017;* published by PwC

Table 34

NATIONAL FULL-SERVICE LODGING SEGMENT

Third Quarter 2017

	CURRENT	FIRST QUARTER 2017	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	8.00% – 13.00%	8.00% – 13.00%	8.00% – 12.75%	9.00% – 13.00%	8.50% – 13.00%
Average	10.19%	10.19%	10.40%	10.71%	11.00%
Change (Basis Points)		0	– 21	– 52	– 81
OVERALL CAP RATE (OAR)[a]					
Range	6.00% – 10.00%	6.00% – 10.00%	6.25% – 10.00%	6.00% – 11.00%	6.00% – 10.00%
Average	7.85%	7.90%	7.78%	7.81%	8.05%
Change (Basis Points)		– 5	+ 7	+ 4	– 20
RESIDUAL CAP RATE					
Range	7.00% – 10.00%	7.00% – 10.00%	7.00% – 10.00%	6.50% – 11.00%	6.00% – 12.00%
Average	8.44%	8.40%	8.38%	8.29%	8.64%
Change (Basis Points)		+ 4	+ 6	+ 15	– 20
AVERAGE DAILY RATE[b]					
Range	(2.00%) – 7.00%	(2.00%) – 7.00%	0.00% – 5.00%	0.00% – 7.00%	0.00% – 10.00%
Average	2.75%	2.83%	3.10%	3.83%	4.50%
Change (Basis Points)		– 8	– 35	– 108	– 175
OPERATING EXPENSE[b]					
Range	1.00% – 4.00%	1.00% – 4.00%	1.00% – 4.00%	1.00% – 4.00%	1.00% – 5.00%
Average	2.92%	2.92%	2.80%	2.83%	3.04%
Change (Basis Points)		0	+ 12	+ 9	– 12
MARKETING TIME[c]					
Range	3 – 9	3 – 9	3 – 9	3 – 9	3 – 24
Average	6.3	6.3	7.0	6.7	9.9
Change (▼, ▲, =)		=	▼	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Limited-Service Midscale & Economy Lodging Segment

While some surveyed investors see a flat near-term performance for the national limited-service midscale & economy lodging segment, others expect slight gains in ADR, occupancy, and RevPAR, but at considerably lower levels. "Aging product and new supply threats will keep this segment's performance neutral," notes a participant. "Fundamentals will moderate," projects another.

For the midscale segment, PwC forecasts a 0.3% increase in occupancy in 2017 as supply growth stays below demand. In 2018, however, supply is forecast to move ahead of demand in this segment, resulting in a 0.5% decline in occupancy. In the economy segment, demand is forecast to trend faintly ahead of supply in 2017, allowing for only a 0.1% increase in occupancy (see Table ELM-1).

The anticipation of muted occupancy gains is revealed in this market's key indicators. First, the low end of the overall cap rate range rises to 7.75%. And second, the high end of the range for its ADR growth rate assumption falls to 4.00% – moving its average down 65 basis points to 2.30%. ✦

Table ELM-1

LODGING FORECASTS

Segment	2017	Annual Change
Midscale		
Occupancy	59.5%	+ 0.3%
ADR	$86.64	+ 1.7%
RevPAR	$51.56	+ 2.0%
Economy		
Occupancy	57.8%	+ 0.1%
ADR	$62.11	+ 2.1%
RevPAR	$35.93	+ 2.2%

Source: *Hospitality Directions US, August 2017;* published by PwC

Table 35

NATIONAL LIMITED-SERVICE MIDSCALE & ECONOMY LODGING SEGMENT

Third Quarter 2017

	CURRENT	FIRST QUARTER 2017	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	8.50% – 13.00%	8.50% – 13.00%	8.50% – 12.00%	9.00% – 12.00%	9.00% – 13.00%
Average	11.00%	11.00%	10.55%	10.70%	10.94%
Change (Basis Points)		0	+ 45	+ 30	+ 6
OVERALL CAP RATE (OAR)[a]					
Range	7.75% – 11.00%	7.50% – 11.00%	7.50% – 10.00%	8.00% – 10.00%	8.00% – 12.00%
Average	9.08%	9.06%	8.70%	9.00%	9.70%
Change (Basis Points)		+ 2	+ 38	+ 8	– 62
RESIDUAL CAP RATE					
Range	7.75% – 11.00%	7.75% – 11.00%	7.75% – 10.00%	8.00% – 11.00%	8.00% – 12.00%
Average	9.83%	9.66%	9.43%	9.55%	9.85%
Change (Basis Points)		+ 17	+ 40	+ 28	– 2
AVERAGE DAILY RATE[b]					
Range	(2.50%) – 4.00%	(2.50%) – 8.00%	0.00% – 4.00%	2.00% – 5.00%	0.00% – 7.00%
Average	2.30%	2.95%	2.65%	3.30%	3.60%
Change (Basis Points)		– 65	– 35	– 100	– 130
OPERATING EXPENSE[b]					
Range	2.50% – 3.00%	2.50% – 3.00%	2.50% – 3.00%	1.00% – 3.00%	1.00% – 3.00%
Average	2.95%	2.95%	2.95%	2.75%	2.75%
Change (Basis Points)		0	0	+ 20	+ 20
MARKETING TIME[c]					
Range	2 – 12	2 – 12	2 – 12	2 – 12	2 – 12
Average	6.9	6.5	6.8	7.0	7.6
Change (▼, ▲, =)		▲	▲	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Luxury/Upper-Upscale Lodging Segment

As supply growth stays ahead of demand, many surveyed investors expect "fundamentals to moderate" in the national luxury/upper-upscale lodging segment as it moves into the second half of 2017. "This hotel sector will continue to show growth, but at a slower pace compared to prior years," comments an investor. Others, however, see fundamentals holding steady. A shown in Table LUM-1, occupancy for the luxury segment is forecast to remain at 73.7% for 2017 compared to 2016, but it is forecast to decline 0.4% in the upper-upscale segment.

When analyzing investments in this lodging market, our investors' assumptions for ADR growth have moderated. As shown in Table 36, the high end of the range for this cash flow assumption declines 100 basis points to 5.00% this quarter. In addition, its average slips ten basis points to 3.00%. Even though this average is well below the assumption from a year ago, it is the highest average of the Survey's four national lodging markets. Select-service lodging posts the second-highest quarterly average at 2.80%. ✦

Table LUM-1

LODGING FORECASTS

Segment	2017	Annual Change
Luxury		
Occupancy	73.7%	0.0%
ADR	$323.42	+ 2.0%
RevPAR	$238.49	+ 1.9%
Upper Upscale		
Occupancy	73.9%	– 0.4%
ADR	$182.38	+ 1.6%
RevPAR	$134.78	+ 1.1%

Source: *Hospitality Directions US, August 2017;* published by PwC

Table 36

NATIONAL LUXURY/UPPER-UPSCALE LODGING SEGMENT

Third Quarter 2017

	CURRENT	FIRST QUARTER 2017	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	6.50% – 12.00%	6.50% – 12.00%	6.50% – 12.00%	8.00% – 12.00%	8.50% – 13.00%
Average	9.53%	9.53%	9.60%	9.82%	10.54%
Change (Basis Points)		0	– 7	– 29	– 101
OVERALL CAP RATE (OAR)[a]					
Range	4.00% – 9.00%	4.00% – 9.00%	4.00% – 9.00%	4.00% – 9.00%	6.00% – 10.00%
Average	7.03%	7.00%	6.92%	7.04%	8.18%
Change (Basis Points)		+ 3	+ 11	– 1	– 115
RESIDUAL CAP RATE					
Range	5.50% – 9.50%	5.50% – 9.50%	5.50% – 9.50%	5.75% – 10.00%	6.00% – 12.00%
Average	7.18%	7.18%	7.23%	7.43%	8.73%
Change (Basis Points)		0	– 5	– 25	– 155
AVERAGE DAILY RATE[b]					
Range	0.00% – 5.00%	0.00% – 6.00%	0.00% – 9.00%	0.00% – 9.00%	(2.00%) – 15.00%
Average	3.00%	3.10%	4.00%	4.14%	4.33%
Change (Basis Points)		– 10	– 100	– 114	– 133
OPERATING EXPENSE[b]					
Range	0.00% – 4.00%	0.00% – 4.00%	0.00% – 5.00%	0.00% – 5.00%	0.00% – 6.00%
Average	2.60%	2.60%	2.75%	2.86%	2.98%
Change (Basis Points)		0	– 15	– 26	– 38
MARKETING TIME[c]					
Range	3 – 12	3 – 12	3 – 12	3 – 12	2 – 20
Average	6.8	6.8	6.3	6.0	7.8
Change (▼, ▲, =)		=	▲	▲	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

National Select-Service Lodging Segment

Changes in this quarter's cash flow assumptions suggest that surveyed investors have become more conservative and cautious about the near-term performance of the national select-service lodging segment. First, this sector's average overall capitalization rate moves up ten basis points to 8.70% – the highest average reported for this segment since its Survey debut in 2011. Second, its average ADR change rate slips 20 basis points to 2.80% – the sixth consecutive semi-annual decline for this assumption and its lowest average since its debut.

Five years ago, investors' expectations for this market were more positive than they are now. In 2012, the average ADR growth rate assumption was 4.80% – the highest average of the four Survey lodging markets. In addition, the average expected change in property values was 5.2%. This quarter, that average expectation is a decline of 1.5% (see Table SSL-1).

A main reason for investors' less favorable outlook for this sector today is the "continued pressure that new supply is placing on property performance." ✦

Table SSL-1

EXPECTED VALUE CHANGE*

Survey Lodging Markets

Segment	Range	Average
Full Service	(5.0%) to 6.0%	0.5%
Limited-Service Midscale & Economy	(5.0%) to 5.0%	– 0.3%
Luxury/Upper Upscale	(3.0%) to 10.0%	+ 2.9%
Select Service	(10.0%) to 3.0%	– 1.5%

* Over the next 12 months

Source: PwC Real Estate Investor Survey; 3Q2017

Table 37

NATIONAL SELECT-SERVICE LODGING SEGMENT

Third Quarter 2017

	CURRENT	FIRST QUARTER 2017	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)[a]					
Range	8.00% – 12.00%	8.00% – 11.00%	8.00% – 11.00%	9.00% – 13.00%	9.00% – 15.00%
Average	10.20%	9.90%	9.80%	10.95%	11.30%
Change (Basis Points)		+ 30	+ 40	– 75	– 110
OVERALL CAP RATE (OAR)[a]					
Range	6.50% – 10.00%	6.50% – 10.00%	6.50% – 10.00%	5.00% – 11.00%	5.00% – 12.00%
Average	8.70%	8.60%	8.55%	8.25%	8.40%
Change (Basis Points)		+ 10	+ 15	+ 45	+ 30
RESIDUAL CAP RATE					
Range	7.00% – 10.75%	7.00% – 10.75%	7.00% – 10.75%	5.00% – 11.00%	5.00% – 12.00%
Average	9.08%	9.03%	9.03%	8.45%	8.50%
Change (Basis Points)		+ 5	+ 5	+ 63	+ 58
AVERAGE DAILY RATE[b]					
Range	(2.00%) – 5.00%	0.00% – 5.00%	0.00% – 6.00%	2.00% – 8.00%	1.00% – 8.00%
Average	2.80%	3.00%	3.20%	5.20%	4.80%
Change (Basis Points)		– 20	– 40	– 240	– 200
OPERATING EXPENSE[b]					
Range	2.00% – 4.00%	2.00% – 4.00%	2.00% – 4.00%	2.00% – 4.00%	2.00% – 4.00%
Average	2.70%	2.70%	2.70%	2.95%	2.95%
Change (Basis Points)		0	0	– 25	– 25
MARKETING TIME[c]					
Range	2 – 12	2 – 12	2 – 12	2 – 12	2 – 12
Average	6.0	6.0	5.9	6.8	6.8
Change (▼, ▲, =)		=	▲	▼	▼

a. Rate on unleveraged, all-cash transactions b. Initial rate of change c. In months

NATIONAL REGIONAL MALL MARKET–SELECT SURVEY RESPONSES [1]

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PUBLIC REAL ESTATE COMPANY ✦ Forecast Period: 3 to 8 years Mainly uses DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	1.0% to 4.0% Year 1; 2.0% to 4.0% Year 2	2.0% to 5.0%	2.0% to 4.0%	4.00% to 10.00%	2.0% to 3.0%	5.00% to 11.50%	4.00% to 9.00%	9 to 18	60.0% to 80.0%	3.0% to 8.0%	$0.25 to $0.50	6 to 15
INVESTMENT BANKER ✦ Forecast Period: 1 to 10 years Relies on DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; retail sales based on historical and market analysis; typical sales growth per market per year is at the inflation rate (CPI); expects overall cap rates to increase 25 basis points over the next six months.	3.0% Years 1 to 3	3.0%		5.00% to 7.25%	0.8% to 1.0%	5.50% to 7.00%	4.50% to 6.00%	4 to 6	70.0%	1.0% to 2.0%	$0.15 to $0.30	6
REIT ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; no longer uses rent spikes; expects overall cap rates to increase up to 75 basis points over the next six months.	1.0% to 2.0% Year 1; 2.0% to 3.0% Year 2	2.0% to 3.0%	3.0% to 4.0%	5.00% to 10.00%	0.5% to 1.0%	7.00% to 10.00%	5.00% to 10.00%	4 to 8	80.0% to 85.0%	3.0% to 8.0%	Does not use	9 to 18
PUBLIC C CORP ✦ Forecast Period: 7 to 10 years Mainly uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; free rent is no longer awarded; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.5%	3.0%	3.0%	4.25% to 9.00%	1.0% to 3.0%	6.00% to 11.00%	4.00% to 9.00%	6 to 9	70.0% to 80.0%	5.0% to 7.0%	$0.25 to $0.50	6 to 9
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses mainly DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; sees overall cap rates holding steady over the next six months.	2.0% to 4.0% Years 1 to 3	3.0%	1.5% to 3.0%	5.00% to 7.50%	0.5% to 3.0%	5.50% to 7.50%	4.00% to 6.75%	6 to 14	50.0% to 75.0%	3.0% to 6.0%	$0.20 to $0.50	3 to 12

Source: Personal survey conducted by PwC during July 2017; (1) relates to Class A+, A, B+, and B malls

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NATIONAL POWER CENTER MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
REALTY ADVISOR ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; may use rent spikes; expects overall cap rates to decrease 25 to 50 basis points over the next six months.	0.0% Year 1; 0.0% to 1.0% Year 2; 1.0% to 1.5% Year 3	3.0%	3.0%	6.00% to 8.00%	1.5% to 2.5%	6.00% to 10.00%	5.50% to 7.50%	3 to 10	60.0% to 80.0%	5.0% to 10.0%	$0.20 to $0.35	3 to 9
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	0.0% to 3.0% Year 1; 3.0% Year 2	3.0%	3.0%	5.50% to 6.50%	1.0% to 2.0%	6.25% to 7.00%	5.25% to 6.50%	6 to 9	65.0% to 75.0%	5.0% to 8.0%	Does not use	2 to 6
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Primarily interested in high-credit deals; uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; sees overall cap rates holding steady over the next six months; no longer uses rent spikes.	3.0% Years 1 to 3	3.0%	3.0%	6.25% to 6.50%	1.0% to 1.5%	6.50% to 6.75%	5.50% to 6.25%	4 to 8	65.0% to 70.0%	5.0% to 7.0%	$0.20 to $0.30	2 to 4
INVESTMENT BANKER ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; prefers urban areas with easy access and good anchor tenancy; credit is key; may use a rent spike of 10.0% in year 5.	0.0% to 3.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	7.00% to 9.00%	2.0%	8.00% to 10.00%	6.00% to 7.00%	4 to 8	60.0% to 75.0%	5.0% to 10.0%	$0.20	3 to 5
PENSION FUND ✦ Forecast Period: 1 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	2.5% to 3.0%	3.0%	Did not disclose	6.50% to 7.50%	2.0%	6.50% to 7.75%	6.50% to 7.25%	1 to 3	70.0%	3.0% to 5.0%	$0.10 to $0.20	6

Source: Personal survey conducted by PwC during July 2017.

NATIONAL STRIP SHOPPING CENTER MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before deducting TIs, leasing commissions and capital replacement reserve; does not use rent spikes.	2.0% to 3.0%	3.0%	3.0%	6.00% to 7.00%	1.0% to 3.0%	6.50% to 7.00%	4.75% to 7.00%	6 to 12	65.0% to 80.0%	1.0% to 3.0%	$0.20 to $0.50	3 to 6
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Invests primarily in 200,000- to 400,000-square-foot, well-anchored community centers and good credit quality anchored power centers; relies on DCF; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	3.0%	3.0%	3.0%	6.00% to 6.25%	2.0% to 2.5%	6.75% to 7.00%	5.25% to 5.75%	5 to 7	65.0% to 70.0%	4.0% to 6.0%	$0.15 to $0.25	3 to 4
REIT ✦ Forecast Period: 1 to 3 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before deducting TIs, leasing commissions and capital replacement reserve; does not use rent spikes; expects overall cap rates to increase 25 to 75 basis points over the next six months.	0.0% to 1.0%	3.0%	3.0%	6.00% to 9.75%	1.0% to 2.0%	8.00% to 10.50%	7.00% to 9.50%	9 to 15	70.0% to 75.0%	2.5% to 5.0%	$0.15 to $0.25	9 to 12
REIT ✦ Forecast Period: 10 years Primarily uses direct capitalization in valuing assets; also uses yield capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to increase up to 25 basis points over the next six months.	2.0% to 3.0%	3.0%	3.0% to 4.0%	6.75% to 7.75%	4.0% to 5.0%	6.25% to 7.75%	5.25% to 8.50%	9 to 18	70.0% to 75.0%	3.0% to 7.0%	$0.25 to $0.75	3 to 6
DOMESTIC PENSION FUND ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	2.5% to 3.0%	2.5% to 3.0%	2.5% to 3.0%	4.75% to 6.50%	0.5% to 3.0%	5.50% to 7.50%	4.00% to 6.50%	6 to 12	60.0% to 70.0%	1.0% to 5.0%	$0.10 to $0.25	6 to 12
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	0.0%	3.0%	3.0%	5.50% to 6.25%	1.0% to 3.0%	6.00% to 6.50%	4.75% to 5.50%	6 to 9	65.0% to 75.0%	4.0% to 7.0%	Does not use	2 to 3

Source: Personal survey conducted by PwC during July 2017.

NATIONAL CBD OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses mainly DCF analysis; in direct cap, capitalizes NOI before tenant improvements, leasing commissions, and capital replacement reserve; may use a rent spike of 6.0% in year 1 and 5.0% in years 2 and 3.	2.0% to 5.0%	2.0% to 4.0%	1.5% to 3.0%	4.75% to 6.75%	0.5% to 4.0%	5.75% to 8.00%	3.75% to 6.75%	6 to 12	50.0% to 75.0%	2.5% to 6.0%	$0.10 to $0.50	3 to 9
PENSION FUND ✦ Forecast Period: 8 to 12 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	2.0% to 4.0%	2.0% to 4.0%	1.0% to 3.0%	5.50% to 7.50%	2.0% to 3.0%	6.50% to 9.00%	5.00% to 7.50%	6 to 12	60.0% to 75.0%	2.0% to 6.0%	$0.10 to $0.20	3 to 18
PUBLIC REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses a rent spike.	2.0% to 4.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	6.25% to 7.25%	1.0% to 1.5%	6.50% to 7.50%	5.00% to 7.50%	6 to 12	60.0% to 70.0%	5.0% to 8.0%	Does not use	2 to 6
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike of 4.0% in year 3 and 5.0% in year 4.	0.0% to 3.0%	3.0%	3.0%	5.00% to 5.50%	1.0% to 4.0%	5.75% to 6.25%	4.50% to 5.75%	6 to 9	65.0% to 75.0%	3.0% to 5.0%	$0.15 to $0.30	3 to 6
REIT ✦ Forecast Period: 5 to 10 years Uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that overall cap rates will decline 50 to 100 basis points over the next six months.	0.0% to 4.0%	2.0% to 3.0%	2.0% to 3.0%	5.50% to 7.50%	1.0% to 2.0%	5.50% to 7.00%	5.50% to 7.00%	6 to 9	65.0% to 85.0%	1.0% to 5.0%	$0.25 to $0.50	3 to 9
PRIVATE REAL ESTATE ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	1.0% to 3.0%	3.0%	2.0% to 3.0%	5.50% to 6.50%	1.0% to 3.0%	8.50% to 9.50%	5.50% to 6.50%	6 to 12	70.0% to 75.0%	3.0% to 5.0%	$0.25 to $0.50	6 to 9

Source: Personal survey conducted by PwC during July 2017.

NATIONAL SUBURBAN OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT ADVISORS ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur.	3.0%	3.0%	3.0%	6.50% to 7.25%	2.0% to 2.5%	7.00% to 7.75%	5.50% to 6.25%	6 to 9	65.0% to 70.0%	3.0% to 5.0%	$0.20 to $0.25	3 to 8
LIFE INSURANCE COMPANY ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes.	0.0% to 2.5%	2.0% to 3.0%	1.5% to 2.5%	6.50% to 9.50%	1.0% to 2.0%	6.00% to 10.00%	5.00% to 8.50%	6 to 15	50.0% to 67.0%	7.0% to 15.0%	$0.25 to $0.50	3 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike of 6.0% in year 4.	3.0% Years 1 to 3	3.0%	3.0%	6.00% to 7.00%	1.0% to 3.0%	6.50% to 7.50%	5.50% to 6.50%	6 to 12	50.0% to 65.0%	3.0%	$0.25 to $0.50	3 to 6
PUBLIC REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; prefers coastal markets.	1.0% to 4.0%	2.0% to 3.0%	2.0% to 3.0%	6.50% to 8.00%	1.0%	6.50% to 8.00%	5.00% to 8.00%	9 to 12	55.0% to 70.0%	5.0% to 9.0%	Does not use	3 to 6
DOMESTIC PENSION FUND ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	2.5% to 3.0%	2.5% to 3.0%	2.5% to 3.0%	6.50% to 7.25%	0.5% to 3.0%	7.50% to 8.50%	5.50% to 7.50%	9 to 12	65.0% to 75.0%	0.0% to 7.0%	$0.10 to $0.25	6 to 12
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses mainly DCF analysis; in direct cap, capitalizes NOI before tenant improvements, leasing commissions, and capital replacement reserve; may use a rent spike of 5.0% in years 1 to 3.	0.0% to 5.0%	2.0% to 4.0%	1.5% to 3.0%	5.75% to 8.00%	1.0% to 2.5%	7.00% to 9.00%	5.00% to 7.50%	8 to 12	50.0% to 70.0%	5.0% to 10.0%	$0.20 to $0.50	6 to 9

Source: Personal survey conducted by PwC during July 2017.

ATLANTA OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; uses effective rent after all concessions are extracted; expects overall cap rates to increase 10 to 50 basis points over the next six months.	2.0% to 4.0%	2.8% to 3.5%	2.5% to 3.5%	6.00% to 7.00% (CBD); 7.00% to 8.00% (suburbs)	1.5% to 3.0%	6.00% to 8.00% (CBD); 7.00% to 8.50% (suburbs)	5.75% to 7.00% (CBD); 7.00% to 8.50% (suburbs)	7 to 9	50.0% to 75.0%	3.0% to 5.0%	$0.15 to $0.25	2 to 4
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve.	3.0% Year 1; 3.0% to 4.0% Year 2	3.0%	3.0%	6.75% to 8.00% (CBD); 7.50% to 9.00% (suburbs)	2.0% to 3.0%	7.50% to 8.75% (CBD); 8.00% to 9.50% (suburbs)	5.25% to 7.50% (CBD); 6.00% to 8.50% (suburbs)	6 to 10	60.0% to 65.0%	8.0% to 10.0%	$0.20 to $0.25	8 to 10
INVESTMENT BANKER ✦ Forecast Period: 5 to 10 years Prefers DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses a rent spike; expects overall cap rates to hold steady over the next six months.	3.0% to 3.5%	1.5% to 2.5%	1.5% to 2.5%	6.50% to 7.50% (CBD); 6.75% to 7.75% (suburbs)	1.0% to 2.0%	7.00% to 9.00% (CBD); 7.50% to 9.50% (suburbs)	6.25% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	4 to 8	70.0% to 80.0%	5.0% to 7.0%	$0.10 to $0.25	3 to 4
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	2.0% to 2.5%	2.5%	2.0% to 2.5%	6.75% to 7.25% (suburbs)	1.5% to 2.0%	8.75% to 9.25% (CBD); 9.00% to 10.50% (suburbs)	6.50% to 7.50% (CBD); 8.00% to 8.50% (suburbs)	6 to 10	70.0% to 75.0%	8.0% to 12.0%	$0.15 to $0.35	9 to 12
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses DCF, direct capitalization, and sales comparison approach; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to increase 15 to 25 basis points over the next six months.	0.0% to 3.0% Years 1 & 2	2.5% to 3.0%	3.0%	6.00% to 8.50% (CBD); 6.50% to 8.75% (suburbs)	0.7% to 1.5%	7.00% to 9.00% in both CBD & suburbs	5.50% to 8.50% (CBD); 6.50% to 9.00% (suburbs)	4 to 12	60.0% to 70.0%	6.0% to 10.0%	$0.20 to $0.35	3 to 6

Source: Personal survey conducted by PwC during July 2017.

BOSTON OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT ADVISER ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	2.0% to 3.0%	3.0%	3.0%	5.75% to 6.75% (CBD); 6.50% to 8.25% (suburbs)	2.0% to 3.0%	6.25% to 7.25% (CBD); 7.00% to 8.50% (suburbs)	4.25% to 6.50% (CBD); 5.25% to 7.25% (suburbs)	6 to 8	65.0% to 70.0%	4.0% to 6.0%	$0.20 to $0.25	6 to 8
PENSION FUND ADVISOR ✦ Forecast Period: 3 to 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	0.0% to 2.0%	0.0% to 3.0%	1.0% to 3.0%	6.50% to 8.50% (CBD); 7.50% to 10.50% (suburbs)	1.0% to 2.5%	6.00% to 8.00% (CBD); 8.00% to 10.00% (suburbs)	7.00% to 8.50% (CBD); 7.50% to 10.00% (suburbs)	6 to 9	50.0% to 75.0%	4.0% to 8.0%	$0.15 to $0.65	2 to 5
REAL ESTATE ADVISOR ✦ Forecast Period: 10 years Uses DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; may use rent spikes of 5.0% in year 1 and 4.0% in year 2.	3.0% to 5.0%	3.0%	3.0%	5.00% to 6.00% (CBD); 6.75% (suburbs)	1.0% to 2.0%	6.00% to 6.75% (CBD); 7.25% to 7.75% (suburbs)	4.00% to 4.75% (CBD); 6.00% to 6.25% (suburbs)	6 to 9	65.0% to 70.0%	2.0% to 4.0%	$0.20 to $0.25	6 to 9
PRIVATE EQUITY INVESTOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes.	3.0% to 4.0%	2.5% to 3.0%	2.0% to 2.5%	5.50% to 6.25% (CBD); 6.50% to 8.00% (suburbs)	2.0% to 2.5%	7.00% to 7.50% (CBD); 7.50% to 8.50% (suburbs)	5.25% to 6.25% (CBD); 6.75% to 8.00% (suburbs)	4 to 9	65.0% to 70.0%	5.0%	$0.15 to $0.20	3 to 6
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 10 years Uses mainly direct capitalization; major focus is on the initial cash-on-cash return; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	5.0%	3.0%	3.0%	5.50% to 6.00% (CBD); 7.00% to 7.50% (suburbs)	1.3%	7.00% to 7.50% (CBD); 8.00% to 10.00% (suburbs)	4.25% to 4.75% (CBD); 6.25% to 7.25% (suburbs)	7 to 8	70.0%	4.0%	Does not use	4 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 to 11 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	4.0%	3.0%	3.0%	5.50% to 6.50% (CBD); 6.75% to 8.00% (suburbs)	1.0% to 3.0%	5.75% to 6.25% (CBD); 6.75% to 7.75% (suburbs)	4.40% to 5.00% (CBD); 7.00% to 8.00% (suburbs)	7 to 10	65.0% to 70.0%	5.0% to 8.0%	$0.15 to $0.25	4 to 7

Source: Personal survey conducted by PwC during July 2017.

CHARLOTTE OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
LIFE INSURANCE COMPANY ✦ Forecast Period: 8 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 4.0%	3.0% to 4.0%	1.0% to 3.0%	6.00% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	0.5% to 1.0%	7.00% to 8.50% (CBD); 7.50% to 9.00% (suburbs)	5.00% to 7.00% (CBD); 6.00% to 8.00% (suburbs)	5 to 10	65.0% to 75.0%	5.0% to 10.0%	$0.10 to $0.25	1 to 9
INSTITUTIONAL INVESTOR ✦ Forecast Period: 5 to 10 years Mainly uses DCF analysis and sales comparison approach; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; prefers the CBD; no longer uses a rent spike; sees overall cap rates holding steady over the next six months.	2.5% to 3.5%	1.5% to 2.5%	2.0% to 2.5%	6.50% to 7.50% (CBD); 7.00% to 8.00% (suburbs)	1.0% to 3.0%	7.50% to 9.00% (CBD); 7.75% to 9.50% (suburbs)	6.50% to 7.50% (CBD); 6.75% to 8.00% (suburbs)	3 to 9	70.0% to 75.0%	5.0% to 7.5%	$0.10 to $0.35	2 to 4
VALUE-ADDED INVESTOR ✦ Forecast Period: 3 to 5 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to hold steady over the next six months; may use a rent spike.	2.0% to 3.0%	2.0% to 3.0%	2.5% to 3.0%	5.50% to 6.75% (CBD); 6.75% to 7.50% (suburbs)	0.8% to 1.3%	8.00% to 9.00% (CBD); 8.50% to 10.00% (suburbs)	6.50% to 7.25% (CBD); 7.00% to 8.00% (suburbs)	5 to 10	70.0%	5.0% to 10.0%	$0.10 to $0.25	2 to 4
PRIVATE INVESTOR ✦ Forecast Period: 3 to 7 years Mainly uses DCF analysis; in direct capitalization, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions favor sellers; expects overall cap rates to hold steady over the next six months; no longer uses a rent spike.	3.0% to 4.0%	2.0% to 2.5%	2.0% to 2.5%	6.75% to 7.75% (CBD); 7.75% to 8.50% (suburbs)	1.5% to 2.5%	8.00% to 9.00% (CBD); 9.00% to 10.00% (suburbs)	6.50% to 7.25% (CBD); 7.50% to 8.75% (suburbs)	7 to 10	65.0% to 75.0%	7.0% to 10.0%	$0.25 to $0.40	4 to 7
INVESTMENT MANAGER ✦ Forecast Period: 3 to 10 years Uses all three approaches to value; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to hold steady over the next six months; no longer uses a rent spike.	2.5% to 4.5%	2.0%	2.0% to 3.0%	5.50% to 6.50% (CBD); 6.50% to 8.50% (suburbs)	1.0% to 1.5%	6.50% to 7.50% (CBD); 7.00% to 9.00% (suburbs)	5.50% to 6.50% (CBD); 6.00% to 7.00% (suburbs)	4 to 9	70.0% to 80.0%	3.0% to 6.0%	$0.25 to $0.50	2 to 4

Source: Personal survey conducted by PwC during July 2017.

CHICAGO OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
LIFE INSURANCE COMPANY ✦ Forecast Period: 5 to 10 years Relies mainly on DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	3.0% Years 1 & 2	3.0%	2.5% to 3.0%	6.00% to 8.00% (CBD); 8.50% to 10.00% (suburbs)	0.8% to 1.5%	7.00% to 8.00% (CBD); 8.00% to 9.00% (suburbs)	5.50% to 8.00% (CBD); 7.50% to 10.00% (suburbs)	6 to 9	65.0% to 75.0%	12.0% to 18.0%	$0.25 to $0.50	3 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; no longer uses a rent spike.	0.0% Years 1 & 2	2.0% to 3.0%	2.0%	6.00% to 9.00% (CBD); 7.50% to 10.00% (suburbs)	1.0% to 2.5%	7.00% to 9.50% (CBD); 8.00% to 11.00% (suburbs)	5.50% to 8.00% (CBD); 7.00% to 10.00% (suburbs)	6 to 9	60.0% to 75.0%	10.0% to 15.0%	$0.50 to $0.75	4 to 6
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 10 years Uses mainly direct capitalization; major focus is on the initial cash-on-cash return; typically extends forecast period to capture impact of all lease expirations; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	0.0% Year 1; 0.0% to 3.0% Year 2	3.0%	3.0%	6.00% to 6.50% (CBD); 8.00% to 9.00% (suburbs)	1.5%	7.00% to 7.50% (CBD); 10.00% to 11.00% (suburbs)	5.00% to 6.00% (CBD); 8.00% to 9.00% (suburbs)	10 to 12	70.0% to 85.0%	8.0%	Does not use	4 to 8
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents; does not use rent spikes.	1.0% to 2.0%	3.0%	2.0% to 3.0%	5.50% to 7.50% (CBD); 8.50% to 10.00% (suburbs)	5.0%	9.00% to 10.00% (CBD); 11.00% to 12.00% (suburbs)	5.50% to 7.50% (CBD); 8.50% to 9.50% (suburbs)	6 to 9	60.0% to 70.0%	8.0% to 12.0%	$0.15 to $0.25	3 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; sees overall cap rates holding steady over the next six months.	3.0%	3.0%	3.0%	5.75% to 6.50% (CBD); 8.00% to 10.00% (suburbs)	0.5% to 1.0%	5.50% to 6.50% (CBD); 8.00% to 10.00% (suburbs)	4.50% to 5.75% (CBD); 7.00% to 9.00% (suburbs)	9	65.0% to 75.0%	5.0% to 8.0%	$0.25 to $0.50	2 to 6
INVESTMENT ADVISOR ✦ Forecast Period: 10 years Relies on DCF; uses face rents and reflects concessions as they are scheduled to occur; prefers the West Loop; does not use a rent spikes; sees overall cap rates increasing 5 to 30 basis points over the next six months.	1.0% to 3.0%	3.0% to 6.0%	2.0% to 3.0%	5.50% to 6.25% (CBD); 7.50% to 9.00% (suburbs)	1.0% to 1.5%	6.00% to 7.00% (CBD); 8.25% to 10.50% (suburbs)	4.75% to 6.25% (CBD); 7.00% to 9.00% (suburbs)	6 to 12	60.0% to 75.0%	3.0% to 5.0%	$0.20 to $0.30	3 to 9

Source: Personal survey conducted by PwC during July 2017.

DALLAS OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE INVESTOR ✦ Forecast Period: 3 to 7 years Relies on DCF; also uses direct capitalization and sales comparison approach; uses face rents; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; may use a rent spike of 5.0% in year 2.	2.0% to 5.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	6.00% to 8.00% (CBD); 6.00% to 9.00% (suburbs)	1.0% to 3.0%	6.00% to 8.00% (CBD); 9.00% (suburbs)	5.00% to 8.00% (CBD); 6.00% to 8.50% (suburbs)	6 to 9	65.0% to 75.0%	2.0% to 5.0%	$0.10 to $0.25	3 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that local market conditions equally favor sellers and buyers; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 2.5% Years 1 & 2	3.0%	3.0%	6.25% to 7.25% (CBD); 7.25% to 8.00% (suburbs)	2.0% to 2.5%	6.50% to 7.50% (CBD); 7.50% to 8.50% (suburbs)	5.00% to 6.25% (CBD); 6.25% to 7.00% (suburbs)	6 to 9	70.0% to 75.0%	5.0% to 7.0%	$0.20 to $0.40	3 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; uses face rents and reflects concessions when they are scheduled to occur; believes market conditions favor buyers.	2.0% to 3.0% Years 1 & 2	3.0%	3.0%	6.50% to 7.75% (CBD); 7.50% to 8.50% (suburbs)	2.0% to 3.0%	7.50% to 8.50% (CBD); 8.00% to 9.00% (suburbs)	5.00% to 7.25% (CBD); 5.75% to 7.75% (suburbs)	6 to 10	65.0% to 70.0%	5.0% to 10.0%	$0.20 to $0.25	6 to 12
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	3.0% Years 1 to 3	3.0%	Did not disclose	6.25% to 6.50% (CBD)	0.5% to 1.0%	6.75% to 7.25% (CBD)	5.25% to 6.00% (CBD)	6 to 9	65.0% to 75.0%	1.0% to 5.0%	$0.15 to $0.25	4 to 6
REAL ESTATE ADVISER ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to hold steady over the next six months.	6.0% Year 1; 5.0% Year 2	3.0%	3.0%	6.25% to 7.00% (CBD); 6.50% to 7.25% (suburbs)	1.0%	6.75% to 7.00% in both CBD & suburbs	5.25% to 6.50% (CBD); 5.50% to 6.75% (suburbs)	5 to 9	65.0%	3.0%	$0.50	1 to 6

Source: Personal survey conducted by PwC during July 2017.

DENVER OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 3 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	2.0% to 4.0%	3.0%	3.0%	6.00% to 7.50% (CBD); 7.00% to 8.50% (suburbs)	0.5% to 3.0%	7.00% to 8.00% (CBD); 8.00% to 9.00% (suburbs)	5.50% to 7.00% (CBD); 6.50% to 8.75% (suburbs)	5 to 9	50.0% to 75.0%	3.0% to 8.0%	$0.10 to $0.25	1 to 3
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 7 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 3.0% Years 1 to 3	2.0% to 3.0%	2.0% to 2.5%	6.00% to 7.00% (CBD); 7.50% to 9.00% (suburbs)	1.0% to 3.0%	6.75% to 7.75% (CBD); 8.00% to 9.00% (suburbs)	5.00% to 6.00% (CBD); 7.50% to 8.50% (suburbs)	6 to 7	70.0% to 75.0%	7.0% to 8.0%	$0.15 to $0.25	2 to 4
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	3.0% Years 1 to 3	3.0%	3.0%	6.50% to 7.00% (suburbs)	2.0% to 3.0%	7.00% to 7.50% (suburbs)	6.00% to 6.50% (suburbs)	6 to 8	60.0% to 70.0%	1.0% to 2.0%	$0.20 to $0.30	3 to 6
PENSION FUND INVESTOR ✦ Forecast Period: 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; believes that current market conditions equally favor buyers and sellers; does not use rent spikes.	2.0% to 3.0% Years 1 to 3	3.0%	2.0% to 3.0%	5.75% to 6.50% (CBD); 6.50% to 7.50% (suburbs)	1.5% to 2.0%	6.50% to 7.25% (CBD); 7.00% to 8.00% (suburbs)	5.50% to 6.00% (CBD); 6.25% to 6.50% (suburbs)	5 to 6	60.0% to 70.0%	5.0%	Does not use	3 to 6
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 5 to 11 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to increase 10 to 50 basis points over the next six months; does not use rent spikes.	0.0% to 3.0% Years 1 to 3	3.0%	3.0%	7.50% to 8.50% (CBD); 8.50% to 9.50% (suburbs)	3.0% to 5.0%	8.00% to 10.00% (CBD); 8.00% to 11.00% (suburbs)	5.00% to 7.00% (CBD); 7.00% to 9.00% (suburbs)	6 to 9	70.0% to 75.0%	5.0% to 10.0%	$0.10 to $0.30	3 to 6

Source: Personal survey conducted by PwC during July 2017.

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HOUSTON OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
REAL ESTATE ADVISORS ✦ Forecast Period: 5 years Relies on DCF; also uses direct capitalization and sales comparison approach; uses effective rents; in direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to increase 25 to 50 basis points over the next six months.	(8.0%) to (6.0%) Year 1	2.5%	1.5% to 1.8%	6.50% to 6.75% (CBD); 6.75% to 7.00% (suburbs)	1.5% to 2.5%	6.50% to 7.00% (CBD); 7.50% to 8.00% (suburbs)	6.50% to 6.75% (CBD); 6.75% to 7.25% (suburbs)	12 to 18	50.0% to 60.0%	5.0% to 10.0%	$0.25	12
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; also looks at discount to replacement cost; relies on DCF; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike.	0.0% Year 1; 0.0% to 4.0% Year 2	3.0%	3.0%	5.75% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	1.0% to 2.5%	8.00% to 12.00% (CBD); 9.00% to 13.50% (suburbs)	5.00% to 8.00% (CBD); 6.50% to 8.00% (suburbs)	2 to 5	Up to 80.0%	5.0% to 10.0%	$0.15 to $0.30	3 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; believes market conditions favor buyers.	0.0% Year 1; 0.0% to 1.0% Year 2	3.0%	3.0%	6.75% to 7.75% (CBD); 7.25% to 8.75% (suburbs)	2.0% to 3.0%	7.25% to 8.75% (CBD); 7.75% to 8.75% (suburbs)	5.75% to 7.25% (CBD); 6.75% to 8.00% (suburbs)	8 to 10	60.0% to 65.0%	8.0% to 10.0%	$0.20 to $0.25	10 to 12
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	0.0%	3.0%		7.25% to 7.50% (CBD)	1.0% to 2.0%	8.25% to 9.25% (CBD)	6.00% to 6.50% (CBD)	9	65.0% to 70.0%	1.0% to 5.0%	$0.15 to $0.25	6 to 12
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 7 years Uses both DCF analysis and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that current market conditions equally favor buyers and sellers; does not use rent spikes.	0.0% to 3.0% Years 1 to 3	2.0% to 3.0%	2.0% to 3.0%	7.00% to 9.50% (CBD); 7.50% to 10.00% (suburbs)	1.0% to 3.0%	8.00% to 10.00% (CBD); 9.00% to 11.50% (suburbs)	6.50% to 8.00% (CBD); 7.00% to 10.00% (suburbs)	6 to 12	65.0% to 75.0%	7.0% to 15.0%	$0.15 to $0.30	4 to 9

Source: Personal survey conducted by PwC during July 2017.

LOS ANGELES OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT ADVISOR ✦ Forecast Period: 7 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions favor sellers; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	3.0% to 5.0% Years 1 & 2	3.0%	3.0%	5.00% to 5.50% in both CBD & suburbs	0.5% to 1.0%	5.50% to 7.00% (CBD); 5.00% to 6.50% (suburbs)	4.50% to 5.50% (CBD); 5.00% to 6.00% (suburbs)	6 to 9	70.0% to 80.0%	5.0% to 7.0%	$0.15 to $0.25	1 to 3
REAL ESTATE COMPANY ✦ Forecast Period: 7 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; may use a rent spike of 5.0% in years 1 and 2; believes market conditions equally favor buyers and sellers.	3.0% to 5.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	6.50% to 7.50% (CBD); 6.00% to 7.50% (suburbs)	1.0% to 1.5%	6.50% to 7.50% (CBD); 6.00% to 7.50% (suburbs)	5.50% to 6.50% (CBD); 4.50% to 6.50% (suburbs)	9 to 12	60.0% to 70.0%	5.0% to 8.0%	Does not use	3 to 6
INVESTMENT BANKER ✦ Forecast Period: 5 to 10 years Prefers DCF analysis; also uses direct cap; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike of 10.0% in year 5; expects overall cap rates to hold steady over the next six months.	3.0% to 5.0% Years 1 to 3	2.0% to 3.0%	2.0%	6.75% to 8.00% in both CBD & suburbs	2.0%	6.00% to 8.50% in both CBD & suburbs	5.00% to 7.00% in both CBD & suburbs	4 to 6	65.0% to 75.0%	5.0% to 10.0%	$0.15 to $0.25	3 to 4
LIFE INSURANCE COMPANY ✦ Forecast Period: 3 to 15 years Relies primarily on DCF; also uses direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; may use rent spikes; expects overall cap rates to increase over the next six months.	3.0% to 4.0% Year 1; 3.0% Year 2	3.0%	2.5% to 3.5%	5.25% to 7.00% (CBD); 6.00% to 8.00% (suburbs)	1.5% to 2.0%	6.00% to 8.00% (CBD); 7.00% to 8.50% (suburbs)	5.00% to 6.00% (CBD); 6.25% to 7.50% (suburbs)	8 to 10	50.0% to 65.0%	1.0%	$0.15 to $0.20	1 to 3
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 3.0%	3.0%	2.0% to 3.0%	6.00% to 7.50% (CBD); 6.00% to 7.75% (suburbs)	2.0% to 3.0%	6.50% to 8.00% in both CBD & suburbs	4.25% to 6.25% (CBD); 4.25% to 7.25% (suburbs)	6 to 8	65.0% to 70.0%	4.0% to 6.0%	$0.20 to $0.25	6 to 8

Source: Personal survey conducted by PwC during July 2017.

MANHATTAN OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT BANKER ✦ Forecast Period: 5 years Strongest interest is in Midtown; uses both DCF and direct capitalization; does not use rent spikes; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve.	1.0% to 2.0%	1.0% to 3.0%	1.0% to 3.0%	3.00% to 5.00%	4.0%	6.50% to 8.50%	3.00% to 5.00%	6 to 12	65.0% to 75.0%	5.0% to 10.0%	Does not use	2 to 6
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 10 years Uses mainly direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	5.0%	3.0%	3.0%	5.00% to 5.50%	4.0%	6.00% to 7.00%	4.00% to 5.00%	8 to 10	70.0% to 75.0%	2.5% to 3.0%	$0.35 to $0.50	3
PENSION FUND ADVISOR ✦ Forecast Period: 10 to 12 years Mainly uses DCF analysis when valuing assets; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; may use a rent spike.	4.0% to 5.0%	3.0%	3.0%	4.50% to 5.50%	3.8% to 4.0%	5.50% to 6.25%	3.75% to 5.00%	9 to 12	60.0% to 70.0%	1.0% to 2.0%	$0.10 to $0.25	6 to 9
INVESTMENT ADVISOR ✦ Forecast Period: 3 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commission, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	0.0% to 1.5%	2.0% to 3.0%	1.0% to 3.0%	6.50% to 8.50%	2.0% to 3.0%	8.00% to 9.00%	6.50% to 8.50%	2 to 6	50.0% to 75.0%	2.5% to 7.5%	$0.15 to $0.50	1 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 to 11 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses effective rents in DCF analysis; does not use rent spikes.	3.0% to 4.0%	3.0%	3.0% to 4.0%	5.25% to 6.25%	1.0% to 3.0%	5.75% to 6.25%	4.00% to 5.00%	5 to 7	70.0% to 80.0%	5.0% to 7.0%	$0.15 to $0.25	5 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; relies on DCF; uses face rents in DCF model, net effective rents in direct capitalization; prefers Midtown and Times Square; does not use rent spikes.	2.0% to 3.0%	3.0%	3.0%	5.75% to 6.75%	1.5% to 2.0%	5.75% to 7.25%	4.00% to 5.50%	5 to 8	65.0% to 70.0%	3.0% to 6.0%	$0.20 to $0.25	4 to 6

Source: Personal survey conducted by PwC during July 2017.

NORTHERN VIRGINIA OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
REIT ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; expects overall cap rates to decrease over the next six months; does not use rent spikes.	2.0% to 3.0% Year 1; 2.5% to 3.0% Year 2	2.0% to 3.0%	2.5% to 3.0%	7.50% to 8.50%	1.5% to 2.0%	7.50% to 8.50%	7.00% to 8.00%	6 to 15	60.0% to 70.0%	5.0% to 7.0%	$0.25 to $0.50	4 to 8
LIFE INSURANCE COMPANY ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	0.0% Year 1; 2.0% Year 2	0.0%	2.0% to 2.5%	5.50% to 6.50%	1.5%	6.00% to 8.50%	5.00% to 7.00%	12	50.0% to 75.0%	5.0% to 9.0%	$0.25 to $0.70	1 to 3
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Relies on DCF; also uses direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	3.0% Years 1 & 2	3.0%	3.0%	6.50% to 7.00%	2.0% to 3.0%	7.00% to 7.50%	6.00% to 6.50%	6 to 7	60.0% to 70.0%	3.0% to 5.0%	$0.15 to $0.25	3 to 5
PENSION FUND ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; does not use rent spikes; believes market conditions are neutral.	0.0% to 3.0% Year 1; 1.5% to 3.0% Year 2	3.0%	3.0%	5.75% to 7.50%	1.0% to 2.0%	6.00% to 8.50%	5.25% to 8.00%	6 to 9	70.0%	5.0%	$0.15 to $0.25	3 to 6
REIT ✦ Forecast Period: 10 years Looks at cash-on-cash return and the growth in the return over a ten-year period; does not price properties through DCF; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve.	0.0% Years 1 & 2; 0.0% to 2.0% Year 3	2.0%	2.0%	6.00% to 7.50%	2.0% to 2.5%	6.50% to 9.50%	5.00% to 8.50%	8 to 12	65.0%	1.0% to 3.0%	$0.25	3 to 6

Source: Personal survey conducted by PwC during July 2017.

PACIFIC NORTHWEST OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT ADVISOR ✦ Forecast Period: 7 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions equally favor buyers and sellers; does not use rent spikes.	3.0% to 4.0%	3.0%	3.0%	5.00% to 5.50% (CBD); 5.00% to 6.00% (suburbs)	0.5% to 1.0%	5.25% to 6.50% (CBD); 5.50% to 7.00% (suburbs)	4.25% to 5.00% (CBD); 5.00% to 6.50% (suburbs)	6 to 9	70.0% to 80.0%	5.0%	$0.15 to $0.25	1 to 3
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects cap rates to hold steady over the next six months; does not use rent spikes.	2.5% to 3.3% Years 1 & 2	3.0%	3.0%	5.50% to 6.25% (CBD); 6.25% to 7.25% (suburbs)	3.0% to 4.0%	6.75% to 8.00% (CBD); 8.00% to 9.00% (suburbs)	5.00% to 6.00% (CBD); 6.00% to 7.00% (suburbs)	6 to 9	70.0% to 75.0%	3.0% to 6.0%	$0.15 to $0.25	3 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 3.0%	3.0%	3.0%	5.50% to 6.25% (CBD); 6.25% to 7.25% (suburbs)	3.0% to 4.0%	6.50% to 7.50% (CBD); 7.50% to 8.50% (suburbs)	5.25% to 6.00% (CBD); 6.00% to 7.00% (suburbs)	6 to 9	70.0% to 75.0%	3.0% to 5.0%	$0.15 to $0.25	3 to 6
PRIVATE INVESTOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	2.5% to 3.0%	2.5% to 3.0%	1.5% to 3.0%	5.00% to 9.00% (CBD)	2.0% to 4.0%	8.00% to 9.00% (CBD); 8.00% to 10.00% (suburbs)	5.00% to 8.00% (CBD)	6 to 12	50.0% to 75.0%	1.0% to 2.0%	$1.00 to $2.00	6 to 12
REAL ESTATE SERVICE FIRM ✦ Forecast Period: 5 to 12 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes; expects overall cap rates to hold steady over the next six months.	3.0% to 5.0% Years 1 & 2	2.5% to 3.0%	2.5% to 3.0%	5.50% to 7.00% (CBD); 7.00% to 8.00% (suburbs)	1.0% to 2.0%	6.00% to 8.00% (CBD); 8.00% to 10.00% (suburbs)	5.00% to 6.50% (CBD); 6.75% to 7.75% (suburbs)	6 to 9	70.0% to 75.0%	5.0%	$0.10 to $0.20	3 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 7 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	3.0%	3.0%	3.0%	6.50% to 7.50% (CBD)	2.5% to 3.0%	7.00% to 8.25% (CBD)	6.00% to 7.00% (CBD)	6 to 12	65.0% to 70.0%	5.0% to 8.0%	$0.20 to $0.50	3 to 6

Source: Personal survey conducted by PwC during July 2017.

PHILADELPHIA OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE EQUITY INVESTOR ✦ Forecast Period: 3 to 5 years Uses mainly DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; uses face rents and reflects concessions when they are scheduled to occur.	0.0% Year 1; 0.0% to 3.0% Year 2	0.0% to 4.0%	0.0% to 3.0%	7.50% to 9.00% (CBD); 8.50% to 10.00% (suburbs)	1.5% to 3.0%	9.00% to 10.00% (CBD); 9.50% to 11.00% (suburbs)	7.00% to 8.00% (CBD); 8.00% to 9.50% (suburbs)	9 to 12	50.0% to 75.0%	5.0% to 10.0%	$0.15 to $0.65	3 to 5
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 1 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	4.0% to 6.0% Year 1; 5.0% to 7.0% Year 2	2.5% to 3.0%	2.0% to 2.5%	6.00% to 7.00% (CBD); 6.50% to 7.50% (suburbs)	2.0% to 3.0%	7.00% to 9.00% (CBD); 8.00% to 10.00% (suburbs)	5.00% to 6.50% (CBD); 5.50% to 7.00% (suburbs)	6 to 9	70.0% to 75.0%	5.0% to 8.0%	Does not use	2 to 4
OPPORTUNITY FUND INVESTOR ✦ Forecast Period: 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; prefers suburbs; does not use rent spikes.	3.0% Years 1 to 3	3.0%	3.0%	6.50% to 7.50% (CBD); 7.50% to 8.50% (suburbs)	2.0% to 3.0%	7.00% to 8.00% (CBD); 8.00% to 9.00% (suburbs)	6.00% to 7.50% (CBD); 7.00% to 8.50% (suburbs)	6 to 9	65.0% to 75.0%	5.0%	$0.25	4 to 8
REIT ✦ Forecast Period: 5 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 3.0%	1.5% to 2.0%	2.5% to 3.0%	6.50% to 7.50% (CBD); 7.50% to 9.00% (suburbs)	2.0% to 2.5%	7.00% to 7.50% (CBD); 8.50% to 9.50% (suburbs)	6.00% to 7.00% (CBD); 7.00% to 9.00% (suburbs)	6 to 18	60.0% to 70.0%	5.0% to 7.0%	$0.25 to $0.50	4 to 8
PRIVATE INVESTOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses effective rents; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	2.0% to 2.5% Year 1; 2.5% Year 2	2.5%	2.5% to 3.0%	7.25% to 7.75% (CBD); 8.25% to 8.75% (suburbs)	3.0% to 4.0%	7.50% to 8.25% (CBD); 8.50% to 9.00% (suburbs)	6.50% to 7.00% (CBD); 7.75% to 8.25% (suburbs)	7 to 9	65.0% to 70.0%	7.0% to 9.0%	$0.25	4 to 6

Source: Personal survey conducted by PwC during July 2017.

PHOENIX OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE INVESTOR ✦ Forecast Period: 3 to 7 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	2.0% to 4.0% Years 1 & 2	1.0% to 3.0%	3.0%	7.00% to 8.00% in both CBD & suburbs	2.0%	8.00% to 10.00% in both CBD & suburbs	6.50% to 8.00% (CBD); 7.00% to 8.00% (suburbs)	6 to 12	65.0% to 75.0%	5.0% to 10.0%	$0.20 to $0.25	6 to 18
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 10 to 12 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike of 6.0% in year 3.	3.0% to 6.0% Year 1; 3.5% to 6.0% Year 2	3.0%	3.0%	5.50% to 6.25% in both CBD & suburbs	1.0% to 2.0%	7.75% to 8.50% in both CBD & suburbs	5.50% to 6.25% in both CBD & suburbs	6 to 12	60.0% to 70.0%	5.0% to 7.0%	$0.20 to $0.25	4 to 9
PUBLIC REIT ✦ Forecast Period: 5 to 10 years Uses all approaches to value; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that this market equally favors buyers and sellers; expects overall cap rates to hold steady over the next six months.	3.0% to 7.0% Year 1; 2.0% to 4.0% Year 2	1.0% to 3.0%	1.0% to 3.0%	6.00% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	0.5% to 1.0%	7.00% to 9.00% (CBD); 7.00% to 10.00% (suburbs)	5.50% to 7.50% (CBD); 6.00% to 8.00% (suburbs)	6 to 9	60.0% to 75.0%	4.0% to 7.0%	$0.10 to $0.25	1 to 12
REAL ESTATE ADVISOR ✦ Forecast Period: 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; believes that market conditions favor buyers; may use a rent spike of 4.0% in year 3.	3.0% to 4.0%	3.0%	3.0%	6.75% to 7.00% (suburbs)	1.0% to 3.0%	7.50% to 7.75% (suburbs)	6.00% to 6.50% (suburbs)	6 to 8	65.0% to 70.0%	6.0% to 7.0%	$0.20 to $0.25	4 to 6
PRIVATE EQUITY FIRM ✦ Forecast Period: 3 to 5 years Mainly uses DCF analysis; in direct capitalization, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions currently favor buyers.	3.0% to 5.0% Years 1 & 2	2.0% to 3.0%		6.50% to 7.00% (CBD); 7.00% to 7.50% (suburbs)	1.5% to 2.0%	8.00% to 10.00% (CBD); 7.00% to 9.00% (suburbs)	6.25% to 6.50% (CBD); 7.00% to 7.25% (suburbs)	5 to 10	70.0% to 75.0%		$0.10 to $0.15	6 to 10

Source: Personal survey conducted by PwC during July 2017.

SAN DIEGO OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 5 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to increase up to 50 basis points over the next six months; may use rent spikes.	2.0% to 4.0% Year 1; 1.5% to 3.0% Year 2	2.0% to 3.0%	2.0% to 3.0%	6.00% to 7.00% (CBD); 6.50% to 8.00% (suburbs)	1.0% to 5.0%	8.00% to 10.50% (CBD); 9.00% to 11.00% (suburbs)	5.50% to 6.50% (CBD); 6.00% to 7.50% (suburbs)	5 to 10	65.0% to 75.0%	7.0% to 12.0%	$0.10 to $0.20	3 to 12
PRIVATE INVESTOR ✦ Forecast Period: 1 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; may use rent spikes in certain submarkets.	3.0% to 5.0% Year 1; 4.0% to 6.0% Year 2	3.0%	3.0%	7.25% to 8.75% (CBD); 6.75% to 8.75% (suburbs)	1.0% to 3.0%	8.50% to 10.50% in both CBD & suburbs	7.00% to 8.50% (CBD); 6.50% to 8.50% (suburbs)	9 to 12	60.0% to 70.0%	5.0% to 10.0%	$0.25 to $0.35	3 to 5
PUBLIC REAL ESTATE COMPANY ✦ Forecast Period: 7 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; may use a rent spike of 6.0% in year 1 and 5.0% in year 2; believes market conditions equally favor buyers and sellers.	4.0% to 5.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	6.50% to 7.50% in both CBD & suburbs	1.0% to 1.5%	6.50% to 7.50% in both CBD & suburbs	6.00% to 7.00% (CBD); 5.50% to 7.00% (suburbs)	6 to 12	60.0% to 70.0%	4.0% to 8.0%	Does not use	3 to 6
PENSION/CORE INVESTOR ✦ Forecast Period: 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; does not use rent spikes; expects overall cap rates to increase up to 25 basis points over the next six months.	2.0% to 3.0% Years 1 to 3	3.0%	2.5% to 3.0%	5.75% to 6.50% (CBD); 6.50% to 7.00% (suburbs)	2.0%	6.75% to 7.75% (CBD); 7.25% to 8.00% (suburbs)	5.50% to 6.00% (CBD); 6.00% to 7.50% (suburbs)	6 to 9	60.0% to 70.0%	2.0% to 3.0%	Does not use	4 to 6
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	3.0% to 4.0% Year 1	3.0%		5.75% to 6.25% (suburbs)	1.0% to 2.0%	6.50% to 7.00% (suburbs)	5.25% to 5.50% (suburbs)	6 to 8	65.0% to 75.0%	1.0%	$0.15 to $0.25	3 to 6

Source: Personal survey conducted by PwC during July 2017.

SAN FRANCISCO OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT ADVISOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	2.0% to 3.0% Year 1; 3.0% Year 2	3.0%	2.0% to 3.0%	5.00% to 6.00% (CBD); 6.25% to 7.50% (suburbs)	0.7% to 1.5%	5.50% to 6.50% (CBD); 6.50% to 7.75% (suburbs)	4.25% to 5.25% (CBD); 5.00% to 6.25% (suburbs)	6 to 9	50.0% to 70.0%	3.0% to 5.0%	$0.20 to $0.30	3 to 5
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to increase 25 to 50 basis points over the next six months.	2.0% to 5.0% Year 1; 3.0% to 5.0% Year 2	3.0%	3.0%	5.00% to 8.00% (CBD); 6.00% to 9.00% (suburbs)	1.0% to 2.0%	5.00% to 8.00% (CBD); 7.00% to 9.50% (suburbs)	3.50% to 7.00% (CBD); 5.00% to 8.00% (suburbs)	2 to 7	65.0% to 70.0%	5.0% to 10.0%	$0.10 to $0.30	2 to 6
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions favor sellers; does not use rent spikes.	3.0% to 4.0%	0.0% to 3.0%	3.0%	5.00% to 5.50% (CBD); 6.50% to 7.00% (suburbs)	3.0% to 3.5%	6.50% to 7.00% (CBD); 7.00% to 8.00% (suburbs)	4.50% to 5.50% (CBD)	10	70.0% to 75.0%	3.0% to 4.5%	Does not use	4 to 6
INVESTMENT ADVISOR ✦ Forecast Period: 7 to 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions equally favor buyers and sellers; expects overall cap rates to hold steady over the next six months.	3.0% to 4.0% Years 1 to 3	3.0%	3.0%	5.00% (CBD); 5.00% to 6.00% (suburbs)	0.5% to 1.0%	5.50% to 6.00% (CBD); 6.00% to 7.00% (suburbs)	4.00% to 5.00% (CBD); 5.00% to 6.00% (suburbs)	6 to 9	75.0% to 80.0%	2.5% to 5.0%	$0.15 to $0.25	1 to 3
REAL ESTATE COMPANY ✦ Forecast Period: 10 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes.	1.0% to 3.0%	2.0% to 3.0%	2.0% to 3.0%	6.00% to 6.50% (CBD); 6.50% to 7.50% (suburbs)	1.0% to 1.5%	6.50% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	5.00% to 6.00% (CBD); 5.50% to 6.50% (suburbs)	7 to 10	60.0% to 70.0%	5.0% to 7.0%	Does not use	3 to 6

Source: Personal survey conducted by PwC during July 2017.

SEATTLE OFFICE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
INVESTMENT ADVISOR ✦ Forecast Period: 7 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	3.0% to 4.0%	3.0%	3.0%	5.00% to 5.50% (CBD); 5.00% to 6.00% (suburbs)	0.5% to 1.0%	5.25% to 6.50% (CBD); 5.50% to 7.00% (suburbs)	4.50% to 5.50% (CBD); 5.00% to 6.50% (suburbs)	6 to 9	70.0% to 80.0%	5.0%	$0.15 to $0.25	1 to 3
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Mainly uses DCF; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	2.5% to 3.0%	2.5% to 3.0%	1.5% to 3.0%	5.00% to 9.00% (CBD)	2.0% to 4.0%	8.00% to 9.00% (CBD); 8.00% to 10.00% (suburbs)	5.00% to 8.00% (CBD)	6 to 12	50.0% to 75.0%	1.0% to 2.0%	$1.00 to $2.00	6 to 12
INVESTMENT BANKER ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to hold steady over the next six months; may use a rent spike of 15.0% in year 5.	3.0% to 5.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	6.50% to 7.50% in both CBD & suburbs	2.0%	6.25% to 8.50% in both CBD & suburbs	5.00% to 7.00% in both CBD & suburbs	4 to 6	65.0% to 75.0%	5.0% to 10.0%	$0.15 to $0.25	3 to 4
LIFE INSURANCE COMPANY ✦ Forecast Period: 7 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to hold steady over the next six months; no longer uses rent spikes.	3.0% to 4.0%	3.0%	3.0%	6.00% to 6.50% (CBD)	2.5% to 3.0%	6.00% to 7.50% (CBD)	4.50% to 6.00% (CBD)	5 to 8	65.0% to 70.0%	5.0% to 8.0%	$0.20 to $0.50	1 to 3
ASSET MANAGER ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions equally favor buyers and sellers; uses face rents and reflects concessions when they are scheduled to occur.	3.0% to 4.0%	3.0%	3.0%	5.50% to 6.00% (CBD); 6.50% to 6.75% (suburbs)	2.5% to 2.8%	6.00% to 7.00% (CBD); 7.50% to 7.75% (suburbs)	4.25% to 5.50% (CBD); 6.50% to 7.00% (suburbs)	6 to 12	70.0%	4.0% to 5.0%	$0.20 to $0.25	4 to 8
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions equally favor buyers and sellers; no longer uses rent spikes.	2.5% to 3.5%	3.0%	3.0%	5.00% to 6.00% (CBD); 6.00% to 7.00% (suburbs)	3.0% to 4.0%	5.50% to 6.50% (CBD); 6.50% to 8.00% (suburbs)	4.50% to 5.75% (CBD); 5.75% to 6.75% (suburbs)	6 to 9	70.0% to 75.0%	3.0% to 5.0%	$0.15 to $0.25	3 to 6

Source: Personal survey conducted by PwC during July 2017.

SOUTHEAST FLORIDA OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 3 to 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses a rent spike; sees overall cap rates holding steady over the next six months.	3.0% to 5.0% Years 1 to 3	2.5% to 3.0%	2.0% to 2.5%	6.00% to 7.50% (CBD); 7.50% to 10.00% (suburbs)	1.5% to 2.0%	8.00% to 9.00% (CBD); 9.00% to 10.00% (suburbs)	5.00% to 8.00% (CBD); 7.00% to 9.50% (suburbs)	9 to 12	60.0% to 75.0%	6.0% to 8.0%	$0.50 to $1.00	3 to 5
REIT ✦ Forecast Period: 5 to 10 years Uses DCF analysis only; uses face rents and reflects concessions when they are scheduled to occur; expects overall cap rates to increase 25 to 50 basis points over the next six months; does not use rent spikes.	2.0% to 3.0% Years 1 & 2	2.5% to 3.0%	2.0% to 2.5%	5.00% to 6.00% (CBD); 6.50% to 7.50% (suburbs)	1.0% to 2.5%	6.00% to 7.00% (CBD); 7.00% to 8.00% (suburbs)	5.00% to 6.00% (CBD); 6.50% to 7.00% (suburbs)	6 to 12	50.0% to 80.0%	3.0% to 8.0%	$0.25 to $0.50	4 to 8
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes; sees overall cap rates holding steady over the next six months.	1.0% to 5.0% Years 1 to 3	3.0%	3.0%	5.50% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	1.0% to 3.0%	6.50% to 8.00% (CBD); 7.00% to 8.50% (suburbs)	5.50% to 7.00% (CBD); 6.50% to 7.50% (suburbs)	6 to 12	65.0% to 75.0%	7.0% to 11.0%	$0.10 to $0.30	3 to 5
PRIVATE EQUITY INVESTOR ✦ Forecast Period: 3 to 5 years Uses mainly DCF analysis; in direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; uses face rents and reflects concessions when they are scheduled to occur; sees overall cap rates holding steady over the next six months.	0.0% to 2.0% Year 1; 0.0% to 3.0% Year 2	1.0% to 3.0%	1.0% to 3.0%	7.00% to 10.50% (CBD); 8.50% to 10.50% (suburbs)	1.0% to 2.5%	8.50% to 10.00% (CBD); 10.00% to 10.50% (suburbs)	7.00% to 9.50% (CBD); 8.50% to 10.00% (suburbs)	6 to 12	40.0% to 70.0%	7.0% to 13.0%	$0.20 to $0.50	3 to 5
REIT ✦ Forecast Period: 10 years Valuation preference is DCF analysis; also uses direct cap; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; does not use rent spikes; prefers suburbs; sees overall cap rates holding steady over the next six months.	0.0% to 1.0%	3.0%	2.0% to 3.0%	7.50% to 8.50% (suburbs)	2.0%	8.00% to 9.50% (suburbs)	7.75% to 8.75% (suburbs)	6 to 9	65.0%	5.0%	$0.20	6 to 12

Source: Personal survey conducted by PwC during July 2017.

SUBURBAN MARYLAND OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE INVESTOR ✦ Forecast Period: 1 to 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	0.0% Years 1 & 2	1.0%	1.0% to 2.0%	7.00% to 8.50%	4.0% to 5.0%	9.00% to 10.00%	7.00% to 8.50%	9 to 12	70.0% to 80.0%	0.0%	Does not use	3 to 9
LIFE INSURANCE COMPANY ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; no longer uses rent spikes.	0.0% Years 1 & 2	2.0% to 3.0%	2.0% to 2.5%	6.75% to 9.50%	2.0% to 3.0%	7.00% to 9.00%	5.50% to 9.00%	12	60.0% to 75.0%	5.0% to 15.0%	$0.50 to $0.75	3 to 9
PRIVATE INVESTOR ✦ Forecast Period: 1 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; believes market conditions equally favor sellers and buyers.	0.0% to 1.0%	1.0% to 2.0%	2.0% to 3.0%	6.50% to 7.50%	1.0% to 2.0%	7.50% to 10.00%	5.50% to 7.00%	4 to 6	50.0% to 75.0%	6.0% to 9.0%	$0.25 to $0.50	4 to 8
PRIVATE EQUITY FIRM ✦ Forecast Period: 5 to 8 years Mainly uses DCF analysis; in direct capitalization, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that market conditions equally favor buyers and sellers.	0.0% Years 1 & 2	3.0%	3.0%	8.25% to 9.25%	2.5% to 3.0%	8.50% to 9.50%	8.00% to 9.00%	9 to 12	65.0% to 75.0%	7.0% to 10.0%	$0.25 to $0.30	6 to 9
PRIVATE INVESTOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; believes market conditions favor buyers.	0.0% to 1.5% Years 1 & 2	2.0%	2.0%	6.00% to 8.00%	3.0%	7.50% to 8.50%	6.00% to 8.00%	8	65.0%	1.0% to 3.0%	$0.25	5

Source: Personal survey conducted by PwC during July 2017.

WASHINGTON, DC OFFICE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike of 4.0% in years 2 and 3.	0.0% Year 1; 2.0% Year 2	3.0%	3.0%	5.25% to 5.50%	2.0%	5.75% to 6.00%	4.75% to 5.50%	3 to 9	65.0% to 70.0%	6.0% to 8.0%	$0.15 to $0.25	2 to 4
LIFE INSURANCE COMPANY ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; believes market conditions favor sellers.	0.0% Year 1; 0.0% to 2.0% Year 2	0.0%	2.0% to 2.5%	5.00% to 6.00%	1.0% to 3.0%	5.00% to 6.50%	4.25% to 5.75%	9 to 12	50.0% to 75.0%	0.0% to 5.0%	$0.20 to $0.50	1 to 3
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Relies on DCF; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses present value analysis of effective rents; no longer uses rent spikes; believes market conditions equally favor sellers and buyers.	3.0% to 4.0% Year 1; 3.0% Year 2	3.0%	2.5% to 3.0%	5.00% to 5.50%	2.0% to 2.5%	6.00% to 6.50%	4.50% to 5.50%	4 to 6	65.0% to 75.0%	1.0% to 2.0%	$0.15 to $0.25	2 to 5
PENSION FUND ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	0.0% to 4.0%	3.0%	3.0%	5.00% to 6.50%	1.0% to 2.0%	5.50% to 7.00%	4.25% to 6.50%	6 to 9	70.0%	5.0%	$0.25	3 to 6
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months; believes market conditions favor buyers.	2.0% to 3.0%	3.0%	3.0%	6.00%	2.5%	8.00%	6.00%	7 to 9	70.0% to 75.0%	3.0% to 5.0%	Does not use	3 to 6

Source: Personal survey conducted by PwC during July 2017.

NATIONAL FLEX/R&D MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE EQUITY INVESTOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes market conditions equally favor buyers and sellers; does not use rent spikes.	3.0% Years 1 to 3	3.0%	3.0%	7.00% to 7.50%	1.5% to 3.0%	7.00% to 8.00%	6.25% to 7.00%	6 to 12	65.0% to 70.0%	2.0% to 5.0%	$0.15 to $0.40	2 to 5
PRIVATE EQUITY INVESTOR ✦ Forecast Period: 2 to 5 years Uses mainly DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; uses face rents and reflects concessions when they are scheduled to occur.	0.0% to 3.0% Years 1 to 3	0.0% to 2.0%	1.0% to 2.0%	7.50% to 9.50%	1.0% to 2.0%	8.00% to 10.00%	7.50% to 9.50%	9 to 12	50.0% to 75.0%	5.0% to 10.0%	$0.15 to $0.65	3 to 5
REAL ESATE SERVICES FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use rent spikes.	3.0% to 4.0% Years 1 to 3	3.0%	3.0%	6.75% to 7.50%	2.0% to 3.0%	7.50% to 9.00%	6.50% to 7.50%	6 to 12	65.0% to 75.0%	5.0% to 7.5%	$0.20 to $0.30	6 to 9
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; uses a rent spike of 4.0% in years 2 and 3 and 4.5% in year 4.	2.0% Years 1 & 2	3.0%	3.0%	6.00% to 7.00%	1.0% to 4.0%	6.75% to 7.50%	5.50% to 6.25%	9 to 15	50.0% to 65.0%	3.0% to 8.0%	$0.15 to $0.50	6 to 12
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use rent spikes.	2.0% to 3.0%	3.0%	2.0%	7.00% to 8.00%	4.0% to 6.0%	8.50%	7.00% to 8.00%	6 to 9	70.0% to 80.0%	5.0% to 7.0%	$0.10 to $0.20	6 to 12

Source: Personal survey conducted by PwC during July 2017.

NATIONAL WAREHOUSE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
REAL ESTATE SERVICES FIRM ✦ Forecast Period: 5 to 15 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; may use a rent spike of 5.0% in years 1 to 3.	2.5% to 6.0% Years 1 & 2	2.5%	2.5%	5.00% to 6.50%	1.0% to 2.0%	5.50% to 6.00%	4.00% to 5.00%	6 to 9	65.0% to 80.0%	0.0% to 5.0%	$0.05 to $0.15	4 to 6
DOMESTIC PENSION FUND ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes; data refers to the national warehouse sector; expects overall cap rates to hold steady over the next six months.	2.5% to 3.0% Years 1 to 3	2.50% to 3.0%	2.50% to 3.0%	5.50% to 7.00%	1.0% to 3.0%	6.25% to 8.00%	4.50% to 6.50%	6 to 12	65.0% to 75.0%	0.5% to 2.0%	$0.10 to $0.25	6 to 9
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Relies mainly on direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; data refers to the U.S. Southwest region.	2.0% to 3.0%	3.0%	3.0%	6.00% to 7.00%	1.0% to 3.0%	6.50% to 7.00%	5.00% to 6.00%	6 to 12	50.0% to 65.0%	3.0%	$0.10 to $0.35	3 to 6
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; data refers to the national warehouse sector.	0.0% Year 1; 3.0% to 4.0% Year 2	3.0%	3.0%	5.00% to 6.00%	1.0% to 3.0%	5.75% to 6.50%	4.25% to 5.50%	6 to 9	60.0% to 75.0%	5.0% to 7.0%	$0.05 to $0.15	3 to 6
PENSION FUND ADVISOR ✦ Forecast Period: 5 to 10 years Mainly uses DCF; in direct capitalization, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; data refers to the U.S. Southeast region; expects overall cap rates to hold steady over the next six months.	0.0% Year 1; 3.0% Year 2	0.0% to 3.0%	2.5% to 3.0%	6.50% to 6.75%	1.5% to 2.0%	7.00% to 7.25%	5.50% to 6.90%	9	70.0% to 75.0%	1.0% to 7.0%	$0.10 to $0.20	1 to 3
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Relies on DCF; also uses direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; data refers to the U.S. Southeast region.	3.0% to 4.0%	3.0%	3.0%	5.75% to 6.00%	2.0% to 3.0%	6.25% to 6.75%	5.00% to 5.25%	4 to 6	65.0% to 70.0%	1.0% to 2.0%	$0.10 to $0.20	3 to 4

Source: Personal survey conducted by PwC during July 2017.

EAST NORTH CENTRAL (ENC) REGION WAREHOUSE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; expects overall cap rates to hold steady over the next six months; may use rent spikes.	0.0% to 3.0%	3.0%	3.0%	5.00% to 6.00%	1.0% to 2.0%	5.75% to 6.25%	4.25% to 5.50%	6 to 8	60.0% to 75.0%	4.0% to 7.0%	$0.05 to $0.15	2 to 3
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; no longer uses rent spikes.	2.0% to 3.0%	3.0%	2.5% to 3.0%	6.00% to 6.25%	2.0% to 3.0%	6.50% to 6.75%	5.50% to 5.75%	6 to 9	60.0% to 70.0%	2.0% to 4.0%	$0.10 to $0.20	3 to 6
REAL ESTATE SERVICES FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions currently favor sellers; expects overall cap rates to hold steady over the next six months; may use a rent spike of 5.0% in years 1 to 3.	2.5% to 5.0% Years 1 & 2	2.5%	2.5%	5.50% to 6.75%	1.0% to 2.0%	5.75% to 6.75%	4.75% to 5.75%	2 to 6	65.0% to 75.0%	0.0% to 5.0%	$0.05 to $0.15	6 to 9
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and replacement reserve; believes market conditions favor sellers; expects overall cap rates to hold steady over the next six months.	3.0% Years 1 to 3	3.0%	3.0%	5.75% to 6.75%	1.0% to 4.0%	6.25% to 7.00%	5.00% to 5.50%	6 to 12	50.0% to 65.0%	3.0%	$0.10 to $0.35	3 to 6
PRIVATE EQUITY INVESTOR ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; does not use rent spikes; expects overall cap rates to hold steady over the next six months.	2.0% to 3.5%	3.0%		5.50% to 7.00%	1.0% to 4.0%	5.75% to 7.00%	5.50% to 6.00%	6 to 8	60.0% to 70.0%	3.0%	$0.10 to $0.20	3 to 6

Source: Personal survey conducted by PwC during July 2017.

PACIFIC REGION WAREHOUSE MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE ASSET MANAGER ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes market conditions equally favor buyers and sellers; may use a rent spike of 5.0% in years 1 and 2.	0.0% Year 1; 3.0% to 5.0% Year 2	3.0%	3.0%	4.75% to 5.50%	1.0% to 3.0%	5.50% to 6.00%	3.75% to 5.00%	6 to 12	60.0% to 75.0%	5.0%	$0.05 to $0.15	2 to 4
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Mainly uses direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur; believes market conditions favor sellers; does not use rent spikes.	3.0% Years 1 to 3	3.0%	3.0%	6.00% to 6.50%	3.0% to 4.0%	6.00% to 7.00%	4.25% to 5.50%	6 to 9	60.0% to 70.0%	5.0% to 7.0%	Does not use	1 to 2
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Relies on DCF; also uses direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; no longer uses rent spikes; believes market conditions favor sellers.	3.0% to 4.0% Year 1; 3.0% Year 2	3.0%	3.0%	5.00% to 5.25%	2.0% to 3.0%	6.00% to 6.25%	4.25% to 4.50%	4 to 6	65.0% to 75.0%	2.0% to 4.0%	$0.10 to $0.20	2 to 4
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Relies mainly on direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	4.0% Years 1 & 2	3.0%	3.0%	4.50% to 5.50%	0.7% to 3.0%	5.50% to 6.00%	3.75% to 4.25%	3 to 6	50.0% to 65.0%	3.0%	$0.10 to $0.35	3 to 6
REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	0.0% to 1.5% Year 1; 1.5% to 2.0% Year 2	2.0%	1.5% to 2.5%	6.00% to 8.00%	2.0% to 3.0%	8.00% to 8.50%	6.00% to 7.00%	4 to 8	50.0%	3.0% to 5.0%	$0.10 to $0.15	3 to 6

Source: Personal survey conducted by PwC during July 2017.

NATIONAL APARTMENT MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	FF&E REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	TOTAL VACANCY	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	PER UNIT	MONTHS
INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, FF&E reserve is not deducted from NOI before capitalization; does not use a separate structural replacement reserve.	2.0% to 5.0%	3.0%	3.0% to 7.0%	4.25% to 6.50%	0.5% to 4.0%	5.00% to 7.25%	3.50% to 6.00%	$200 to $550	3 to 6
PENSION FUND ADVISOR ✦ Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; FF&E reserve is not deducted from NOI before capitalization; does not use a separate structural replacement reserve.	0.0% to 3.0%	3.0%	3.0% to 8.0%	4.50% to 6.25%	1.5% to 4.0%	5.75% to 7.00%	4.00% to 5.50%	$150 to $350	2 to 3
DOMESTIC PENSION FUND ✦ Forecast Period: 1 to 10 years Uses both DCF and direct capitalization; FF&E reserve is not deducted from NOI before capitalization; reflects concessions as they occur; does use a separate structural replacement reserve of $100 to $300 per unit.	2.5% to 3.0%	2.5% to 3.0%	3.0% to 10.0%	4.50% to 6.50%	0.5% to 3.0%	5.75% to 7.25%	3.75% to 6.00%	$100 to $300	3 to 9
INSTITUTIONAL INVESTOR ✦ Forecast Period: 10 years Relies on DCF; FF&E reserve is not deducted from NOI before capitalization; does not use an additional structural reserve; believes current market conditions equally favor sellers and buyers.	3.0%	3.0%	4.0% to 6.0%	4.50% to 5.50%	2.0% to 3.0%	6.00% to 6.50%	4.00% to 5.00%	$200 to $250	2 to 3
PENSION FUND ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; FF&E reserve is deducted fom NOI before capitalization; buys 150- to 400-unit apartment complexes in first- and second-tier markets nationwide; uses a separate structural reserve of $100 per unit.	3.0%	2.0%	7.0%	6.50% to 7.00%	1.0% to 2.0%	8.25% to 9.00%	5.75% to 7.00%	$250 to $350	1 to 2
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 1 to 5 years Uses both DCF and direct capitalization; FF&E reserve is deducted from NOI before capitalization; sees overall cap rates holding steady; does not use a separate structural reserve.	(1.0%) to 3.0%	2.0% to 3.0%	3.0% to 8.0%	5.00% to 7.75%	3.0% to 4.0%	7.00% to 9.50%	5.00% to 7.50%	$200 to $350	1 to 6

Source: Personal survey conducted by PwC during July 2017.

MID-ATLANTIC REGION APARTMENT MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	FF&E REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	TOTAL VACANCY	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	PER UNIT	MONTHS
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 2 to 4 years Uses both DCF and direct capitalization; FF&E reserve is deducted from NOI before capitalization; uses a separate structural replacement reserve of $100 to $400 per unit; believes market conditions currently favor sellers; expects overall cap rates to hold steady over the next six months.	0.0% to 4.0%	1.0% to 4.0%	2.0% to 4.0%	5.50% to 6.50%	1.0% to 2.0%	6.00% to 9.00%	4.50% to 6.50%	$100 to $400	3 to 5
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Prefers DCF analysis; also uses direct capitalization; FF&E reserve is deducted from NOI before capitalization; uses a separate structural replacement reserve of $200 to $300 per unit.	0.0% Year 1; 3.0% to 6.0% Year 2	0.0% to 3.0%	4.0% to 5.0%	4.00% to 5.00%	1.0% to 4.0%	5.25% to 7.00%	3.00% to 4.60%	$200 to $300	1 to 3
PENSION FUND INVESTOR ✦ Forecast Period: 4 to 7 years Uses all three approaches to value; FF&E reserve is not deducted from NOI before capitalization; uses a separate structural replacement reserve of $1,000 to $1,500 per unit; believes market conditions equally favor sellers and buyers.	2.0% to 3.0% Year 1; 3.0% Year 2	3.0%	5.0% to 7.0%	5.00% to 6.75%	2.0% to 3.0%	8.00% to 10.00%	4.25% to 6.75%	$250 to $350	2 to 8
PRIVATE INVESTOR ✦ Forecast Period: 5 to 10 years Mainly uses direct capitalization; FF&E reserve is deducted from NOI before capitalization; also uses a separate structural replacement reserve of $200 to $350 per unit; expects overall cap rates to hold steady over the next six months.	1.0% to 3.0% Years 1 to 3	2.0% to 3.0%	4.0% to 7.0%	4.75% to 5.75%	0.3% to 1.5%	5.25% to 6.75%	4.25% to 5.25%	$200 to $350	2 to 3
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 8 years Mainly uses direct capitalization analysis; FF&E reserve is deducted from NOI before capitalization; believes that market conditions equally favor buyers and sellers; does not use a seperate structural replacement reserve.	1.0% to 3.5%	3.0%	5.0% to 7.0%	5.50% to 6.50%	1.0% to 3.0%	7.00% to 9.00%	5.00% to 6.25%	$200 to $300	3 to 9

Source: Personal survey conducted by PwC during July 2017.

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PACIFIC REGION APARTMENT MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	FF&E REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	TOTAL VACANCY	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	PER UNIT	MONTHS
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 10 years Uses both DCF and direct capitalization; FF&E reserve is deducted from NOI before capitalization; uses a separate structural replacement reserve of $250 to $350 per unit; expects overall cap rates to increase up to 25 basis points over the next six months.	2.0% to 5.0%	2.5% to 3.0%	3.5% to 5.0%	4.50% to 6.00%	0.5% to 1.5%	7.00% to 10.00%	4.00% to 6.00%	$250 to $350	3 to 6
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Prefers DCF analysis; also uses direct capitalization; FF&E reserve is deducted from NOI before capitalization; uses a separate structural replacement reserve of $200 to $300 per unit; expects overall cap rates to hold steady over the next six months.	0.0% Year 1; 3.0% to 4.0% Years 2 & 3	0.0%	4.0% to 5.0%	4.25% to 5.00%	0.8% to 3.0%	5.75% to 6.25%	3.60% to 4.30%	$200 to $300	1 to 3
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 8 years Mainly uses direct capitalization analysis; FF&E reserve is deducted from NOI before capitalization; believes market conditions equally favor buyers and sellers; does not use a separate structural reserve.	2.0% to 3.5%	3.0%	5.0% to 6.0%	5.00% to 6.00%	1.0% to 3.0%	6.00% to 9.00%	4.75% to 5.50%	$200 to $300	3 to 9
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; does not use an FF&E reserve; uses a separate structural replacement reserve of $200 to $300 per unit.	5.0%	3.0%	3.0% to 5.0%	4.25% to 5.00%	1.0% to 3.0%	5.50% to 6.50%	3.50% to 4.75%	Does not use	3 to 9
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; FF&E reserve is deducted from NOI before capitalization; uses a separate structural replacement reserve of $200 to $350 per unit; believes market conditions equally favor buyers and sellers; expects overall cap rates to hold steady over the next six months.	2.0% to 4.0% Years 1 & 2	2.0% to 2.8%	3.0% to 5.0%	4.50% to 5.50%	0.3% to 1.5%	5.25% to 6.00%	3.75% to 4.75%	$200 to $375	1 to 3

Source: Personal survey conducted by PwC during July 2017.

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SOUTHEAST REGION APARTMENT MARKET–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	FF&E REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	TOTAL VACANCY	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	PER UNIT	MONTHS
PENSION FUND INVESTOR ✦ Forecast Period: 4 to 7 years Uses all three approaches to value; FF&E reserve is not deducted from NOI before capitalization; also uses a separate structural replacement reserve of $1,200 to $1,500 per unit; expects overall cap rates to hold steady over the next six months.	3.0% to 4.0% Years 1 & 2	3.0%	5.0% to 7.0%	5.75% to 7.00%	2.0% to 3.0%	8.00% to 10.00%	4.75% to 6.50%	$250 to $350	2 to 6
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 4 years Uses both DCF and direct capitalization; does not use an FF&E reserve; uses a separate structural replacement reserve of $300 to $350 per unit; expects overall cap rates to hold steady over the next six months.	2.0% to 3.5% Years 1 to 3	2.0% to 3.0%	4.0% to 7.0%	6.50% to 7.00%	1.3% to 1.5%	8.00% to 10.00%	5.50% to 6.00%	Does not use	3 to 5
REAL ESTATE ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; does not use an FF&E reserve; uses a separate structural replacement reserve of $200 to $300 per unit; expects overall cap rates to hold steady over the next six months.	4.0% Year 1; 3.0% Year 2	3.0%	5.0%	4.50% to 5.00%	1.0% to 4.0%	5.75% to 6.50%	3.50% to 4.75%	Does not use	3 to 6
PENSION FUND ADVISOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; FF&E reserve is not deducted from NOI before capitalization; buys 150- to 400-unit apartment complexes; uses a separate structural reserve of $250 to $350 per unit; expects overall cap rates to increase up to 25 basis points over the next six months.	1.0% to 3.0% Years 1 & 2	2.0% to 3.0%	4.5% to 7.0%	5.50% to 6.25%	0.8% to 1.5%	6.50% to 7.25%	4.75% to 5.75%	$200 to $350	1 to 3
REAL ESTATE ADVISOR ✦ Forecast Period: 1 to 5 years Prefers DCF analysis; also uses direct capitalization; FF&E reserve is not deducted from NOI before capitalization; uses a separate structural replacement reserve of $300 per unit; expects overall cap rates to hold steady over the next six months.	3.0% Years 1 to 3	3.0%	5.0%	4.75% to 5.25%	1.0% to 1.5%	6.00% to 7.00%	4.50% to 5.25%	$300	2

Source: Personal survey conducted by PwC during July 2017.

NATIONAL NET LEASE MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	PREFERRED PROPERTY TYPE	CHANGE RATES		PREFERRED CREDIT RATING	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	UNDERLYING VACANCY & CREDIT LOSS	REPLACEMENT RESERVE	MARKETING TIME
		MARKET RENT	EXPENSES		CAP RATE	SELLING EXPENSES	FREE & CLEAR	FREE & CLEAR		PER SQUARE FOOT	MONTH
INVESTOR/BROKERS ✦ Forecast Period: 3 to 10 years Primary valuation method is direct capitalization; also uses sales comparison approach; underlying credit rating of tenant is more important than real estate value; capitalizes NOI before TIs, leasing commissions, and capital replacement reserve.	Commodity retail, office, medical	1.0% to 3.0% Years 1 to 3	1.0% to 3.0%	BBB– to AAA	6.00% to 9.00%	3.0% to 5.0%	8.00% to 10.00%	5.50% to 8.50%	Does not use	Does not use	3 to 6
REAL ESTATE SERVICE FIRM ✦ Forecast Period: 5 to 10 years Primary valuation method is direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; also uses DCF analysis; mainly focuses on net lease transactions; feels that market conditions favor sellers.	Drug stores, banks, medical, retail	1.0% to 3.0% Years 1 to 3	1.0% to 3.0%	BBB– to A+	6.00% to 8.00%	2.0% to 4.0%	7.50% to 9.00%	5.50% to 8.00%	10.0% to 15.0%	Does not use	2 to 6
PRIVATE INVESTMENT FIRM ✦ Forecast Period: 5 to 10 years Primary valuation method is DCF analysis; only completes net lease sales; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; excludes reimbursements paid by tenants as both revenues and expenses.	Automotive; general (retail)	2.0% to 4.0% Years 1 to 3	2.0% to 4.0%	Not disclosed	7.00% to 8.00%	4.0% to 6.0%		7.00% to 8.00%	0.0%	Does not use	4 to 12
INVESTMENT ADVISOR ✦ Forecast Period: 3 to 10 years Primary valuation method is direct capitalization; also uses DCF analysis; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; mainly focuses on net lease sales and 1031 exchanges; excludes reimbursements paid by tenants as both revenues and expenses.	Retail	1.0% to 2.0%	1.0% to 2.0%	BBB to AA	7.50% to 7.75%	3.0%	6.00% to 7.00%	5.25% to 6.50%	0.0% to 5.0%	Does not use	4 to 6
MANAGEMENT COMPANY ✦ Forecast Period: 10 to 20 years Mainly focuses on sale-leaseback deals and net lease sales; in direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to decrease 50 to 75 basis points over the next six months; excludes reimbursements paid by tenants as both revenues and expenses.	All varieties	0.0% to 2.0%	0.0%	B to AAA	Not disclosed	Not disclosed	Not disclosed	6.00% to 7.75%	Does not use	Does not use	2 to 12

Source: Personal survey conducted by PwC during July 2017.

NATIONAL MEDICAL OFFICE BUILDINGS MARKET–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES			RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS			REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
REIT ✦ Forecast Period: 1 to 10 years Uses both DCF analysis and direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to increase over the next six months; does not use rent spikes.	2.0% to 3.0% Years 1 to 3	2.0% to 3.0%	2.0% to 3.0%	5.50% to 6.50% (on campus); 6.50% to 7.50% (off campus)	1.0% to 2.0%	6.50% to 7.50% (on campus); 7.50% to 9.00% (off campus)	5.25% to 6.50% (on campus); 5.75% to 7.00% (off campus)	9 to 12	75.0% to 90.0%	5.0% to 10.0%	$0.15 to $0.60	4 to 6
REIT ✦ Forecast Period: 3 to 5 years Mainly uses DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes market conditions favor sellers; expects overall cap rates to hold steady over the next six months.	2.5% Years 1 & 2	2.5%	1.5% to 2.5%	5.50% to 6.50% (on campus); 6.00% to 7.00% (off campus)	1.0% to 2.0%	6.00% to 8.00% (on campus); 7.00% to 10.00% (off campus)	5.50% to 6.50% (on campus); 6.00% to 7.00% (off campus)	9 to 12	80.0% to 90.0%	0.0%	$0.25 to $0.45	3 to 6
REAL ESTATE SERVICE FIRM ✦ Forecast Period: 8 to 11 years Uses all approaches to value; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; expects overall cap rates to hold steady over the next six months; does not use rent spikes.	2.0% to 3.0% Years 1 & 2	2.0% to 3.0%	2.0% to 3.0%	5.25% to 7.00% for both on campus and off campus	1.0% to 2.0%	6.00% to 7.75% (on campus); 6.00% to 8.00% (off campus)	5.00% to 6.75% for both on campus and off campus	6 to 12	70.0% to 85.0%	2.0% to 5.0%	$0.15 to $0.25	2 to 4
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 3 to 7 years Uses all approaches to value; indirect cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; expects overall cap rates to hold steady over the next six months.	0.0% to 3.0% Years 1 to 3	2.0% to 3.0%	2.0% to 3.0%	7.00% to 8.50% (on campus); 8.00% to 10.25% (off campus)	1.0% to 3.0%	7.00% to 9.00% (on campus); 8.00% to 11.00% (off campus)	6.75% to 8.50% (on campus); 7.75% to 10.00% (off campus)	6 to 18	70.0% to 80.0%	5.0% to 10.0%	$0.10 to $0.30	4 to 6
PRIVATE REAL ESTATE FIRM ✦ Forecast Period: 5 to 10 years Uses both DCF analysis and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions.	1.0% to 3.0%	1.0% to 4.0%	2.0% to 5.0%	5.50% to 9.00% (on campus); 5.75% to 10.00% (off campus)	0.8% to 4.0%	5.75% to 9.50% (on campus); 6.00% to 10.50% (off campus)	4.75% to 8.50% (on campus); 5.00% to 10.00% (off campus)	6 to 12	75.0% to 90.0%	0.0% to 10.0%	$0.15 to $0.30	1 to 12

Source: Personal survey conducted by PwC during July 2017.

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NATIONAL FULL-SERVICE LODGING SEGMENT–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	IS FF&E DEDUCTED FROM NOI PRIOR TO CAPITALIZATION?	BASE MANAGEMENT FEE	RESERVE FOR REPLACEMENT OF FIXED ASSETS	MARKETING TIME
	AVERAGE DAILY RATE	OPERATING EXPENSES	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	YES/NO	PERCENT OF TOTAL REVENUE	PERCENT OF TOTAL REVENUE	MONTHS
OWNER/OPERATOR ✦ Forecast Period: 4 to 6 years Uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months of income; believes market conditions favor sellers; expects overall cap rates to hold steady over the next six months.	2.5% to 3.5% Years 1 to 3	3.0% to 4.0%	7.00% to 9.00%	2.5% to 3.5%	10.00% to 12.75%	6.50% to 8.00%	Yes	1.0% to 1.5%	2.5% to 4.5%	6 to 9
OWNER/PRIVATE ✦ Forecast Period: 4 to 8 years Uses both DCF and direct capitalization; in direct cap, capitalizes both prior 12 months of income and forecast 12 months of income; believes market conditions favor buyers; expects overall cap rates to hold steady over the next six months.	(2.0%) to 3.0% Year 1	3.0%	7.00% to 9.00%	0.3% to 3.0%	8.00% to 10.50%	6.00% to 9.00%	Yes	2.0% to 3.0%	3.0% to 5.0%	4 to 8
PRIVATE COMPANY ✦ Forecast Period: 7 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes both prior 12 months of income and next 12 months of income; believes that market conditions equally favor buyers and sellers.	5.0% to 7.0%	3.0%	7.50% to 10.00%	1.5% to 3.0%	11.00% to 13.00%	7.00% to 9.00%	Yes	3.0% to 3.5%	4.0% to 5.0%	3 to 5
REAL ESTATE ADVISER ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months income; expects overall cap rates to increase up to 50 basis points over the next six months; believes market conditions favor sellers.	3.0% to 4.0%	3.0%	7.25% to 9.50%	2.0% to 3.0%	8.50% to 10.50%	6.25% to 8.50%	Yes	2.5% to 3.5%	4.0% to 5.0%	8
PRIVATE INVESTOR ✦ Forecast Period: 3 to 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes both prior 12 months and next 12 months income; believes that overall cap rates will increase up to 50 basis points over the next six months and that market conditions are neutral.	0.0% to 4.0%	1.0% to 4.0%	8.00% to 10.00%	1.0% to 3.0%	9.00% to 11.00%	8.00% to 10.00%	Yes	2.0% to 4.0%	3.0% to 5.0%	3 to 6

Source: Personal survey conducted by PwC during July 2017.

NATIONAL LIMITED-SERVICE MIDSCALE & ECONOMY LODGING SEGMENT–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	IS FF&E DEDUCTED FROM NOI PRIOR TO CAPITALIZATION?	BASE MANAGEMENT FEE	RESERVE FOR REPLACEMENT OF FIXED ASSETS	MARKETING TIME
	AVERAGE DAILY RATE	OPERATING EXPENSES	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	YES/NO	PERCENT OF TOTAL REVENUE	PERCENT OF TOTAL REVENUE	MONTHS
REAL ESTATE ADVISER ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months of income; expects overall cap rates to increase 25 to 50 basis points over the next six months.	3.0%	3.0%	7.75% to 9.50%	3.0% to 4.0%	8.50% to 11.00%	7.75% to 9.50%	Yes	4.0% to 5.0%	4.0% to 5.0%	8 to 12
PRIVATE OWNER ✦ Forecast Period: 5 years Focuses on direct capitalization; in direct cap, capitalizes prior 12 months of income; current breakeven occupancy rate is estimated at 55.0%; sees occupancy holding steady over the next six months.	2.0% to 3.0%	3.0%	10.00%	2.0%	11.00%	9.00%	Yes	3.5%	4.0%	9
PRIVATE HOTEL COMPANY ✦ Forecast Period: 7 to 10 years Prefers Northeast, Southeast, and Southwest; uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months of income; expects occupancy to decrease and ADRs to increase over the next six months; believes market conditions currently are neutral.	2.0% to 4.0%	3.0%	9.00% to 11.00%	2.5% to 3.5%	11.50% to 13.00%	8.00% to 11.00%	Yes	3.0% to 4.0%	4.0% to 5.0%	3 to 6
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months of income; believes that market conditions favor sellers; expects both occupancy and ADR to decrease over the next six months.	2.0% to 3.5%	2.5% to 3.0%	10.00% to 11.00%	2.0% to 3.0%	11.00% to 13.00%	8.50% to 10.00%	Yes	2.0% to 3.5%	4.0% to 5.0%	6 to 8
OWNER/OPERATOR ✦ Forecast Period: 3 to 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months of income; believes overall cap rates will decrease up to 50 basis points over the next six months; believes market conditions equally favor buyers and sellers.	(2.5%) to 3.0%	3.0%	9.00% to 11.00%	0.5% to 2.5%	9.00% to 11.00%	8.00% to 10.00%	Yes	2.5% to 5.0%	2.0% to 4.0%	2 to 6

Source: Personal survey conducted by PwC during July 2017.

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NATIONAL LUXURY/UPPER-UPSCALE LODGING SEGMENT–SELECT SURVEY RESPONSES

Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	IS FF&E DEDUCTED FROM NOI PRIOR TO CAPITALIZATION?	BASE MANAGEMENT FEE	RESERVE FOR REPLACEMENT OF FIXED ASSETS	MARKETING TIME
	AVERAGE DAILY RATE	OPERATING EXPENSES	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	YES/NO	PERCENT OF TOTAL REVENUE	PERCENT OF TOTAL REVENUE	MONTHS
INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months of income; expects overall cap rates to hold steady over the next six months.	2.0% to 5.0% Year 1	2.0% to 4.0%	5.50% to 8.00%	0.5% to 2.5%	6.50% to 9.00%	4.00% to 6.50%	Yes	3.0% to 5.0%	4.0% to 5.0%	6 to 12
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes next 12 months of income; believes that market conditions currently favor sellers; expects overall cap rates to increase 25 to 50 basis points over the next six months.	3.0% Years 1 to 3	3.0%	6.75% to 8.50%	2.0% to 3.0%	7.75% to 10.00%	5.50% to 8.25%	Yes	2.5% to 5.0%	4.0% to 5.0%	6 to 8
PRIVATE INVESTOR ✦ Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months income; believes that overall cap rates will increase over the next six months and that market conditions currently favor sellers.	2.0% to 4.0%	2.0% to 3.0%	6.00% to 8.00%	1.5% to 2.0%	10.00% to 12.00%	7.00% to 9.00%	Yes	2.5% to 3.5%	4.0%	3 to 6
PRIVATE INVESTOR ✦ Forecast Period: 5 to 8 years Uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months of income; believes overall cap rates will hold steady over the next six months; believes market conditions equally favor buyers and sellers.	0.0% to 4.0%	0.0% to 3.0%	6.50% to 9.50%	1.0% to 3.0%	8.00% to 10.00%	7.00% to 9.00%	Yes	2.5% to 3.0%	4.0% to 6.0%	3 to 6
OWNER/OPERATOR ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes both next 12 months of income and prior 12 months of income; market conditions equally favor sellers and buyers.	3.0% to 4.0%	3.0%	6.00% to 7.00%	2.0% to 4.0%	10.00% to 12.00%	6.00% to 8.00%	Yes	3.0% to 5.0%	4.0%	6 to 12

Source: Personal survey conducted by PwC during July 2017.

NATIONAL SELECT-SERVICE LODGING SEGMENT–SELECT SURVEY RESPONSES
Third Quarter 2017

	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	IS FF&E DEDUCTED FROM NOI PRIOR TO CAPITALIZATION?	BASE MANAGEMENT FEE	RESERVE FOR REPLACEMENT OF FIXED ASSETS	MARKETING TIME
	AVERAGE DAILY RATE	OPERATING EXPENSES	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	YES/NO	PERCENT OF TOTAL REVENUE	PERCENT OF TOTAL REVENUE	MONTHS
OWNER/MANAGER ✦ Forecast Period: 4 to 6 years Uses both DCF and direct capitalization; in direct cap, capitalizes both prior 12 months of income and the next 12 months of income; expects overall cap rates to hold steady over the next six months; believes that market conditions currently favor sellers.	(2.0%) to 4.0%	3.0%	7.50% to 10.00%	0.3% to 2.5%	8.00% to 11.00%	6.50% to 9.50%	Yes	2.5% to 3.5%	2.0% to 4.0%	4 to 7
REAL ESTATE ADVISER ✦ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months of income; expects overall cap rates to hold steady over the next six months; believes market conditions equally favor buyers and sellers.	3.0%	2.0% to 3.0%	9.00% to 10.00%	1.0% to 2.0%	11.00%	8.50% to 9.50%	Yes	3.0%	2.0%	4 to 6
REIT ✦ Forecast Period: 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months of income; expects overall cap rates to increase 25 to 50 basis points over the next six months; believes that market conditions equally favor buyers and sellers.	3.0% to 5.0%	2.0% to 3.0%	7.00% to 9.00%	1.5% to 3.0%	8.00% to 10.00%	7.00% to 9.00%	Yes	3.0% to 4.0%	4.0% to 5.0%	2 to 6
OWNER/MANAGER ✦ Forecast Period: 1 to 4 years Uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months of income; deducts both FF&E and structural reserve from NOI before capitalization; expects overall cap rates to hold steady over the next six months.	2.0% to 4.0%	2.0% to 4.0%	9.00% to 10.75%	5.0%	10.00% to 11.00%	8.00% to 10.00%	Yes	3.0% to 4.0%	3.0% to 5.0%	9 to 12
LIFE INSURANCE COMPANY ✦ Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes the next 12 months of income; expects overall cap rates to hold steady over the next six months; believes that market conditions favor sellers.	2.0% to 4.0%	2.0% to 3.0%	8.50% to 10.00%	2.0% to 3.0%	10.00% to 12.00%	9.00% to 10.00%	Yes	2.5% to 3.5%	4.0% to 5.0%	4 to 6

Source: Personal survey conducted by PwC during July 2017.

INVESTMENT AND PROPERTY CHARACTERISTICS: OFFICE MARKETS
Third Quarter 2017

	FORECAST VALUE CHANGE NEXT 12 MONTHS		PRICE AS % OF REPLACEMENT COST		STRUCTURAL VACANCY		YEARS TO REACH STRUCTURAL VACANCY		TENANT IMPROVEMENT ALLOWANCE (PSF) NEW DEALS (1)		RENEWAL LEASES	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National CBD	(5.0%) – 15.0%	2.5%	65.0% – 125.0%	100.5%	2.0% – 15.0%	7.0%	0 – 3	1.6	$10.00 – $100.00	$41.88	$5.00 – $35.00	$17.50
National Suburban	(10.0%) – 10.0%	1.6%	70.0% – 110.0%	90.5%	4.0% – 15.0%	8.8%	0 – 5	1.7	$0.00 – $100.00	$34.11	$0.00 – $25.00	$14.11
National Secondary	(10.0%) – 10.0%	0.4%	50.0% – 120.0%	82.1%	3.0% – 20.0%	9.2%	1 – 5	3.4	$2.00 – $100.00	$29.48	$2.50 – $25.00	$10.32
Atlanta	0.0% – 6.0%	2.0%	55.0% – 100.0%	84.0%	4.0% – 10.0%	7.6%	0 – 3	1.5	$10.00 – $70.00	$34.13	$0.00 – $20.00	$11.70
Boston	(5.0%) – 6.0%	2.6%	50.0% – 110.0%	90.0%	5.0% – 12.0%	7.8%	0 – 5	1.1	$10.00 – $90.00	$48.75	$5.00 – $30.00	$17.92
Charlotte	0.0% – 15.0%	4.9%	85.0% – 110.0%	95.1%	2.0% – 12.0%	6.8%	0 – 3	1.8	$10.00 – $40.00	$30.63	$5.00 – $10.00	$14.38
Chicago	(5.0%) – 10.0%	1.6%	25.0% – 120.0%	85.7%	5.0% – 15.0%	9.8%	0 – 5	2.3	$7.50 – $125.00	$52.59	$5.00 – $40.00	$19.88
Dallas	(2.0%) – 20.0%	2.8%	50.0% – 110.0%	93.1%	5.0% – 15.0%	8.3%	0 – 2	0.8	$5.00 – $75.00	$37.17	$5.00 – $35.00	$16.00
Denver	0.0% – 5.0%	2.3%	50.0% – 150.0%	100.0%	5.0% – 12.0%	7.4%	0 – 3	1.1	$12.00 – $65.00	$34.81	$3.00 – $25.00	$11.94
Houston	(20.0%) – 0.0%	(6.5%)	55.0% – 110.0%	87.4%	5.0% – 15.0%	9.5%	1 – 5	3.3	$8.00 – $65.00	$34.25	$0.00 – $45.00	$16.92
Los Angeles	(10.0%) – 10.0%	2.4%	40.0% – 140.0%	93.6%	2.0% – 15.0%	8.4%	0 – 4	1.6	$10.00 – $125.00	$49.11	$0.00 – $50.00	$18.93
Manhattan	(1.0%) – 7.0%	3.2%	50.0% – 120.0%	88.8%	0.0% – 12.0%	6.2%	0 – 6	2.1	$10.00 – $125.00	$58.54	$10.00 – $50.00	$26.67
Northern Virginia	(10.0%) – 10.0%	1.4%	60.0% – 100.0%	91.3%	5.0% – 12.0%	7.7%	0 – 10	3.4	$20.00 – $125.00	$51.25	$5.00 – $80.00	$22.67
Pacific Northwest	(5.0%) – 15.0%	2.3%	50.0% – 125.0%	99.3%	3.0% – 15.0%	7.7%	1 – 5	1.6	$10.00 – $100.00	$49.43	$0.00 – $50.00	$20.00
Philadelphia	0.0% – 5.0%	1.8%	75.0% – 100.0%	88.8%	5.0% – 12.0%	7.6%	1 – 4	2.3	$5.00 – $75.00	$37.81	$5.00 – $35.00	$13.75
Phoenix	(5.0%) – 15.0%	3.3%	70.0% – 110.0%	89.2%	5.0% – 20.0%	10.3%	0 – 4	1.8	$2.00 – $75.00	$60.00	$0.00 – $35.00	$35.00
San Diego	(5.0%) – 10.0%	2.3%	20.0% – 110.0%	89.4%	3.0% – 12.0%	6.6%	0 – 5	2.0	$10.00 – $75.00	$38.13	$0.00 – $20.00	$10.00
San Francisco	(10.0%) – 5.0%	0.0%	85.0% – 130.0%	100.6%	3.0% – 10.0%	6.6%	0 – 3	0.9	$10.00 – $150.00	$52.50	$0.00 – $35.00	$16.00
Seattle	(5.0%) – 15.0%	3.3%	50.0% – 125.0%	96.2%	3.0% – 15.0%	7.8%	0.5 – 5	1.9	$10.00 – $100.00	$49.17	$0.00 – $50.00	$20.42
Southeast Florida	(2.5%) – 15.0%	3.6%	50.0% – 100.0%	81.3%	4.0% – 25.0%	9.6%	0 – 5	1.9	$0.00 – $75.00	$33.13	$5.00 – $40.00	$15.63
Suburban Maryland	(10.0%) – 5.0%	(3.8%)	100.0% – 110.0%	103.8%	5.0% – 12.0%	8.5%	0 – 5	1.8	$25.00 – $85.00	$59.58	$15.00 – $75.00	$34.17
Washington, DC	(5.0%) – 5.0%	1.0%	90.0% – 140.0%	107.9%	2.0% – 8.0%	5.5%	0 – 3	0.8	$25.00 – $150.00	$67.50	$10.00 – $115.00	$32.92

(1) Includes both second-generation and new space; a breakout of TI allowances is included in each fourth quarter issue of the Survey.

Source: Personal survey conducted by PwC during July 2017.

INVESTMENT AND PROPERTY CHARACTERISTICS: NATIONAL AND REGIONAL MARKETS

Third Quarter 2017

	FORECAST VALUE CHANGE NEXT 12 MONTHS		PRICE AS % OF REPLACEMENT COST		CLASS-A+ and A MALLS IRRs		OARs		CLASS-B+ and B MALLS IRRs		OARs		STABILIZED OCCUPANCY	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Regional Mall	(12.0%) – 5.0%	0.6%	70.0% – 125.0%	106.7%	5.00% – 9.00%	6.80%	4.00% – 6.50%	5.08%	7.00% – 11.50%	8.94%	5.50% – 10.00%	7.67%	80.0% – 99.0%	92.4%
National Power Center	(5.0%) – 5.0%	0.5%	80.0% – 110.0%	98.3%									80.0% – 96.0%	91.5%
National Strip Shopping Center	(10.0%) – 5.0%	(0.4%)	50.0% – 125.0%	96.9%									85.0% – 97.0%	92.9%

	FORECAST VALUE CHANGE NEXT 12 MONTHS		PRICE AS % OF REPLACEMENT COST		FINISHED SPACE %		TENANT IMPROVEMENT ALLOWANCES (PSF) NEW DEALS (1)		RENEWAL LEASES	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Flex/R&D	Insufficient number of responses		Insufficient number of responses		Insufficient number of responses		$0.00 – $25.00	$9.75	$0.00 – $10.00	$4.38
Warehouse (National)	0.0% – 10.0%	3.7%	95.0% – 140.0%	106.8%	0.0% – 20.0%	7.5%	$0.00 – $75.00	$6.48	$0.00 – $2.50	$0.81
Warehouse (ENC Region)	0.0% – 10.0%	3.5%	90.0% – 125.0%	102.5%	0.0% – 15.0%	6.6%	$0.00 – $5.00	$1.56	$0.00 – $2.50	$0.69
Warehouse (Pacific Region)	0.0% – 10.0%	2.7%	80.0% – 110.0%	100.1%	0.0% – 15.0%	6.7%	$0.00 – $5.00	$1.25	$0.00 – $2.50	$0.78
Apartment (National)	(5.0%) – 10.0%	2.6%	90.0% – 125.0%	100.8%						
Apartment (Mid-Atlantic Region)	(3.0%) – 5.0%	0.9%	70.0% – 130.0%	99.0%						
Apartment (Pacific Region)	(10.0%) – 15.0%	1.7%	80.0% – 150.0%	107.3%						
Apartment (Southeast Region)	0.0% – 5.0%	1.7%	80.0% – 120.0%	98.8%						
National Net Lease	(20.0%) – 10.0%	(3.0%)	100.0% – 140.0%	112.5%						
National Medical Office Buildings	(10.0%) – 10.0%	0.4%	100.0% – 150.0%	116.3%						
National Student Housing	(5.0%) – 15.0%	3.8%	50.0% – 130.0%	108.2%						

(1) Includes both second-generation and new space; a breakout of TI allowances is included in each fourth quarter issue of the Survey.

Source: Personal survey conducted by PwC during July 2017.

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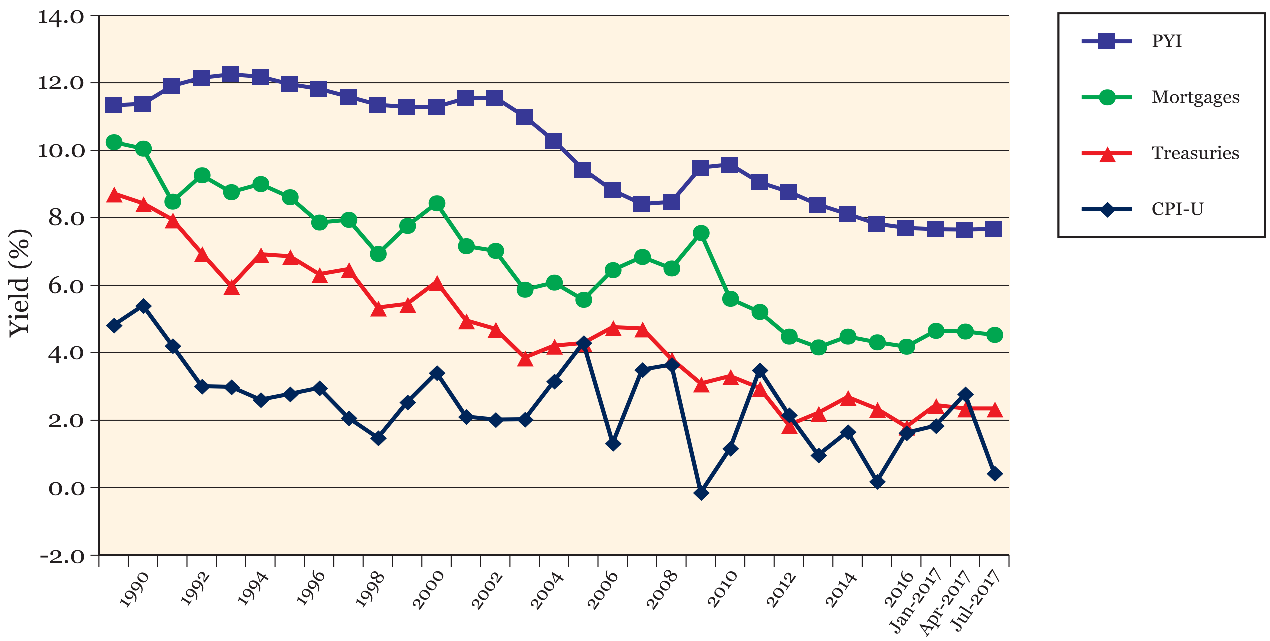
YIELD COMPARISONS
July 1, 2017

	2012 AVERAGE	2013 AVERAGE	2014 AVERAGE	2015 AVERAGE	2016 AVERAGE	2016 OCTOBER	2017 JANUARY	2017 APRIL	2017 JULY
PwC Yield Indicator (PYI)[a]	8.77%	8.39%	8.11%	7.82%	7.70%	7.68%	7.66%	7.65%	7.67%
Long-Term Mortgages[b]	4.48%	4.16%	4.48%	4.31%	4.18%	3.93%	4.65%	4.63%	4.53%
10-Year Treasuries[c]	1.86%	2.22%	2.69%	2.34%	1.81%	1.63%	2.45%	2.35%	2.35%
Consumer Price Index Change[d]	2.16%	0.97%	1.66%	0.19%	1.63%	1.80%	1.84%	2.78%	0.43%
SPREAD TO PYI (Basis Points)									
Long-Term Mortgages	429	423	363	351	352	375	301	302	314
10-Year Treasuries	691	617	542	548	589	605	521	530	532
Consumer Price Index Change	661	742	645	763	607	588	582	487	724

a. A composite IRR average of all markets surveyed (excluding hotels, development land, and student housing).
b. Source: CB Richard Ellis/L.J. Melody Capital Markets, Global Commercial Banc, Commercial Loan Direct; reflects conventional funding, 60% to 80% LTV commercial loans; fixed rates; 6- to 30-year terms.
c. Source: Federal Reserve; the annual average change is the mean of the four corresponding quarters.
d. Source: U.S. Department of Labor; quarterly changes are annualized based on the index change from the prior quarter; the annual average change is the mean of the four corresponding quarters.

COMPARATIVE YIELDS
July 1, 2017



DIVIDEND COMPARISONS
July 1, 2017

	2012 AVERAGE	2013 AVERAGE	2014 AVERAGE	2015 AVERAGE	2016 AVERAGE	2016 OCTOBER	2017 JANUARY	2017 APRIL	2017 JULY
PwC Dividend Indicator (PDI)[a]	7.27%	6.92%	6.66%	6.38%	6.26%	6.23%	6.24%	6.24%	6.21%
Equity REITs[b]	3.59%	3.68%	3.80%	3.64%	3.88%	4.00%	4.00%	4.01%	3.99%
S&P 500[c]	2.04%	2.09%	1.92%	2.03%	2.11%	2.08%	2.04%	1.96%	1.95%
SPREAD TO PDI (Basis Points)									
Equity REITs	368	324	286	274	238	223	224	223	222
S&P 500	523	483	474	435	415	415	420	428	426

a. A composite OAR (initial rate of return in an all-cash transaction) average of all markets surveyed (excluding hotels and student housing).
b. Source: National Association of Real Estate Investment Trusts; dividend yields are as of the last day of the prior quarter until April 2013; then, starting month of quarter.
c. Source: Standard & Poors; dividend yields are quarterly yields as of the last day of the prior quarter.

INSTITUTIONAL-GRADE VS. NONINSTITUTIONAL-GRADE PROPERTY RATES: OFFICE MARKETS

Third Quarter 2017

	INSTITUTIONAL IRRs		OARs		NONINSTITUTIONAL (BASIS-POINT SPREAD TO INSTITUTIONAL RATES) IRRs		OARs	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National CBD Office	5.50% – 9.50%	7.13%	3.50% – 7.50%	5.66%	(a)	(a)	(a)	(a)
National Suburban Office	6.00% – 11.50%	8.03%	5.00% – 10.00%	6.69%	(a)	(a)	(a)	(a)
National Secondary Office	6.50% – 13.00%	8.99%	4.50% – 10.00%	7.46%	50 – 400	176	50 – 250	121
Atlanta Office	6.00% – 10.50%	8.29%	5.25% – 9.00%	7.19%	(a)	(a)	(a)	(a)
Boston Office	5.75% – 10.00%	7.43%	4.00% – 10.00%	6.27%	50 – 500	213	50 – 250	169
Charlotte Office	6.50% – 10.00%	8.36%	5.00% – 8.75%	6.93%	(a)	(a)	(a)	(a)
Chicago Office	5.50% – 12.00%	8.61%	4.50% – 10.00%	7.28%	100 – 600	285	50 – 350	163
Dallas Office	6.00% – 11.00%	7.86%	5.00% – 8.50%	6.48%	(a)	(a)	(a)	(a)
Denver Office	6.50% – 11.00%	7.95%	5.00% – 9.00%	6.56%	(a)	(a)	(a)	(a)
Houston Office	6.50% – 13.50%	9.02%	5.00% – 10.00%	7.31%	75 – 1,000	333	50 – 200	108
Los Angeles Office	5.00% – 11.00%	7.41%	4.00% – 8.00%	5.74%	50 – 300	142	50 – 150	96
Manhattan Office	5.50% – 9.00%	6.81%	3.00% – 8.50%	4.94%	50 – 150	96	50 – 200	113
Northern Virginia Office	6.00% – 9.50%	7.71%	5.00% – 8.50%	6.77%	(a)	(a)	(a)	(a)
Pacific Northwest Office	5.25% – 10.00%	7.44%	4.25% – 8.00%	5.99%	75 – 500	246	50 – 300	121
Philadelphia Office	7.00% – 11.00%	8.63%	5.00% – 9.50%	7.29%	(a)	(a)	(a)	(a)
Phoenix Office	7.00% – 11.00%	8.78%	5.00% – 8.00%	6.53%	50 – 1,000	492	50 – 300	150
San Diego Office	6.50% – 11.00%	8.21%	5.25% – 8.50%	6.51%	(a)	(a)	(a)	(a)
San Francisco Office	5.00% – 9.50%	6.86%	3.50% – 8.00%	5.45%	(a)	(a)	(a)	(a)
Seattle Office	5.25% – 10.00%	7.24%	4.25% – 8.00%	5.79%	(a)	(a)	(a)	(a)
Southeast Florida Office	6.00% – 10.50%	8.31%	5.00% – 10.00%	7.26%	(a)	(a)	(a)	(a)
Suburban Maryland Office	7.00% – 10.00%	8.65%	5.50% – 9.00%	7.35%	(a)	(a)	(a)	(a)
Washington, DC Office	5.00% – 8.00%	6.48%	4.25% – 6.50%	5.27%	75 – 200	108	50 – 200	125

(a) Participants are not currently pursuing noninstitutional investments in this market.

Source: Personal survey conducted by PwC during July 2017.

INSTITUTIONAL-GRADE VS. NONINSTITUTIONAL-GRADE PROPERTY RATES: NATIONAL AND REGIONAL MARKETS

Third Quarter 2017

	INSTITUTIONAL IRRs		OARs		NONINSTITUTIONAL (BASIS-POINT SPREAD TO INSTITUTIONAL RATES) IRRs		OARs	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Regional Mall	5.00% – 11.50%	7.60%	4.00% – 10.00%	6.23%	(a)	(a)	(a)	(a)
National Power Center	6.00% – 10.00%	7.53%	5.25% – 8.00%	6.40%	50 – 300	178	50 – 200	131
National Strip Shopping Center	5.50% – 10.50%	7.25%	4.00% – 9.50%	6.19%	50 – 800	200	25 – 500	134
National Flex/R&D	6.75% – 10.00%	8.08%	5.50% – 9.50%	7.10%	(a)	(a)	(a)	(a)
Warehouse (National)	5.50% – 9.00%	6.65%	4.00% – 6.90%	5.22%	50 – 400	225	50 – 250	133
Warehouse (ENC Region)	5.75% – 7.00%	6.38%	4.25% – 6.00%	5.35%	(a)	(a)	(a)	(a)
Warehouse (Pacific Region)	5.50% – 8.50%	6.48%	3.75% – 7.00%	4.83%	(a)	(a)	(a)	(a)
National Apartment	5.00% – 10.00%	7.28%	3.50% – 7.50%	5.35%	25 – 400	175	25 – 400	131
Apartment (Mid-Atlantic Region)	5.25% – 10.00%	7.33%	3.00% – 6.75%	5.04%	25 – 400	204	25 – 400	171
Apartment (Pacific Region)	5.25% – 10.00%	6.73%	3.50% – 6.00%	4.49%	(a)	(a)	(a)	(a)
Apartment (Southeast Region)	5.75% – 10.00%	7.50%	3.50% – 6.50%	5.13%	(a)	(a)	(a)	(a)
National Medical Office Buildings	5.75% – 11.00%	7.80%	4.75% – 10.00%	6.71%	100 – 300	163	50 – 300	121

(a) Participants are not currently pursuing noninstitutional investments in this market.

Source: Personal survey conducted by PwC during July 2017.

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INCOME CAPITALIZED IN DIRECT CAPITALIZATION
Third Quarter 2017

MARKET	PERCENTAGE OF SURVEY RESPONDENTS USING: METHOD 1 (a) CURRENT	METHOD 1 (a) YEAR AGO	METHOD 2 (a) CURRENT	METHOD 2 (a) YEAR AGO	METHOD 3 (a) CURRENT	METHOD 3 (a) YEAR AGO
National Retail						
Regional Mall	20.0%	40.0%	80.0%	60.0%	0.0%	0.0%
Power Center	17.0%	33.0%	83.0%	67.0%	0.0%	0.0%
Strip Shopping Center	11.0%	11.0%	89.0%	89.0%	0.0%	0.0%
Office						
National CBD	0.0%	14.0%	100.0%	86.0%	0.0%	0.0%
National Suburban	38.0%	25.0%	63.0%	63.0%	0.0%	13.0%
National Secondary	9.0%	10.0%	91.0%	90.0%	0.0%	0.0%
Atlanta	0.0%	0.0%	80.0%	80.0%	20.0%	20.0%
Boston	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Charlotte	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Chicago	29.0%	29.0%	71.0%	71.0%	0.0%	0.0%
Dallas	17.0%	13.0%	83.0%	88.0%	0.0%	0.0%
Denver	40.0%	50.0%	60.0%	50.0%	0.0%	0.0%
Houston	43.0%	38.0%	43.0%	50.0%	14.0%	13.0%
Los Angeles	14.0%	20.0%	86.0%	80.0%	0.0%	0.0%
Manhattan	17.0%	17.0%	83.0%	83.0%	0.0%	0.0%
Northern Virginia	60.0%	40.0%	40.0%	60.0%	0.0%	0.0%
Pacific Northwest	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Philadelphia	17.0%	20.0%	83.0%	80.0%	0.0%	0.0%
Phoenix	17.0%	40.0%	83.0%	60.0%	0.0%	0.0%
San Diego	60.0%	60.0%	40.0%	40.0%	0.0%	0.0%
San Francisco	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Seattle	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Southeast Florida	20.0%	33.0%	60.0%	50.0%	20.0%	17.0%
Suburban Maryland	40.0%	40.0%	60.0%	60.0%	0.0%	0.0%
Washington, DC	33.0%	33.0%	67.0%	67.0%	0.0%	0.0%
Industrial						
National Flex/R&D	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
National Warehouse	20.0%	20.0%	80.0%	80.0%	0.0%	0.0%
ENC Region Warehouse	20.0%	20.0%	80.0%	80.0%	0.0%	0.0%
Pacific Region Warehouse	40.0%	40.0%	60.0%	60.0%	0.0%	0.0%
Apartments[b]						
National	50.0%	90.0%	50.0%	10.0%		
Mid-Atlantic Region	80.0%	100.0%	20.0%	0.0%		
Pacific Region	100.0%	80.0%	0.0%	20.0%		
Southeast Region	0.0%	80.0%	100.0%	20.0%		
National Net Lease	50.0%	40.0%	33.0%	20.0%	17.0%	40.0%
National Medical Office Buildings	40.0%	29.0%	60.0%	71.0%	0.0%	0.0%

Note: Lines may not add to up to 100% due to rounding.

a. **Method 1:** NOI after deducting capital replacement reserve but before deducting TIs (tenant improvements) and leasing commissions.
Method 2: NOI before deducting capital replacement reserve,TIs, and leasing commissions.
Method 3: Cash flow after deducting capital replacement reserve, TIs, and leasing commissions.

b. **Method 1:** deducts FF&E reserve from NOI prior to direct capitalization.
Method 2: does not deducts FF&E reserve from NOI prior to direct capitalization.

LODGING INCOME CAPITALIZED IN DIRECT CAPITALIZATION
Third Quarter 2017

SEGMENT	PRIOR 12 MONTHS[a] CURRENT	PRIOR 12 MONTHS[a] YEAR AGO	FORECAST 12 MONTHS[b] CURRENT	FORECAST 12 MONTHS[b] YEAR AGO	BOTH[c] CURRENT	BOTH[c] YEAR AGO
Full Service	17.0%	0.0%	50.0%	40.0%	33.0%	60.0%
Limited-Service Midscale & Economy	25.0%	60.0%	75.0%	40.0%	0.0%	0.0%
Luxury/Upper Upscale	40.0%	17.0%	40.0%	33.0%	20.0%	50.0%
Select Service	60.0%	60.0%	20.0%	20.0%	20.0%	20.0%

Note: Lines may not add to up to 100% due to rounding.

a. Percentage of our lodging participants who capitalize the prior 12 months of income in direct capitalization.
b. Percentage of our lodging participants who capitalize the next 12 months of income in direct capitalization.
c. Percentage of our lodging participants who analyze both the prior 12 months of income and the next 12 months of income in direct capitalization.

FORECAST PERIODS AND CHANGE RATES: OFFICE MARKETS

Third Quarter 2017

	FORECAST PERIOD		MARKET RENT CHANGE RATES INITIAL YEAR		FORECAST PERIOD AVERAGE		EXPENSE CHANGE RATES INITIAL YEAR		FORECAST PERIOD AVERAGE	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National CBD Office	5 – 12	9	0.00% – 5.00%	2.54%	0.00% – 4.00%	2.63%	2.00% – 4.00%	2.82%	2.00% – 4.00%	2.77%
National Suburban Office	5 – 10	8	0.00% – 5.00%	2.00%	0.00% – 4.00%	2.45%	0.00% – 4.00%	2.72%	2.00% – 4.00%	2.91%
National Secondary Office	1 – 15	7	0.00% – 5.00%	2.84%	1.00% – 6.00%	3.43%	1.50% – 3.50%	2.52%	1.50% – 3.00%	2.55%
Atlanta Office	3 – 10	9	0.00% – 4.00%	2.60%	0.00% – 3.50%	2.45%	1.50% – 3.50%	2.68%	1.50% – 3.50%	2.83%
Boston Office	3 – 11	9	0.00% – 5.00%	3.33%	2.00% – 3.40%	2.95%	0.00% – 3.00%	2.71%	2.00% – 4.50%	3.00%
Charlotte Office	3 – 10	6	2.00% – 4.50%	3.10%	2.00% – 5.00%	2.88%	1.50% – 4.00%	2.45%	1.75% – 4.00%	2.72%
Chicago Office	3 – 10	8	0.00% – 3.00%	1.71%	2.00% – 4.00%	2.91%	2.00% – 6.00%	3.21%	2.00% – 8.00%	3.47%
Dallas Office	3 – 10	8	2.00% – 6.00%	3.46%	2.00% – 6.00%	3.52%	2.00% – 3.00%	2.88%	2.50% – 6.00%	3.46%
Denver Office	3 – 11	8	0.00% – 4.00%	2.50%	0.00% – 3.00%	2.38%	2.00% – 3.00%	2.90%	2.00% – 3.00%	2.88%
Houston Office	3 – 10	7	(8.00%) – 3.00%	(1.53%)	(3.00%) – 9.00%	1.15%	0.00% – 3.00%	2.51%	0.00% – 9.00%	3.28%
Los Angeles Office	1 – 15	7	1.50% – 6.00%	3.75%	1.50% – 7.00%	3.84%	2.00% – 3.50%	2.78%	2.00% – 3.50%	2.78%
Manhattan Office	3 – 12	8	0.00% – 5.00%	2.96%	0.00% – 5.00%	2.73%	1.00% – 3.00%	2.75%	1.00% – 5.00%	2.92%
Northern Virginia Office	3 – 10	7	0.00% – 3.00%	1.63%	1.00% – 4.00%	2.52%	0.00% – 3.00%	2.17%	2.00% – 3.00%	2.58%
Pacific Northwest Office	5 – 12	8	2.00% – 5.00%	3.24%	2.00% – 5.00%	3.12%	2.00% – 3.00%	2.91%	2.00% – 3.00%	2.91%
Philadelphia Office	1 – 10	7	0.00% – 4.00%	2.13%	0.00% – 4.00%	2.71%	0.00% – 4.00%	2.50%	0.00% – 3.00%	2.48%
Phoenix Office	3 – 12	8	2.00% – 7.00%	4.00%	2.00% – 7.00%	3.67%	1.00% – 4.00%	2.67%	1.00% – 4.00%	2.67%
San Diego Office	1 – 10	8	2.00% – 5.00%	3.50%	1.50% – 5.00%	3.19%	2.00% – 3.00%	2.80%	2.00% – 3.00%	2.75%
San Francisco Office	5 – 10	9	1.00% – 5.00%	3.00%	(5.00%) – 4.00%	2.19%	0.00% – 3.00%	2.60%	2.00% – 3.00%	2.90%
Seattle Office	5 – 10	8	2.50% – 5.00%	3.38%	2.50% – 5.00%	3.31%	2.00% – 3.00%	2.88%	2.00% – 3.00%	2.88%
Southeast Florida Office	3 – 10	7	0.00% – 5.00%	2.20%	0.00% – 5.00%	2.75%	1.00% – 3.00%	2.70%	1.00% – 3.00%	2.69%
Suburban Maryland Office	1 – 10	7	0.00% – 1.50%	0.25%	0.00% – 2.00%	1.17%	1.00% – 3.00%	2.00%	1.00% – 3.00%	1.83%
Washington, DC Office	5 – 10	9	0.00% – 4.00%	1.58%	1.50% – 3.10%	2.58%	0.00% – 3.00%	2.33%	1.50% – 3.00%	2.71%

Source: Personal survey conducted by PwC during July 2017.

FORECAST PERIODS AND CHANGE RATES: NATIONAL AND REGIONAL MARKETS
Third Quarter 2017

	FORECAST PERIOD		MARKET RENT CHANGE RATES INITIAL YEAR		FORECAST PERIOD AVERAGE		EXPENSE CHANGE RATES INITIAL YEAR		FORECAST PERIOD AVERAGE	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Regional Mall	1 – 10	7	1.00% – 4.00%	2.50%	2.00% – 4.00%	2.88%	2.00% – 5.00%	3.00%	2.00% – 5.00%	3.13%
National Power Center	1 – 12	8	0.00% – 5.00%	1.97%	0.00% – 5.00%	2.50%	1.00% – 5.00%	2.89%	2.00% – 3.00%	2.80%
National Strip Shopping Center	1 – 10	8	0.00% – 3.00%	1.69%	0.00% – 4.50%	2.73%	0.00% – 3.00%	2.67%	1.00% – 4.00%	2.86%
National Flex/R&D	2 – 10	7	0.00% – 4.00%	2.50%	0.00% – 3.00%	2.25%	0.00% – 3.00%	2.60%	0.00% – 3.00%	2.00%
Warehouse (National)	3 – 15	9	0.00% – 6.00%	2.55%	2.50% – 4.00%	3.11%	0.00% – 3.00%	2.48%	0.00% – 3.00%	2.34%
Warehouse (East North Central Region)	3 – 10	8	0.00% – 5.00%	2.70%	2.50% – 3.50%	3.00%	2.50% – 3.00%	2.90%	0.00% – 3.00%	2.13%
Warehouse (Pacific Region)	5 – 10	9	0.00% – 4.00%	2.25%	2.00% – 4.00%	2.99%	2.00% – 3.00%	2.80%	0.00% – 3.00%	2.20%
Apartment (National)	1 – 10	7	(1.00%) – 5.00%	2.69%	0.00% – 4.00%	2.77%	2.00% – 3.00%	2.72%	2.00% – 4.00%	2.93%
Apartment (Mid-Atlantic Region)	2 – 10	6	0.00% – 4.00%	1.75%	1.00% – 4.00%	2.85%	0.00% – 4.00%	2.50%	1.00% – 4.00%	2.90%
Apartment (Pacific Region)	3 – 10	7	0.00% – 5.00%	2.85%	2.00% – 5.00%	3.37%	0.00% – 3.00%	2.23%	2.00% – 3.00%	2.85%
Apartment (Southeast Region)	1 – 10	5	1.00% – 4.00%	3.05%	1.00% – 4.00%	2.85%	2.00% – 3.00%	2.80%	2.00% – 3.00%	2.90%
National Net Lease	3 – 20	8	0.00% – 4.00%	1.88%	1.00% – 15.00%	4.75%	0.00% – 4.00%	1.67%	1.00% – 8.00%	3.13%
National Medical Office Buildings	1 – 11	6	0.00% – 3.00%	2.20%	0.00% – 4.00%	2.30%	1.00% – 4.00%	2.50%	2.00% – 5.00%	2.70%

Source: Personal survey conducted by PwC during July 2017.

Definitions

General

BASIS POINT
1/100th of a percentage point (0.01%).

CHANGE RATE
Annual compound rate of change.

DISCOUNT RATE (IRR)
Internal rate of return in an all-cash transaction, based on annual year-end compounding. All-cash refers to either all cash or market financing; unleveraged return.

EAST NORTH CENTRAL (ENC) REGION
As per NCREIF, includes Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsion.

EXCESSIVE TENANT IMPROVEMENT ALLOWANCE[3]
The amount by which an awarded tenant improvement allowance exceeds that which is typical for the market.

INSTITUTIONAL-GRADE REAL ESTATE
Real property investments that are sought out by institutional buyers and have the capacity to meet generally prevalent institutional investment criteria.

MARKETING TIME
The period of time between the initial offering of a property for sale and the closing date of the sale.

MEDICAL OFFICE BUILDING (MOB)
A multitenant office building containing physicians' offices and exam rooms, and in some cases pharmacies and ancillary hospital-service space to conduct outpatient services, such as diagnostic testing, rehabilitation, and day-surgery operating procedures. MOBs are different from general office buildings since they typically require more plumbing and electrical and mechanical systems to accommodate equipment unique to medical practices.

MID-ATLANTIC REGION
As per NCREIF, includes Delaware, Maryland, Virginia, North Carolina, and South Carolina, as well as Washington, DC.

NET OPERATING INCOME (NOI)
Income remaining after deduction of all property expenses (including real estate taxes). In direct capitalization, investors capitalize one of the following:

1. NOI after capital replacement reserve deduction but before TIs and leasing commissions
2. NOI before capital replacement reserve deduction, TIs, and leasing commissions
3. Cash flow after capital replacement reserve deduction, TIs, and leasin commissions

OVERALL CAPITALIZATION (CAP) RATE
Initial rate of return in an all-cash transaction; the overall cap rates reported in this Survey reflect investors' expectations of property performance and are applied to one of the three net operating income levels noted above. All-cash refers to either all cash or market financing; unleveraged return.

PACIFIC REGION
As per NCREIF, includes Washington, Oregon, and California.

PROJECTION PERIOD[1]
A presumed period of ownership; a period of time over which expected net operating income is projected for purposes of analysis and valuation; also referred to as "forecast" period by Survey participants

PwC DIVIDEND INDICATOR (PDI)
A composite OAR average of the surveyed markets excluding lodging.

PwC YIELD INDICATOR (PYI)
A composite IRR average of the surveyed markets excluding lodging and development land

QUARTILE
One of the three points that divide a range of data or population into four equal parts. The first quartile (also called the lower quartile) is the number below which sits 25.0% of the bottom data. The second quartile (the median) divides the range in the middle and has 50.0% of the data below it. The third quartile (also called the upper quartile) has 75.0% of the data below it and the top 25.0% of the data above it.

RENT SPIKE
An increase in market rent that is markedly higher than the general rate of inflation.

REPLACEMENT COST[1]
The estimated cost to construct, at current prices as of the effective appraisal date, a substitute for the building being appraised, using modern materials and current standards, design, and layout.

REPLACEMENT RESERVE
Amount allocated for periodic replacement of building components during a property's economic life

RESIDUAL
Estimated total price at conclusion of forecast period:

Cap Rate
Overall capitalization rate used in calculation of residual price; typically applied to the NOI in the year following the forecast.

Selling Expense
Transaction expenses (legal, brokerage, marketing, etc.) paid by the seller.

SHADOW SPACE[3]
Space within an occupied office suite that is not currently utilized by a tenant and is also not being marketed for subleasing

SOUTHEAST REGION
As per NCREIF, includes Alabama, Arkansas, Florida, Georgia, Mississippi, and Tennessee.

STRUCTURAL VACANCY[3]
Normal vacancy rate in a balanced market.

VACANCY ASSUMPTIONS

Months Vacant
The number of months a space remains unleased at the expiration of a vacating tenant lease.

Tenant Retention
Percentage of leased rentable area that is expected to be released by the existing tenants at lease expiration.

Underlying Vacancy/Credit Loss
Percentage of total revenue uncollected due to unexpected vacancy or credit loss (in addition to any rent loss from vacancies at lease expirations).

Apartment

NET OPERATING INCOME (APARTMENT NOI)
Income remaining after deduction of all property expenses (which includes leasing commissions); in direct capitalization, investors capitalize one of the following:

1. NOI after capital replacement reserve
2. NOI before capital replacement reserve
3. Cash flow after capital replacement reserve

GARDEN APARTMENT[1]
Development consisting of two- or three-story, walk-up structures built in a garden-like setting; customarily a suburban or rural-urban fringe development.

HIGH-RISE APARTMENT[5]
Multifamily housing development consisting of at least four stories.

Various sources for these definitions include [1]*The Dictionary of Real Estate Appraisal, Fifth Edition,* published by the Appraisal Institute, [2]International Council of Shopping Centers, [3]investor interviews and PwC, [4]Smith Travel Research, and [5]National Multi Housing Council.

Development Land

DEVELOPMENT LAND
Land that has been purchased, readied for subdivision development (i.e. entitlements and infrastructure), and subsequently sold to builders

DEVELOPER'S PROFIT[1,3]
A market-derived figure that reflects the amount a developer expects to receive for his or her contribution to a project and risk

Industrial

FLEX/R&D[3]
An industrial property with 14- to 20-foot clear ceiling heights, up to 100.0% finished office space including lab and clean-room space (up to 60.0% finished office space excluding lab and clean-room space), and dock-high and/or grade-level loading used for minimal distribution, research and development, and specialized office space.

WAREHOUSE[3]
An industrial property with 16- to 30-foot clear ceiling heights, up to 15.0% finished office space, and dock-high loading facilities used for the storage and distribution of goods.

Lodging

AVERAGE DAILY RATE (ADR)[4]
Room revenue divided by rooms sold.

LIMITED-SERVICE MIDSCALE & ECONOMY[3,4]
Midscale lodging with "rooms only" and no food or beverage except possible continental breakfast; includes all economy lodging; lower-tier pricing; corresponds to STR's limited-service hotels in the midscale chain scale and all hotels in the economy chain scale; includes brands such as Howard Johnson, Sleep Inn, and Motel 6.

FULL SERVICE[3,4]
Lodging with restaurant and lounge facilities, meeting space, and a minimum service and amenities level; moderate to lower upper-tier pricing; corresponds to STR's full-service hotels in the upscale, upper midscale, and midscale chain scales; includes brands such as Doubletree, Radisson, and Ramada.

LUXURY/UPPER UPSCALE[3,4]
High-quality lodging offering personalized guest services, typically with extensive amenities, and upper-tier pricing; corresponds to STR's luxury and upper-upscale chain scales; includes brands such as Ritz Carlton, Four Seasons, and Hyatt.

MANAGEMENT FEE
An expense item representing the sum paid for or the value of management service, including incentives, expressed as a percentage of total revenues.

NET OPERATING INCOME (LODGING NOI)
Income remaining after deduction of all property expenses: in direct capitalization, investors capitalize one of the following:

1. Prior 12 months
2. Forecast next 12 months
3. Both of the above

OCCUPANCY[4]
Rooms sold divided by rooms available.

OPERATING EXPENSES
The ongoing expenditures incurred during the ordinary course of business necessary to maintain and continue the production of gross revenues, not including reserves, debt service, and capital costs.

PROPERTY EXPENSES
Includes all necessary operating expenses and a reserve for replacement of building components and FF&E.

RESERVE FOR REPLACEMENT
An allowance that provides for the periodic replacement of building components, and furniture, fixtures, and equipment, which deteriorate and must be replaced during the building's economic life.

REVPAR
Revenue per available room.

SELECT SERVICE[3,4]
Upscale and upper-midscale lodging with "rooms only" and no or minimal food and beverage; moderate pricing; excludes economy properties; corresponds to STR's select-service hotels in the upscale chain scale and limited-service hotels in the upper-midscale chain scale; includes brands such as Hampton Inn, Residence Inn, and Comfort Inn.

Net Lease

PROVISION 1031
A tax code that allows the seller of an investment property to defer capital gains taxes by exchanging the sale proceeds for an investment in a similar property or properties within 180 days of the original closing.

SALE LEASEBACK
A transaction in which an owner sells a property that it fully occupies to a third party and then leases the space back from the new owner.

Secondary Office[3]

INCLUDED MARKETS
Austin, Baltimore, Cincinnati, Cleveland, Detroit, Indianapolis, Jacksonville, Kansas City, Las Vegas, Minneapolis, Nashville, Orlando, Pittsburgh, Raleigh, Riverside, Sacramento, San Antonio, San Jose, St. Louis, and Tampa

Retail

FORTRESS MALL
The dominant performing Class-A+ malls in the country whose inline stores generate at least $650 per square foot in retail sales; they contain inline and anchor stores that are both well established and unmatched in the trade area.

LIFESTYLE CENTER[2]
Most often located near affluent residential neighborhoods, this center type caters to the retail needs and "lifestyle" pursuits of consumers in its trading area. It has an open-air configuration and typically includes at least 50,000 square feet of space occupied by upscale national chain specialty stores. Other elements, such as restaurants and entertainment, design ambience and amenities like fountains and street furniture, make the lifestyle center serve as a multi purpose leisure-time destination. One or more conventional or fashion specialty department stores often act as anchors.

OUTLET CENTER[2]
Consist mostly of manufacturers' outlet stores selling their own brands at a discount. Usually located in rural or occasionally in tourist locations. A strip configuration is most common, although some are enclosed or arranged in a "village" format.

POWER CENTER[2,3]
An open center dominated by at least 75.0% large big-box anchors, including discount stores, warehouse clubs, and value-oriented category stores, and a minimal amount of inline store space

REGIONAL MALL[2,3]
An enclosed shopping center that contains at least two department stores and has climate-controlled walkways that are lined with smaller retail shops

REGIONAL MALL CLASSIFICATIONS[3]

Class	Inline Retail Sales[3] (Per Sq. Ft.)
A+	$650 and up
A	$500 to $649
B+	$400 to $499
B	$300 to $399
C+/C	Less than $300

STRIP SHOPPING CENTER[2,3]
An open row of stores either with or without anchor stores that offer convenience (neighborhood centers) and general merchandise (community centers).

Various sources include [1]*The Dictionary of Real Estate Appraisal, Fifth Edition,* published by the Appraisal Institute; [2]ICSC; [3]investor interviews and PwC, inline sales exclude anchor stores, movie theaters, and large drug stores; [4]Smith Travel Research; and [5]National Multi Housing Council.

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The information in this survey is gathered through on-line questionnaires and telephone interviews. As such, the findings and opinions expressed reflect those of our investor participants and do not necessarily reflect those of PwC. Although we do not represent that the survey is statistically accurate, its results provide important insight into the thinking of a significant portion of the equity real estate marketplace.

Investor Survey Responses: The individual investor responses contained in the large tables in the back of each issue are a representative sample. Due to space constraints, not all responses are included.

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*16-page supplement following 9/11

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