NATIONAL FLEX/R&D MARKET-SELECT SURVEY First Quarter 2016	crsu		RESPONSES	VSES	,		f		,		1	
	Y-JAITIAI	INITIAL-YEAR CHANGE RATES	- 1	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP	VACANCY ASSUMPTIONS	·- SNC		RESERVE	r MARKETING TIME
	MARKET RENT	EXPENSES	c'n	CAP	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT	UNDERLYING VACANCY & T 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 favor sellers; does not use rent spikes	3 0% Years 1 to 3	3.0%	3.0%	7.00% to 7.50%	15% to 3.0%	7 00% to 8 00%.	. 6 25% to 7.00%	6 6 to 12	65.0% to 70.0%	2 0% to 5.0%	; \$0 15 to \$0.40	9 to 8
PRIVATE EQUITY INVESTOR + Forecast Period: 2 to 7 years Uses manly DG analysis; m direct cap, capitalizes NOI before T1s, 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 1.0% Year 1, 0.0% to 2.0% Year 2	. 00% to; 3.0%	: 3.0%	8.00% to 9.00%	10% to 2.5%	6. 6. 11.00%	8 00% t. to 9.00%	99 181 1	50.0% to 75.0%	5.0% to 10.0%	\$0 15 to \$0.50	45,∞ `
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 a rent spike of 5.0% in year 1, 7 0% in year 2, and 5 0% in year 3.	3.0% to 5.0% Year 1, 3.0% ' to 7.0% Year 2	3 0%	%0°.	6.75% to 77.50%	2.0% to 3.0%	7.50% to 9.00%:	6.50% to 7.50%	6 to to 12	65.0% to 75.0%	5.0% to 7,5%	\$0.20 to \$0.30	φ <b>2</b> δ.
REAL ESTATE ADVISOR + Forecast Period: 5 to 10 years Uses both DGF 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.	10% Year 1; 2 0% Year 2	3.0%	3 0%	6.00% to 17.25%	1.0% to 4.0%	7 00% to 7.75%	5.75% to 6.50%	, 9 9 to 15 15	50.0% to 65.0%	3.0% 8.0% 9.0% 1.	\$0.15 to \$0.50	្ ១៦ ភូព
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% 100% 100%	%0.8°	700%	7.00% to to 8.00%	4.0% to 6.0%	8.50%	7.00% 10.6 8.00%	60 to 10 to	70 0% to 80 0%	5.0% 5.0% 7.0%	\$0.10 to \$0.20	. 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

NATIONAL WAREHOUSE MARKET-SELECT SURVEY RESPONSES First Quarter 2016	ELECTS	URVEY	RES	ONSES								
	INITIAL-YEAR C	EAR CHANGE RATES	CATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	SNC		REPLACEMENT RESERVE	TIME
	MARKET RENT	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT RETENTION	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	MONTHS
REIT ← 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 7.0% in year 2 and 8.0% in year 3	30% to 70%	3.0%	2.5% to 3.0%	5.25% to 8 50%	1.0% to 3.0%	6.00% to 9.25%	3.00% to 7.00%	3 10	65.0% to 75.0%	2 0% to 5 0%	\$0.05 to \$0.20	6 5 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; may use a rent spike of 5.0% in years 1 and 2; data refers to the national warehouse sector; expects overall cap rates to hold steady over the next six months.	3 0% to 5 0%	3.0%	3.0%	5.50% to 7.25%	1.0% to 3.0%	6 00% to 8 25%	4.50% to 6.50%	6 5 5 5	65 0% to 75 0%	05% to 20%	\$0 10 to \$0 25	6 to 12
PRIVATE REAL ESTATE FIRM ← Forecast Period: 5 to 10 years Relies mainly on direct capitalization; in direct cap, capitalizes NOI before TIs, leasing commussions, and capital replacement reserve, uses face rents and reflects concessions when they are scheduled to occur; data refers to the U.S. Southwest region	s 2.0% to 3.0%	3.0%	3.0%	6.00% to 7.00%	1.0% to 3.0%	6 75% to 7.75%	5 50% to 6.75%	6 tt 12	50 0% to 65 0%	3.0%	\$0.10 to \$0.35	6 6 6 m
PENSION FUND ADVISOR + Forecast Period: to years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI before IIs, 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%	4.75% to 7.00%	1.0% to 3.0%	5 50% to 7.00%	4.25% to 7.00%	6 to 12	60 0% to 75 0%	5 0% to 7 0%	\$0.05 to \$0.15	6 th 30

PENSION FUND ADVISOR ◆ Forecast Period: 5 to 10 years Mainly uses DCF; in direct capitalization, captalizes NOI before TIs, leasing commissions, and capital replacement reserve; data refers to the L.S. Southeast region, expects overall cap rates to hold steady over the next six months	3.0% to 4.0%	3.0%	2.5% to 3.0%	6.50% to 7.25%	1.0% to 2.0%	7 00% to 7 75%	4.00% to 7.00%	4 to 01	65 0% to 75.0%	1.0% to 2.0%	\$0.05 to \$0.15	4 t
INSTITUTIONAL INVESTOR + Forecast Period: 10 years Relies on DGF, 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%	3 0%	3.0%	6.00% to 6.50%	2.0% to 3.0%	6.50% to 6.75%	5.25% to 5.75%	4 to 6	65.0% to 70.0%	10% to 20%	\$0 10 to \$0.20	8 t t 4

Source Personal survey conducted by PwC during January 2016



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	INTERALY	INITIAL-YEAR CHANGE RATES		RESIDUAL		DISCOUNT RATE (IRR) 3	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ONS		REPLACEMEN , RESERVE	REPLACEMENT, MARKETING RESERVE TIME
	MARKET RENT	EXPENSES CPI		CAP , RATE	SELLING EXPENSE	FREE & CLEAR	, FREE & CLEAR	MONTHS	TENANT. RETENȚION	UNDERLYING TENANT. 'VACANCY & RETENTION 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 IIs, 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%	5.50% to 6.50%	10% to 2.0%	5.75% to 7.00%	4.50% to 5.50%	\$ 2 & .	60 0% to 75.0%.	4 0% to 7 0%	\$0.05 to \$0 15	9 2 20
INSTITUTIONAL INVESTOR + Forecast Period: 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve but before Tls 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%	25% 3.0%	6.25% to 6.75%	2 0% to 3 0%	6.75% to 7.25%	5.75% to 6.25%	9 6	60.0% to 70.0%	2.0% to 4.0%	\$0.10 to \$0.20	e d 0
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 year 1, 7.0% in year 2, and 6.0% in year 3.	rs 20% to 50%	2.0% 10* 3.0%	2.0% to	6.00% to 	1.0% to 2.0%	6.50% 104 7 00%	. 5.50%	450	65.0% to 75.0%	50.0% 50.0% 50.0%	\$0.05 to \$0.15	· .
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%	3.0%	3.0%	5.75% to 6.75%	10% to 4.0%	6.25% to 7.00%	5.00% to 5.50%	6 to 12	50.0% to 65.0%	. %0°C	\$0 10 to \$0 35	w 2 o
PRIVATE EQUITY INVESTOR + Forecast Period: 3 to 7 years Uses both DCF and direct capitalization: in direct cap, capitalizes NOI before TIs, leasing commussions, and capital replacement reserve, does not use rent spikes; expects overall cap rates to decrease 25 to 50 basis points over the next six months	3.0%. to . 5.0%	3.0% 4.0%	2 0 2 to	7.00%	2.0% to 5.0%	6.75% 10.75% 7.50%	%00.9°	'o to to to to 'o'	60 0% to 70.0%	%0'0'8	\$0.10 to \$0.15	. o to

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PACIFIC REGION WAREHOUSE MARKET-SELECT SURVEY RESPONSES First Quarter 2016	RKET-SE	LECT SU	RVE	Y RESPC	NSES							-	
	INTITAL	INITIAL-YEAR CHANGE RATES	ATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	SNIC		REPLACEMENT RESERVE	MARKETING TIME	
	MARKET	EXPENSES	CPI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION 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 Til, steamge 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 s:	3 0%	3 0%	4.75% to 6.00%	1.0% to 5.8%	5.50% to 6.25%	4.00% to 5.25%	6 5 5 5 7	60.0% to 75.0%	%.0%	\$0.05 to \$0.15	4 C 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.	ars 3.0% Yeaus 1 to 3	30%	3 0%	6.00% to 6.50%	3.0% to 4 0%	650% to 7.50%	5.00% to 6.25%	6 6	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	3.0% Years 1 to 3	3 0%	3 0%	5.50% to 6.00%	2.0% to 3.0%	6 25% to 6 50%	4.50% to 5.25%	4 to 8	65 0% to 75.0%	2 0% to 4.0%	\$0.10 to \$0.20	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
PRIVATE REAL ESTATE FIRM + Forecast Period: 5 to 10 years Rehes mannly 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	Fars 50% Year 1, 40% Year 2	3.0%	3.0%	4.75% to 6.00%	0.7% to 3.0%	5.75% to 6.75%	3.75% to 5.75%	6 to 12	50.0% to 65.0%	3 %	\$0.10 to \$0.35	<b>م</b> وم	
REAL ESTATE FIRM + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization: in direct cap, capitalizes NOI before IIs, leasing commissions, and capital replacement reserve; uses face rents and reflects concessions when they are scheduled to occur.	0.0% to 2.0% Year 1, 2.0% to 3.0% Year 2	2.0%	15% to 25%	6.00% to 7.50%	2 0% to 3.0%	8 00% to 9.00%	6.00% to 7.00%	4	50.0% to 75.0%	3 0% to 5 0%	\$0.10 to \$0.15	ომს	
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	INITIAL-Y	INITIAL-YEAR CHANGE RATES	, VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	REPLACEMENT RESERVE	MARKETING TIME
	MARKET	EXPENSES	TOTAL	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, capitalizes NOI after capital replacement reserve; does not use a separate FFRE replacement reserve.	2.0% to 60%	2.0% to : . 4.0%	3.0% to, 7.0%	4.50% to 7.00%	. 0.5% . to 5.5% 	5.00% to 7.00%	3.50% to 6.50%	\$200 to \$500	బ ఫ్రాం
PENSION FUND ADVISOR + Forecast Period: 10 years Prefers DCF analysis; also uses direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve; does not deduct FF&E reserve from NOI before capitalization; does not use a separate FF&E replacement reserve.	0 0% to, 3 0%	30%	4 0% 4 0% to 10.0%	4.00% to 6.75%	20% 10 30%	5.50% to 7.75%	4 00% to 6.50%	\$150 to \$350	4.9 e.
DOMESTIC PENSION FUND + Forecast Period: 1 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve, reflects concessions as they occur, may burn off on new property during lease-up period in strong market; does not use a separate FF&E replacement reserve.	3 0% to 6.0%	3.0%	30% to to 15.0%	4.25% to 6.50%	110%	6.00% to 7.25%	3 50%. to . 5 59%	\$200 to \$500	6 9
INSTITUTIONAL INVESTOR '+ Forecast Period: 10 years Relies on DCF; in direct cap, capitalizes NOI after capital replacement reserve; uses a seperate FF&E reserve; believes current market conditions equally favor sellers and buyers.	3.0% to 4.0%	3;0%	4.0% (to 6.0%	4.50% to 5.50%	20%	6.00% to 6.50%	4 00% to 5.00%	\$200 to \$250	3 3 3 5 c
PRIVATE INVESTMENT FIRM ◆ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap. capitalizes NOI after capital replacement reserve, sees overall cap rates holding steady; does not use a separate FF&E reserve	* 0.0% to 3.5%	2.8%	3.5% , to 7.5%	5 00% to 6.00%	10%	5.75% 5.75% 7.00%	3.50% to 5.00%	\$200 to \$350.	÷ 3 %
PENSION FUND ADVISOR + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization, in direct cap, capitalizes NOI after capital replacement reserve; buys 150- to 400-unit apartment complexes in first- and second-ther markets nationwide; does not use a separate FF&E reserve.	. %0.65	2.5%	7.0%	6.50% to 7.00%	10% 10% 20%	8.25% to '9.00%'	6.00% to 7.00%	\$250 to \$350	11. 20.
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MID-ATLANTIC REGION APARIMENT MAKKET	I MAKKE	-SELECT SURVEI NESFONSES		STORIES		DISCOUNT	OVERALL CAP	STRUCTURAL REPLACEMENT	MARKETING
	INTTIAL-YEAR	INTITAL-YEAR CHANGE RATES	VACANCY	RESIDUAL		RATE (IRR)	RATE (OAR)	RESERVE	TIME
	MARKET RENT	EXPENSES	TOTAL	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	PER UNIT	MONTHS
PRIVATE REAL ESTATE FIRM + Forecast Period: 3 to 6 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve, does use a separate FF&E replacement reserve; believes market conditions currently favor sellers; expects overall cap rates to hold steady over the next six months.	s 0 0% to 4 0%	10% to 3.0%	2.0% to 7.0%	5.50% to 7.50%	10% to 2.5%	7 00% to 10.00%	5.50% to 7.50%	\$100 to \$400	თვთ
REAL ESTATE ADVISOR ← Forecast Period: 5 to 10 years Prefers DCF analysis, also uses direct capitalization, in direct cap, capitalizes VOI after capital replacement reserve, ededucts FF&E reserves from NOI before capitalization, uses a separate FF&E replacement reserve of \$200 to \$300 per unit.	3 0% to 4 0% Years 1 & 2, 3 0% Year 3	3.0%	4.0% to 7.0%	4.25% to 6.25%	2 0% to 4 0%	5.75% to 7.50%	4 00% to 5.25%	\$200 \$300	8.29
PENSION FUND INVESTOR + Forecast Period: 4 to 7 years Uses all three approaches to value, in direct capitzation, capitalizes NOI after capital replacement reserve; uses a separate FF&E replacement reserve of \$350 per unit; believes market conditions favor sellers.	2.0% to 3.0% Year 1	3.0%	5.0% to 7.0%	5 25% to 6.75%	2 0% to 3.0%	8.00% to 10.00%	5 25% to 6 75%	\$1,000 to \$1,500	6 6
PRIVATE INVESTOR + Forecast Period: 5 to 10 years Mainiv uses direct capitalization, in direct cap, capitalizes NOI after capital replacement reserve, also uses a separate FP&E replacement reserve of \$1.5 to \$7.5 per unit, expects overall cap rates to hold steady over the next six months.	3.0% to 4.0% Years 1.&2	%0°8	3 0% to 7.0%	4 25% to 7.00%	15% to 3.0%	7 00% to 10.00%	4 25% to 7.00%	\$250 to \$350	4 to 6
PRIVATE REAL ESTATE FIRM + Forecast Period: 5 to 8 years Mainly uses direct capitalization analysis: in direct cap, capitalizes NOI after capital replacement reserve, believes that market conditions currently favor sellers; uses an FF&E replacement reserve of \$200 to \$300 per unit.	1.0% 1.0% 1.04.0% 1.0% 1. to 4.0% 1. Year 2	3 0%	5 0% to 6.0%	5 00% to 6 25%	10% to 20%	6 50% to 9.00%	5.00% to 6.00%	Does not use	బర్ ఉ

	INITIAL-YE.	INITIAL-YEAR CHANGE RATES	VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	STRUCTURAL REPLACEMENT RESERVE	MARKETING
	MARKET. RENT	EXPENSES	TOTAL	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	PER UNIT	MONTHS
PRIVATE REAL ESTATE FIRM ♦ Forecast Period: 3 to 8 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve, uses a separate FF&E replacement. reserve of \$250 to \$350 per unit, FF&E is deducted from NOI before capitalization; expects overall cap rates to hold steady over the next six months.	2.0% to 5.0% Years 1.& 2	2.5%, 10 · 3.0%	. 20%	3.75% to 6.00%	0.5% 	7 00% to 9.00%	3.50% to 6.00%	\$250 to \$350	, ,
REAL ESTATE ADVISOR + Forecast Period: 5 to 10 years Prefers DCF analysis; also uses direct capitalization, in direct cap, capitalizes NOI after capital replacement reserve; does not deduct FP&E reserve from NOI before capitalization; uses a separate FP&E replacement reserve of \$200 to \$300 per unit.	3 0% to 5 0% Year t; 3.0% to 4.0% Years 2 & 3	3.0%	4.0% to 7.0%	4 75% to 5.75%	15% to 30%	5.75% to 7.00%	3.70% to 5.00%.	\$200 to \$300	5. 6 6 6
PRIVATE REAL ESTATE FIRM + Forecast Period: 5 to 8 years Mainly uses direct capitalization analysis; in direct cap, capitalizes NOI after capital replacement reserve; believes market conditions favor sellers, uses a separate FF&E reserve of \$200 to \$300 per unit.	3.0% to 5.0%	%o £	4.0% to 6.0%	4.50% to` 6.00%	1.0% to 2.5%	6.00% to 9.00%	4.50% to 5.50%	Does not use	
REAL ESTATE ADVISOR + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before capital replacement reserve, does not use a separate FF&E replacement reserve; FF&E is not deducted from NOI before capitalization.	2.0%	30%	3.0% to 5.0%	4 25% to' 5.50%	10% to ' 30%	5.50% to 6.75%	3.59% to 4.75%	\$200 to \$300	8 g 6 .
PRIVATE INVESTIMENT FIRM + Forecast Period: 5 to 10 years after capit already direct capitalizes NOI after capitalizes to part capital replacement reserve; uses a separate FR&E replacement reserve of \$250 to \$375 per unit; FF&E is not deducted from NOI before capitalization; believes market conditions favor sellers; expects overall cap rates to hold steady over the next six months	3.0% to 6.0% Years	2.0%	3.0%	475% 603 5.25%	18%	5.50% to 6.75%	3.75% 10 4.75%	\$200 to \$350	, ė. ė. ė.

SOUTHEAST REGION APARTMENT MARKET-SEI First Quarter 2016	ARKET-S	BELECT SURVEY RESPONSES	VEY RESPO	ONSES					
	INITIAL-YEA!	INITIAL-YEAR CHANGE RATES	VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	STRUCTURAL REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT	EXPENSES	TOTAL	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; in direct capitazinon, capitalizes NOI after capital replacement reserve, uses a separate FF&E replacement reserveof \$350 per unit; does not deduct FF&E reserves from NOI before capitalization.	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%	5.25% to 6.50%	\$1,200 to \$1,500	954
PRIVATE REAL ESTATE FIRM + Forecast Period: 3 to 4 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve; uses a separate FF&E replacement reserve of \$250 to \$300 per unit; expects overall cap rates to hold steady over the next six months; does not deduct FF&E reserves from NOI before capitalization.	2.0% to 3.5% Years 1 to 3	2.0% 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 7.00%	\$250 to \$300	იყი
TATE ADVISOR + Forecast Period DCF and direct capitalization; in direct cap itial replacement reserve; does not use a sep int reserve, expects overall cap rates to hold s ;; does not deduct FF&E reserves from NOI I	4.0% Year 1, 3.0% Year 2	3.0%	5.0%	450% to 525%	10% to 4.0%	6 00% to 7.00%	3.75% to 5.00%	\$200 to \$300	೯೪೪
PENSION FUND ADVISOR + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve; buys 150- to 400-unit apartment complexes; uses a separate FF&E reserve of \$250 to \$350 per unit; does not deduct FF&E reserves from NOI before capitalization.	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 50% to 5 75%	\$200 to \$350	3 60 1
REAL ESTATE ADVISOR + Forecast Period: 1 to 5 years Prefers DCF analysis, also uses direct capitalization, in direct cap, capitalizes NOI after capital replacement reserve, does not deduct FF&E reserves from NOI before capitalization, uses a separate FF&E replacement reserve of \$300 per unit.	3 0% Years 1 to 3	3.0%	5 0%	4.75% to 5.25%	10% to 15%	6.00% to 7.00%	4.50% to 5.25%	\$300	

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Source Personal survey conducted by PwC during January 2016

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			PER SQUARE FOOT	Does not use	\$0.10 to \$0.25	Does not use	\$0.10 to \$0.25	. Does not use	
		UNDERLYING VACANCY & REPLACEMENT CREDIT LOSS; RESERVE	7	Does I not r	<b>%</b> 0 0	5.0%	3.0% to 5.0%	Does not use	
-		OVERALL CAP CAP RATE (OAR)	FREE & CLEAR	5.50% to 7.50%	6.50% to 9.00%	5.25% to -6.50%	5.50% .to 7.00%	6.25% to 8.50%	
		DISCOUŃT RATE (IRR)	FREE & CLEAR	8 00% to 10.00%	8 00% to 10.00%	6 00% to 7 00%		Does not use	
		ī	SELLING EXPENSES	3.0% to 5.0%	2 0% to 4.0%	3.0%	4.0% to 5.0%	į.	1,
	:	RESIDUAL	CAP RATE	6.00%. -to 9.00%	, , , , , , , , , , , , , , , , , , ,	7.50% to 7.75%	7.00% to 7.75%	Does not use	:
		PREFERRED CREDIT	, , , , , , , , , , , , , , , , , , ,	BBB- to AAA	, w.ts∢	B, to't AA	BBB <del>-</del> to A	B F F F F F F F F F F F F F F F F F F F	
	RESPONSES	, "	EXPENSES	10% to 3.0%	1.0% to 2.0%	1.0% to 2.0%	1.0% to f 3.0%	0.0% to .3.0%	
		CHANGE RATES		1.0% to 3.0%	1.5% to 3.0%	1.0% to 2.0% Years 1 to 3	r r to 2.5%	0.0% , to 3.0% 	
	CT SURVE	PREFERRED PROPERTY TYPE	,	Commodity retail, office, medical	Office, health care, industrial, government	Retail (restaurants)	General-purpose 1.0% office 2.5%	All varieties	
	NATIONAL NET LEASE MARKET-SELECT SURVEY First Quarter 2016			INVESTOR/BROKERS + Forecast Period: 3 to 10 years Primary valuation method is direct capitalization; also uses sales comparizon approach; underlying credit rating of tenant is more important than real estate value; capitalizes NOI before TIs. leasing commissions, and capital replacement reserve.	PRIVATE INVESTMENT FIRM + Forecast Period: 1 to 5 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 analysts; mainly focuses on net lease transactions; includes reimbursements paid by tenants as both revenues and expenses.	PRIVATE INVESTMENT FIRM + Forecast Period: 3 to 8 years Prinary valuation method is sales comparison approach; also uses DCF analysis; mainly completes net lease sales; in direct cap, capitalizes cash, flow after TIs, leasing commissions, and capital replacement reserve: excludes reimbursements paid by tenants as both revenues and expenses.	INVESTMENT ADVISOR + Forecast Period: 3 to 10 years Prinary 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; excludes reimbursements pand by tenants as both revenues and expenses.	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 25 to 50 basis points over the next six months; excludes reimbursements paid by tenants as both revenues and expenses	
		<u> </u>	<u> </u>						J

Source Personal survey conducted by PwC during January 2016

First Quarter 2016						DISCOUNT	OVERALL CAP	VACANCY			REPLACEMENT	NT MARKETING
	MARKET E	CHANGE R XPENSES	ł	KESIDOAL CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	1	TENANT RETENTIO	UNDERLYING TENANT VACANCY & RETENTION CREDITLOSS		MONTHS
REAL ESTATE ADVISOR ← Forecast Period: 10 years Uses both DCF and 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 rent spikes.	%0.2	2.0% 2.0% 2.0% 2.5.0% 2.5.5.2.5.5.2.5.5.2.5.5.5.5.5.5.5.5.5.5	% %	7.00% to 7.50% (on campus): 7.50% to 8.00% (off campus)	0.8% to 1.0%	7 00% to 7.75% (on campus); 7 50% to 8.00% (off campus)	5.75% to 6.75% to (on campus); 6.75% to 7.75% to (off campus)	4 to 6	70 0% to 80 0%	5.0% to 7.0%	\$0.25 to \$0.50	က ဌာက
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 hold steady over the next six months; does not use rent spikes.	2.0% to 3.0% Years 1 to 3	2 0% 2. to to to 3.0% 3	5.54 6.55 6.57 00 10 6.0 3.0% 7.54 (offi	5.50% to 6.50% (on campus); 6.6.00% to 7.50% (off campus)	1.0% to 2.0%	7 00% to 8 00% (on campus); 7.50% to 9.50% (off campus)	5.50% to 6.50% (on campus); 6.00% to 7.50% (off campus)	9 to 12	75.0% to 90.0%	5.0% to 10.0%	\$0 15 to \$0.60	4 to 0
MEIT → Forecast Period: 1 to 10 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; believes market conditions favor sellers, expects overall cap rates to decrease 50 basis points over the next six months.	1.0% to 3.0%	1,5% 0 C to to 30% 3 C 3 C 3 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C	% %	6.00% to 7.50% (on campus); 6.50% to 8.50% (off campus)	1.5% to 2.5%	7.00% to 9.00% (on campus); 8 00% to 10 00% (off campus)	6.25% to 7.25% (on campus); 6.50% to 8.25% (off campus)	6 to 15	60.0% to 85.0%	3.0% to 8.0%	\$0.25 to \$0.50	4 t 4
REAL ESTATE SERVICE FIRM + Forecast Period: 8 to 11 years to loses 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 1.8% 2	20% 2 to to 30% 3	5 75 2 0% 7.50 to on 0 3 0% and	5 75% to 7.50% for both on campus and off campus	1.0% to 2.0%	6 50% to 8 00% for both on campus and off campus	5.00% to 7.00% for both on campus and off campus	4 to to 5	70.0% to 90.0%	3.0% to 5.0%	\$0.15 to \$0.25	1 to to 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
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.	to 0.0% to 3.0% Years 1 to 3	20% 2.0 to to 30	% %	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 to 6

Source: Personal survey conducted by PwC during January 2016

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	INITIAL YEAR CHANGE RATES	R.	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	, ,
	AVERAGE DAILY RATE	OPERATING	CAP '	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	YES/NO	PERCENT OF TOTAL REVENUE	PERCENT OF TOTAL REVENUE	MONTHS	4
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.	3.0% to 4.0% Years 1 to 3	3.0% to 4.0%	7.50% to .9.00%.	2.5% to 3.5%	10.00% 1 to 13.00%	6.50% to: 8 00%	· 2	1.0% to 1.5%	.* 22.5% to 45.%	6 t 0	-
OWNER/PRIVATE + Forecast Period: 4 to 8 years Uses both DCF and direct capttalization, in direct cap, capitalizes prior 12 months of income; believes market conditions favor sellers; expects overall cap rates to increase 25 to 50 basis points over the next six months	2.0% to 5.0%	% % %	7.50% to 9.00%	0.5% to 3.0%	8.50% , to 10.00%	%050.6 05.0%	Yes	2.0% to 3.5%	3 0% to 5.0%	7 20 7	
PRIVATE COMPANY + Forecast Period: 3 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 currently favor sellers	 %0 %	2.0% . to . 3.0%	7.00% to 8.00%	2.0% to 3.0%	1100%	6.50% to 7.50%	Yes	25% to 3.5%	Does not use	. 6	
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 hold steady over the next six months; believes market conditions favor sellers.	3 0% to* 5,0%	30%	7.25% · to by 9.50%	2.0% to 3.0%	8 75% to to 10.50%	6 00% to 8.50%	Yes	2.5% to 3.5%	4 0% to 5 0%	∞	٠,
PRIVATE INVESTOR + Forecast Period: 3 to 6 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 hold steady over the next six months and that market conditions are neutral.	30%	1.0%	9.00% to 10.00%	1.0% to 4.0%	1100%	to	Yes	. 3.0% to 5.0%	3.0% to 5.0%	33 7	
Source: Personal survey conducted by PwC during January 2016.		,		,			-				_

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OVERALL IS FERE DEDUCTED BASE CAP RATE FROM NOI PRIOR TO MANAGEMENT (OAR) CAPITALIZATION? FEE	FREE & PERCENT OF CLEAR YES/NO TOTAL REVENUE	7.50% 4.0% to to 10.00% S 0%	3 0% to to 4.0%	0% Yes 3.0%	2.0% Yes to to 3.5%	3.0% Yes to to 5.0% 5.0%
OVI DISCOUNT CAI RATE (IRR) (OA	FREE & CLEAR	8.50% 7.50% to to 11.50% 10.00%	11.00% to 8.75% 11.50%	9.00% 11.00% 9.50%	10.00% 8 00% to to to 12.00% 9.00%	9.50% 8.00% to to 11.00% 10.25%
RESIDUAL	SELLING TE EXPENSE	3.0% 3.0% to 4.0%	2 0%	3.0%	2.0% to 3.0%	% 0.5% to 1.5%
	OPBRATING CAP TE EXPENSES RATE	7.75% 3.0% to 9.50%	3 0% 9 75%	10.00% 3.0% to 10.50%	2.5% 9.00% to to 3.0% 10.00%	8.50% 3.0% to 10.00%
INTITAL-YEAR CHANGE RATES	AVERAGE DAILY RATE	3.0% to 4.0%	30%	3.0%	2 0% to 3 5%	3 0% to 4.0%
		REAL ESTATE ADVISER + Forecast Period: 10 years Uses both DCF and drect capitalization; in direct cap, capitalizes next 12 months of income; expects overall cap rates to hold steady over the next six months.	PRIVATE OWNER + Forecast Period: 5 years Focuses on direct capitalization, in direct cap, capitalizes prior 12 months of income; expects ADRs and occupancy to hold steady over the next six months, current breakeven occupancy rate is estimated at 55.0%; sees occupancy holding steady over the next six months.	PRIVATE HOTEL COMPANY + Forecast Period: 10 years Prefers Northeast, Southeast, and Southwest; uses both DCF and direct capitalization; in direct cap, capitalizes prior 12 months of income, expects occupancy to hold steady and ADRs to increase over the next six months; believes market conditions currently are neutral.	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 occupancy to increase 100 to 300 basis points over the next six months.	OWNER/OPERATOR + Forecast Period: 3 to 7 years Uses both DCF and direct capitalization: in direct cap, capitalizes pror La months of moome; believes overall cap rates will increase 10 to 25 basis points over the next sx months; believes market conditions equally favor buyers and sellers.

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MARKETING	HS		•				
	MONTHS	6 to 12	6 2 8		4 t t	. 659	တ္ေငးက
RESERVE FOR REPLACEMENT OF FIXED ASSETS	PERCENT OF TOTAL REVENUE	Did not disclose	4.0% to 5.0%	4.0% to 5.0%	4 0% to 6.0%	4 0% *	4,0%
BASE MANAGEMENT FEE	PERCENT OF TOTAL REVENUE	3.0% to 5.0%	3 0% to 5.0%	2.5% to 3.5%	2.5% to 3.0%	3.0% to 5.0%	44 54 54 54 54 54 54 54 54 54 54 54 54 5
IS FFRE DEDUCTED FROM NOI PRIOR TO CAPITALIZATION?	YES/NO	Yes	Yes	Yes	Yes`	Yes .	Yes
OVERALL CAP RATE	FREE &	4.00% to 6.50%	5.25% to 8.00%	45.00% to 8.00%		6.00% to 8.00%	7.00% to .9.00%
DISCOUNT RATE (IRR)	FREE & CLEAR	6.50% to \$\display\$	7.75%, to 10.00%	900% to 11.00%	8 00%' to' '; 10.00%'	10 00% to 12.00%	10.00% 12.00%
^	SELLING ** EXPENSE	0.5% to 2.5%	2.0% to 3.0%	1.0% to 2.0%	1.0% to 3.0%	2.0% to _ 4.0%	%o.:
RESIDUAL	CAP	5.50% to 8 00%	6 75% to '8.50%	7.00% to 8.00%	, 6.50% to 10.00%	6 00% to 7.00%	5 50% . to . 8.50%
R,	OPERATING EXPENSES	2.0% to . 4 0%.	30%	3.0%. to 5.0%	0.0% .to .	3.0%	2 0% to 4.0%
INÍTIAL-YEÁR. CHANGE RATES	AVERAGE DAILY RATE	0 0% to 5.0%	3.0% to	6.0% to 9.0%	0 0 % to . 3.0%	2.0% to 6.0%	2.0% to .*
First Quarter 2010		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.	LIFE INSURANCE COMPANY + Forecast Period: 10 years Uses both DCF and direct captualization; in direct cap, captualizes next 12 months of income; believes that market conditions currently favor sellers; e-pects overall cap rates to hold steady over the next six months.	PRIVATE INVESTOR + Forecast Period: 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes both prior 12 months of income and next 12 months income: expects occupancy to hold steady over the next six months, but sees ADR increasing.	PRIVATE INVESTOR + Forecast Period: 5 to 8 years Uses both DGP and direct capitalization; in direct cap, capitalizes both next 12 months of income and prior 12 months of income; believes overall cap rates will decrease up to 50 basis points over the next six months.	OWNER/OPERATOR + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes both next 12 months of morme and prior 12 months of income: market conditions currently favor sellers.	PRIVATE INVESTOR + Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; in direct cap, capitalizes both open: 12 months income and next 12 months of income, believes that overall cap rates will hold steady over the next six months and that market conditions currently favor sellers.

Source Personal survey conducted by PwC during January 2016

	NATIONAL SELECT-SERVICE LODGING SEGMENT-SELECT SURVEY RESPONSES First Quarter 2016	G SEGME!	NT-SELE	CT SURV	ÆY RES	PONSES					
1		INITIAL-YEAR CHANGE RATES	S	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 mcome; expects overall cap rates to increase 10 to 25 basis points over the next six months; believes that market conditions are currently neutral.	3 0% to 5.0%	2 0% to 3 0%	7.50% to 9.00%	0.3% to 3.0%	9.00% to 12.00%	6.50% to 9.00%	Yes	2.5% to 4.0%	2 0% to 4 0%	6 <del>6</del> 8 3
1	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 currently favor sellers	3.0%	2 0% to 3 0%	9 00% to 10.00%	10% to 20%	11.00%	8.50% to 9.50%	Yes	2.5% to 6.0%	7.0%	t t t t t t t t t t t t t t t t t t t
1	REIT ← Forecast Period: 1 to 5 years Uses both DGF and direct capitalization; in direct cap, capitalizes both prior 12 months of income, expects overall cap rates to hold steady over the next six months; believes that market conditions currently favor sellers.	%04	3 0%	8.00%	1.5% to 3.0%	10.00% to 11.00%	7.00%	Yes	3.0% to 4.0%	3.0% to 5.0%	8 0 0
	OWNER/MANAGER ← Forecast Period: 1 to 4 years Uses both DCF and direct captalization; 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 decrease 30 to 100 basis points over the next six months.	2.0% to 4.0%	2.0% to 4.0%	9.00% to 11.00%	5.0%	11.50%	8.00% to 10.75%	Yes	3.0% to 4.0%	3.0% to 5.0%	9 to 51 to 52 to 53 to 54 to 5
GVSUD	LIFE INSURANCE COMPANY + Forecast Period: 10 years loss both DCF and direct capitalization; in direct cap, capitalizes the next iz months of moome; expects overall cap rates to hold steady over the next six months; believes that market conditions favor sellers	2.0% to 4.0%	2.5% to 3.0%	8.00% to 10.00%	2 0% to 3.0%	9.00% to 12.00%	8 00% to 10 00%	Yes	2.5% to 3.5%	3 0% to 5.0%	450

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Source: Personal survey conducted by PwC during January 2016



FANCE         ANYERAGE         ANYERAGE <t< th=""><th></th><th>FORECAST VALUE CHANGE NEXT 12 MONTHS</th><th>E CHANGE</th><th>PRICE AS % OF REPLACEMENT COST</th><th>TX</th><th>STRUCTURAL .</th><th>YEARS TO REACH STRUCTURAL VACANCY</th><th>ZK.</th><th>TENANT IMPROVE NEW DEALS (1)</th><th>MENT ALLOW</th><th>TENANT IMPROVEMENT ALLOWANCE (PSF) NEW DEALS (1) RENEWAL LEASES</th><th></th></t<>		FORECAST VALUE CHANGE NEXT 12 MONTHS	E CHANGE	PRICE AS % OF REPLACEMENT COST	TX	STRUCTURAL .	YEARS TO REACH STRUCTURAL VACANCY	ZK.	TENANT IMPROVE NEW DEALS (1)	MENT ALLOW	TENANT IMPROVEMENT ALLOWANCE (PSF) NEW DEALS (1) RENEWAL LEASES	
Carrollono   Gardle	MARKET	RANGE.	AVERAGE	RANGE	AVERAGE		RANGE	VERAGE	RANGE	AVERAGE	RANGE	AVERAGE
1	National CBD	(5.0%) – 15.0%	4 7%	65.0% - 120.0%	98 1%	- 15.0%	- 4	2.2	\$20.00 - \$75.00	\$40.25	\$5.00 - \$35.00	\$17 00
6 cont. 100 de 3 y de good - 100 de 8 s de de de l'andre 8 de	National Suburban	(5.0%) – 10.0%	3.6%	70.0% - 115.0%	%0 06	0% - 15.0% 9.8%	, 0 – 5	6:	\$0.00 - \$80.00	\$30.89	\$0 00 - \$25 00	\$13 93
1	Atlanta	0.0% – 10.0%	3.7%	50.0% - 100 0%	82 8%	0% – 12.0%	- 4	9:	\$5 00 \$60.00	\$28,63	\$0.00 - \$20.00	\$10.40
cook*_sight         5.1%         7.00% - 1100%         91.3%         2.0%*_sight         1.8         \$10.00 - 590.00         \$50.00	Boston	(5.0%) – 10.0%.	3.6%	1	1	8% – 12 0%	0-5,,	F	,		\$5.00 - \$30.00	\$1833
1992   1992	Charlotte	0.0%,- 15.0%	5.1%	,70.0% - 110.0%	91.5%	-12 0%	8 1	871	\$10 00 - \$30 00	\$29.50	\$5 00 - \$10.00	\$13.00
C2006  -10006   4086   50006 -110006   50006 -110006   50006 -110006   50006	Chicago	0.0% - 5.0%	.2.3%	50.0% - 120.0%	81.1%		-5	2.5	\$7.50 - \$125.00	\$50.09	\$5.00 - \$40.00	\$19.52
C15.04)	Dallas	(2.0%) - 20.0%	3 6%	50.0% - 110.0%	89.6%	, 7 8%	- 10	3.0	\$5.00 = \$60.00	\$32.45	\$5,00 - \$25.00	\$12.88
	Denver	0.0% 10.0%	4 0%	50.0% - 150.0%	100.5%	1	- 4	9.1	\$12.00 - \$60.00	\$33.88	\$3.00 - \$20.00	\$10 69
Housiage   Cook	Houston	(25.0%) – 10.0%	(4.9%)	50.0% - 110.0%	91.3%	- 15.0%.	0 – 15	4.7	\$8 00 – \$55.00	\$29.29	\$0.00 - \$25.00	- \$11.50
number         (10.0%) - 12.0%         46%         60.0% - 12.0%         65%         0 - 4         1.4         \$10.00 - \$120.0         \$52.29         \$10.00 - \$350.0         \$24.77         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$350.0         \$24.75         \$10.00 - \$30.0         \$20.00	Los Angeles	0 0% - 10 0%	4.1%	. 80 0% – 125.0%	101.5%		. 4	11	\$10 00 - \$125 00	\$41.25	\$0 00 – \$50 00	\$17 00
Virginia         (10.0%) – 5.0%         0.2%         6.0% – 10.0%         7.3%         0.0 – 5         2.8         \$20.00 – \$100.00         \$49.75         \$10.00 – \$80.00         \$40.55         \$10.00 – \$100.00         \$40.55         \$10.00 – \$100.00         \$10.59         \$10.50         \$10.5	Manhattan	(2 5%) - 12 0%	4 6%	50.0% - 120.0%	88.0%	9	- 4	41	\$10.00 - \$120 00	\$52.29	\$10 00 - \$35.00	\$24 17
thia         (5 0%) - 10.0%         2.2%         50.0% - 120.0%         81.5%         50.0% - 12.0%         7.6%         0 - 5         1.4         \$10.00 - \$85.00         \$45.34         \$0.00 - \$55.00         \$10.50           thia         (5 0%) - 10.0%         1.6%         50.0% - 12.0%         \$1.2%         7.2%         1 - 4         1.7         \$5.00 - \$65.00         \$50.00 - \$50.00         \$50.00 <td>Northern Virginia</td> <td>(10.0%) - 5 0%</td> <td>0.2%</td> <td>80.0% - 105.0%</td> <td>94.9%</td> <td>£</td> <td>- 5</td> <td>2.8</td> <td>\$20.00 - \$100.00</td> <td>\$49 75</td> <td>00.08\$ - 00.01\$</td> <td>\$26.50</td>	Northern Virginia	(10.0%) - 5 0%	0.2%	80.0% - 105.0%	94.9%	£	- 5	2.8	\$20.00 - \$100.00	\$49 75	00.08\$ - 00.01\$	\$26.50
hia (50%) - 10.0% 1.6% 5.0% - 110.0% 81.5% 5.0% - 12.0% 1.2% 1.0% 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Pacific Northwest	(10.0%) – 10.0%	2.2%	50.0% - 120.0%	99.2%	- 15.0%**	- 5	1.4	\$10.00 - \$85.00	\$45.34	\$0.00 -, \$50 00	\$16.59
cisco         1.0.%         5.0.%         1.10.%         5.0.%         1.2.         1.2.         1.2.         Insufficient number of responses         1.0.         \$	Philadelphia	(5 0%) – 10.0%	1.6%	55.0% - 100.0%	8i 5%	24.44	- 4	1.7	\$5.00,- \$65 00	\$29,00	\$5.00,= \$20.00,	\$9.00
go         0.0% - 10.0%         3.8%         85.0% - 110.0%         98.3%         50% - 12.0%         7.3%         0 - 3         14         Insufficient number of responses         Insufficient number of responses         Insufficient number of responses         15.0% - 10.0%         15.0% - 10.0%         15.0% - 10.0%         15.0% - 15.0%         15.0% - 1	Phoenix	0.0% - 25 0%	7.4%	,50.0% – 110 0%	.86.9%	0% = 12 0% 7 6%	*.0-4	1.2 .	Insufficient number	of responses	Insufficient number	of responses
nersco (10 0%) - 20.0% 2.1% 85.0% - 130.0% 98.5% 3.0% - 10 0% 68% 0 - 3 1.0 \$10.00 - \$80.00 \$43.25 and a st Florida (25.0%) - 15.0% 1.4% 50.0% - 100.0% 79.4% 4.0% - 25.0% 1 1 - 5 2.1 \$0.00 - \$75.00 \$30.46 and a st Florida Insufficient number of responses Insufficient number of responses Insufficient number of responses 10 10.0% 10.0% 10.0% 10.0% 10.0% 20.0% 10.0%		0.0% - 10.0%	3.8%	85.0% 110.0%	98.3%	3 . 3 m	-3	1.4	Insufficient number	of responses	Insufficient number	of responses
an Maryland Insufficient number of responses Insufficient number of response Insufficient number	San Francisco	(10 0%) – 20.0%	2.1%	85.0% - 130.0%	98.5%		- 3	1.0	\$10 00 - \$80.00	\$43.25	\$0.00 \$25.00	\$13.50
1 (25.0%) - 15.0% 1.4% 50.0% - 100.0% 79.4% 4.0% - 25.0% 4 8.3% 1 - 5 2.1 \$0.00 - \$75.00 \$30.46 and Insufficient number of responses Insufficient number of responses Insufficient number of responses Insufficient number of responses (5.0%) - 10.0% 1.5% 90.0% - 115.0% 102.7% 2.0% - 8.0% - 10.0% 1.5% 1.2 \$25.00 - \$125	Seattle	0.0% - 10'0%	4.1%	50.0% – 120.0%	95.9%	%6.2.	° 0.5 – 5 *	1.9	\$10.00′_ \$85 00	\$47.29	\$0.00 - \$50 00	\$16.67
Insufficient number of responses Insufficient number of responses Insufficient number of responses Insufficient number of responses.  (5.0%) - 10.0% 1.5% 90.0% - 115.0% 102.7% 2.0% - 8.0% - 8.0% - 5.5% - 0 - 3 1.2 \$25.00 - \$125.00 : \$65.21	Southeast Florida	(25.0%) – 15.0%	1.4%	50.0% - 100.0%	79.4%	8.3%	1-5	2.1	\$0.00 – \$75.00	*\$30.46	\$5.00 – \$40.00	\$13.50
$(5.0\%) - 10.0\%$ $1.5\%$ $90.0\% - 115.0\%$ $102.7\%$ $2.0\% + 18.0\%$ $1.5\%$ $1.00 - 3$ $1.2$ $$25.00 - $125.00 \times $65.21 \times $10.00 - $115.00 \times $11$	Suburban Maryland	Insufficient numbe	ar of responses	Insufficient number o		Insufficient number of responses		esponses	Insufficient number	of responses	Insufficient number	of responses
	Washington, DC	(5.0%) – 10.0%	1.5%	90.0% - 115.0%	102.7%	2.0% - 8.0%	0-3	1.2	\$25.00 - \$125.00 =	\$65 21	\$10 00 - \$115.00	~ \$32.50

(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 January 2016

# INVESTMENT AND PROPERTY CHARACTERISTICS: NATIONAL AND REGIONAL MARKETS First Quarter 2016

	FORECAST VAL	UE CHANGE	FORECAST VALUE CHANGE PRICE AS % OF		CLASS-A+ and A MALLS			CLASS-B+ and B MALLS				STABILIZED	
	NEXT 12 MONTHS	HS	REPLACEMENT COST	OST	IRRs	OARs		IRRs		OARs		OCCUPANCY	
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Regional Mall	(10 0%) 8 0%	19%	75 0% — 150 0%	110 4%	5 0% 10 0% 6 69%	4 00% — 6.25%	4 89%	7 00% – 12 00%	9.08%	5 25% 9.00%	7.17%	85 0% 99 0%	93 4%
National Power Center	(5 0%) – 5.0%	12%	85.0% — 110.0%	98.3%						Andread Community of the Community of th		80 0% - %0 08	91.6%
National Strip Shopping Center	(5 0%) — 10.0%	2 1%	50.0% - 140.0%	%5 66						Aleksenskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerinskerins	Abbieration of the Control of the Co	85 0% - 97.0%	92 6%
				The same of the sa			70 Automotive	nonzero verze manadani manadani urandani	April 74 Novembra 18 April 18	The second secon	eveniment makenen – a andre	Radinary Consistent states of the states of	TO A NATIONAL OF COUNTY BAS ABSOLU
	FORECAST VALUE NEXT 12 MONTHS	UE CHANGE	FORECAST VALUE CHANGE PRICE AS % OF NEXT 12 MONTHS REPLACEMENT COST	OST	FINISHED SPACE %			TENANT IMPROVEMENT ALLOWANCES (PSF) NEW DEALS (1)	EMENT ALL	WANCES (PSF)		RENEWAL LEASES	ES
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE		RANGE	,	AVERAGE		RANGE	AVERAGE
National Flex/R&D	(10 0%) - 5 0%	0.5%	70.0% — 110.0%	95.0%	5 0% – 75 0%	32 5%		\$0.00 - \$25.00	-	\$8.33		\$0.00 - \$12.00	\$4.08
Warehouse (National)	(20%) – 60%	27%	85.0% — 130.0%	104 1%	0.0% 20.0%	8.7%		\$0.00 - \$75.00		\$5.89		\$0.00 - \$2.50	\$0.74
Warehouse (ENC Region)	0 0% 10 0%	40%	80.0% — 120.0%	%6.96	0.0% – 30.0%	9.3%		\$0.00 - \$10.00	53	\$2.43		\$0.00 - \$2.50	\$0.80
Warehouse (Pacific Region)	0.0% — 10.0%	2 8%	80.0% — 110.0%	%9.66	0.0% – 15 0%	6.7%		\$0.00 - \$5 00		\$1.25		\$0.00 - \$2.50	\$0.78
Apartment (National)	(5.0%) 15.0%	3 1%	90.0% - 130.0%	103.8%					er sakerrollander sekule in, sakule	of the state of th	man , , , organ , , dam, o , agazzana, o	derman, or wearest descent, spanners, statement, state	Control of
Apartment (Mid-Atlantic Region)	0 0% — 5.0%	2 5%	70.0% – 130.0%	102.5%				Circle seekalves, gelavoudost visiterentes endadoses de un se	versió sad máltanyas pupas parqueta	en kantokala in vallakkin myldinsk maramonin voot kan oo		Conditions Enterprispontational production of the State o	
Apartment (Pacific Region)	0 0% – 15.0%	4.6%	80 0% - 135.0%	106.0%			offit, Ant amiliarity of the management to the angle of t	ven, act stational depotements apply page, specially depotent	Agentum or see that the control of t	Bellings grant as the adolphic design of the second size districted	-	die fastigele für state und eine state sie	to decrease the second
Apartment (Southeast Region)	00%-50%	2.1%	80.0% - 125.0%	103.8%		sineken viljarijaniki idatali musekuni madalarinina delanda		delicate, unique seguinamental management dels emments	roundance and Architectures	ekoplinaani ilimaaks edibra takanissa e jellisa	agadonia e englespenjumbir englespe	ender der vertigen der bei der vertigen der	
National Net Lease	0 0% - 15.0%	4 7%	100 0% — 150.0%	111.9%								man a 140- ingalismuskispisjispiinoodijojas e aaditalis	
National Medical Office Buildings	(5.0%) – 10.0%	13%	100 0% — 150 0%	111.3%					three rate transport of the same	es a commence de la c	A CONTRACTOR OF THE CONTRACTOR	deline mane tak manendendendenden in vide de devad	

(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 January 2016

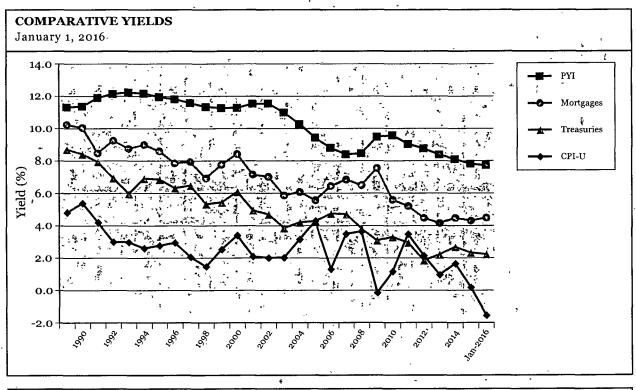


#### YIELD COMPARISONS

January 1, 2016

•								
^	2011 . AVERAGE	2012 AVERAGE	2013 AVERAGE	2014 AVERAGE	2015 AVERÁGE	2015 OCTOBER	2016 JANUARY	•
PwC Yield Indicator (PYI) <sup>a</sup>	9.05%	8.77%	8.39%	8.11%	7.82%	7.75%	7.73%	i '
Long-Term Mortgages <sup>b</sup>	5.21%	4.48%	4.16%	4.48%	. 4.31%	4.31%	4.49%	
10-Year Treasuries <sup>c</sup>	2.96%	1.86%	2.22%	2.69%	2.34%	2.05%	2.24%	
Consumer Price Index Changed	3.49%	2.16%	o.97%	1.66%	0.19%	(1.37%)	(1.55%)	.,
SPREAD TO PYI (Basis Points)		r						g.5
Long-Term Mortgages .	384	429	423	363	351	344	324	); 41 ,
10-Year Treasuries	6 <u>0</u> 9	691	617	542 5	548	570	549	
Consumer Price Index Change	556	661	742	645	763	912	928	

- 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



	AVERAGE	2012 AVERAGE	2013 AVERAGE	2014 AVERAGE	2015 AVERAGE	2015 OCTOBER	2016 JANUARY	•
PwC Dividend Indicator (PDI)a	7.60%	7.27%	6.92%	6.66%	6.38%	6.31%	6.31%	
Equity REITsb	3.65%	3.59%	3.68%	3.80%	3.64%	3.82%	<sup>"</sup> 4.07% .	,
S&P 500°	1.91%	2.04%	2.09%	1.92%	2.03%	2.21%	2.12%	
SPREAD TO PDI (Basis Points)	x					-		
Equity REITs	395	368	324	286	274	249	224	
S&P 500	569	523	<b>'</b> 483	474	435	410	419	

- a A composite OAK (initial rate of return in an all-cash transaction) average of all markets surveyed excluding notes, development and, and student notsing)
   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

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MARKET Notes and Other Office								
Notice of CBD Office	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National CDD Office	5.50% - 10 00%	%88.9	3 50% - 7.50%	5.58%	(a)	(a)	(a)	(a)
National Suburban Office	5 75% 10.00%	7.52%	4.50% - 9 50%	638%	(a)	(a)	(a)	(a)
Atlanta Office	6 00% 10.00%	834%	5.25% — 9.25%	7 33%	(a)	(a)	(a)	(a)
Boston Office	6 00% — 10 00%	7.76%	4.00% - 8.00%	6 15%	50 – 500	213	50 - 250	169
Charlotte Office	6 50% — 11.00%	8.53%	5.50% - 9.00%	7.14%	150 – 400	258	75-250	146
Chicago Office	6 00% – 12.00%	8 58%	5.00% 10 00%	7.34%	100 – 600	320	50 – 400	178
Dallas Office	6 00% – 11 00%	8 18%	5.00% - 9.00%	7.00%	(a)	(a)	(a)	(a)
Denver Office	6 75% – 11 00%	7 88%	5.00% - 9.00%	6 49%	(2)	essential entraction and the contraction of the contraction and a contraction of the contrac	(a)	(a)
Houston Office	6 50% 12.00%	8.68%	5.50% - 10.00%	7 13%	75 – 1,000	329	50 – 200	104
Los Angeles Office	5.00% – 9.00%	%06.9	4 50% – 7.25%	5 69%	(a)	(a)	(a)	(a)
Manhattan Office	5.50% - 9.00%	6 85%	3.75% - 8.00%	5 15%	50 – 150	96	50 – 200	113
Northern Virginia Office	6 00% — 9.50%	7.75%	5.00% - 8 50%	88%	(a)	(a)	(a)	(a)
Pacific Northwest Office	5.50% – 11.00%	7.50%	4.00% - 9.00%	6 11%	75 – 500	225	50 — 300	121
Philadelphia Office	7.00% — 10 00%	8 55%	%00.6 – %00 9	7 53%	50 – 200	108	50 – 150	- 62
Phoenix Office	7.00% — 12.00%	8.48%	5 00% - 8.50%	6.84%	(a)	(a)	(8)	(8)
San Diego Office	6 25% — 10 50%	7.83%	5.25% — 8.50%	6 81%	(a)	(a)	(a)	(a)
San Francisco Office	5.75% – 10 00%	6.89%	3.50% - 9 00%	5 70%		THE CONTRACTOR AND ADMINISTRAÇÃO AND AND ADMINISTRAÇÃO AND AND AND ADMINISTRAÇÃO AND	(a)	(a)
Seattle Office	5 50% – 11 00%	7.47%	4.00% – 9.00%	6.10%	(a)	(a)	(a)	(a)
Southeast Florida Office	6 00% – 11 50%	8 33%	4.50% – 10.00%	7.18%	(a)	(a)	(a)	(8)
Suburban Maryland Office	7 25% – 10 00%	8 88%	5.50% - 9.00%	7 28%	(a)	(a)	(a)	(a)
Washington, DC Office	5 50% - 8 00%	681%	4 25% — 6.50%	5 40%	75 – 200	113	50 – 200	125



Marie Control of the	INSTITUTIONAL	1			NONINSTITUTION.	NONINSTITUTIONAL (BASIS-POINT SPREAD TO INSTITUTIONAL RATES)	AD TO INSTITUTIONAL	RATES)
	IRRs	( <sub>3-7</sub>	OARS	The state of the s	"IRRs	•	OARs ,	
MARKET	RANGE	AVERAGE	RANGE.	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Regional Mall	5.00% – 12.00%	763%	4.00% - 9.00%	6. 5. 4. 6.00% Fr. 4. 5. 6.	(a)	(a)	(a)	(a)
National Power Center	6.00% — 10.00%	7.75%	500%-8.00%	6 33%	50 – 300	131	50 – 150	, 84
National Strip Shopping Center	6.00% - 10.75%	7 66%	4.75% - 9.50%	641%	50 – 800	200	25 – 500	134
National Flex/R&D	7.00% – 11.00%	8.33%	5.75% - 9.00%	7.15%	;(a)	(a)	(a)	(a)
Warehouse (National)	5.50% - 9.25%	694%	300% 700%	552%	50 – 400	225	50 – 250	138
Warehouse (ENC Region)	5.75% 7.50%	6.73%	4.50% - 6.25%	5.48%	4100 – 500	233	75 – 400	167
Warehouse (Pacific Region)	250% — 900%	6 80%	375% - 700%	5.28%	(a)	(a)	(a)	(a)
National Apartment	5.00% - 10.00%	7.28%	3.50% - 8.00%	6 4 535%	25 – 400	169	25 – 400	147
Apartment (Mid-Atlantic Region)	5 50% — 10.00%	. 775%	4.00% - 750%	2, 2, 46%	,25 – 400	204	25 – 400	171
Apartment (Pacific Region)	5.50% - 9.00 <b>%</b>	6.83%	350% - 600%	.450%	, (a)	(a)	, (a)	(a)
Apartment (Southeast Region)	6.00% - 10.00%.	7.58%	3.75% - 7.00%	530%	; ;(a)	(a)	(a)	(a)
National Medical Office Buildings	5.50% - 11.00%	* 7.96%	4.75% - 10 00%	. 4	. 100 – 400	217	50 – 300	142
National Secondary Office	5 75% - 12 50%	8.78%	4.50% - 10.00%	2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	(50 – 400	. 88	50 - 250	124

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

#### INCOME CAPITALIZED IN DIRECT CAPITALIZATION

First Quarter 2016

·		T BURYET KEST	PONDENTS USING:			
MARKET	METHOD 1 (a) CURRENT	YEAR AGO	METHOD 2 (a) CURRENT	YEAR AGO	METHOD 3 (a) CURRENT	YEAR AGO
National Retail						
Regional Mall	40.0%	33 0%	60.0%	67.0%	0.0%	0 0%
Power Center	33.0%	33.0%	67.0%	67.0%	0.0%	0 0%
Strip Shopping Center	13 0%	13.0%	88.0%	88.0%	0.0%	0.0%
Office						···-
National CBD	17.0%	14 0%	83.0%	86.0%	0.0%	0.0%
National Suburban	25.0%	25.0%	63.0%	63.0%	13.0%	13.0%
National Secondary	10.0%	10.0%	90.0%	90.0%	0.0%	0.0%
Atlanta	0.0%	0.0%	80.0%	83 0%	20.0%	17.0%
Boston	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Charlotte	0.0%	0 0%	100.0%	100 0%	0.0%	17 0%
Chicago	29.0%	29.0%	71.0%	71.0%	0.0%	0.0%
Dallas	13.0%	17.0%	88.0%	83.0%	0.0%	0.0%
Denver	40.0%	20.0%	60.0%	80.0%	0.0%	0.0%
Houston	29.0%	17.0%	57.0%	67.0%	14.0%	17.0%
Los Angeles	20.0%	20.0%	80.0%	80.0%	0.0%	0.0%
Manhattan	17.0%	14.0%	83.0%	86.0%	0.0%	0.0%
Northern Virginia	40.0%	40.0%	60.0%	60.0%	0.0%	0.0%
Pacific Northwest	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%
Philadelphia	20.0%	20.0%	80.0%	80.0%	0.0%	0 0%
Phoenix	40.0%	33.0%	60.0%	67.0%	0 0%	0.0%
San Diego	60.0%	40.0%	40.0%	60.0%	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	33.0%	20.0%	50.0%	60.0%	17.0%	20.0%
Suburban Maryland	40.0%	20.0%	60.0%	80.0%	0.0%	0.0%
Washington, DC	33.0%	20.0%	67.0%	80.0%	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%	17.0%	80.0%	83.0%	0.0%	0.0%
Pacific Region Warehouse	40.0%	33.0%	60.0%	67.0%	0.0%	0.0%
Apartments <sup>b</sup>			AV.	· · · · · · · · · · · · · · · · · · ·		
National	90.0%	70.0%	10.0%	30.0%		
Mid-Atlantic Region	100.0%	100.0%	0.0%	0.0%		
Pacific Region	80.0%	83.0%	20.0%	17.0%		
Southeast Region	80.0%	80.0%	20.0%	20.0%		
National Net Lease	40.0%	20.0%	20.0%	40.0%	40.0%	40.0%
National Medical Office Buildings						

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

#### LODGING INCOME CAPITALIZED IN DIRECT CAPITALIZATION First Quarter 2016

	PRIOR 12 MO	NTHS <sup>a</sup>	FORECAST 12	MONTHSb	BOTH <sup>c</sup>	
SEGMENT	CURRENT	YEAR AGO	CURRENT	YEAR AGO	CURRENT	YEAR AGO
Full Service	0.0%	17.0%	40.0%	33.0%	60.0%	50.0%
Limited-Service Midscale & Economy	60.0%	60.0%	40.0%	40.0%	0 0%	0.0%
Luxury/Upper Upscale	0.0%	17.0%	33.0%	29.0%	67.0%	43 0%
Select Service	40.0%	40.0%	20.0%	20.0%	40.0%	40 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: NOI after deducting capital replacement reserve Method 2: NOI before deducting capital replacement reserve.

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 PERIOD	RIOD	MARKET RENT CHANGE RATES INITIAL YEAR	ANGE RATES	FORECAST PERIOD AVERAGE	D AVERAGE	EXPENSE CHANGE RATES INITIAL YEAR	E RATES	FORECAST PERIOD AVERAGE	D AVERAGE	1
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANĠĖ	AVERAGE	RANGE	AVERAGE	
National CBD Office	5 – 15	01	0.00% – 7.00%	2.92%	0.00% 5.00%	3.07%	2.00% - 4.00%	2.75%	2 00% - 4.00%	2.75%	
National Suburban Office	5 – 12	6	0.00% - 5.00%	2.75%	100% - 4.00%	2.68%	2.00% 4.00%	2.91%	2.00% - 4.00%	2.93%	
Atlanta Office	3.– 10	8	.0 00% — 7.00%	3.60%	0.00% - 5.00%	2.88%	0.00% - 3.50%	2.28%	150% - 350%	2 73%	
Boston Office `*	3 – 12 3	6	0 00% – 7.00%	3.83%	2.00% - 4.50%	3.19%	2.50% - 4.00%	3 04%	2 50% - 4 50%	3.08%	
Charlotte Office	3 – 10	9	0.00% – 6.00%	3.30%	2.00% - 5.00%	3.35%	180% – 3.00%	2.59%	1.75% – 3 00%	2.63%	,
Chicago Office	3 = 10	80	.0.00% – 4.50%	2.00%	2.00% 4.00%	3.13%	ž 00% <del>+</del> 5.00%	3.14%	. 2.00% – 5.00%	3.37%	
Dallas Office,	3 - 10	7	0009-%000	3.41%	2.00% - 6.00%	3.61%	2 00% - 3.00%	2.91%	2.50% - 6.00%	3.34%	
Denver Office	1 – 11	, 8	2.00% - 4.00%	3 20%	2.00% - 4.00%	3.00%	2,00% - 3.00%	2.80%	2.00% - 3.00%	2.75%	
Houston Office	3 – 10	9	.(8.00%) – 5.00%	(0.43%)	(3.00%) – 10.00%	2.51%	2.00% – 3.00%	2.79%	2 50% - 9.00%	.3.61%	·
Los Angeles Office	3 – 15	6	* 0.00% – 7.00%	3 90%	, 2.00% – 6.00%	3.70%	2.00% – 3.00%	2 80%	2.00% - 3.00%	2.80%	
Manhattan Office	3 – 12	10	,0.00% – 7.00%	3 92%	. 0.00% – 5.00%	3.58%	1 00% – 3.00%	2.75%	100% - 500%	2.92%	
Northern Virginia Office	3 – 10	., ., .,	%00% – %000°	1.30%	1.00% – 3 00%	2,14%	. 100% - 3.00%	2.40%	1.00% — 3.00%	2.45%	
Pacific Northwest Office	3 – 10	8	, 2.50% — 10.00%	3.86%	3.00% - 5.00%	3.40%	2 00% – 3.00%	2.91%	, 2.00% - 3 00%	2.91%	
Philadelphia Office	4 - 10	7.,	%00% – %00°0	1.85%	2.00% – 3.50%	2.80%	0.00% – 3.00%	2.30%	0.00% – 3.00%	2.38%	
Phoenix Office	2 – 12	7	.2.00% - 7.00%	4.00%	2.00% – 8.00%	3.88%	1.00% - 3.00%	2,70%	1 00% – 3.00%	2.70%	
San Diego Óffice	1 – 10	6	-, 2.00% 6.00%	3.80%	2.00% — 5.00%	3.31%	2.00% - 3.00%	2.80%	2 00% - 3 00%	2.75%	
San Francisco Óffice	5 – 10	6	2.00% - 6.00%	4 10%	1.00% - 5.00%	3.36%	0.00% – 3.00%	2.60%	2.00% - 3.00%	´2.90%	2 '
Seattle Office	5 - 10	ė	2.50% - 5.00%	3 75%	3 00% - 5.00%	3.46%	2 00% – 3 00%	2.88%	2 00% – 3.00%	2 88%	·
Southeast Florida Office	3 – 10	٠œ	0.00% — 6.00%	2 50%	0.00% – 5.00%	2 88%	1.00% - 3.00%	. 2.75%	1 00% - 3.00%	2 79%	
Suburban Maryland Office	1′-10	,	(2.00%) — 1.00%	(0.10%)	(1.00%) – 4.00%	198%	100% - 3.00%	2 00%	1.00% – 3.00%	2 30%	
Washington, DC Office	5 - 10	, ,6	0.00% – 4.00%	1.42% *	150% - 5.00%	3.13%	2 00% – 3.00%	2.75%	, 200% – 3.00%	.2.79%	
Source Personal survey conducted by PwC during January 2016.	ng January 2016.	τ,	4	·		!	,			ELL	出

D REGIONAL MARKETS	
ORECAST PERIODS AND CHANGE RATES: NATIONAL AND REGIONAL MARKETS	Prest Quarter 2016

	FORECAST PERIOD	QO	MARKET RENT CHANGE RATES INITIAL YEAR	ANGE RATES	FORECAST PERIOD AVERAGE	AVERAGE	EXPENSE CHANGE RATES	RATES	HORECAST PERIOD AVERAGE	AVEDACE
MARKET	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
National Regional Mall	1 – 10	7	0.00% - 5.00%	2 73%	1 00% — 5 00%	2 95%	2 00% – 5 00%	3 00%	2 00% 5 00%	3 10%
National Power Center	1 – 15	8	0.00% — 5.00%	2.00%	0.00% - 5.00%	2.60%	2.00% — 3.00%	2.83%	2.00% — 4.00%	2.90%
National Strp Shopping Center	1 – 10	8	0.00% – 3.00%	1.94%	0.00% - 6.00%	2.86%	0.00% - 3.00%	2 72%	100% 400%	2.89%
National Flex/R&D	2 – 10	7	0.00% - 5.00%	2.20%	0.00% - 5.00%	2 75%	000% - 300%	2.70%	%00% — %00 0	2.70%
Warehouse (National)	3 – 15	6	0.00% – 7.00%	3.05%	2 00% – 6 00%	3.22%	3.00% – 3.00%	3.00%	0 00% — 3.00%	2 45%
Warehouse (East North Central Region)	3 – 10	8	0.00% – 5.00%	2.90%	2.00% – 6.00%	3.25%	2.00% - 4 00%	3.00%	0 00% - 4 00%	2.40%
Warehouse (Pacific Region)	5 – 10	6	0.00% – 5.00%	2.40%	2 00% 4.00%	3.02%	2 00% – 3 00%	2 80%	0 00% - 3.00%	2 20%
Apartment (National)	1 – 10	7	0.00% – 6.00%	3 18%	0.00% – 5.00%	3.01%	2 00% - 4 00%	2 91%	2 00% - 4 50%	3.05%
Apartment (Mid-Atlantic Region)	3 – 10	7	0.00% – 4.00%	2.83%	1.00% – 4 50%	3.13%	1.00% – 3 00%	2 75%	1.00% - 3 00%	2.83%
Apartment (Pacific Region)	3 – 10	7	2.00% – 6.00%	4.20%	2.00% — 5.00%	3.60%	2.00% – 3.00%	2.83%	2.50% — 3.00%	2.85%
Apartment (Southeast Region)	1 – 10	5	1.00% – 4.00%	3.05%	1.00% – 4.00%	2.90%	2.00% – 3.00%	2 80%	2.00% – 3.00%	2.90%
National Net Lease	1 – 20	7	0.00% — 3.00%	1.80%	100% - 5.00%	2.63%	0.00% – 3 00%	170%	1.00% — 6.00%	2 25%
National Medical Office Buildings	1 – 11	7	0.00% 4 00%	2.31%	0.00% 4.00%	2.38%	1.00% – 4.00%	2 3 4 %	2 00% — 5.00%	2.53%
National Secondary Office	1 – 15	7	0.00% — 10.00%	3.65%	2.00% - 10.00%	3 85%	1.50% - 3 00%	2 45%	150% — 3.00%	2 46%





# **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 IMPROVE-MENT ALLOWANCE<sup>3</sup>

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:

- NOI after capital replacement reserve deduction but before TIs and leasing commissions
- 2. NOI before capital replacement reserve

- deduction, TIs, and leasing commissions
- 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 PERIOD1

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

#### **OUARTILE**

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<sup>1</sup>

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 SPACE3

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 VACANCY3

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 re-

#### GARDEN APARTMENT<sup>1</sup>

Development consisting of two- or threestory, walk-up structures built in a gardenlike setting; customarily a suburban or rural-urban fringe development.

#### **HIGH-RISE APARTMENT5**

Multifamily housing development consisting of at least four stories.

Various sources for these definitions include 'The Dictionary of Real Estate Appraisal, Fifth Edition, published by the Appraisal Institute, <sup>2</sup>International Council of Shopping Centers, <sup>3</sup>investor interviews and PwC, <sup>4</sup>Smith Travel Research, and <sup>5</sup>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<sup>1,3</sup>

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&D3

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.

#### WAREHOUSE3

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<sup>3,4</sup>

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 SERVICE3,4

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 UPSCALE3,4

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

#### OCCUPANCY4

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 SERVICE3,4**

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<sup>3</sup>

#### **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<sup>2</sup>

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<sup>2</sup>**

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 CENTER2,3

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<sup>2,3</sup>

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<sup>3</sup>

Class	Inline Retail Sales <sup>3</sup> (Per Sq. Ft.)
A+	\$650 and up
Α	\$500 to \$649
B+	\$400 to \$499
В	\$300 to \$399
C+/C	Less than \$300

#### STRIP SHOPPING CENTER<sup>2,3</sup>

An open row of stores either with or without anchor stores that offer convenience (neighborhood centers) and general merchandise (community centers).

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

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#### **REAL ESTATE INVESTOR SURVEY**

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**Survey Process:** Survey participants represent a cross section of major institutional equity real estate investors who invest primarily in institutional-grade property. As such, the information presented is not generally applicable to noninstitutional-grade investments. In addition, the information represents investors' investment expectations and does not reflect actual property performances.

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.

Торіс	Quarter Covered
Buyers vs. Sellers	Third
Concessions	First
Face/Effective Rents	Third
Leasing Commissions	First
Leveraged IRRs	Third
Management Fees	First
Rent Spikes	Third
Replacement Reserves	First
Tenant Improvements	Fourth
Vacancy Assumptions	Fourth

Торіс	QUARTER DEBUTED
Domestic Self-Storage Market	Second 2005
e-Commerce and Retail Real Estate	Second 1999
Effective Rent	Third 1993
Gaming Industry	Third 2009
Green Building Macro Trends	Third 2006
Institutional-Grade Real Estate	Second 1994
Investment Sales	Second 2009
Medical Office Space	Fourth 2007
Net Lease Market	First 2000
October 11, 2001*	2001
Power Centers	Third 1995
Real Estate Value Cycles	First 2000
Regional Mall Market	Second 1996
REITs	Second 1998
Retail: The 100-Million-Square-Foot Hangover	First 2009
Retail: The Perfect Storm, or More Hot Air?	Second 2009
Self Storage Industry	First 2003
Senior Housing Industry	First 2009
Terrorism Insurance	Second 2002
U.S. Single-Family Rental Housing	Fourth 2012

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Second Quarter 2016





#### Dear Reader:

I believe commercial real estate investors are an optimistic group. With so many variables to analyze and forecast with regard to investments, I think most of them tend to look at the glass half full when presented with less-than-rosy data — economic growth is slowing, but it's still positive; leasing trends are down, but additions to supply are muted; sales volumes have declined year over year, but are up from the prior quarter — you see my point. I also tend to believe that these "but" statements are mostly made at inflection points of the cycle (on the way up and on the way down) rather than at other times, which could be why I heard many of them this quarter.

Our lead story, "Stabilizing Values May Signal End of Expansion," highlights how investors remain positive with regard to near-term fundamentals and values, *but* they also sense that a shift is coming – one that will likely turn fundamentals and pricing in favor of tenants and buyers as the current expansion comes to an end. *But*, we will have to wait and see how the cycle unfolds.

This quarter the Survey also includes commentary and data for two niche markets that we include semiannually. The first is our *National Development Land Market*, which can be found on page 53, and the second is our *National Student Housing Market*. Investors see opportunities in both of these sectors over the near term, especially in student housing, where sales activity has surged over the past year.

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 M. Smith Editor-in-Chief

Ensan Smith

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# PwC Real Estate Investor Survey

# **National Highlights**

# STABILIZING VALUES MAY SIGNAL END OF EXPANSION

One certainty that investors express this quarter is that the commercial real estate (CRE) industry is closer to the end of the current expansion phase of the cycle than at the beginning of it. From there, opinions vary with regard to how much longer the current expansion will continue, which property types and geographies will be better isolated from an impending downturn, and what factors will markedly impact property values and pricing going forward. For the most part, our investors remain upbeat about CRE fundamentals and expect them to stay positive through 2016 into 2017, especially with new supply growth so limited in many sectors and individual cities. In addition, both domestic and international investors remain aggressive in their pursuit of quality CRE assets. Although these trends suggest it may be "too soon to declare the end of this expansion," some buyers are noticing for-sale inventory lingering on the market a bit longer, which typically suggests that downward price adjustments are to come.

While there have been recent reports from a few sources stating that CRE sales either "are dropping" or "declined in the first quarter," our investors caution that many of these reports tend to relate to volume and not unit pricing for assets, which they feel are mostly holding firm and even elevated somewhat for the best assets up for sale. As a whole, investor sentiment remains positive from both buyers and sellers amid what many describe as "a stabilizing pricing environment." At the same time, however, our investors are closely monitoring interest rate trends and the cost and availability of debt, which some feel are the two catalysts that will influence future CRE values the most. "Higher interest rates open up more investment options for investors, who may remove funds from CRE, lessening the industry's appeal and weakening prices," comments a participant.

In the office sector, some investors are sensing a "leveling off" of CBD values as fewer tenants vie for available space and the ability to aggressively push up rental rates has diminished. Unlike this time last year, one investor feels that "there is more uncertainty associated with CBD office building acquisitions in the near term," which is being reflected in their use of lower market rent growth rate assumptions. In the suburban office sector, one investor senses that healthy fundamentals should continue to push up property values over the next 12 months, but at a slower pace. This quarter, our investors forecast property values in the national suburban office market to increase an average of 3.6%. Two years ago, the forecast was 4.4%.

Overall, most individual office markets are expected to stay in the expansion phase of the real estate cycle through year-end 2018, according to our PwC real estate barometer. Nevertheless, investors are watching job growth, supply pipelines, and leasing trends, which some feel could have more of an impact on property values than interest rate changes. "A drop off in employment growth and leasing demand can have a significant and lasting effect," says a participant. "All investors need to adjust to changes in interest rates, but when your market hurts from a lack of job growth and tenant demand, it can be isolating," adds another.

Until clear signs emerge that the current expansion has run its course, CRE sales activity may continue to decline or be stagnant compared to prior years as more buyers, sensing the industry is entering a period of downward price adjustments, pause and wait for both fundamentals and pricing parameters to lean in their favor. •

# **Overall Cap Rate Analysis**

In the second quarter of 2016, the average overall capitalization (cap) rate decreases in 17 Survey markets, holds steady in ten, and increases in 7. The quarterly shifts remain very diverse like they have been in the past few quarters with a higher number of markets now reporting declines and a

smaller number posting increases in their average cap rates. In addition, the magnitude of the shifts has widened this quarter, ranging from -29 to +6 basis points (see Exhibit 1). These trends are very similar to what was reported a year ago.

This quarter's average overall cap

rate shifts suggest varied viewpoints by investors across the industry. In the office sector, for example, some investors are showing optimism for Seattle, the Pacific Northwest, Charlotte, and Dallas, but appear more cautious with regard to the Washingtôn, DC metro office markets. Cap rate shifts for the

Exhibit 1	\$
OVERALL CAPITALIZATION RAT	ES
Second Quarter 2016	

Second Quarter 2016		
National Markets	Average	Quarterly Change*
Apartment	5.29%	- 6
Warehouse	5.38%	- 14
CBD Office	5.55%	-,3
Regional Mall	6.00%	ó
Strip Shopping Center	6.26%	- 15
Power Center	6.35%	2
Suburban Office	6.43%	5
Net Lease	6.75%	0
MOB**	6.81%	- 2
Flex/R&D	7.15%	0
Regional Warehouse		
Pacific Region	5.20%	- 8
ENC*** Region	5.48%	0
Apartment Markets		
Pacific Region	4.52%	2
Southeast Region	5.15%	- 15
Mid-Atlantic Region	5.23%	- 23
Office Markets		
Manhattan	5.15%	0
Washington, DC	5.40%	0
San Francisco	5.71%	1
Los Angeles	5.75%	6
Seattle	5.81%	- 29
Pacific Northwest	5.99%	- 12
Boston	6.19%	4
Denver	6.45%	-4
San Diego	6.81%	<b>*</b> 0
Phoenix	6.84%	0
Dallas	6.84%	- 16
Northern Virginia	6.88%	0
Charlotte *	6.99%	- 15
Houston	7.05%	. – 8
Atlanta	7.10%	- 23
Southeast Florida	7.13%	<b>-</b> 5
Suburban Maryland	7.28%	0
Chicago	7.36%	2
Philadelphia	7.50%	- 3
* Basis points; ** Medical o	office building	gs,

Source. PwC Real Estate Investor Survey

Second Quarter 20		012/ 140/	EVEROTATIONS		
MADVET	OVERALL CAP RATE	SIX-MONTH INCREASE	SIX-MONTH EXPECTATIONS INCREASE DECREASE		
MARKET	2Q 2016	, INCREASE	DECKEASE	HOLD STEAD	
National	600%	÷0%	0%	100%	
Regional Mall	0.0070				
Power Center	6 35%	0%	17%	83%	
Strip Shopping Center		33%	0%	67%	
CBD Office	5.55%	14%	14%	71%	
Suburban Office		0% ہے۔	0%	100% *	
Net Lease	6.75%	20%	20%	60%	
Medical Office Buildings	6.81%	13%	13%	75%	
Industrial	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· ·			
National Flex/R&D	7.15%	0%	20%	80%	
National Warehouse	5.38%	0%	18%	82%	
ENC Region Warehouse	5.48%	0%	20%	80%	
Pacific Region Warehouse	5.20%	0%	0%	100%	
Apartment	34				
National	5 29%	.· 20%	0%	80%	
Mid-Atlantic Region	5.23%	`0%	0%	100%	
Pacific Region	4.52%	0%	0%	100%	
ŭ		, 0% 20%	0%	80%	
Southeast Region	5.15%	20%	076	00%	
Office	2014 T B	•			
Atlanta	7.10%	10%	0%_	100%	
Boston	6.19%	17%	17%	67%	
Charlotte	6.99%	20%	20%	60%	
Chicago	7.36% <sup>.</sup>	14%	о%	86%	
Dallas	6.84%	13%	25%	63%	
Denver	6.45%	17%	0%	83%	
Houston	7.05%	57%	0%	43%	
Los Angeles	5.75%	0%	0%	100%	
Manhattan	5.15%	ο%	0%	100%	
Northern Virginia	6.88%	0%	20%	80%	
Pacific Northwest	5.99%	18%	9%	73%	
Phıladelphia	.7.50%	20%	20%	60%	
Phoenix	<sup>1</sup> 6.84%	0%	0%	100%	
San Diego	6.81%	ο%	0%	100%	
San Francisco	5.71%	40%	0%	60%	
Seattle	5.81%	17%	17%	67%	
Southeast Florida	7.13%	0%	17%	83%	
Suburban Maryland	7.28%	ο%	0%	100%	
Washington, DC	5.40%	0%	o% <sup>*</sup>	100%	

Survey's warehouse markets reveal a positive outlook despite growing levels of new supply. The same sentiment is shown for the Survey's apartment markets, where average cap rates decline in three of the four Survey markets.

#### **LOOKING FORWARD**

Even though surveyed investors hold a positive outlook for the commercial real estate industry for the near term, they are mindful of the potential for interest rate increases, market corrections, and the need for caution.

While overall cap rates are expect-

ed to hold steady in most Survey markets over the next six months, a greater portion of investors foresee cap rates rising over that time period (10.0% of them) compared to last quarter (3.0% of them).

#### KEY INDICATOR BREAKOUT

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 most 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 achieve higher rental rates.

In addition, downtown cores tend to provide better forms of mass transportation and embody 18- or 24-hour, live-work lifestyles that appeals 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. ◆

Exhibit 3
BREAKOUT OF KEY INDICATORS
Second Ouarter 2016

CBD OF:	DISCOUNT RATE RANGE	AVERAGE	OVERALL CAPITAL RANGE	IZATION RATE AVERAGE	RESIDUAL CAPITA RANGE	LIZATION RATE AVERAGE
Atlanta	6 00% – 9 00%	7.80%	5.25% - 8.75%	6.78%	6.00% - 8.50%	7.18%
Boston	6.00% - 8.00%	6.85%	4.00% - 8.00%	5.44%	5 00% - 8 00%	6.21%
Charlotte	6 50% - 9.75%	8 05%	5.50% - 7.50%	6 65%	5 50% - 7.75%	6.70%
Chicago	6 00% - 10.00%	7.59%	5.00% - 8.00%	6.04%	5 50% - 9.00%	6.55%
Dallas	6.00% - 11.00%	7.89%	5.00% - 9.00%	6.63%	6 00% - 9.00%	7.17%
Denver	6 50% - 10.00%	7.73%	5.00% - 7.00%	5.93%	5.75% - 8.50%	6.85%
Houston	6 50% - 10.00%	8.20%	5.50% - 8.00%	6.63%	6 00% - 9.50%	7.16%
Los Angeles	5.50% - 9 00%	6.95%	4.50% - 7.00%	5.55%	5.00% - 8.00%	6.58%
Manhattan	5.50% - 9.00%	6.85%	3.75% - 8.00%	5.15%	4 75% - 8.00%	5.94%
Pacific Northwest	5.50% - 9.00%	7.00%	4.50% - 8.00%	5.58%	5.00% - 9.00%	6.28%
Philadelphia	7.00% - 9 00%	7.88%	6.00% - 8.00%	6.90%	6 00% - 8 00%	7.23%
Phoenix	7.00% - 10.00%	8.17%	5.00% - 8.00%	6.58%	5.50% - 7.50%	6.67%
San Diego	6.50% - 10 50%	7.94%	5.50% - 8.50%	6.81%	6.25% - 8.75%	7.25%
San Francisco	5 75% - 8.00%	6.48%	3.50% - 7.00%	4.93%	5.00% - 8.00%	5.78%
Seattle	5 50% – 9 00%	6.96%	4.50% - 8.00%	5.50%	5.00% - 9.00%	6.21%
Southeast Florida	6 00% - 10.00%	7.80%	4.50% - 9.50%	6.55%	4.50% - 10 00%	6.65%
Washington, DC	5 50% - 8.00%	6.81%	4.25% - 6.50%	5.40%	5 00% - 6.50%	5.81%
SUBURBS OF:	DISCOUNT RATE RANGE	AVERAGE	OVERALL CAPITAL RANGE	IZATION RATE AVERAGE	RESIDUAL CAPITA	
Atlanta	7.00% - 9.50%	8 15%			RANGE	AVERAGE
Boston	7.00% - 9.50% 7.00% - 10 00%	-	6.00% - 9.00%	7.43%	6.50% - 9.00%	7.65%
Charlotte	7.00% - 10 00% 7.00% - 11.00%	8.13%	5.00% - 9.00%	6.94%	6.50% – 9 00%	7.35%
Chicago	•	8.90%	6.00% - 8.75%	7.33%	6.00% - 8.50%	7.53%
-	7 50% - 12 00%	9 63%	7.00% - 10.00%	8.68%	7 50% – 11 00%	8.89%
Dallas Denver	7.00% - 11.00%	8 39%	5.75% - 9.00%	7.05%	6 00% - 9.00%	7.57%
	7 00% - 11.00%	8 23%	6.00% - 9.00%	6.98%	6.50% – 9 50%	7.58%
Houston	7.50% - 12.00%	9 17%	6.25% - 10.00%	7.48%	6.25% - 10.00%	7.79%
Los Angeles	5.00% - 9.00%	6.90%	4.50% - 7.50%	5.95%	5 50% – 8 00%	6.83%
Northern Virginia	6 00% - 9 50%	7.75%	5.00% - 8.50%	6.88%	5.75% - 8 50%	7.25%
Pacific Northwest	6 00% - 10 50%	7.92%	5.00% - 7.75%	6.41%	5 50% - 8.00%	6.81%
Philadelphia	7 50% - 10.00%	9.15%	7 00% – 9.00%	8.10%	7 00% – 9.00%	8.48%
Phoenix	7 00% - 11.00%	8.70%	6.00% - 8.50%	7.10%	6.50% - 9.00%	7.63%
San Diego	6 25% - 10.50%	7.73%	5.25% - 8.50%	6.80%	5 75% – 8 75%	7.15%
San Francisco	6 00% - 10.00%	7 33%	4.50% - 9.00%	6.50%	5 50% - 9.00%	6.73%
	6 00% - 10.50%	7.78%	5.00% - 7.00%	6.13%	5 50% - 8 00%	6 66%
Seattle Southeast Florida Suburban Maryland	7 00% - 10 75% 7 25% - 10 00%	8 69% 8.78%	5.00% - 10.00% 5.50% - 9.00%	7.71%	6.00% - 10 00%	7.79%

# **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 Charts 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

The U.S. office sector is forecast to remain fundamentally strong through 2016 and 2017 with most metros in the expansion phase of the real estate cycle (64.9% and 61.4%, respectively). By year-end 2018, office markets in a growing number of cities will segue into contraction, realizing softer market conditions, a shift in supply-demand balance, and rising overall cap rates. Interestingly, the barometer estimates that the fewest number of office markets will be in either recession or recovery over the next four years.

#### RETAIL

The U.S. retail sector is projected to remain on the upswing over the next two years with 74 metros in either recovery or expansion by year-end 2016 and 75 cities in these two categories through year-end 2017. The national retail sector is expected to benefit from a combination of a stronger single-family housing market and rising income levels.

Of course, a few metros will move into either contraction or recession by the end of 2019, including Charlotte, Philadelphia, and San Diego (see Forecast-2).

#### INDUSTRIAL

As new supply is delivered, most of the U.S. industrial sector is projected to move into contraction through 2017 and 2018 (see Chart REB-3). At the end of 2015, 46 industrial areas stood in either recovery or expansion. This count is expected to change quickly by year-end 2016 without 27 metros projected to be in either of these cycle positions. On the other hand, 27 metros are forecast to be in contraction at that time – up significantly from seven metros at year-end 2015.

#### **MULTIFAMILY**

Despite steady leasing demand, a number of metros are dealing with the delivery of a significant amount of new supply that is leading to rising vacancy rates and pushing most of the U.S. multifamily sector toward contraction (see Chart REB-4). By year-end 2016, 47 metros are forecast to be in the contraction phase while only 21 of them will be in expansion. This disparity is expected to continue through 2017. By year-end 2018, this sector could hit bottom when 21 metros are projected to be in recession. •

#### DEFINITIONS '

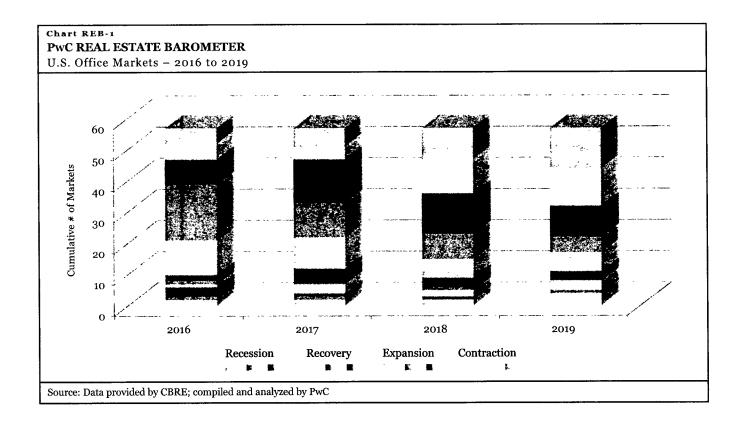
**Contraction:** The phase following the market peak, characterized by softening market conditions and a shift in the supply/demand balance leading to increasing vacancy rates, slowing rental growth, and rising overall cap rates.

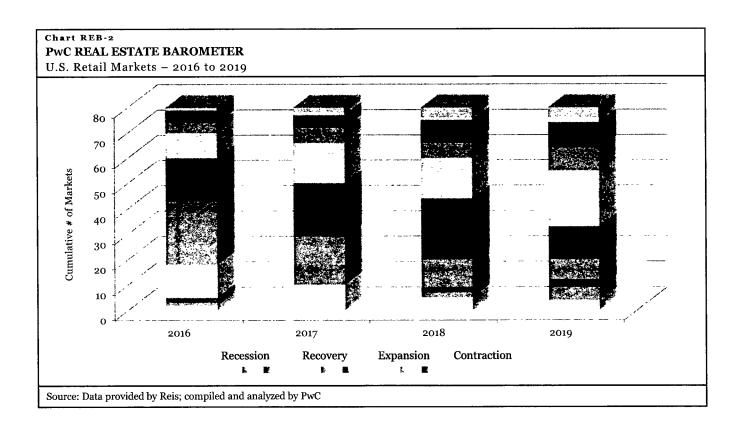
**Expansion:** The phase following recovery, characterized by strong demand and increasingly tight market conditions leading to low vacancy rates, robust rental growth, and decreasing overall cap rates.

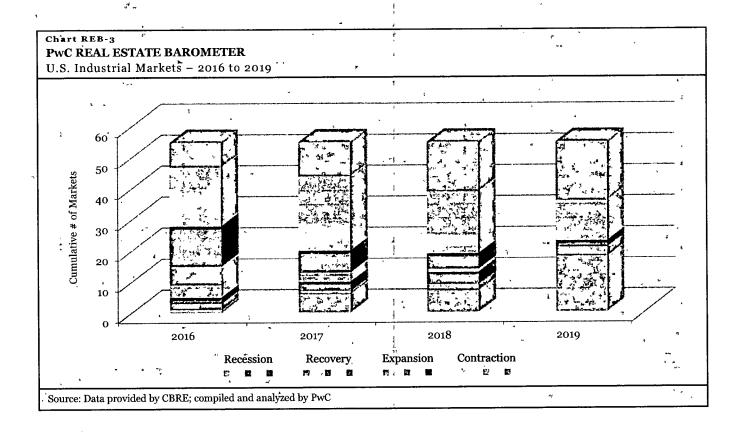
**Recession:** The phase following contraction, characterized by very low demand and high levels of supply that were added during the previous two phases. Typically involves high vacancies, negative rental growth, and high overall cap rates.

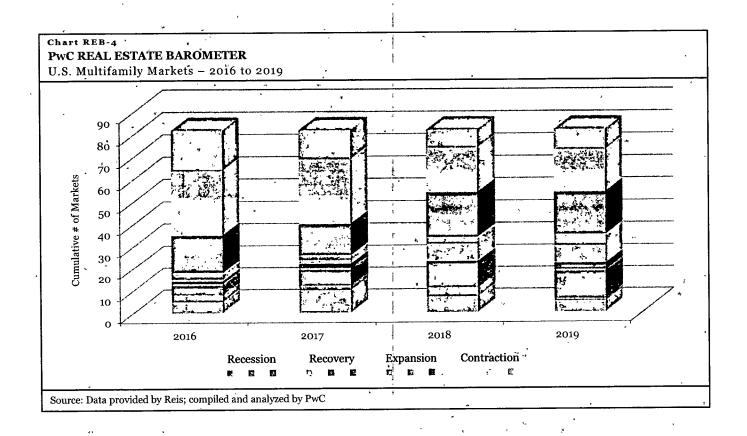
**Recovery:** The phase following the market bottom, characterized by tightening market conditions and a shift in supply/demand balance leading to reduced vacancy rates, more balanced rental growth, and a stabilization of overall cap rates.

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









# Forecast-1 PwC Real Estate Barometer U.S. Office Market Forecasts (2016 to 2019)

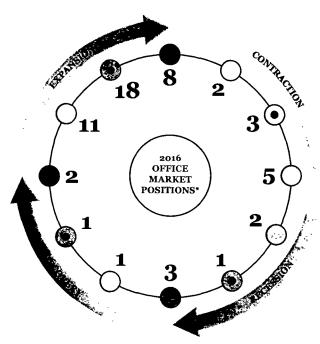
	2016	2017	2018	2019
United States	0	0	0	0

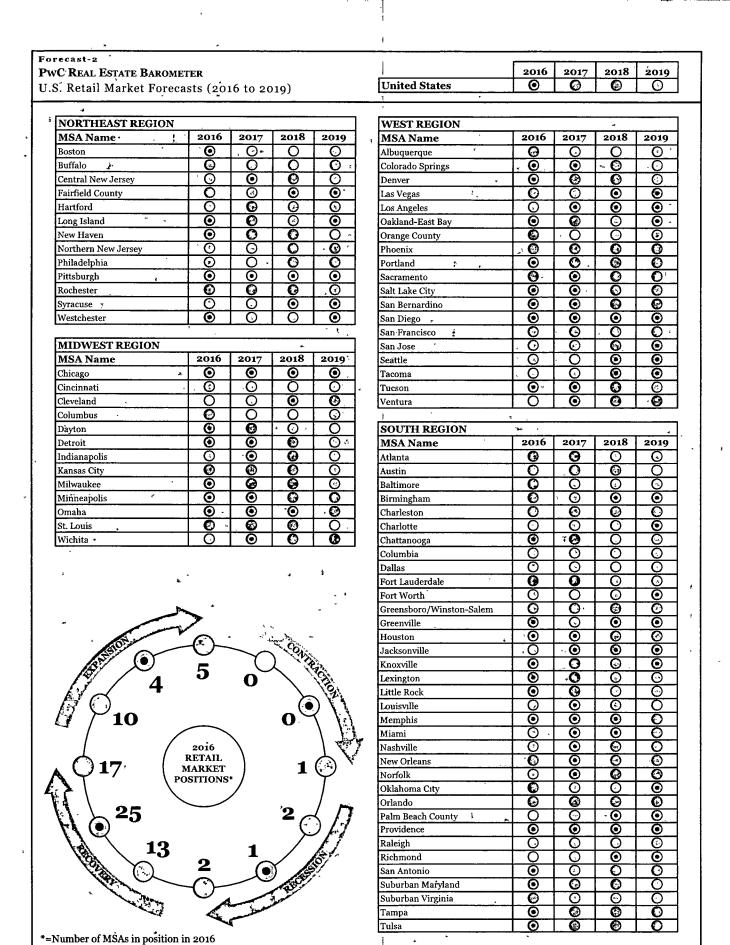
NORTHEAST REGION						
MSA Name	2016	2017	2018	2019		
Boston		0	0	0		
Hartford	0					
Long Island	0	0	0	0		
New York	0	0	0	0		
Newark		0	•			
Philadelphia	0		<u> </u>			
Pittsburgh	•	•	•	•		
Stamford	0	0	0	0		
Trenton		0	0	0		

MIDWEST REGION				
MSA Name	2016	2017	2018	2019
Chicago	0	0	<b>①</b>	0
Cincinnati	0	(2)	(9)	0
Cleveland	9	0		•
Columbus				
Detroit		0	0	0
Indianapolis	_ 0			
Kansas City			0_	0
Minneapolis	•			
St. Louis	•			
Toledo	•	•		

WEST REGION					
MSA Name	2016	2017	2018	2019	
Albuquerque		0	0	0	
Denver		•	0	0	
Honolulu	0	•	•	•	
Las Vegas			0	0	
Los Angeles	0	0	0	0	
Oakland	•	Ð	0	0	
Orange County	•	0	0	0	
Phoenix		•	€	0	
Portland	<b>②</b>	0	0	0	
Riverside	•	•	•	•	
Sacramento			•	0	
Salt Lake City	0	€		0	
San Diego	<b>②</b>	•	0	0	
San Francisco		0	0	0	
San Jose	0	•	0	•	
Seattle	0	€			
Tucson	•		0	0	
Ventura			0	0	

SOUTH REGION					
MSA Name	2016	2017	2018	2019	
Atlanta	•	•	0	0	
Austin			0	0	
Baltimore	0	0	0	•	
Charlotte		0	0	•	
Dallas					
Fort Lauderdale	•	0		0	
Fort Worth	•	0	0	Ð	
Houston	<b>®</b>	0	<b>(</b>	0	
Jacksonville	•		0_	0	
Memphis		0	•	•	
Miami	. 0	0	•	<b>©</b>	
Nashville			0	0	
Orlando	•		0	0	
Raleigh		•			
Richmond	•			0	
San Antonio	0	•	•	•	
Tampa					
Washington, DC		0	•	0	
West Palm Beach	9	Θ	•	0	
Wilmington		0	0	0	





#### PWC REAL ESTATE BAROMETER

U.S. Industrial Market Forecasts (2016 to 2019)

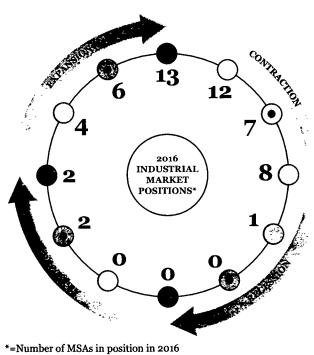
	2016	2017	2018	2019
United States	0	0	•	0

MSA Name	2016	2017	2018	2019
Allentown	0	•		0
Boston	0	•	0	0
Hartford	0	0	0	0
Long Island	0	0	0	0
New York		0	•	0
Newark	0	•	•	•
Philadelphia	0	•	0	6
Pittsburgh		0	•	0
Stamford				8
Trenton	•	0	0	6

MIDWEST REGION	7			
MSA Name	2016	2017	2018	2019
Chicago		0	0	0
Cincinnati	•	•	•	0
Cleveland	•	0	0	0
Columbus		•	•	8
Detroit	0	0	•	0
Indianapolis	•	•	0	9
Kansas City	0			
Minneapolis				0
St. Louis	8	(1)		9

WEST REGION				
MSA Name	2016	2017	2018	2019
Albuquerque	0	0	0	0
Denver	0	0	0	0
Las Vegas	0	0	0	0
Los Angeles	•		0	•
Oakland	0	0	0	0
Orange County	0	0	•	0
Phoenix	0	0	0	0
Portland	•	0	0	0
Riverside	•	0	0	8
Sacramento		0	0	0
Salt Lake City	0	0	0	<b>Ø</b>
San Diego	0	0	0	•
San Francisco	0	0	0	0
San Jose		0	0	0
Seattle	0	•	0	9
Tucson				<b>②</b>
Vallejo				
Ventura	0	0	0	•

SOUTH REGION				
MSA Name	2016	2017	2018	2019
Atlanta	0	0	0	0
Austin		0	0	0
Baltimore	0	0	0	0
Charlotte	0	0	•	(3)
Dallas		0	0	0
Fort Lauderdale	•	0	✐	0
Fort Worth	0	<b>®</b>		•
Houston	●	0	•	0
Jacksonville	0	<b>©</b>	<b>(</b>	<b>9</b>
Memphis			0	0
Miami	0	<b>G</b>	<b>3</b>	•
Nashville			0	0
Orlando	0	0	0	0
Raleigh	0	0	0	0
Tampa		8	•	•
Washington, DC	0	<b>©</b>	<b>3</b>	0
West Palm Beach	0	•	•	•
Wilmington	•		0	•



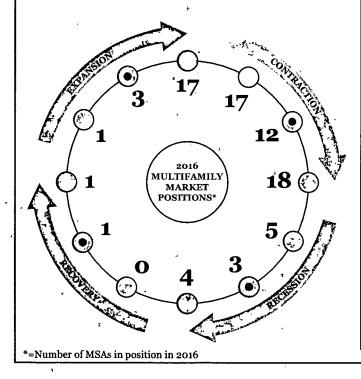
#### Forecast-4 PWC REAL ESTATE BAROMETER

U.S. Multifamily Market Forecasts (2016 to,2019)

t e e	2016	<b>Ž</b> Ó17	2018	2019
United States	•	•	•	•

NORTHEAST REGIO	N			
MSA Name	2016	2017	2018	2019
Boston	0	O O	0	0
Buffalo	0	•	0	0
Central New Jersey	0	0	0	0
Fairfield County	, O	O	.0	0
Hartford	<u> </u>	0	0	0
Long Island	<b>O</b>	Ö	0	<b>6</b>
New Haven	0	0	0	. 0
New York	Ō.	8	0	6
Northern New Jersey	0	0	0	0
Philadelphia	0	0	0	0
Pittsburgh	0	0	0	<b>©</b>
Providence	0	0	0	0
Rochester	0	•	0	0
Syracuse	· 0	0	0	0
Westchester .	0	0	•	Θ

MIDWEST REGION				
MSA Name	2016	2017	2018	2019
Chicago	•	0	•	0
Cincinnati .	(O)	0	•	0
· Cleveland	0	0	0	0
Columbus	0	0	•	•
Dayton ,		0	0	0
Detroit	0	0	0	0
Indianapolis	Ò	<b>3</b>	0	0
Kansas City	0	0	0	0
Milwaukee	0	0	0	0
Minneapolis -	0	0	. 0	0
<sup>7</sup> Omaha	0	0	0	•
St. Louis	0	0	0	0
Wichita	0	❸ .	Ø.,	0



WEST REGION				
MSA Name	2016	2017	2018	2019
Albuquerque	.0	0	0	0
Colorado Springs	0	0	0	0
Denver	•	0	0	<b>⊙</b> :
Las Vegas	0	0	0	0
Los Angeles	0	0	Ο,	Ö
Oakland-East Bay		0	0	G
Orange County	0	0	<b>(</b> 3)	0
Phoenix	0	. 0	0	0
Portland	. 0	•	O O	0
Sacramento	. 0	0	0	O
Salt Lake City	0	0	0	0
San Bernardino •	0	0	0	0
San Diego	•	0	. ①	0
San Francisco	0	0	•	0
San Jose.	. 0	(e)	0	0
Seattle	0	0	0	O
Tacoma	Ø	0	0	•
Tucson	. 0	0	Ō.	0
Ventura County	•	0	•	O.

SOUTH REGION		r		
MSA Name	2016	2017	2018	2019
Atlanta		0	0	0
Austin	· · · · · ·	0	0	0
Baltimore	0	0	Θ	0
Birmingham .	0	O	🚱 ·	G
Charleston	. 0	€ .	0	0
Charlotte	0	0	0	0
Chattanooga	0	0	0	0
Columbia "	0.	0	0	0
Dallas	0	0	0	0
District of Columbia	0	0	0	0
Fort Lauderdale	0	0	0	0
Fort Worth	0	0	0	0
Greensboro/Winston-Salem	0	0	0	0
Greenville	0	0	0	0
Houston '	. 0	0	0	0
Jacksonville	(O)	0	.0	0
Knoxville		0	0	0
Lexington .	0	0	0	0
Little Rock	0	· ②	0	0
Louisville `	0	0	(3)	0
Memphis	0	0	0	0
Miami	0	0.	0	<b>O</b> .
Nashville	0	0	6	<b>②</b>
New Orleans	•	0	Θ	0
Norfolk	. 0	<u> </u>	0	Õ
Oklahoma City	0	0	ூ	L O
Orlando	<u> </u>	<b>O</b> _	0	0
Palm Beach County	<u> </u>	0	<u> </u>	0
Raleigh	.0	0	0	•
Richmond	0	0	0	Ō
San Antonio	0	0	0	⊙
Suburban Maryland	<u> </u>	0	0	0
Suburban Vırginia	ଡ	-0	0	0
Tampa	0	0	0	0
Tulsa ' ,	0	0	Ø	Ø

# **U.S. CRE Stock Acquisition Trends**

Editor's Note: 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 first quarter of 2016.

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.

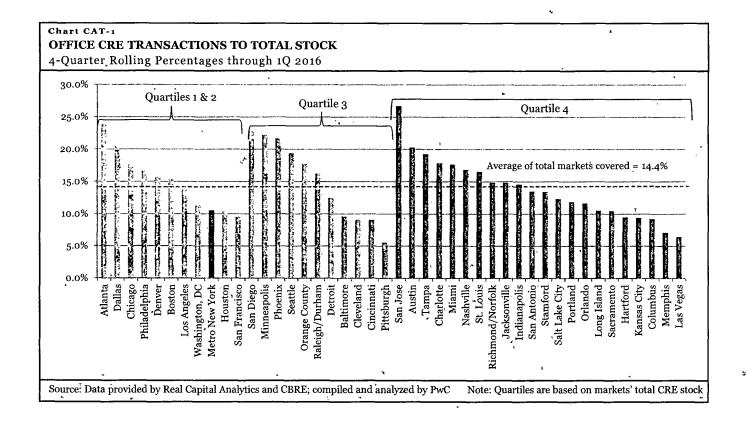
#### STOCK ACQUISITION ANALYSIS

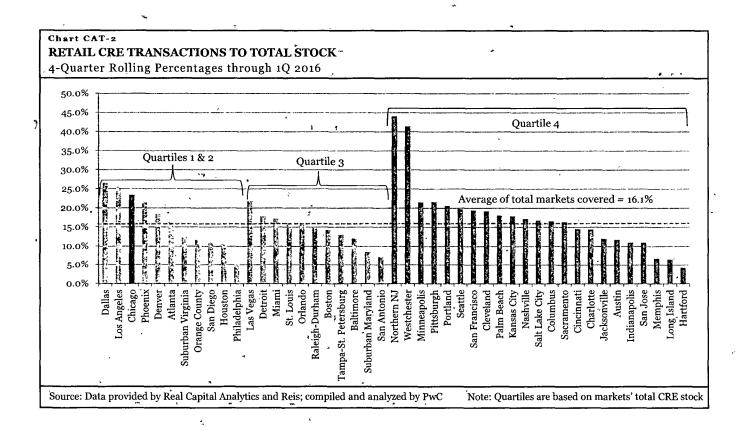
Our analysis reveals the following trends.

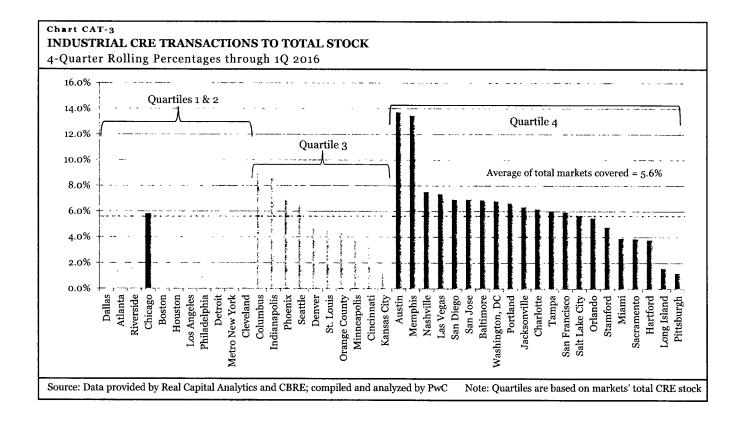
- ♦ The retail sector posted the largest increase in its average stock acquisition percentage since last quarter's analysis, rising 40 basis points from 15.7% to 16.1% (see Chart CAT-2). This increase reflects growing investor interest for the retail sector as it moves through the late stages of recovery into expansion.
- Compared to figures posted in the first quarter of 2016, the office and apartment sectors each revealed increases in their stock acquisition percentages of 30 and 10 basis points, respectively (see Charts CAT-1 and CAT-4).
- ◆ The industrial sector revealed a 60-basis-point decrease in its stock acquisition percentage compared to last quarter (see Chart CAT-3). Due to the large amount of new supply entering this sector, a growing number of cities are expected to move into the contraction phase of the real estate cycle over the next two years.
- ♦ At 52.0% (22 out of 42 metros), the industrial sector had the most of its metros analyzed post stock acquisition percentages above their sector's average. Retail was second with 51.0% (23 out of 45 metros) followed by office with 50.0% (22 out of 44 metros) and apartment with 48.0% (23 out of 48 metros).
- ◆ Five metros posted above-average stock acquisition percentages in each property sector this quarter. These cities are Atlanta, Dallas, Nashville, Phoenix, and Seattle, which each have growing local economies. Only Atlanta and Dallas held this distinction last quarter.

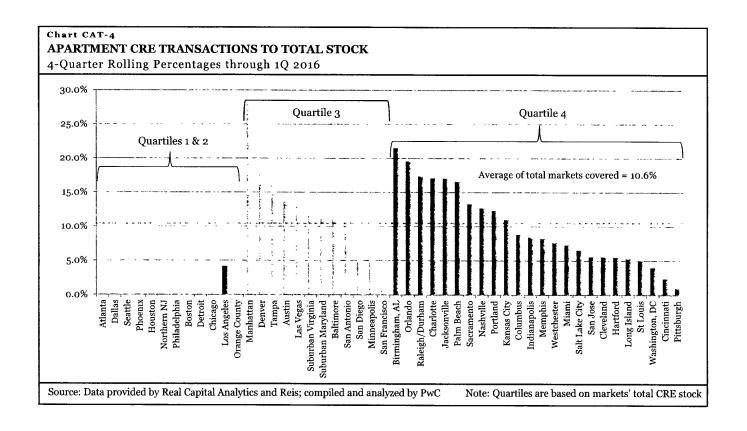
#### LOCATIONAL DIFFERENCES

While the economic and demographic trends in a specific metro may pique buyer interest for a certain property type, those same trends may not have a similar impact on other property types in that metro. In our analysis, cities with the highest amounts of stock sold were diverse in each specific property with the exception of the five cities previously noted as outperforming each sector. Such diversity opens up broad investment options for investors not just in terms of geography, but property type as well. •









# **National Student Housing Market**

Although investment criteria for the national student housing market reveals little movement this quarter, properties in this niche sector are highly sought after by investors because they are viewed as "needs-based" assets and regarded as more resilient to economic downturns than various other property types. "A significant amount of capital is looking to enter this emerging sector through acquisitions," comments a participant.

In the first quarter of 2016, total sales of student housing properties rose 62.0% over the prior quarter, according to Real Capital Analytics. In addition, the average price per bed was up 2.6% during that time period while the year-over-year price increase was 16.1%. The three primary sources of capital for transactions during the first five months of 2016 were institutional capital at 47.0%, cross-border capital at 32.0%, and private sources at 17.0%. This makeup is different from 2015 when most capital was represented by private buyers (54.0%) and institutional sources (31.0%).

While the overall outlook for student housing is bright, Survey participants highlight key factors that may have a detrimental impact on property

Table STH-2 AVERAGE EXPECTED VALUE CHANGE\* **Survey Market** Average 5.5% Pacific Region Apts. Student Housing 4.1% National Apartment 3.1% Southeast Region Apts. 2.1% Mid-Atlantic Region Apts. 2.1% All Survey Markets\* 2.6% \*Next 12 months; excluding development land Source: 2Q 2016 PwC Real Estate Investor Survey

values in the future. First, as high-quality offerings are increasingly harder to come by, investors are concerned about overall pricing trends. "Many low-quality portfolios will trade this year and their overall cap rates and prices per bed may not be reflective of their subpar quality," explains an investor. Second, an investor notes, "There are many new investors and inexperienced operators in the student housing space - a combination that can lead to properties unjustifiably trading at elevated prices and underperforming pro forma assumptions." Third, continued levels of new construction in certain markets could

inhibit owners' abilities to raise rents.

For now, this market reveals no change in its outlook for future rent growth and only a modest increase in its average overall cap rate. As a result, some surveyed investors are confident with regard to value increases over the next 12 months. Anticipated property value changes range from 0.0% to 15.0% and average 4.1%.

As shown in Table STH-2, this market's average forecasted value change falls short of the Pacific region apartment market, but is higher than the other three traditional apartment markets surveyed. •

NATIONAL STUDEN' Second Quarter 2016	T HOUSING N	IARKET*	¥
	CURRENT:	4Q 2015	YEAR'AGO
DISCOUNT RATE (IRR) <sup>a</sup>			7
Range	6.00% - 10.00%	6.00% - 11.00%	7.00% - 10.00%
Average	8.24%	8.31%	8.64%
Change (Basis Points)		-7	- 40 · · · ·
OVERALL CAP RATE (OAR)	a , , '		and the
Range	4.50% - 7.50%	4.50% - 7.50%	4.50% - 7.75%
Average	6.08%	6.02%	6.32%
Change (Basis Points)	Y .	+ 6	- 24
RESIDUAL CAP RATE			\$5 ° \$
Range	4.75% - 7.75%	4.75% - 7.75%	4 75% - 8.00%
Average	6.38%	- 6.23%	6.75%
Change (Basis Points)	т,	+ 15	- 37
MARKET RENT CHANGE			-
Range	0.00% - 5.00%	0.00% - 5.00%	0.00% - 5 00%
Average	2.38%	2.38%	2.50%
Change (Basis Points)		0	- 12
EXPENSE CHANGE <sup>b</sup>		-	
Range	0 00% - 11.00%	0.00% - 12.00%	0 00% - 12 00%
Average	3.09%	3.06%	2.90%
Change (Basis Points)		+ 3	+ 19
MARKETING TIME			
Range	0 - 6	0 – 6	2 – 8
Average	3.1	2.9	.3-9
Change (▼, ▲, =)	,	<b>A</b>	▼

NATIONAL STUDENT HOUSING MAKKET—SELECT SO Second Quarter 2016	13C-13									
	INFFIAL-YEA	INTITAL -YEAR CHANGE RAITES	VACANCY	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	REPLACEMENT RESERVE	PREFERKED T LEASE TERM	MARKETING
	MARKET RENT	EXPENSES	TOTAL	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	PER BED	MONTHS	MONTHS
IRM dizati e is de sees	2.5% to 4.0%	2 0% to 2 5 %	4.0% to 5.0%	4 75% to 5 50%	0 8% to 1.0%	7.00% to 9.00%	450% to 550%	\$125 to \$150	1	up to 4
PRIVATE INVESTMENT FIRM + Forecast Period: 3 to 10 years Uses both DCF and direct capitalization: in direct cap, capitalizes NOI after capital replacement reserve is deducted; uses a separate structural replacement reserve of up to \$300 per bed, sees overall cap rates holding steady over the next six months	0 0% to 4 0%	0.0% to 11.0%	4.0% to 10.0%	5.75% to 6.50%	1.5% to 2.0%	7 00% to 8.50%	5 25% to 7 00%	\$150 to \$300	21. 22.	6 6 6 7
PRIVATE INVESTOR + Forecast Period: 5 years Uses both DCF and direct capitalization: in direct cap, capitalizes NOI before capital replacement reserve is deducted, uses a separate structural replacement reserve; sees overall cap rates increasing over the next six months.	2.0% to 3.0%	2.0% to 3.0%	4.0% to 10.0%	5.75% to 7.50%	1.0%	9.00% to 10.00%	5.50% to 7.50%	\$100 to \$175	g	2 t to 4
PRIVATE INVESTMENT FIRM + Forecast Period: 3 to 5 years Uses both DCP and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve is deducted; uses a separate structural replacement reserve, sees overall cap rates holding steady over the next six months; invests in the southwest region of the country.	2.5% to 3.0%	2.0% to 3.0%	4 0% to 8 0%	5.75% to 7.75%	o 8% to 1.3%	8.00% to 10.00%	5 00% to 7 50%	\$100 to \$125	; ;	2 to 4
PRIVATE INVESTOR ← Forecast Period: 1 to 5 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve is deducted; does not use a separate structural replacement reserve, sees overall cap rates holding steady over the next six months	2 5% to 3.5%	2.0% to 2.5%	4 0% to 5.0%	5.75% to 6.50%	0.8% to 1.0%	7.50% to 9.00%	5 50% to 6 25%	\$150	Company and a second se	up to 4
PRIVATE INVESTMENT FIRM + Forecast Period: 3 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve is deducted; uses a separate structural replacement reserve of up to \$100 per bed, sees overall cap rates holding steady over the next six months.	s 0 0% to 5 0%	0 0% to 10 0%	5 0% to 10.0%	5.50% to 7.00%	1.0% to 2.0%	6 90% to 8.50%	4.75% to 6.50%	\$150 to \$350	લ	2 to 6

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\*off-campus assets only Source

# **National Secondary Office Market**

Investor sentiment about future rent growth in the national secondary office market holds steady this quarter, but half of our Survey participants report the use of rent spikes in their cash flow forecasts. For those using spikes, the first one occurs in either year one, four, or five, and averages 5.0%. The second spike, if used, occurs in year two or five and also averages 5.0%.

While this market's average overall cap rate also holds steady this quarter, a lower average overall cap rate in its CBD suggests a more aggressive pursuit by investors for these properties than for suburban ones. "A lack of absorption in certain sub-

urbs contributes to higher cap rates and value declines, but better leasing trends in CBD assets will generally result in higher price points and lower overall cap rates," explains a participant. This quarter, however, the OAR spread between the CBD and suburban averages is 55 basis points – a bit lower than the spread of 61 basis points a year ago.

Investors' concerns about what will impact property values the most in the national secondary office market over the near term mirror those noted for many of the Survey's primary markets: economic growth; unforeseen global events, and the cost and availability of capital. •

Tenant Retention	on Rate:		
Average		72	2.0%
Range	*60.0% t	o 8c	0.0%
Months of Free	Rent(1):		
Average		1	6.0
Range		1 1	10 12
% of participants	using .	100	0.0%
Average Overal	l Cap Ra	tes	:
Market (as a whol	e)	7.	39%
CBD		, 7	.11%
Suburbs		7.	66%

# Table SEC-1 NATIONAL SECONDARY OFFICE MARKET Second Quarter 2016

•		<u></u>		
	*****	LAST QUARTER	1 YEAR AGO. 14	<sup>1</sup> 3 YEARS AGO
DISCOUNT RATE (IRR)*	4 ** }	•	,	•
Range	5.75% - 13.00%	5.75% - 12.50%	5.75% - 12.00%	6.75% - 14.00%
Average	8.79%:	8.78%	8.66%	9.63%
Change (Basis Points)		'+1	+ 13	<b>-</b> 71
OVERALL CAP RATE (OAR)*	14		•	' 1
Range	4.50% - 10.00%	4.50% - 10.00%	4.50% - 10.00%	4.00% - 11.00%
Average	7.39%	7.39%	7.54%	8.01%
Change (Basis Points)		٠,0	- 15	- 67
-RESIDUAL CAP RATE	* "			
Range	6.00% - 10.00%	6.00% - 10.00%	6.00% - 10.00%	6 00% – 10.00%
Average	7 69%	7.71%	7.74%	8.17%
Change (Basis Points)		- 2	- 5	- 53
MARKET RENT CHANGE <sup>b</sup>		- Ang	. 1	
Range	0.00% - 10.00%	0.00% - 10.00%	0.00% - 10.00%	0.00% - 10.00%
Average	3 65%.	3.65%	3.93%	3.24%
Change (Basis Points)	ŧ	0	- 28	+ 61
EXPENSE CHANGE <sup>b</sup>	•			1
•Range,	1.50% - 3.00%	1.50% - 3.00%	2.00% - 3.00%	2.00% - 3.00%
'Average	2.48%	. 2.45%	2.53%	2.52%
Change (Basis Points)		. +3	- 5	-6
MARKETING TIME		,	-	
Range	2-9	2 – 9	2 <del>-</del> 9	2 - 12
Average	5.8 .	5.8	5.8	, 6 3
Change (▼, ▲, =)	•	= .	= .	<b>∀</b> ;
a Rate on unleveraged, all-cash transactions	b`Imitial rate of change c	In months		



Fig. 25   Fig. 25   Fig. 26   Fig.		INTTIAL-YEAR GEOGRAPHY CHANGE RATES	INTITAL-YE	AR (TES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP VACANCY RATE (OAR) ASSUMPTIONS	P VACANCY ASSUMPTI	IONS		REPLACEMENT MARKETING RESERVE TIME	MARKETIN TIME
Week   Secrements   Cook (200)   2.5%   10.00% (CBD)   7.25% (CBD)   7		REGION/ CITY	MARKET RENT	EXPENSES	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT RETENTION		PER SQUARE FOOT	MONTHS
Mountain	FUIL-SERVICE ADVISORY FIRM    Forecast Period: 10 years Uses both DCF and direct capitalization, in direct cap, capitalizes NOI after capital replacement reserve but before IIs and leasing commissions; expects overall cap rates to decrease 50 to 100 basts points over the next sx months; does not use rent spikes	West/ Sacramento	%0.0		6.75% to 7 00% (CBD), 8.00% to 8.50% (suburbs)	2 5% to 5 0%	9.00% to 11.00% (CBD); 11.00% to 13.00% (suburbs)	6 50% to 7 25% (CBD); 7 75% to 8.25% (suburbs)	9	75.0%	2.0%	\$0.15 to \$0.20	ð 3 e
Southeast 1 3.0% 8 00% (CBD); 10% 8 59% (CBD); 5 70.0% 5 0% 80.15  Tampa 5.0% 8 00% (CBD); 10% 8 59% (CBD); 5 70.0% 5 0% 80.15  Tampa 5.0% 8 00% (CBD); 10% 8.75% to 10 75.0% 7.5% 80.25  (suburbs) 8 00% (CBD); 2 0% 9.00% (CBD); 5 75% 10 75.0% 8.0% 8.00  Orlando 3.0% 3.0% 8.00% 3.0% 10.00% 8.50% 10 75.0% 8.0% 8.00  Southwest 2.0% 8.00% 10 7.25% to 60.0% to 10 75.0% 8.00% 8.00  Suthwest 2.0% 8.90% (CBD); 10% 9.25% (CBD); 8.00% (CBD); 5 0% 8.00% 10 75.0% 8.00% 8.00% 10 75.0% 8.00% 10 75.0% 8.00% 10 75.0% 10.00% 10.00% 10.00% 10 75.0% 10.00%	REAL ESTATE FIRM + Forecast Period: 110 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 hold steady over the next six months, may use a rent spike of 6.0% in years 4 and 5.	Mountam/ Las Vegas	4.0% to 5.0%	2.0% 2.5%	7 50% to 8.25% in both CBD & suburbs	2 0% to 3.0%	8.00% to 9.00% to 9.00% cBD & suburbs	7 oo% to 7.75% un both CBD & suburbs	o 5 0	75.0%	10.0%	\$0.10 to \$0.15	4 to 4
South/ 10% 2.0% 7 00% (CBD); 2.0% 9,00% (CBD); 7.25% (CBD), 6 60.0% 5 0% \$0.10  Orlando 3.0% 3.0% 8.00% 3.0% 10.00% 8.50% 10 75.0% 8.0% \$0.25  (suburbs) 5.0% 10.75% to to to 7.00% (CBD); 1.0% 9.05% (CBD); 1.0% 9.00% 10.75% 0 0.0% 10 to to 7.00% to to to 7.00% to	REAL ESTATE ADVISOR + Forecast Period: 3 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before TIS, leasting commissions, and replacement reserve; expects overall cap rates to hold steady over the next sx months; does not use rent spikes.	Southeast/ Tampa	3.0% to 5.0%		7.25% to 8 00% (CBD), 8.00% to 9.00% (suburbs)	10% to 30%	7.75% to 8.50% (CBD), 8.25% to 9.50% (suburbs)	6.25% to 7.25% (CBD); 7.00% to 8.75% (suburbs)	5 to 10	70.0% to 75.0%	5 0% to 7.5%	\$0.15 to \$0.25	4 to 6
6.50% to 7.25% to 6.00% to 5.00% to 7.25% to 6.00% to 5.00% to 70.00% 5.00% 5.00% 5.00% 5.00% to to 7.00% to to 7.00% to to 7.00% to to 7.00% to to 8.25% to 7.00% to	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 currently favor sellers; expects cap rates to decrease 5 to 15 basis points over the next sx months.	South/ Orlando	10% to 3.0%		6 75% to 7 00% (CBD); 7.75% to 8.00% (suburbs)	2 0% to 3.0%	7.75% to 9.00% (CBD); 9.00% to 10.00% (suburbs)	6.00% to 7 25% (CBD), 7 25% to 8.50% (suburbs)	6 to 10	60.0% to 75.0%	5 0% to 8.0%	\$0 10 to \$0 25	6 to 6
	REAL ESTATE FIRM + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI conferent IIs, 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); 8.25% to 10.75% (suburbs)	6 00% to 8.00% (CBD); 7.00% to 9 00% (suburbs)	5 9	70.0% to 75.0%	5.0% to 7.0%	\$0 10 to \$0 25	8 c 5

Source: Personal survey conducted by PwC during April 2016

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Rigidion   MARKET   EXPENSES RITE   STALING PRIZE   PREF.   MOPTHS   TRAAKT   WURANTHOS PROJECT		GEOGRAPHY	INITIAL-YE CHANGE RA	AR VTES	RESIDUAL		: DISCOUNT	OVERALL CA RATE (OAR)	ASSUMPT	ONS		REPLACEMER RESERVE	IT MARKETING TIME
Weary         4.0%         2.0%         Cook (EB)         5.00% to         5.00% to         Does         3.7% <th></th> <th>RÈGION/ CITY</th> <th>MARKET</th> <th>EXPENSES</th> <th>CAP RATE</th> <th>SELLING</th> <th>FREE &amp; CLEAR</th> <th>FREE &amp; CLEAR</th> <th>MONTHS YACANT</th> <th>TENANT RETENTION</th> <th>UNDERLYING VACANCY &amp; CREDIT LOSS</th> <th></th> <th>, MONTHS</th>		RÈGION/ CITY	MARKET	EXPENSES	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS YACANT	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS		, MONTHS
San Jose   6 c6		4				' 		•		,		ŧ	, ,
San Jose 10 10 10 10 10 10 10 10 10 10 10 10 10	REAL ESTATE COMPANY + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI	Wort	4.0%	2.0%	6.50% to 7.00% (CBD);		6.25% to			%0 09	3.0%	Does	<b>'</b> m .
East North   3.0%   2.0%   8.00% to   7.50% to   7.50% to   10.00%   8.0%   8.0%   8.0%   8.00%   8.00% to   10.00%	before TIs, leasing commissions, and replacement reserve; believes market conditions currently favor sellers; may use a rent spike of 6.0% in year 1	west/ San Jose	to 6 0%	, to 3.0%	6.00% to 7.00% (suburbs)	٤	, 5.75% to , 6.50% (suburbs)		9 <b>6</b>	to 70.0%	to 7.0%	not us <b>e</b>	و <u>ت</u> و
East North   3.0%   2.0%   9.00% (CBD)   1.5%   1.00% (CBD)   6   0.00%   8.0%   8.0%   8.0%   9.0% (CBD)   1.5%   1.00% (CBD)   1.5%   1.00% (CBD)   1.00					100	.,				*		,	
Central   10	REAL ESTATE INVESTOR + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI	East North	3.0%	2.0%	8 00% to 9.00% (CBD);		.7.00% to (10.00% (CBD);	-		%0.09.	8.0%	\$0.20	. mi
Fig. Northeast 15% 675% to 825% to 675% to 10 to	before TIs, leasing commissions, and replacement reserve; believes market conditions favor sellers; uses face rents and reflectsconcessions when they are scheduled to occur; may use rent spikes '	Central/ Indianapolis	to 5.0%	, to 3 0%	8.00% to 10.00% (suburbs)	30%	'8.00% to 12.00%" (suburbs)	8.00% to 10.00% <sub>L</sub> (suburbs)	9 6	75 0%	00.0%	60 25	3 4 ,
Northeast 2 0% 115% 759% to 10 6 75% to 10	(1			*	, , ,	-			,				
Northeast 15% 6/75% to 750% (CBD), 2.0% (CBD), 2.0% (CBD), 4.0% (CBD), 6.0% (C		-,	•		, 5× **			•		, A	•		
Pittsburgh 20% (Suburbs) (	REAL ESTATE SERVICE FIRM + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI		8	15%	6.75% to 7.50% (CBD),	2 0%	.8 25% to ,8 50% (CBD), 8 75% to			70.0% to	5.0% to	\$0.15 to	ð S
Southwest 6 0% 2.0% (CBD); 0.5% 9.00% (CBD); 5.70.0% 5.0% (SD); 0.5% 9.00% (CBD); 7.75% (CBD); 5.70.0% 5.0% (SD); 0.5% 9.00% (CBD); 0.0% (CBD);	before 11s, leasing commissions, and replacement reserve, petieves, marker conditions currently favor sellers; expects overall cap rates to hold steady over the next six months; may use rent spikes.	Pittsburgh '	8 0 N	, 2.0%	` '	30%	;9 00% ;9 00% (suburbs)		. 9	80.08	%0.7	\$0.25	6
Southwest 6 0% 2.0% 7 00% (CBD); 775% (CBD); 775% (CBD); 5 70.0% 10 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		اد دست			u.s.y	,	*					•	
Southwest 6 0% 2.0% 7.00% (CBD); 0.5% 0.00% (CBD); 5.70.0% 5.0% 0.10 5.0% 0.10 10.0% 3.0% (CBD); 0.5% 0.10 10.0% 8.50% 0.10.00% 8.50% 0.10.00% 8.50% 0.10.00% 8.50% 0.10.00% 8.50% 0.10.00% 8.50% 0.10.00% 8.50% 0.10.00% 0		•			1. i		24 % 60 %		-	·			
Anstm 10.0% 3.0% 8.50% 10.00% 8.50% 9 75.0% 7.0% \$0.20 8 (suburbs) (suburbs) (suburbs) (suburbs) (suburbs) 7.50% 10.00% 8.50% 10.00% 10	REAL ESTATE ADVISOR + Forecast Period: 3 to 15 years Uses both DCF and direct capitalization, in direct cap, capitalizes NOI	Southwest/	60%	2.0%	7 00% (CBD), 7 50% to		9 00% (CBD); 7.00% to	7.75% (CBD); 5.50% to		70.0% to	5.0% to		ಭ
Southeast/ 3.0% to	Defore 11s, Rasing Commissions, and repractment seer vs. pources market conditions currently favor sellers; expects cap rates to hold steady over the next six months: no longer uses rent smiles.	Austin	10.0%	3.0%	8.50%* (suburbs)	%e.0%	: 10.00% (suburbs)	8.50% (suburbs)	6	75 0%	7.0%	\$0.20	, ,
Southeast/ 2.5% to 8.50% to 7.50% to 7.50% to 6.50% to 10.0% (Suburbs); 2.6% 1.10.0% (CBD); 2.0% 1.10.0% (Suburbs); 2.6% 1.10.0% (Suburbs); 2.6% 1.10.0% 1.0					ru Arr Strift Tradition	ر با الله الما				4			2
8 600% to 8.50% to 7.50% to 7.50% to 7.00% 5.0% \$0.20 Southeast/ 2.5% 8.50% (CBD); 2.0% 11.00% (CBD); 9.00% (CBD); 9.00% (CBD); 9.00% (Suburbs) (S		,			* 23°	-	د	a ::					
Southeast, 3.0% to 8.00% to 7.50% to 7.50% to to to to to to to to to Jacksonville 3.0% 9.00% 1.100% 8.50% 10 75.0% 10.0% \$0.30 (suburbs) 1.100% (suburbs) 1.100% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0%	INVESTMENT FIRM + Forecast Period: 5 to 7 years			%	8 00% to	• •	8.50% to .			, %0 0/	5.0%	\$0.20	,, ro
(suburbs) (suburbs) (suburbs)	Uses both DCF and direct capitalization, in direct cap, capitalizes ivoid before ITs, leasing commissions, and replacement reserve; believes market before ITs, leasing commissions, and caplacement reserve; believes market before capital cap rates to	Southeast/ Jacksonville	3.0%	to 2.0%	8.00% to	ж.	;9.00% to				to 10.0%	to \$0.39	င့် <b>ဆ</b> ဲ
yundah.	decrease 20 to 25 basis points over the next six months	•			(suburbs)	ş.	,(suburbs)	(suburbs)	;			•	
	*.	7			,	,*		1				,	

# **National Regional Mall Market**

Investment activity remains quite segregated in the national regional mall market with most buyers focused on acquiring Class-A+ through Class-B+ product and navigating away from lesser categorized malls. One reason for their partiality is that vacancy issues generally continue to plague weaker malls. Another reason is that the "availability of debt capital for Class-B and Class-C malls is essentially nonexistent, leading to a dearth of meaningful sale transactions for low-quality regional malls," notes a participant.

Sales volume for regional malls totaled \$2.1 billion in the first quarter of 2016 – down from \$3.1 billion in the prior quarter and well below the \$5.4-billion total in the first quarter of 2015, as per Real Capital Analytics. Although a few more regional mall sales closed in April and May of 2016 and a couple more are under contract, most surveyed investors anticipate 2016's sales volume to be below that of 2015 due to difficulties tied to financing availability, a lack of quality offerings, and continued trepidation in the sector's overall performance.

Over the next 12 months, Survey participants expect property values in the national regional mall market to dip as much as 10.0% and increase as much as 8.0% – the average forecasted change is an increase of 1.8%. ◆

#### **KEY 2Q16 SURVEY STATS\***

#### **Tenant Retention Rate:**

Average 72.0% = Range 50.0% to 80.0%

#### Months of Free Rent(1):

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

#### **Average Overall Cap Rates:**

Class A+ 4.58% = Class A 5.20% = Class B+ 6.25% =

\*  $\nabla$ ,  $\wedge$ , = change from prior quarter

(1) on a ten-year lease

(2) 80% are not using free rent

# Table 1 NATIONAL REGIONAL MALL MARKET<sup>(d)</sup> Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	5.50% - 11.50%	5.00% - 12.00%	5.50% - 12.00%	5.50% - 12.00%	5.75% - 14.00%
Average	7.65%	7.63%	7.83%	8.75%	9.71%
Change (Basis Points)		+ 2	- 18	- 110	- 206
OVERALL CAP RATE (OAR)*					
Range	4.00% – 9.00%	4.00% - 9.00%	4.00% - 9.00%	4.50% - 9.00%	5.00% - 11.00%
Average	6.00%	6.00%	6.13%	6.52%	7.48%
Change (Basis Points)		o	- 13	- 52	- 148
RESIDUAL CAP RATE					
Range	4.00% – 9.00%	4.00% - 9.00%	4.25% - 9.00%	4.50% - 12.00%	5.75% - 12.00%
Average	6.50%	6.50%	6 65%	7.06%	8.19%
Change (Basis Points)		o	- 15	- 56	<b>– 169</b>
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 5.00%	0.00% - 5.00%	1.00% - 5.00%	1.00% - 6.00%	(3.00%) – 3 00%
Average	2.65%	2.73%	2.90%	3.08%	1.58%
Change (Basis Points)		- 8	- 25	- 43	+ 107
EXPENSE CHANGE <sup>b</sup>					
Range	2.00% - 5.00%	2.00% - 5.00%	1.00% - 5.00%	0.00% - 3.00%	0.00% - 3.00%
Average	3.00%	3.00%	2.80%	2.17%	2.17%
Change (Basis Points)		0	+ 20	+ 83	+ 83
MARKETING TIME					
Range	3 - 24	3 - 24	3 – 24	3 - 24	3 - 18
Average	9.0	9.0	9.0	9.7	7.1
Change (▼, ▲, =)		=	=	▼	<u> </u>
Change (▼, ▲, =)  a Rate on unleveraged, all-cash transactions	b. Initial rate of change	<del></del>		_	<b>Y</b>
5.50% 7.65% 4.00% 6.00% 4.00% 6.50% 0.00% 2.65% 2.00% 3.00%	- 11.5 - 9.0 - 9.0	0%	5.00% - 12.00% 7.63% + 2 0% 4.00% - 9.00% 6.00% 0 0% 4.00% - 9.00% 6.50% 0 0% 0.00% - 5.00% 2.73% - 8 0% 2.00% - 5.00% 3.00% 0	0% 5.00% - 12.00% 5.50% - 12.00% 7.63% 7.83% + 2 - 18  0% 4.00% - 9.00% 4.00% - 9.00% 6.13% 0 - 13  0% 4.00% - 9.00% 4.25% - 9.00% 6.50% 6 65% 0 - 15  0% 0.00% - 5.00% 1.00% - 5.00% 2.73% 2.90% - 8 - 25  0% 2.00% - 5.00% 1.00% - 5.00% 3.00% 2.80% 0 + 20  3 - 24 9.0 9.0 = =	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

# **National Power Center Market**

Changes in interest rates and how they will affect the availability of capital are likely to have a greater impact on values in the national power center market than the sector's underlying fundamentals, according to our Survey participants. "I don't expect any real changes in the intrinsic metrics for power centers, so I would expect property values to be most affected by changes in interest rates over the next 12 months," shares an investor.

While the anticipation of higher interest rates would likely negatively impact property values, a shortage of quality offerings could boost values. "With a growing number of buyers

vying to acquire a limited number of quality offerings, values could remain at a standstill," says another. Over the next 12 months, Survey participants believe that property values in the national power center market could fall as much as 5.0% and rise as much as 5.0% – the average expected change is an increase of 1.1%.

Surveyed investors also feel that property values will be impacted by the retail sales performances of anchor tenants in the near term, as well as the ability of property owners to maintain occupancy since many large-scale retail tenants continue to redefine marketing strategies and store formats. •

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 69.0% 55.0% to 80.0% Range Months of Free Rent(1): Average Range 0 to 12 % of participants using 50.0% = **Average Overall Cap Rates:** 75.0% big-box space 6.27% 85.0% big-box space 6.44% 100.0% big-box space 6.56%

\* ▼, ▲, = change from prior quarter

(1) on a ten-year lease

Table 2 NATIONAL POWER CE Second Quarter 2016	NTER MARKE	<b>XT</b>	g - 49		
*	CURRENT, O	~ LAST QUARTER	1 YEAR AGO 7 6 %	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR) <sup>a</sup> Range	6.00% - 10.00%		6.00% - 10.00% %	r	7.00% - 12.00%
Average	7.79%	7.75%	7.90%	8.17%	8.73%
Change (Basis Points)		+ 4	- 11	,-38 ·	-94 · 14-4 - 1
OVERALL CAP RATE (OAR)*			* * \$ \$ \$		1 250
Range	5.00% - 8.00%	5.00% - 8.00%	5.50% - 8.00% **	5.00% - 8.00%	6.00% – 9.5ö% i
Average	6.35%	6.33%	6.54%	6.67%	7.48%
Change (Basis Points)		+ 2	<del>-</del> 19	- 32	₹ 113.
RESIDUAL CAP RATE					* **
Range	5.00% - 9.00%	5.00% - 9.00% *	5.75% - 9.00%	6.00% - 9.00%	6.50% - 9.00%
Average	6.81%	6.79%	6.96%	7.19%	7.80%
Change (Basis Points)		+ 2	- 15	- 38	- 99
MARKET RENT CHANGE <sup>b</sup>					•
Range	0.00% - 5.00%	0.00% - 5.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%
Average	2.00%	- 2.00%	1.75%	1.17%	0.80%
Change (Basis Points)		.,	+ 25	+ 83,	+ 120
EXPENSE CHANGE <sup>b</sup>		•			,
Range "	2.00% - 3.00%	2.00% - 3.00%	2.00% - 3.00%	0.00% - 3.00%	2.00% - 3.00%
Average	2 75%	2.83%	2.83%	2.46%	2.80%
Change (Basis Points)	No.	<del>-</del> 8	` ÷8	+ 29`	-5 '
MARKETING TIME <sup>c</sup>			,		•
Range	2 – 18	2 – 18	2 – 18	2 - 18	3 – 12
Average	6.1	6.1	6.0	6.5	7.5
Change (▼, ▲, =)		=	<b>A</b>	▼ ,	▼
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

# **National Strip Shopping Center Market**

The cost of capital, the ability to maintain properties in Class-A condition, and constant store closings are a few of the key factors that surveyed investors feel will influence values in the national strip shopping center market over the next 12 months. "Interest rates will grow, presenting investors with alternative investment options outside of commercial real estate ownership," says a participant. "Store closings continue to burden many trade areas and retail assets," states another.

Over the next 12 months, Survey participants expect values in this retail category to dip as much as 5.0% and rise as much as 10.0%. The aver-

age forecasted change is an increase of 1.2% – below the 2.1% average from last quarter. While some investors tie their weakened outlook for property values to this market's "stalled recovery" or "continuous transformation," others point to above-market rental rates and "aggressive bidding that needs to come to an end."

Despite these challenges, certain investors believe that property values in this retail category will be the least affected within the retail sector over the next 12 months and anticipate strongly pursuing the best assets in the best metros, which they note as including Austin, Charleston, Miami, and San Jose. •

#### **KEY 2Q16 SURVEY STATS\***

#### **Tenant Retention Rate:**

Average 72.0%

Range 50.0% to 100.0%

#### Months of Free Rent(1):

Average 2 =

Range o to 6
% of participants using 55.0% ▼

#### **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 Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*		- · · · · · · · · · · · · · · · · · · ·			
Range	6.00% - 10.75%	6.00% - 10.75%	6.00% - 10.75%	6.50% - 11.50%	6.75% - 12.50%
Average	7.54%	7.66%	7.86%	8.19%	8.85%
Change (Basis Points)		- 12	- 32	- 65	- 131
OVERALL CAP RATE (OAR)*				-	
Range	4.50% 9.50%	4.75% - 9.50%	4.50% - 10.00%	5.50% - 9.50%	5.50% - 9.50%
Average	6.26%	6.41%	6.91%	6.95%	7 33%
Change (Basis Points)		- 15	- 65	- 69	- 107
RESIDUAL CAP RATE					
Range	4.75% - 9.75%	4.75% - 9.75%	5.00% - 9.75%	6.00% - 11.00%	6.50% - 12.00%
Average	6.50%	6.59%	7 13%	7.53%	7.97%
Change (Basis Points)		- 9	- 63	- 103	- 147
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 4.00%	0.00% - 4.00%
Average	1.89%	1.94%	1.84%	1.72%	1 32%
Change (Basis Points)		- 5	+ 5	+ 17	+ 57
EXPENSE CHANGE <sup>b</sup>			<u> </u>		
Range	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	2.50% - 3.00%	2.00% - 4.00%
Average	2.69%	2.72%	2 72%	2.94%	2.98%
Change (Basis Points)		- 3	- 3	- 25	- 29
MARKETING TIME <sup>c</sup>					
Range	2 – 12	2 – 12	2 - 12	3 – 18	2 - 18
Average	5.8	5.6	6.2	7.4	8.1
Change (▼, ▲, =)		<b>A</b>	▼	▼	▼

# **National CBD Office Market**

Surveyed investors remain pleased with the fundamental side of the national CBD office market highlighted by a still-declining overall vacancy rate, limited additions of new supply, and continuous growth in office-space-using employment sectors. In the first quarter of 2016, the overall vacancy rate was 11.8% – down from 11.9% a year ago and down from 13.5% three years earlier. "Absorption trends are still favorable to landlords, but the velocity of leasing has slowed a bit," says a participant.

With fewer tenants vying for space and the cost of capital anticipated to rise, some investors are sensing a plateau in valuations and are factoring in less aggressive market rent growth rate assumptions in their cash flow projections. "There is more uncertainty associated with CBD office building acquisitions in the near term," comments an investor. One exception may be trophy CBD office buildings, which participants note are still being aggressively pursued by both domestic and international investors.

As a whole, the average overall cap rate for this market slips three basis points this quarter to 5.55%, becoming the lowest average cap rate ever posted for this market in the Survey since its debut 22 years ago in 1994 when the average was 9.73%. ◆

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 69.0% Average 50.0% to 85.0% Range . Months of Free Rent(1): Average 0, to 15 86.0% % of participants using **Market Conditions Favor:** Buyers 0.0% Sellers 71.0% Neither 29.0%

\* ▼, ▲, = change from prior quarter

(1) on a ten-year lease

Table 4
NATIONAL CBD OFFICE MARKET
Casand Owenton 2016

•	CURRENT of the Control	LAST QUARTER,	1 YEAR AGO'	133 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)* Range	5.50% - 10.00%	5.50% – 10.00%	5.50% - 11.00%	5.25% – 11.00%	5.50% - 11.00% -
Average .	7.16%,	÷ 6.88%	7.34%	<b>%8.16%</b>	8.49%
Change (Basis Points)		+ 28	- 18	- 100	- 133
OVERALL CAP RATE (OAR)*	4.4	•		13	programme of the same
Range	3.50% - 7.50%.	3.50% - 7.50%	3.50% - 9 00%	4.25% - 10.00%	5.00% - 10.00%
Average	5.55%	5.58%	6.07%	6.63%.	6.95%
Change (Basis Points)		- 3	-,52,	- 108	- 140
RESIDUAL CAP RATE	· · · · · · · · · · · · · · · · · · ·				
Range	4.75% - 7.50%	4.75% - 7.50%	4.50% - 9.00%	5.25% - 11.00%	5.50% - 10.50%
Average	6.02%	6.02%	6.48%	7.23%	7.35%
Change (Basis Points)	•	0	- 46	- 121	- 133
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 7.00%	0.00% - 7.00%	0.00% - 7.00%	0.00% - 7.00%	(5.00%) - 5.00%
Average	2.86%	2.92%	2.43%	2.36%	1.39% .
Change (Basis Points)		- 6	+ 43	+ 50	+ 147
EXPENSE CHANGE <sup>b</sup>				•	*
Range	2.00% - 4.00% .	, 2.00% – 4.00%	1.00% - 3.00%	1.00% - 3.00%	2.00% - 4.00%
Average	2.79%	2.75%	2.61%	2.64%	2.78%
Change (Basis Points)	· At 15 A	+ 4	+ 18	+ 15	+1 **
MARKETING TIME				•	•
Range	2 - 15	2 - 15	2 - 15	2 – 18	2 - 12
Average	6.6	6.7	6.4	7.9	7.8
Change (▼, ▲, =) "		▼ ,	<b>A</b>	▼ . ,	,▼

# **National Suburban Office Market**

Even though the national suburban office market continues to perform well from a fundamental standpoint, a few investors expect a slowdown in value appreciation over the near term due to an expected rise in interest rates and a deceleration of U.S. economic growth. "While the large amount of capital pursuing commercial real estate continues to uphold pricing, it is offset by investor uncertainty with regard to the anticipation of rising interest rates," comments a participant.

Investors' outlook for slower value growth is reflected in a few key cash flow assumptions this quarter. First, this market's average overall cap rate moves up slightly to 6.43% – its highest quarterly average in the past year. Second, this market's average initial-year market rent change rate falls 50 basis points to 2.25% – its lowest quarterly average since midyear 2014. "It's getting tougher to maintain rent growth in some suburban office areas with speculative new construction," remarks an investor.

Lastly, the average amount of free rent offered on ten-year leases increases from 5 months to 6 months this quarter with 100.0% of surveyed investors now incorporating free rent in lease negotiations − up from 88.0% last quarter. ◆

KEY 2Q16 SU	RVEY STAT	rs*
Tenant Retention	n Rate:	
Average	64.0%	=
Range	50.0% to 75.0%	
Months of Free F	Rent <sup>(1)</sup> :	
Average	6	£
Range	0 to 12	
% of participants us	sing 100.0%	£
Market Condition	ns Favor:	
Buyers	14.0%	٨
Sellers	15.0%	•
Neither	71.0%	<b>A</b> .
*▼, ♣, = change from p	nor quarter	

(1) on a ten-year lease

Table 5
NATIONAL SUBURBAN OFFICE MARKET
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	5.75% - 10.00%	5.75% - 10.00%	6.00% - 10.00%	6.00% - 12.50%	6.00% - 12.50%
Average	7.59%	7.52%	7.69%	8.75%	8.73%
Change (Basis Points)		+ 7	- 10	- 116	- 114
OVERALL CAP RATE (OAR)*	· ·				•
Range	4.50% - 9.00%	4.50% - 9.50%	5.00% - 9.00%	5.00% - 11.00%	5.50% - 11.00%
Average	6.43%	6.38%	6.50%	7.55%	7.60%
Change (Basis Points)		+ 5	<del>-</del> 7	- 112	- 117
RESIDUAL CAP RATE					
Range	5.50% - 10.00%	5.50% - 10.25%	5.50% - 9.50%	6.00% - 11.00%	6.00% - 11.50%
Average	7.28%	7.23%	7.28%	8.04%	8.00%
Change (Basis Points)		+ 5	0	- 76	<b>- 72</b>
MARKET RENT CHANGE <sup>b</sup>	•				
Range	0.00% - 5.00%	0.00% - 5.00%	0.00% - 5.00%	(3.00%) - 4.00%	(5.00%) - 4.00%
Average	2.25%	2.75%	2.56%	1.55%	0.55%
Change (Basis Points)		<b>- 50</b>	- 31	+ 70	+ 170
EXPENSE CHANGE <sup>b</sup>					
Range	2.00% - 4.00%	2.00% - 4.00%	1.00% - 3.50%	1.00% - 4.00%	2.00% - 4.00%
Average	2 91%	2.91%	2.75%	2.65%	2.77%
Change (Basis Points)		0	+ 16	+ 26	+ 14
MARKETING TIME <sup>c</sup>					
Range	3 - 12	3 – 12	3 – 12	2 - 18	2 – 24
Average	6.1	6.3	6.3	8.8	8.8
Change (▼, ▲, =)		▼	▼	▼	▼
a. Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

# **Atlanta Office Market**

Our PwC real estate barometer places the Atlanta office market in the expansion phase of the real estate cycle given its steady demand trends, controlled supply, declining vacancy rates, and positive rental rate growth (see Forecast-1 on page 8). Based on data from Cushman & Wakefield, its first quarter 2016 overall vacancy rate fell 100 basis points year over year while its average asking rental rate grew 2.4%.

Even though investment sales in the first three months of 2016 were significantly below the heated pace of the prior quarter, this market's average overall cap rate falls for the tenth consecutive quarter to 7.10% (see Table 6). Still, this figure remains above the composite quarterly average of 6.54% for the Survey's 19 city-specific office markets. Over the next six months, investors unanimously foresee overall cap rates holding steady in Atlanta.

While investor sentiment is quite positive with respect to underlying fundamentals in this market, Survey participants do draw attention to issues that may negatively impact market values in the near term. Top concerns include the ability of Atlanta to sustain its recent high level of job growth; unpredictable external events that could hinder economic growth; and the availability and cost of debt.

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 67.0% Average 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) 7.10% CBD 6.78% Suburbs 7.43% ▼

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

	<u> </u>	<del></del>	<del></del>		· · · · · · · · · · · · · · · · · · ·
Table 6 ATLANTA OFFICE MAR Second Quarter 2016	RKET		<u>.</u>		, , , , ,
	CURRENT	· LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*				, <u>, , , , , , , , , , , , , , , , , , </u>	程序 "中心、其中。
Range	6.00% - 9.50%	6.00% – 10.00%	6.00% - 10.00%	7.50% - 10.50%	7.75%15.00%
Average	7.98%	8.34%	8.42%	:··· 8.95%	9.95%
Change (Basis Points)	,	- 36	<del>-</del> 44	- 97	<del>-</del> 197
OVERALL CAP RATE (OAR) <sup>a</sup>			de Se	<del></del>	and the first term
Range	5.25% - 9.00%	5.25% - 9.25%	5.75% - 9.25%	*, 6.75% – 9.25%	7.00% <b>–</b> 11.00% *
Average	7 ìo%	7.33%	7.56%	8.01%	8 63%
Change (Basis Points)	1 f *	23	- 46	_ 91	- 153
RESIDUAL CAP RATE		* %			The Frederick
Range	6.00% - 9.00%	6.00% - 9.25%	6.00% - 9.25%	7.00% - 9.25%	7.00% ~ 11.00%
Average	7.41%  -	7.38%	7.39%	7.91%	8.80%
Change (Basis Points)		+3 *	+ 2	- 50	,- 139
MARKET RENT CHANGE <sup>b</sup>	1				* je
Range	0.00% - 7 00%	0.00% - 7.00%	0.00% - 6.00%	(1.00%) - 3.00%	(3.00%) – 3.00%
Average	3.50%	3.60%	3.08%	1.04%	0.07%
Change (Basis Points)	, ; 	10	+ 42	+ 246	+ 343
EXPENSE CHANGE <sup>b</sup>	7- 7- 7- 7- 7- 7- 7- 7- 7- 7- 7- 7- 7- 7				
Range	0 00% - 3.50%	0.00% - 3.50%	0.00% - 3.50%	0.00% - 3.00%	0.00% - 3.00%
Average	2.28%	2.28%	2.31%	2.25%	2 32%
Change (Basis Points)		0	-3	+ 3 ,	-4 ·
MARKETING TIME					\$ • e-
Range	1 – 12	2 – 12	1 - 12	1 – 12	2 - 15
Average	4.5	4.6	4.3	5.5	8.3
Change (▼, ▲, =)		· <b>v</b>		<u> </u>	<u> </u>
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months		***	*

## **Boston Office Market**

While solid tenant demand and a lack of new supply have been positive trends in the Boston office market for a few years now, our surveyed investors note that new supply is being delivered at a time when some tenants are also returning unneeded space to the market. The end result could be a rise in vacancy. "An upward change in vacancy could impact rental rates in an unfavorable way for many landlords," says a participant. For now, our Survey reveals that investors are holding steady with regard to initial-year market rent change rate assumptions, which range from 0.00% to 7.00% and average 3.83% this quarter (see Table 7).

Investors are drawn to this office market due to its growing economic focus on technology and life sciences. Increasing tenant demand from these innovative sectors, particularly in Boston's suburbs, is helping to offset consolidations by traditional office-space users. From a buyer's standpoint, our investors report that prices range from 80.0% to 110.0% of replacement cost and average 88.0% — below the average of 91.8% for the Survey's 19 city-specific office markets.

As in other gateway office markets, investors here continue to monitor changes in interest rates, capital flows, and U.S. labor markets. •

#### **KEY 2Q16 SURVEY STATS\***

#### **Tenant Retention Rate:**

Average 68.0% =

Range 50.0% to 80.0%

#### Months of Free Rent(1):

Average 5 =

Range 0 to 10

% of participants using 83.0% \(\nbegin{align\*}
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#### **Average Overall Cap Rates:**

Market (as a whole) 6.19%

CBD 5.44% **★**.

Suburbs 6.94% **=** 

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

# Table 7 BOSTON OFFICE MARKET Second Quarter 2016

a Rate on unleveraged, all-cash transactions

CURRENT LAST QUARTER 1 YEAR AGO 3 YEARS AGO 5 YEARS AGO DISCOUNT RATE (IRR)\* Range 6.00% - 10.00% 6.00% - 10.00% 6.25% - 10.00% 6.50% - 13.00% 7.50% - 15.00% 7.76% 7.85% 8.57% 9.48% Average 7.49% Change (Basis Points) - 36 - 108 - 199 OVERALL CAP RATE (OAR)\* 4.00% - 9.00% 4.00% - 8.00% 4.00% - 9.00% 4.75% - 11.00% 5.75% - 12.00% Range 8.00% Average 6.19% 6.15% 6.40% 7.04% Change (Basis Points) - 181 + 4 - 21 RESIDUAL CAP RATE 5.00% - 8.25% 5.25% - 10.00% 6.00% - 11.00% 6.00% - 12.00% Range 5.00% - 9.00% 6.76% 8.22% 6.78% 7.03% 7.52% Average Change (Basis Points) - 25 - 74 - 144 MARKET RENT CHANGE<sup>b</sup> 0.00% - 10.00% 0.00% - 4.00% Range 0.00% - 7.00% 0.00% - 7.00% 0.00% - 5.50% 1 00% Average 3.83% 3.83% 3.50% 3.92% Change (Basis Points) - 9 + 283 + 33 EXPENSE CHANGE<sup>b</sup> 2.50% - 4.00% Range 0.00% - 3.00% 2.50% - 4.00% 3.00% - 4 50% 0.00% - 4.50% 2 71% 3.04% 3.04% 3.13% 2.81% Average Change (Basis Points) - 10 - 33 -33- 42 MARKETING TIME 2 - 12 2 -- 12 2 - 12 2 - 12 Range 2 - 12 Average 6.2 6.2 6.2 5.9 6.7 Change  $(\nabla, \blacktriangle, =)$ ▼

c In months

b Initial rate of change

# **Charlotte Office Market**

Charlotte's suburban office sector is seeing an abundance of new supply, as well as compelling levels of absorption. In the first quarter of 2016, the suburbs accounted for all of the new product deliveries and 74.0% of the total net absorption, as per Cushman & Wakefield. In addition, there are close to 1.6 million square feet of new space underway in the suburbs, most of which are due for completion this year.

In addition to robust construction levels, steady sales activity in the suburbs led to a 15-basis-point decline in its average overall cap rate this quarter. As shown in the Key 2Q16 Survey Stats table, the suburban cap

rate of 7.33% remains above the CBD average of 6.65%. The average cap rate for the overall Charlotte office market slips 15 basis points this quarter to 6.99% – dipping below 7.00% for the first time since the fourth quarter of 2007.

While this market continues to see cap rate compression, the number of investors seeking high-quality urban assets here may be limited. "We're observing that prices for trophy properties are holding steady, but the size of the buyer pool is shrinking," says a participant. The most recent trophy asset sale was One Wells Fargo Center, which sold in March 2016 for \$285.00 per square foot. •

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 71.0% Average 65.0% to 80.0% Range Months of Free Rent(1): Average Range 1 to 10 % of participants using 100.0% = **Average Overall Cap Rates:** Market (as a whole) 6.99% CBD 6.65% 7-33% ▼ Suburbs \* ▼, ▲, = change from prior quarter (1) on a ten-year lease

Second Quarter 2016				•	
<u> </u>				- TELES 160	- XTARS 400
	CURRENT 1	· LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*		· · · · · · · · · · · · · · · · · · ·	,	- 000/ 10009/	8.00% - 12.00%
Range	6.50% - 11.00%	6.50% - 11.00%	7.00% - 11.50%		
Average	8.48%	8.53%	8.70%		9.51%
Change (Basis Points)		<del>- 5</del>	- 22	- 79	- 103 **
OVERALL CAP RATE (OAR)*	7.2				• * * · · · · · · · · · · · · · · · · ·
Range	5.50%~ 8.75%	5 50% - 9.00%	5.50% - 9.00%	· 6.00% – 9.50%	6.50% - 10.00%
Average	6.99%	7.14%	7.21%	7.78%	8.41%
Change (Basis Points)		- 15	- 22	<del>- 79</del>	- 142 · ' :
RESIDUAL CAP RATE			•		-
Range	5.50% - 8.50%	5.50% - 8.50%	5.50% - 8.75%	6.00% - 9.00%	7.00% - 10.00%
Average	7.11%	7.24%	7.29%	7.66%	8.69%
Change (Basis Points)		- 13	- 18	- 55	- 158
MARKET RENT CHANGE <sup>b</sup>			,		1
Range	0.00% - 6.00%	0.00% - 6.00%	0.00% - 6.00%	0.00% - 5.00%	0.00% - 2.00%
Average	3 20%	3.30%	3.31%	2.25%	0.50%
Change (Basis Points)		- 10	- 11	+ 95	+ 270
EXPENSE CHANGE <sup>b</sup>		`			**
Range	1.80% - 3.00%	1.80% – 3.00%	1.75% - 3.00%	2.00% - 4.00%	2.00% – 3 00%
Average	2.49%	2.59%	2.58%	2.94%	2.79%
Change (Basis Points)	4 49	- 10	-9	<del>- 45</del>	- 30
MARKETING TIME			74	<u>-</u>	•
Range	1-12	1 – 12	1 - 12	2 - 12	2 – 12
Average	4.5	4.5	4.2	5.1	62 -
Change (▼, ▲, =)		=	,	▼ ,	▼

# **Chicago Office Market**

A recent slowdown in leasing velocity and net absorption in the Chicago office market's CBD has investors carefully monitoring the new supply entering its core by yearend 2017. "My greatest concern here is oversupply," says an investor. While downtown tenants in immediate need of quality office space are finding few opportunities, this situation should reverse itself when the 2.2 million square feet of new space are delivered by year-end 2017. "As tenants move about the CBD, shuffling into new space, increases in vacancy are on the horizon," remarks another.

In Chicago's suburban office sector, positive absorption trends and a

lack of new supply have helped to keep overall vacancy below its long-term average. Nevertheless, "very few investors are looking to acquire suburban office assets in Chicago." Overall, sales activity was down on both a rolling 12-month and quarterly basis in the Chicago office market as of the first quarter of 2016. Over the near term, it is expected that investor sentiment and foreign capital flows will guide this market's pricing and sales volume. While certain Class-A office buildings with stabilized rent rolls could see cap rate compression, Class-B properties will most likely need very strong rent rolls in order to trade once the new supply is delivered. ◆

KEY 2Q16 S	URVEY STAT	rs*
Tenant Retentio	on Rate:	
Average	69.0%	$\blacksquare$
Range	60.0% to 85.0%	
Months of Free	Rent(1):	
Average	11	=
Range	6 to 18	
% of participants ı	100.0%	=
Average Overall	Cap Rates:	
Market (as a whole	e) 7.36%	A

6.04%

8.68%

CBD

Suburbs

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

# Table 9 CHICAGO OFFICE MARKET Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	6.00% - 12.00%	6.00% - 12.00%	6.00% - 12.00%	6.50% - 13.00%	6.50% - 13.00%
Average	8.61%	8.58%	8.68%	9.09%	9.39%
Change (Basis Points)		+ 3	-7	- 48	- 78
OVERALL CAP RATE (OAR)				W	10.0
Range	5.00% - 10 00%	5.00% - 10.00%	5.00% - 11.00%	5.75% - 11.00%	6.00% - 11.00%
Average	7.36%	7.34%	7.43%	8.04%	8.27%
Change (Basis Points)		+ 2	-7	- 68	- 91
RESIDUAL CAP RATE				•	
Range	5.50% 11.00%	5.50% - 10.00%	5.50% - 10.00%	6.00% - 11.00%	7 00% – 11.00%
Average	7.72%	7.65%	7.64%	8.01%	8.32%
Change (Basis Points)		+ 7	+ 8	- 29	<b>- 60</b>
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 4 50%	0.00% - 4.50%	0.00% - 4.00%	0.00% - 3.00%	(10.00%) - 3.00
Average	2.00%	2.00%	2.07%	1.44%	0.06%
Change (Basis Points)		o	-7	+ 56	+ 194
EXPENSE CHANGE <sup>b</sup>					
Range	2.00% - 5.00%	2.00% - 5.00%	2.00% - 4.00%	1.00% - 3.00%	1.50% - 3.00%
Average	3.14%	3.14%	2.93%	2.78%	2.83%
Change (Basis Points)		0	+ 21	+ 36	+ 31
MARKETING TIME <sup>c</sup>	•				
Range	2 - 8	2 – 8	2 - 8	3-9	2 - 15
Average	4.2	4.2	4.1	4.9	7 2
Change (▼, ▲, =)		=	<b>A</b>	▼	▼

# **Dallas Office Market**

This quarter's Survey results reveal that most investors believe that current market conditions in the Dallas office market favor sellers. As a result of strong investment demand, Dallas had a 20.6% office stock acquisition percentage compared to the 44-metro composite average of 14.4% for the four quarters leading up to first quarter 2016 (see Chart CAT-1 on page 13).

Investors are attracted to Dallas for its expanding and diverse economy, as well as its favorable cost of doing business. These attributes are underscored by the quarterly shifts in key investment criteria. First, this market's average overall cap rate slips

16 basis points to 6.84% while its average initial-year market rent change rate rises to 3.47% (see Table 10). While its average cap rate is above the aggregate average of 6.54% for the 19 city-specific office markets surveyed, the average market rent change rate exceeds the collective average of 2.81%.

Amid a bright outlook, survey participants are monitoring the potential impact that new supply and interest rate increases could have on future property values here. Investors expect property value changes ranging from a decrease of 2.0% to an increase of 20.0% with an average expected value change of +3.6% in the coming year. •

KEY 2Q16 S	URVE	Y STĄT	rs*
Tenant Retenti	on Rate:		
Average		69.0%	=
Range	60.0% t	0 75.0%	
Months of Free	Rent <sup>(i)</sup> :	1	
Average	r	7	=
Range		2 to 12	
% of participants	using	75.0%	=
Average Overal	l Cap Ra	tes:	
Market (as a who	le)	6.84%	▼
CBD,		6.63%	•
Suburbs		7.05%	▼
*▼, ▲, = change from (1) on a ten-year lease	prior quarte	r	

Table 10
DALLAS OFFICE MARKET
Second Quarter 2016

·	CURRENT	· LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*	1			-Mn	Mr. 358 (A. 8)
Range	6.00% = 11.00%	6.00% - 11.00%	6 00% – 11:00%	6.00% - 11.00%	7.75% - 13.00%
Average	8.14%	8.18%	8.23%	8.49%	9.35% '1
Change (Basis Points)	i	- 4	<del>-</del> 9	- 35	- 121
OVERALL CAP RATE (OAR)	. ,			•	Mary And Alcoholog
Range	5.00% <del>-</del> 9.00%	5.00% - 9.00%	5.00% - 9.00%	5.50% - 10.00%	6.50% <del>,-</del> 11.00%
Average	6.84%	7.00%	7.09%	7.76%	8.24%
Change (Basis Points)	?	- 16	- 25	- 92	- 140
RESIDUAL CAP RATE			-		-
Range	6.00% - 9:00% *	5.75% - 9.00% `*	6.00% <b>–</b> 9.00%	6.50% - 10.00%	7.00% - 10.00%
Average	7.37% .	7.28%	7.41%	7.96%	8.48%
Change (Basis Points)	*	+ 9	-4	- 59	- 111
MARKET RENT CHANGE <sup>b</sup>					
Range	0 00% - 6.00%	0,00% - 6.00%	1.00% - 10.00%	0.00% - 6.00%	0.00% - 3.00%
Average	3.47%	3.41%	4 00%	2.63%	1.08%
Change (Basis Points)	3	+ 6	- 53	+ 84	+ 239
EXPENSE CHANGE <sup>b</sup>		•	-		•
Range	2.00% - 3 00%	2.00% = 3.00%	2.00% - 3.00%	1.00% - 3.00%	1.00% – 3.00%
Average	2.91%	2.91%	2.88%	2.75%	2.67%
Change (Basis Points)	35 	0,	+3	+ 16	+ 24
MARKETING TIME				<u>.</u>	
Range	1 - 12	1 – 12	1 - 12	1 - 24	3 - 12
Average	4.6	4.6	4.5	7.0	6.2
			•		▼

# **Denver Office Market**

This quarter, the average overall cap rate for the Denver office market slips four basis points to 6.45% – the lowest level seen in this market since the fourth quarter of 2007. While the average cap rate for the suburbs holds steady, the average for the CBD falls to 5.93% – below the aggregate average overall cap rate of 6.06% for the CBDs in the Survey's 19 city-specific office markets.

Although the CBD's lower cap rate average reveals investors' preference for downtown assets, growing sublease space is a concern. "Sublease space in the CBD is holding steady, but values will drop quickly if it increases significantly," states an investor. Survey

participants also highlight CMBS debt availability, the presidential election, job growth, and the ability of landlords to maintain flexibility to accommodate the needs of growing tenants as key concerns for this office market in the coming months.

Our PwC real estate barometer places the Denver office market in the late stage of the expansion phase by the end of 2016 (see Forecast-1 on page 8). With more than two million square feet of new supply entering this market over the next 18 months, this metro is expected to see downward pressure on both occupancy rates and rent growth as it enters the contraction phase. •

# KEY 2Q16 SURVEY STATS\* Tenant Retention Rate: Average 68.0% & Range 50.0% to 75.0% Months of Free Rent(\*):

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

Average Overall Cap Rates:

Market (as a whole) 6.45% ▼

CBD 5.93% ▼

Suburbs 6.98% =

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

Table 11

DENVER OFFICE MARKET

Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	6.50% - 11.00%	6.75% – 11.00%	6.50% - 11.00%	6.50% – 14.00%	7.75% - 15.00%
Average	7.98%	7.88%	7.93%	8.90%	9.80%
Change (Basis Points)		+ 10	+ 5	<b>- 92</b>	- 182
OVERALL CAP RATE (OAR)					
Range	5.00% - 9.00%	5.00% - 9.00%	4.50% - 9.00%	4.50% - 9.00%	6.50% - 11.00%
Average	6.45%	6.49%	6.57%	6.93%	8 16%
Change (Basis Points)		- 4	- 12	- 48	- 171
RESIDUAL CAP RATE					
Range	5.75% - 9.50%	5.75% - 9.50%	6.00% - 9.50%	5.00% - 10.00%	7.00% - 11.00%
Average	7.22%	7.18%	7.33%	7.64%	8.42%
Change (Basis Points)		+ 4	- 11	- 42	- 120
MARKET RENT CHANGE <sup>b</sup>			·		
Range	3.00% - 5.00%	2.00% - 4.00%	2.00% - 5.00%	(10.00%) - 10.00%	(20.00%) – 5 005
Average	3.67%	3.20%	3.60%	2.80%	(1.10%)
Change (Basis Points)		+ 47	+ 7	+ 87	+ 477
EXPENSE CHANGE <sup>b</sup>					
Range	2.00% - 5.00%	2.00% - 3.00%	2.00% - 3.00%	3.00% - 5.00%	3.00% - 3.00%
Average	3.00%	2.80%	2.80%	3.30%	3.00%
Change (Basis Points)		+ 20	+ 20	- 30	0
MARKETING TIME	-				
Range	1 – 6	1 – 6	1 – 6	2 - 12	2 – 12
Average	41	4.0	3.9	5.0	6.3
Change (▼, ▲, =)		<b>A</b>	<b>A</b>	▼	▼
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

# **Houston Office Market**

Lingering low oil prices are stalling economic growth and weakening the underlying fundamentals of the Houston office market. In the first quarter of 2016, overall vacancy rose to 16.8% from 13.7% a year ago. Over that that time, Houston had the fifth largest increase in CBD vacancy and the third largest rise in suburban vacancy among the 74 markets tracked by Cushman & Wakefield. In addition, investors are uneasy about the growing amount of vacant sublease space in both the CBD and suburbs.

With year-over-year total leasing activity down 16.7% through the first three months of 2016, tenants here have a wide variety of space options.

As a result, our participants agree that free rent concessions exist in this market and average ten months on a ten-year lease (see Key 2Q16 Survey Stats table.) This figure is an increase from eight months last quarter and above the average of 6.4 months among the 19 city-specific office markets in our Survey.

Taking into account the economic pressures in Houston, 83.0% of investors believe that local market conditions favor buyers while the balance view the market as neutral − equally favoring buyers and sellers. Despite such sentiment, local sales activity has halted abruptly as investors adopt a wait-and-see attitude. ◆

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** Average 65.0% 50.0% to 80.0% Range Months of Free Rent(1): Average-10 Range 1 to 24 % of participants using. 100.0% **Average Overall Cap Rates:** Market (as a whole) 7.05% CBD 6.63% 7.48% Suburbs \* ▼, ▲, = change from prior quarter (1) on a ten-year lease

Table 12
<b>HOUSTON OFFICE MARKET</b>
Second Quarter 2016

	CURRENT (1973)	LAST QUARTER	1 YEAR AGO 75 .*	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*			7.00		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Range	6.50% - 12.00%		6.50% – 11.50%	7.00% - 14.00%	7.50% - 15.00% -
Average	8.68%	* 8.68%	8.44%	9.17%	9.54%
Change (Basis Points)		0	+ 24	- 49	<b>- 86</b>
OVERALL CAP RATE (OAR)	and the same		7 m 59.	. 4	11 一、多种情况
Range	5.50% – 10.00%	5.50% – 10.00% ·	5.50% - 10.00%	5.00% - 11.00%	6.50% - 11.00%
Average	7.05%	7.13%	6.71%	7.68%	8.22%
Change (Basis Points)	- ş	. 1 – 8	+ 34	- 63	'- 117'
RESIDUAL CAP RATE		•			ť
Range	6.00% - 10.00%	5.50% - 10.75%	5.50% <del>-</del> 10.75%	5.00% - 11.00%	7.00% - 11.00%
Average	7.48%	7.35%	7.23%	7.90%	8.29%
Change (Basis Points)	•	+ 13	+ 25	- 42	- 81
MARKET RENT CHANGE <sup>b</sup>	3			p+ 3	
Range	(8.00%) – 3 00%	(8.00%) – 5.00%	(4.00%) – 5.00%	2.00% - 5.00%	0.00% - 3 00%
Average	(0.64%)	(0.43%)	1.08%	3.08%	0 83%
Change (Basis Points)		- 21 ,	- 172	372	- 147
EXPENSE CHANGE <sup>b</sup>			1		, .
Range	2.00% - 3.00%	2.00% - 3.00%	2.00% - 3.00%	2.00% - 3.00%	2.00% – 3.00%
Average	2.79%	2.79%	2.83%	2.67%	2.83%
Change (Basis Points)	•	0	- 4	+ 12	- 4
MARKETING TIME	1			Mg.	1
Range	1 – 12	1 – 13	2 - 12	3 – 12	3 - 12
Average	7.5	7.5	7.1	6.7	7.2
Change (▼, ▲, =)		=	<b>A</b>		. 🔺
a Rate on unleveraged, all-cash transactions	b. Initial rate of change	c In months			

# **Los Angeles Office Market**

Three key factors that will influence property value changes in the Los Angeles office market over the next 12 months are interest rate changes, the availability of competitive CMBS capital, and the cost of debt, according to Survey participants. "Trends in capital flows will be critical to the performance of this market and its value trends," attests an investor. Even though investors' forecast for value appreciation here has slipped slightly over the past three months, its average of 3.6% is still above the aggregate average of 2.4% for the Survey's 19 city-specific office markets.

In downtown Los Angeles, investors are keeping an eye on "all

the new product being delivered over the next 24 months that could have a negative impact on its fundamentals and values." At the same time, many investors applaud the revitalization occurring in the CBD, which includes creative conversions and new residential/mixed-use projects. One of the largest ones is The Bloc, which will bring a 498-room hotel, a renovated Macy's, and additional creative office space to the financial district.

Sensing an approaching market peak, Survey participants emphasize the importance for "disciplined underwriting and realistic cash flow assumptions" when pricing assets in this market now. •

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 69.0% Average 60.0% to 80.0% Range Months of Free Rent<sup>(1)</sup>: 5 = Average Range 0 to 10 % of participants using 100.0% **Average Overall Cap Rates:** Market (as a whole) 5.75% CBD 5.55% Suburbs 5.95%

♥, ♣ , = change from prior quarter

(1) on a ten-year lease

Table 13
LOS ANGELES OFFICE MARKET
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*		· · · · · · · · · · · · · · · · · · ·			
Range	5.00% - 9.00%	5.00% - 9.00%	5.75% - 10.00%	5.75% - 10.00%	7 00% - 12.00%
Average	6.93%	6.90%	7.34%	7.82%	8 86%
Change (Basis Points)		+ 3	- 41	- 89	- 193
OVERALL CAP RATE (OAR)*				•	
Range	4.50% - 7.50%	4.50% - 7.25%	4.50% - 7.25%	4.50% - 8.50%	5.00% - 9.00%
Average	5.75%	5.69%	5.79%	6.61%	7.25%
Change (Basis Points)		+ 6	-4	- 86	- 150
RESIDUAL CAP RATE					
Range	5.00% - 8.00%	5.00% - 8.00%	5.00% - 8.00%	6.00% - 9.00%	6.50% - 9.00%
Average	6.70%	6.70%	6.70%	7.10%	7.96%
Change (Basis Points)		0	0	- 40	- 126
MARKET RENT CHANGE <sup>b</sup>					
Range	2 00% - 7.00%	0.00% - 7.00%	0.00% - 7.00%	0.00% - 7.50%	(1.00%) - 4.00%
Average	4.00%	3.90%	4.00%	3.13%	1.00%
Change (Basis Points)		+ 10	o	+ 87	+ 300
EXPENSE CHANGE <sup>b</sup>					
Range	2.00% - 3.00%	2.00% - 3.00%	1.00% - 3.00%	1.00% - 3.00%	1.00% - 3.00%
Average	2.70%	2.80%	2.70%	2.75%	2.75%
Change (Basis Points)		- 10	0	- 5	-5
MARKETING TIME <sup>c</sup>					
Range	1 - 12	1 – 12	1 - 12	1 – 12	1 – 12
Average	4.7	4.7	4.7	5.2	5.8
Change (▼, ▲, =)		=	=	▼	▼
a Rate on unleveraged, all-cash transactions	b. Initial rate of change	c. In months			

# **Manhattan Office Market**

.. Although our PwC real estate barometer places the Manhattan office market in the latter stages of expansion, heading into contraction by year-end 2018, a variety of concerns linger in the minds of investors. Some are concerned about international factors, like terrorism and China's uncertain economy, while others are closely watching interest rate trends and their impact on the cost of capital, yields, and property values. "You can't hide from these things, but you can try to minimize your exposure to them," says a participant.

Concerns about asset pricing and value trends, as well as the thought that this market is at or close to

peaking, are reflected in this market's quarterly cash flow assumptions. First, its average overall cap rate holds steady at 5.15% for the fifth straight quarter (see Table 14). Second, its average initial-year market rent change rate declines 38 basis points to 3.54% – the third quarterly decline for this assumption. And third, concessions remain an integral part of lease negotiations.

For investors looking to acquire assets here, a lack of quality offerings is another noted concern. "The scarcity of quality assets for sale could keep pricing elevated even as this office market slips past its peak," comments an investor.

#### **KEY 2Q16 SURVEY STATS\***

#### **Tenant Retention Rate:**

Average 68.0% 50.0% to 75.0% Range

#### Months of Free Rent(1):

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

#### **Market Conditions Favor:**

0.0% **Buyers** 67.0% Sellers Neither 33.0% = ▼. ▲. = change from prior quarter

(1) on a ten-year lease

#### Table 14 MANHATTAN OFFICE MARKET Second Quarter 2016

5 YEARS AGO LAST QUARTER 3 YEARS AGO 1 YEAR AGO 4 CURRENT» ~ Si. Figur. DISCOUNT RATE (IRR)\* 6.75% - 10.00% 6.00% - 9.00% 6.00% - 8.50% 5.50% - 9.00% -5.50% - 9.00% Range n À 7.00% 7.25% 7 83% 6.85% 6.85% Average ·- 98 - 15 Change (Basis Points) - 40 1966年1970日新维 OVERALL CAP RATE (OAR)\* 3 75% - 8.00% 4.00% - 6.00% 4.00% - 8.00% - 8.00% 3.75% - 8.00% Range 3.75% 4.96% 5.83% \*Average 5.15% 5.15% 5.15% + 19 Change (Basis Points) RESIDUAL CAP RATE 5.00% - 8.00% 5.00% - 7.00% 5.00% - 8.50% 4.75% - 8.00% 5.00% - 8.00% Range 6.50% 5.98% 6.02% 5.79% Average 5.94% - 56 Change (Basis Points) - 8 - 4 + 15 MARKET RENT CHANGE<sup>b</sup> 0.00% - 10.00% 0.00% - 10.00% 0.00% - 6.50% 0.00% - 7.00% 0.00% - 7.00% Range 3.54% 3.92% 4.00% 4.65% 3.50% Average J 111 Change (Basis Points) \_- 38 - 46 +4 EXPENSE CHANGE<sup>b</sup> 1.00% - 3.00% 0.00% - 3.00% 2.00% - 3.00% 1.00% - 4.00% Range 1.00% - 3.00% 2.75% 2.75% 2.83% 2.67% 2.92% Average + 8 - 8 - 17 Change (Basis Points) MARKETING TIME 3 - 6 1 – 9 3 - 6 1 - 6Range 1 - 6 4.2 \* Average 4.8 4.1 '4·3 <sub>+</sub> 4.3 Ÿ Change (**▼**, **▲**, =) b. Initial rate of change c. In months a Rate on unleveraged, all-cash transactions

# Northern Virginia Office Market

The overall vacancy rate for the Northern Virginia office market remains well above it long-term historical average since 2010, giving investors reason to reflect on their strategies and future plans. "It's hard to properly assess this market with so many pockets of weakness," remarks a participant. As a whole, the Northern Virginia office market registered negative 479,000 square feet of net absorption in the first quarter of 2016 as several large exits by federal contractors hit the market, as per Cushman & Wakefield. In the first quarter, its overall vacancy rate stood at 21.4%, up from 21.2% at year-end 2015 and well above its long-term average

of 15.9% since 2010.

Unfortunately for office building owners, several large developments either continued or entered into construction in the first quarter - Capital One's one-million-square-foot headquarters expansion; Comstock Partners 350,000-square-foot speculative office building at Wiehle-Reston East Metro Station; and Lerner Enterprises' speculative 475,000-squarefoot building at 1775 Tysons Boulevard. At a time when some tenants are returning office space to the market and the majority of leasing activity consists of renewals, the addition of new supply presents additional challenges to property owners. ◆

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** Average 66.0% = 50.0% to 75.0% Range Months of Free Rent(1): Average 7 Range 2 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 15
NORTHERN VIRGINIA OFFICE MARKET
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	6 00% - 9.50%	6.00% - 9.50%	6.25% - 9.50%	7.00% - 10.00%	7.50% - 10.00%
Average	7.75%	7.75%	7.83%	8.30%	8.75%
Change (Basis Points)		0	- 8	- 55	- 100
OVERALL CAP RATE (OAR)*					
Range	5.00% - 8.50%	5.00% - 8.50%	5.00% - 8.50%	5.75% - 9.00%	5.75% - 9.00%
Average	6.88%	6.88%	6.93%	7.15%	7.65%
Change (Basis Points)		o	- 5	- 27	- 77
RESIDUAL CAP RATE					
Range	5.75% - 8.50%	5.75% - 8.50%	5.75% - 8.50%	6.00% - 9.00%	7 00% – 9.00%
Average	7.25%	7.25%	7.25%	7-55%	7.90%
Change (Basis Points)		o	0	- 30	- 65
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 3.00%	0.00% - 3.00%	(5.00%) - 3.00%	(5.00%) - 3.00%	0.00% - 3.50%
Average	1 30%	1.30%	o 80%	1.00%	1.58%
Change (Basis Points)		0	+ 50	+ 30	- 28
EXPENSE CHANGE <sup>b</sup>					
Range	1.00% - 3.00%	1.00% - 3.00%	1.00% - 3 00%	1.00% - 3.00%	1.50% - 3.00%
Average	2.40%	2.40%	2.40%	2.54%	2.83%
Change (Basis Points)		o	o	- 14	- 43
MARKETING TIME					
Range	3 - 9	3 - 9	3 - 9	3 - 9	1 – 9
Average	4.7	4.7	4.9	5.5	5 3
Change $(\nabla, \triangle, =)$		=	▼	▼	▼
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

# **Pacific Northwest Office Market**

Known as a top technology hub in the country, the Pacific Northwest office market continues to impress investors with strong job growth in both its high-tech and STEM (science, technology, engineering, and math) sectors. While many view Seattle's esteemed tech-scene performance . comparable to that of Silicon Valley, Portland has started to come up more and more in favorable conversations as its tech sector continues to expand. "Portland hasn't received as much 'attention for what is happening in its tech sector, but it is quite healthy," comments a participant.

In Bellevue, an upcoming wave of new speculative development has

some investors a bit nervous. "Buyers are being more conservative with underwriting in Bellevue than in Seattle," reveals an investor. "New supply could cause a downward shift in rental rates," says another. As a whole, this market's average initial-year market rent change rate assumption slips 20 basis points this quarter – its third consecutive quarterly decline. In addition, the high end of the range for this assumption drops from 10.00% to 7.00% (see Table 16).

Over the near term, investors may pause acquisitions until they see how this market performs amid new supply, tenant relocations, and a general decrease in tenant space needs. •

KEY 2Q16 SURVEY STATS*								
Tenant Retention Ra	Tenant Retention Rate:							
Average	68.0% =							
Range 50.0	% to 80.0%							
Months of Free Ren	, , (1);							
Average	6 🛦							
Range	0 to 12							
.% of participants using	100.0% =							
Average Overall Cap	Average Overall Cap Rates:							
Market (as a whole)	5.99% <b>V</b>							
CBD,	5.58% <b>Ý</b> .							
Suburbs	6.41%							
* <b>V</b> , <b>A</b> , = change from prior quality on a ten-year lease	uarter *							

Table 16
PACIFIC NORTHWEST OFFICE MARKET
Second Quarter 2016

6.11	9% - 9.00% 9% - 9.00% 9% - 9.00%	- 28 4.00% - 9.00% 6 20% - 21 5.00% - 9.00% 6.67%	8.08% - 62 4.50% - 9.00% 6.66% - 67	7.00% – 14.00% 9.71% 225 5.50% – 12.00% 8.01% 202-17-97 6.50% – 10.00% 8 19% 164
7.50 - 4 - 8.00% 4.00 6.11' - 12 - 9.00% 5.00 6.56	9% - 9.00% 9% - 9.00% 9% - 9.00%	7.74% - 28 4.00% - 9.00% 6 20% - 21 5.00% - 9.00% 6.67%	8.08% - 62 4.50% - 9.00% 6.66% - 67 5.00% - 9.00%	9.71% = 225 5.50% - 12.00% 8.01% = 202 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -
- 4 - 8.00% 4.00 6.11' - 12 - 9.00% 5.00 6.56	0% - 9.00%	- 28 4.00% - 9.00% 6 20% - 21 5.00% - 9.00% 6.67%	- 62 4.50% - 9.00% 6.66% - 67 5.00% - 9.00% 7.03%	225 5.50% - 12.00% 8.01% - 202 - 1 9 J 6.50% - 10.00% 8 19%
- 8.00% 4.00 6.11' - 12 - 9.00% 5.00 6.56	0% - 9.00% 4 % 9.00% 5 % 9.00% 5	4.00% - 9.00% 6 20% - 21 5.00% - 9 00% 6.67%	4.50% - 9.00% 6.66% - 67 5.00% - 9.00%	5.50% - 12.00% 8.01% - 202-1-9-1 6.50% - 10.00% 8 19%
6.11' - 12 - 9.00% 5.00 6.56	% - 9.00% !	6 20% - 21 5.00% - 9 00% 6.67%	6.66% - 67 5.00% - 9.00% 7.03%	5.50% - 12.00% 8.01% - 202- 1.02 6.50% - 10.00% 8 19%
6.11' - 12 - 9.00% 5.00 6.56	% - 9.00% !	6 20% - 21 5.00% - 9 00% 6.67%	6.66% - 67 5.00% - 9.00% 7.03%	8.01% - 202- 3-03- 3-3-12- 3-3-12- 6.50% - 10.00% 8 19%
- 9:00% 5.00 6.56	9% – 9.00% %	5.00% - 9 00% 6.67%	- 67 5.00% - 9.00% 7.03%	6.50% - 10.00% 8 19%
- 9.00% 5.00 6.56	0% - 9.00% g	5.00% - 9 00% 6.67%	5.00% – 9.00% 7.03%	6.50% – 10.00% 8 19%
6.56	%	6.67%	5.00% – 9.00% 7.03%	6.50% - 10.00% 8 19%
-				•
- 1		<del>-</del> 12	- 48	<u>- 164</u>
				3 E ; GF
- 7.00% 2.50	0% - 10.00%	2.50% - 10.00%	0.00% - 8.00%	0.00% - 3.00%
3.86	5%	4.41%	3.69%	1 17%
- 20		<del>- 7</del> 5	-3	+ 249
			•	•
- 3.00% . 2.00	0% – 3.00%	1.00% - 3.00%	1.00% - 3.00%	1.00% - 3.00%
2.91	% :	2.86%	2.83%	2.75%
, – 5	,	0	+ 3 .	+ 11
		<i>F</i> .		
1 - 1	12 1	1 – 12	1 – 12	1 - 12
. 47	4	4.7	5.0	5.8
=		= ,	▼	. <b>▼</b>
	- 3.00% 2.00 2.91 - 5 1 - 1 47 =	2.00% - 3.00% 2.91% - 5 1 - 12 4 7 =	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

# Philadelphia Office Market

First quarter sales activity in the Philadelphia office market was nearly triple the level seen in the prior quarter as Philly's CBD and suburbs both boasted lower vacancy rates, higher absorption levels, and greater average asking rental rates in the first quarter of 2016 than a year earlier.

Sales volume in the first three months of 2016 totaled \$1.18 billion, the highest level seen in two years, as per Real Capital Analytics. At the same time, the average price surged 19.4% to \$172.00 per square foot, but lagged the national average of \$245.00 per square foot.

Looking ahead, investors have varied views on the drivers of local

property value changes. "If positive net absorption continues, vacancy also goes down, resulting in less tenant rollover risk and additional property value," explains a participant. Another investor remarks, "The cost of debt will be the main factor changing values in this market as tenant demand and supply seem to be constant over the near term."

Over the next 12 months, investors foresee property value changes in the local office market ranging from a decrease of 5.0% to an increase of 10.0% with an average of +1.5% — below the aggregate average of 2.4% for the Survey's 19 city-specific office markets. •

# KEY 2Q16 SURVEY STATS\* Tenant Retention Rate: Average 66.0% = Range 50.0% to 75.0% Months of Free Rent(1): Average 5 = Range 3 to 9 % of participants using 100.0% = Average Overall Cap Rates:

Suburbs 8.10%

7.50%

6.90%

\* **W**, **4**, = change from prior quarter (1) on a ten-year lease

Market (as a whole)

CBD

Table 17
PHILADELPHIA OFFICE MARKET
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	7.00% - 10.00%	7.00% - 10.00%	7.00% - 10.00%	7.00% - 12.00%	8.00% - 11.00%
Average	8 51%	8.55%	8.63%	9.18%	9.37%
Change (Basis Points)		- 4	- 12	- 67	- 86
OVERALL CAP RATE (OAR)*					
Range	6.00% - 9.00%	6.00% - 9.00%	6.00% - 10.00%	7.00% – 10.00%	7.50% - 10.00%
Average	7.50%	7.53%	7.71%	8.49%	8.63%
Change (Basis Points)		- 3	- 21	- 99	- 113
RESIDUAL CAP RATE					
Range	6.00% - 9.00%	6.00% - 9.00%	6.25% - 10.00%	7.00% - 11.00%	7.00% - 11.00%
Average	7.85%	7.85%	8.04%	8.33%	8.78%
Change (Basis Points)		o	- 19	- 48	- 93
MARKET RENT CHANGE <sup>b</sup>					
Range	0 00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3 00%
Average	1.85%	1.85%	1.85%	0.92%	0 75%
Change (Basis Points)		0	0	+ 93	+ 110
EXPENSE CHANGE <sup>b</sup>					
Range	0 00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	2.75% - 3.00%
Average	2.30%	2.30%	2.30%	2.54%	2.96%
Change (Basis Points)		0	0	- 24	- 66
MARKETING TIME <sup>c</sup>					
Range	3 - 12	3 - 12	3 - 12	3 - 18	2 - 18
Average	5.4	5.4	5.4	7.8	73
Change ( <b>▼</b> , <b>△</b> , <b>=</b> )		=	=	▼	•

# **Phoenix Office Market**

Key characteristics of the Phoenix office market highlight its momentum as it moves through the expansion phase of the real estate cycle. First, underlying office fundamentals are improving as the local economy adds more office-space-using jobs. Specifically, its overall vacancy rate fell from 19.4% to 18.2% between the first quarters of 2015 and 2016, as a per Cushman & Wakefield.

Simultaneously, the average asking rental rate for this market rose 7.3% to \$23.29 per square foot, and investors' outlook for near-term growth remains positive. This quarter, the market's average initial-year market rent change rate continues its

seven-year upward trend increasing to 4.10% (see Table 18). Phoenix's average is tied with San Francisco for the highest average initial-year market rent change rate among the Survey's 19 city-specific office markets.

Investors foresee property values rising here in the next 12 months even though they are attentive to the potential negative effects of capital market liquidity and U.S. and global economic trends. With an average expected value increase of 5.1%, Phoenix claims the second-highest estimate for value appreciation in our Survey − behind the Pacific region apartment market at 5.5%. ◆

KEY 2Q16 SURVEY STATS*								
Tenant Reten	Tenant Retention Rate:							
Average		68	.0%	=				
Range	60.09	% to 80	.0%					
Months of Fro	ee Rent <sup>o</sup>	1):	*,					
Average			7	·=				
Range		2 to	10					
% of participant	s using	100	.0%	=				
Average Overall Cap Rates:								
Market (as a wh	ole)	6.8	34%	=				
CBD		6.5	8%	=				
Suburbs		7.1	0%	=				
* ▼, ▲, = change fro (1) on a ten-year leas		ırter						

Table 18					
PHOENIX OFFICE MAI	RKET				
Second Quarter 2016					
	CURRENT	*. LAST QUARTER	1 YEAR AGO.	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)	ato, o."			*	要性性 過少
Range	7.00% - 11.00%"	7.00% - 12:00%	7.00% = 13.00%		8.00% – 16.00%
Average	8.43%	8.48%	9.01%	9.39%	10 47%
Change (Basis Points)		5	- 58	. – 96	- 204
OVERALL CAP RATE (OAR)*	•		a e e e	Table Pi	Bir in parties
Range	5.00% - 8.50%	5.00% - 8.50%	5.50%~ 9.00%.**	5.50% - 10.50%	8.00% - 11.00%
Average	6.84%	· 6.84%	7.08%	<sup>4</sup> 7.34%	9.40%
Change (Basis Points)	•	0	<del>-</del> 24	- 50	. <del>-</del> 256 ·
RESIDUAL CAP RATE					
Range	5.50% - 9.00%	5.50% - 9.00%	5.50% - 9.00%	6.00% - 10.00%	7.75% - 11.00%
Average	7.15%	7.12%	7.26%	7.55%	9.03%
Change (Basis Points)		+ 3	- 11	- 40	<del>-</del> 188 ·
MARKET RENT CHANGE <sup>b</sup>		<del> </del>	· · · · · · · · · · · · · · · · · · ·		·
Range	2.00% - 7.00%	2.00% - 7.00%	0.00% - 7.00%	- 0.00% - 3.00%	(15.00%) - 2.00%
Average	4.10%	4.00%	2.46%	0.88%	(1.40%)
Change (Basis Points)		+ 10	+ 164	+ 322	+ 550'
EXPENSE CHANGE <sup>b</sup>			•	u-1	• •
Range	1.00% ~ 3.00% .	1.00% - 3.00% .	1.00% - 3.00%	1.00% - 3.00%	0.00% - 3.00%
Average	2.70%	2.70%	2 75%	2.70%	2.65%
Change (Basis Points)		o	- 5	. о	+5
MARKETING TIME					
Range	1 – 12	1 – 9	1 – 9	2 - 12	3 - 12
Average	5.1	4.7	5-4	5.9	6.7
Change (▼, ♠, =)		<b>.</b> .	<b>, v</b>	▼	.▼
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months		-	•

# San Diego Office Market

Our PwC real estate barometer places the San Diego office market in the expansion phase of the real estate cycle through 2016 and 2017. The attributes of this phase include strong demand, robust rental rate growth, decreasing overall cap rates, and lower vacancy rates all of which are seen in San Diego. As of the first quarter of 2016, this market's overall vacancy rate stood at 15.6% – down from 15.9% a year earlier, according to Cushman & Wakefield. The average vacancy in the suburbs was 15.2% while it was 18.4% in the CBD.

Amid these positive trends, zealous rent growth over the last several years has some investors worried. "The issue will be to maintain occupancy as tenants receive sticker shock on market rents at lease expiration," comments a participant. Between the first quarter of 2014 and the first quarter of 2016, the overall weighted average rental rate increased 9.5% in the CBD while it surged 25.8% in the suburbs.

This quarter, this market's average initial-year market rent change rate assumption holds steady, suggesting that rental rates may have peaked here. Likewise, its average overall cap rate is unchanged. Regardless, investors anticipate property value appreciation of up to 10.0% for this market in the coming year − the average expected increase is 3.8%. ◆

#### **KEY 2Q16 SURVEY STATS\***

#### **Tenant Retention Rate:**

Average 68.0%

Range 60.0% to 80.0%

#### Months of Free Rent(1):

Average 4 = Range 1 to 12

% of participants using 100.0% =

#### **Average Overall Cap Rates:**

 Market (as a whole)
 6.81%
 =

 CBD
 6.81%
 =

 Suburbs
 6.80%
 =

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

### Table 19 SAN DIEGO OFFICE MARKET

Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	6.25% - 10.50%	6.25% - 10.50%	6.25% - 10.50%	6.75% - 12.50%	7.50% – 12.50%
Average	7.83%	7.83%	7.89%	9.14%	9.63%
Change (Basis Points)		0	- 6	- 131	- 180
OVERALL CAP RATE (OAR)*					
Range	5.25% - 8.50%	5.25% - 8.50%	4.75% - 8.50%	6.00% - 9.50%	6.50% - 10.00%
Average	6.81%	6.81%	6.89%	7.73%	8 04%
Change (Basis Points)		0	- 8	- 92	- 123
RESIDUAL CAP RATE			~ ~ ~ ~		
Range	5.75% - 8.75%	5.75% - 8.75%	5.75% - 8.00%	6.75% - 9.00%	7.00% - 10.00%
Average	7.20%	7.20%	6.98%	7.78%	8.29%
Change (Basis Points)		o	+ 22	- 58	- 109
MARKET RENT CHANGE <sup>b</sup>					
Range	2.00% - 6 00%	2.00% - 6.00%	0.00% - 6.00%	(10.00%) - 5.00%	(10.00%) - 6.00%
Average	3.80%	3.80%	3 60%	o 60%	0.20%
Change (Basis Points)		o	+ 20	+ 320	+ 360
EXPENSE CHANGE <sup>b</sup>					
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%	2.90%	2.90%	2.90%
Change (Basis Points)		0	- 10	- 10	- 10
MARKETING TIME					
Range	1 – 6	1 – 6	1 – 6	1 - 9	1 – 9
Average	4.3	4.3	4.3	4.5	5.4
Change (▼, ▲, =)		=	_=	▼	▼

# San Francisco Office Market

In the San Francisco office market, several investors are keeping a watch on trends in the venture capital (VC) market as a downturn there "will probably ripple through San Francisco's leasing market and taint local investor sentiment." As the heart of U.S. technology development and home base for numerous VC investors, the Bay Area is known to consume the bulk of venture funding. In the fourth quarter of 2015, the U.S. tech sector saw a broad pullback in venture capital funding, particularly Silicon Valley and San Francisco, where VC financing was down 40.0% for the region compared to the third quarter, according to CB Insights. In the first quarter of 2016, VC dollars and deals were down 11.0% compared with first quarter 2015, as per the MoneyTree Report from PwC and NVCA.

While total VC activity didn't rise as quickly as last year in the first quarter of 2016, it was still a strong first quarter compared to recent years, according to the report. Most of the decline in VC activity is attributed to nontraditional investors scaling back investment activity and refocusing on core businesses. While it remains to be seen if these VC trends continue through 2016, investors in this office market will be monitoring these trends, as well as watching interest rate changes and shifts in capital flows. •

KEY 2Q16 SURVEY STATS*						
Tenant Retention	Rate:					
Average	71.0%	=				
Range 6	0.0% to 80.0%					
Mónths of Free Rent <sup>©</sup> :						
Average	4	=				
Range	∙o to 9					
% of participants usi	ng 80.0%	=				
Average Overall Cap Rates:						
Market (as a whole)	5.71%	Δ				
CBD	4.93%	A				
Suburbs	6.50%	▼				

▼. A. = change from prior quarter

(1) on a ten-year lease

Table 20
SAN FRANCISCO OFFICE MARKET
Second Quarter 2016

	CURRENT .	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*	*		n .		1 to 10 10 10 10
Range	5.75% <del>-</del> 10.00%	5.75% - 10.00%	5.75% - 10.00% *	6.00% - 11.00%	7.00% - 11.00%
Average	6.90%	6.89%	7.05%	7.91%	8.59%
Change (Basis Points)	- ч.	+ 1	, <sup>-15</sup> ,	- 101	– 169
OVERALL CAP RATE (OAR)		-		ſ	in the opposite
Range	3.50% - 9 00%	3.50% - 9.00%	3 50% '- 9.00%	4.00% - 9.00%	5.00% – 9.50%
Average	5.71%	5.70%	5.77%	6.38%	7.11%
Change (Basis Points)	=	+ 1	- 6	- 67	- 140
RESIDUAL CAP RATE	1				
Range	5.00% - 9 00%	5.00% - 9.00% -	5.00% - 9 00%	5.00% - 10.00%	6 00% - 10.00%
Average	6.25%	6.21%	6.36%	7.02%	7.49%
Change (Basis Points)		+ 4	- 11	<b>-</b> 77	- 124
MARKET RENT CHANGE <sup>b</sup>			•		•
Range	2.00% - 6.00%	2.00% - 6.00%	2.00% - 10.00%	2.00% - 10.00%	0.00% - 5.00%
Average	4.10%	4.10%	5.92%	6.25%	2.71%
Change (Basis Points)		0	- 182	- 215	+ 139
EXPENSE CHANGE <sup>b</sup>					
Range	0.00% - 3.00%	0.00% <del>-</del> 3.00%	0.00% - 4.00%	0.00% - 4.00%	0.00% - 3.00%
Average	2.60%	2.60%	2.75%	2.69%	2.56%
Change (Basis Points)		0	- 15	- 9	+4 .
MARKETING TIME			-		
Range	1 – 6	1 6	1 – 8	1 – 8	1 – 12
Average	3.9	3.9	4.1	4.3	5.8
Change (▼, ▲, =)	,	= '	▼ .	▼	▼

# **Seattle Office Market**

With overall vacancy well below historical levels and average asking rental rates trending upward, the outlook remains quite favorable for the Seattle office market from a landlord's point of view. However, current office building owners and prospective buyers are keeping an eye on "the substantial amount of supply entering this market coupled with caution in the investment sales market, which could result in either stagnant or declining asset pricing."

Investors are also closely monitoring the local labor market, where job growth has been strong. "Can Seattle keep up its 2.0% annual job growth as it did in 2015?" questions

a participant – developers, landlords, and many investors are counting on it. This quarter, optimism for Seattle's performance is reflected in its average overall cap rate, which tumbles 29 basis points to 5.81% – the first time its average has fallen below 6.00% since it debuted in the Survey in 2013.

Even though interest rate increases could negatively impact values here, most investors belief that growing market rents, increased interest from both foreign and domestic buyers, a healthy tech sector, and sound long-term economic strength should help to counterbalance their impact on local office building values. •

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** Average 68.0% = 50.0% to 80.0% Range Months of Free Rent(1): Average = Range 1 to 12 % of participants using 100.0% **Average Overall Cap Rates:** Market (as a whole) 5.81% ▼ CBD 5.50%

6.13%

Suburbs

(1) on a ten-year lease

\*  $\nabla$ ,  $\mu$ , = change from prior quarter

Table 21
SEATTLE OFFICE MARKET
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO
DISCOUNT RATE (IRR)*				
Range	5.50% - 10.50%	5.50% - 11.00%	5.75% - 11.00%	6.25% - 11.00%
Average	7 37%	7.47%	7.77%	8.16%
Change (Basis Points)		- 10	- 40	<del>- 79</del>
OVERALL CAP RATE (OAR)*				
Range	4.50% - 8.00%	4.00% - 9.00%	4.00% - 9.00%	4.50% - 9.00%
Average	5.81%	6.10%	6.18%	6.73%
Change (Basis Points)		- 29	- 37	- 92
RESIDUAL CAP RATE				
Range	5.00% - 9.00%	5.00% - 9.00%	5.00% - 9.00%	5.00% - 9.00%
Average	6.43%	6.41%	6.50%	6.92%
Change (Basis Points)		+ 2	- 7	- 49
MARKET RENT CHANGE <sup>b</sup>				
Range	2.50% - 5.00%	2.50% - 5.00%	2 50% – 8 00%	2.00% - 8.00%
Average	3.71%	3.75%	4.25%	4.13%
Change (Basis Points)		- 4	54	- 42
EXPENSE CHANGE <sup>b</sup>				
Range	2.00% - 3.00%	2.00% - 3.00%	1.00% - 3.00%	1.00% - 3.00%
Average	2.79%	2.88%	2.79%	2.75%
Change (Basis Points)		<b>-9</b>	0	+ 4
MARKETING TIME <sup>c</sup>				
Range	1 - 12	1 – 12	1 - 12	1 - 12
Average	5.0	5.0	5.0	5.0
Change (▼, ▲, =)		=	=	=
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months		<u> </u>

# Southeast Florida Office Market

Increasing tenant demand for office space and a lack of quality available options continue to create a 👊 favorable environment for owners in the Southeast Florida office market, particularly in Miami, where direct vacancy ended the first quarter of 2016 at 13.7%, as per Cushman & Wakefield. Within Miami, the Brickell Avenue, Coral Gables, and Airport West submarkets accounted for 66.4% of all new or expansion leases signed in the first three months of the year. Even though direct absorption was negative in the first quarter, it was more a reflection of an influx of new vacant office space rather than a decrease in tenant demand.

In Palm Beach County, leasing demand remained positive in the first quarter with Class-A space continuing to be the most desirable among tenants. Developers have proposed approximately 546,000 square feet of office and mixed-use space in the suburbs of Palm Beach County, but no new projects have been announced in its CBD. The Class-A office market also remained healthy in Broward County in the first quarter with many tenants searching for large blocks of space.

Going forward, our participants feel that values will be most influenced by capital market trends, local macroeconomic factors; and the outcome of the U.S. presidential election. ◆

KEY 2Q16 SURV	VEY STAT	rs*
Tenant Retention R	ate:	
Average	65.0%	=
Range 40.0	% to 80.0%	
Months of Free Ren	t <sup>(1)</sup> :	
Average	6	=
Range	2 to 12	
% of participants using	.100.0%	=
Average Overall Cap	Rates:	
Market (as a whole)	7.13%	W.
CBD	6.55%	₩.
Suburbs	7.71%	=
* ▼, ▲, = change from prior q (1) on a ten-year lease	uarter	

* . *	CURRENT ***	LAST QUARTER	1 YEAR AGO.~ ♥	3 YEARS AGO	5 YEARS AGO.
DISCOUNT RATE (IRR)*			~ ~		\$ 5 mm + 6
Range	6.00% - 10.75%	6.00% - 11.50%	6.50% – 11.50%	7.00% - 12.00%	7.00% - 16.00%
Average	8.24%	8.33% +	8.43%	8.91%	10.38%
Change (Basis Points)	Mes a	- <del>'</del> 9	- 19	- 67	- 214
OVERALL CAP RATE (OAR)*	ÿ			' 3	1 's ' ' ' ' ' ' ' ' '
Range	4.50% - 10.00%	4.50% - 10.00%	4.50% - 10.00%	6.00% - 12.00%	7 00% - 15.00%
Average	7.13%	7.18%	7.23%	8.24%	9 52%
Change (Basis Points)		5.	- 10 ·	- 111	- 239
RESIDUAL CAP RATE				- 4	1 .
Range	4.50% 10.00%	4.50% - 10.50%	4.50% - 10.50%	6.00% - 10.50%	7 00% - 12.00%
Average	7.22%	7.34%	7.34%`	8.18%	9 17%
Change (Basis Points)		12	<del>-</del> 12	- 96 · <sub>+</sub>	- 195 ,
MARKET RENT CHANGE <sup>b</sup>			- <del> </del>	`	
Range	0.00% - 7.00%	0.00% - 6.00%	0.00% - 6.00%	(10.00%) - 4.00%	(10.00%) - 3.00%
Average	2.83%	2.50%	2 08%	0.08%	(0.92%)
Change (Basis Points)	Ŀ	+ 33,	+ 75	+ 275	+ 375
EXPENSE CHANGE <sup>b</sup>				-	•
Range	1 00% - 3.00%	1.00% - 3.00%	1.00% - 3 00%	1.00% - 3.00%	1.00% - 3.00%
Average	2.75%	2.75%	2 75%	2.58%	2.75%
Change (Basis Points)		0	0	+ 17	0
MARKETING TIME <sup>c</sup>		7		•	
Range	2 - 12	2 - 12	2 - 12	2 - 18	2 – 18
Average	5.2	5.2	5 4	7.1	6.8
Change (▼, ▲, =) ,	, ,	=' .	▼	▼	▼ .

# **Suburban Maryland Office Market**

Leasing activity has been slow to pick up steam in the Suburban Maryland office market, but some improvement was shown in the first quarter of 2016 as new leasing activity totaled just over 550,000 square feet - a year-over-year increase of 7.9%, as per Cushman & Wakefield. Much of this activity was in the I-270 Rockville submarket due to significant moveins by Shady Grove Fertility and The SK&A Group. Bethesda/Chevy Chase also reported two large lease renewals in the first quarter as Development Alternatives renewed for 50,000 square feet and the National Opinion Research Council renewed 42,000 square feet.

Bethesda/Chevy Chase should continue to attract investor attention as it boasts one of the tightest vacancy rates in this market and has no new supply in its pipeline. "The vacancy rate is very low in Class-A office properties in Bethesda/Chevy Chase and rents are quite high," affirms a participant. Even though some developers are contemplating new supply for this submarket as Class-A space becomes scarce, it will likely be some time before new projects break ground.

In the meantime, certain property owners are being a bit more aggressive with rental growth assumptions as leasing activity has picked up and space options have diminished. •

#### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 67.0% = Average Range 50.0% to 80.0% Months of Free Rent(1): 8 = Average 5 to 12 Range % of participants using 100.0% = **Market Conditions Favor:** 0.0% **Buyers** 20.0% Sellers Neither 80.0%

▼, \*, = change from prior quarter

(1) on a ten-year lease

Table 23
SUBURBAN MARYLAND OFFICE MARKET
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)					
Range	7.25% - 10.00%	7.25% – 10.00%	7.25% - 10.00%	7.25% - 11.00%	7.25% – 9.50%
Average	8.78%	8.88%	8.68%	8.88%	8.41%
Change (Basis Points)		- 10	+ 10	- 10	+ 37
OVERALL CAP RATE (OAR)*					
Range	5.50% - 9.00%	5.50% - 9.00%	5.50% - 9.00%	5.50% - 9.00%	6.50% - 9.00%
Average	7.28%	7.28%	7.23%	7.63%	7.50%
Change (Basis Points)		0	+ 5	- 35	- 22
RESIDUAL CAP RATE					
Range	6.50% - 9.75%	6.50% – 9.75%	6.50% - 9.75%	6.50% - 9.75%	7.50% - 10.00%
Average	7.88%	7.88%	7 93%	8.18%	8.19%
Change (Basis Points)		0	- 5	- 30	- 31
MARKET RENT CHANGEb					
Range	0 00% - 1 00%	(2.00%) - 1.00%	(2.00%) – 3.00%	(2.00%) – 3.00%	(2 00%) – 3.00%
Average	0.10%	(0.10%)	o 30%	0.75%	0.70%
Change (Basis Points)		+ 20	- 20	- 65	- 6o
EXPENSE CHANGE <sup>b</sup>					
Range	1.00% - 3 00%	1.00% - 3.00%	1.00% - 3.00%	1.00% - 3.00%	0.00% - 3.00%
Average	2.00%	2.00%	2.40%	2.67%	2.60%
Change (Basis Points)		0	- 40	- 67	- 6o
MARKETING TIME <sup>c</sup>					
Range	3 – 9	3 - 9	3 - 9	3 - 9	1 – 9
Average	5.7	5.7	6.2	5.9	4 9
Change (▼, ▲, =)		=	▼	▼	<u> </u>
a Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

# Washington, DC Office Market

The Washington, DC office market elicits mixed opinions from investors due to its "choppy" performance over the past several months and its inability to "pick up much consistent steam." After a robust year of leasing activity in 2015, leasing stats for the first quarter of 2016 disappointed with year-over-year new leasing activity down 32.2%, as per Cushman & Wakefield.

A large impact on first-quarter absorption was the result of several GSA tenants vacating a combined 248,400 square feet from various buildings across the District and relocating to federally owned space as part of the government's initiative

Despite these consolidations and a slight increase in the District's overall vacancy, some investors believe that "this market is leveling off" and

to reduce federal real estate expenses.

even tightening in certain areas.

"Office assets here should begin to see increases in rental rates soon, so investors may want to get in now to benefit from the growth," says a participant.

By year-end 2017, the PwC real estate barometer places the Washington, DC office market in recovery – the cycle phase following the market bottom, characterized by tightening vacancy rates and more balanced rent growth. •

# KEY 2Q16 SURVEY STATS\*

**Tenant Retention Rate:** 

Average

69.0%

Range

ge 60.0% to 75.0%

#### Months of Free Rent(1):

Average

7 **A** 

Range

0 to 12

% of participants using

100.0% =

#### **Mårket Conditions Favor:**

Buyers

20.0% 🛦

Sellers

50.0% ▼

Neither

30.0%

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

# Table 24 WASHINGTON, DC OFFICE MARKET

Second Quarter 2016

- <u>+ k</u>	CUDDENET 44.3	/ TACTOUADEED	1 YEAR AGO A	La VEADCACO	- VEADS ACO
<u>:</u>	CURKENT - A F &	LAST QUARTER	1 YEAR AGU (A)	.#3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR) <sup>a</sup>	· marak arinaki	, , , , , , , , , , , , , , , , , , , ,		6.25% – 8.75%	(0)
Range	5.50% - 8.00%	5.50% - 8.00%	00	0 ,0	6.50% – 9.00%
Average	6.81%	" 6.81%		,7.33%	7.77%
Change (Basis Points)		0 '	, - 13	- 5 <sup>2</sup>	- 96-
OVERALL CAP RATE (OAR)	, de 19	y	* * * * * * * * * * * * * * * * * * *		1000年十四十
Range	4.25% - 6.50%.	4.25% - 6.50%	4.25% - 6.50%	4.25% - 6.50%	4.75% <b>–</b> 8 00% <sub>.</sub>
Average	5.40%	5.40%	5.50%	5.40%	6.13%
Change (Basis Points)		o	- io '	0	73
RESIDUAL CAP RATE	· · ·	1	:		j 1,_
Range	5.00% - 6.50%	5.00% - 6.50%	5.00% - 6.50%	5.25% - 8.25%	5.75% - 8.25%
Average	5.81%	5.85%	5.90%	6.38%	6.60%
Change (Basis Points)	4.	- 4	- 9	- 57	- 79
MARKET RENT CHÂNGE <sup>b</sup>			,		,
Range -	0.00% - 4.00%	0.00% - 4.00%	0.00% - 4.00%	0.00% - 6.00%	0.00% - 4.00%
- Average	1.42%	1.42%	1 42%	1.75%	2.21%
Change (Basis Points)	` 	0	0	- 33	- 79
EXPENSE CHANGE <sup>b</sup>					*
Range	2.00% - 3.00%	2.00% - 3.00%	2.00% - 3 00%	2.50% - 3.00%	1.50% - 3.00%
Average *	2.75%	2.75%	2.75% .	2.96%	2.82%
Change (Basis Points)		0	0	- 21	-7
MARKETING TIME	1				
Range	2 - 6	2 - 6	2 - 6	2 - 9	2 - 12
Average	4.0	4.0	4. <b>0</b>	5.0	5.6
Change (▼, ▲, =)		= .	=	▼	▼
a. Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

# National Flex/R&D Market

Certain investors continue to seek ownership opportunities in the national flex/R&D market due to limited additions to supply, a stable overall vacancy rate, and an increase in average asking rental rates. According to Reis, the vacancy rate for the U.S. flex/R&D sector held virtually unchanged at 11.7% in the first quarter of 2016 while new supply amounted to just 594,000 square feet and average asking rental rates inched up to \$9.22 per square foot.

A growing interest in flex/R&D acquisitions is apparent when looking at sales activity in the industrial sector over the past few years. In the first quarter of 2016, sales volume for

flex/R&D assets accounted for 43.0% of the sales volume in the industrial sector. Warehouses captured the remaining 57.0% of sales volume. In the first quarter of 2015, these percentages were 20.0% and 80.0%, respectively. Moreover, the averages have been roughly a 25.0% - 75.0% split, respectively, between 2013 and 2015, as per Real Capital Analytics.

Interest in flex/R&D ownership typically grows among investors when either the warehouse sector or suburban office sector heats up in terms of pricing for both tenants and investors. Currently, these two sectors are both healthy, which bodes well for the flex/R&D sector. ◆

#### KEY 2Q16 SURVEY STATS\*

#### **Tenant Retention Rate:**

Average 67.0% = Range 50.0% to 80.0%

#### Months of Free Rent(1):

% of participants using

Average 4 = Range 1 to 12

100.0% =

#### **Market Conditions Favor:**

 Buyers
 0.0%
 =

 Sellers
 60.0%
 =

 Neither
 40.0%
 =

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

# Table 25 NATIONAL FLEX/R&D MARKET Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*					
Range	7.00% - 11.00%	7.00% - 11.00%	7.00% - 11.00%	7.50% – 12.00%	8.00% - 13.00%
Average	8.23%	8.33%	8.38%	9.21%	9.79%
Change (Basis Points)		- 10	- 15	- 98	- 156
OVERALL CAP RATE (OAR)*					
Range	5.75% – 9 00%	5.75% – 9.00%	6.00% 9.00%	6.50% – 10.00%	6.50% - 12.00%
Average	7.15%	7.15%	7.23%	8.15%	8.75%
Change (Basis Points)		0	- 8	- 100	<b>– 160</b>
RESIDUAL CAP RATE				0,4	04 04
Range	6.00% – 9.00%	6.00% - 9.00%	6.50% – 9 00%	7.00% - 10.00%	7.25% - 10.50%
Average	7.40%	7.40%	7.50%	8.21%	8.75%
Change (Basis Points)		0	- 10	- 81	- 135
MARKET RENT CHANGEb					
Range	0.00% - 4.00%	0.00% - 5.00%	0.00% - 5.00%	0.00% - 3.00%	0 00% – 3.00%
Average	2.30%	2.20%	2.40%	1.67%	o 67%
Change (Basis Points)		+ 10	- 10	+ 63	+ 163
EXPENSE CHANGE <sup>b</sup>					
Range	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	2.00% - 3.00%	1.00% - 3.00%
Average	2.70%	2.70%	2 70%	2.92%	2 83%
Change (Basis Points)		0	0	- 22	- 13
MARKETING TIME					_
Range	2 - 12	2 - 12	2 – 12	2 - 12	2 – 18
Average	7.0	7.0	7.0	6.8	8.3
Change (▼, ▲, =)		=	=	<b>A</b>	▼
a Rate on unleveraged, all-cash transactions	b Imital rate of change	c In months			

### **National Warehouse Market**

Over the next 12 months, surveyed investors will be keeping a watchful eye on expected increases in interest rates and the resulting impact on overall cap rates and values in the national warehouse market. "A good amount of uncertainty exists with regard to interest rate increases, and it is making investors cautious about prices," says an investor. A more vigilant investment attitude is revealed in the 64-basis-point drop in this market's average initial-year market rent change rate assumption this quarter.

Counterbalancing the decline in market rent growth expectations is a decline in this market's average overall cap rate – which slips to 5.38%

this quarter and represents the lowest quarterly average posted for this market since its Survey debut in 2002. "The vast amount of capital focused on warehouse acquisitions continues to elevate prices and keep overall cap rates low for the best assets in this sector," confirms a participant.

Overall, our surveyed investors expect values of Class-A, well-leased warehouse assets to weather interest rate increases better than Class-B and Class-C properties. However, maintaining both occupancy and rental rates through consistent absorption could prove difficult for existing quality assets in metros with newly completed supply. •

KEY 2Q16 SUI	RVEY	STAT	S*
Tenant Retention	Rate:		
Average		68.0%	A
Range 50	0.0% to	80.0%	
Months of Free Re	ent <sup>©</sup> :		
Average		3	=
Range		o to 6	
% of participants usin	ng '	90.0%	=
Market Conditions	s Favor	:	
Buyers		0.0%	=
Sellers	;	82.0%	=
Neither *	<b>L</b>	18.0%	=
* ▼, À, = change from prio (1) on a ten-year lease	r quarter		

<del></del>	CURRENT	* LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*		·	W / + 10 2" "	*	सिंद्र स्थितिक स्थापित ।
Range	5.50% - 9.25%	5.50% - 9.25%	5.25% - 9.00%	^ 5.75% <b>–</b> 9.50%	6.80% - 12.50%
Average	6.90% : "	6.94%	• • •	7.49%	8.64%
Change (Basis Points)		-4	- 18	- 59	174-
OVERALL CAP RATE (OAR)*			7 2 1 -	•	#13 k 1 "
Range	3.00% - 7.00%	3.00% - 7.00%	4.00% - 7.00%	5.00% - 8.25%	6.00% - 12.00%
Average .	5.38%	5.52%	5.65%	6.40%	7.49%
Change (Basis Points)		- 14	- 27.	- 102	- 211 · ·
RESIDUAL CAP RATE		1			
Range	4 75% - 8 50%	4.75% - 8.50%	5.25% - 7.25%	5.50% - 9.00%	6.50% - 12.00%
Average	6.28%	6.28%	6.33%	6.93%	.7 98%
Change (Basis Points)		0	- 5-	- 65	- 170
MARKET RENT CHANGE <sup>b</sup>					:
Range	0.00% - 5.00%	0.00% - 7.00%	0 00% - 6.00%	0.00% - 5.00%	(5.00%) - 3.00%
Average	2.41%	3.05%	2.75%	2.40%	0.90%
Change (Basis Points)		- 64	- 34	+ 1	+ 151
EXPENSE CHANGE <sup>b</sup>	•				, , ,
Range	3 00% - 3.00%	3.00% - 3.00%	2.50% - 3.00%	2.00% - 3.00%	(2.00%) - 3.00%
Average	3.00%	3.00%	2.98%	2.85%	2.62%
Change (Basis Points)	ι .	0	+ 2	, + 15	+ 38
MARKETING TIME <sup>c</sup>					
Range	1 – 12 -	1 ~ 12	1 – 12	2 – 12	2 – 18
Average	4.4	4.5	4.7	5.9	7.7
Change (▼, ▲, =)		▼	<b>_</b> _ ' _ '	.,▼*	▼

## **ENC Region Warehouse Market**

Investors in the East North Central (ENC) region warehouse market, which includes the states of Ohio, Wisconsin, Michigan, Indiana, and Illinois, hold cash flow assumptions steady this quarter as concerns about new speculative additions to supply, the prospect of cap rate increases, and not wanting to overpay for assets appear on their radar. For now, however, several of the major industrial areas in this market, including Chicago, Cincinnati, Indianapolis, and Milwaukee, post availability rates below the country's average as a whole.

When looking to acquire warehouse properties in this market, investors note that prices are 80.0% to 120.0% of replacement cost and average 96.9% of replacement cost – below both the Survey's national warehouse market (103.6%) and Pacific region warehouse market (99.6%). In terms of value expectations over the next 12 months, this market has a higher forecasted average (4.0%) than the Survey's national warehouse market (2.6%) and Pacific region (2.8%).

While rising overall cap rates is one concern among investors, most participants believe that cap rates will hold steady over the next six months as the region attempts to absorb the new supply entering the market without too much disruption to its fundamentals. •

### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 65.0% = Average 50.0% to 75.0% Range Months of Free Rent(1): Average = 3 Range 0 to 5 % of participants using 100.0% = **Market Conditions Favor:** 0.0% = **Buyers** 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
Second Quarter 2016

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO
DISCOUNT RATE (IRR)*				
Range	5.75% - 7.50%	5.75% - 7.50%	6.25% - 8 00%	6.00% - 8.50%
Average	6.73%	6.73%	7.05%	7.30%
Change (Basis Points)		0	- 32	- 57
OVERALL CAP RATE (OAR)*				
Range	4.50% - 6.25%	4.50% - 6.25%	5.00% - 7.00%	5.50% - 7.50%
Average	5 48%	5.48%	5.98%	6.48%
Change (Basis Points)		0	- 50	- 100
RESIDUAL CAP RATE				
Range	5.50% - 7.00%	5.50% - 7.00%	5.50% - 7.75%	6.00% - 8.25%
Average	6.45%	6.45%	6.63%	7.08%
Change (Basis Points)		0	- 18	- 63
MARKET RENT CHANGE <sup>b</sup>				
Range	0.00% - 5.00%	0.00% - 5.00%	0.00% - 5.00%	0.00% - 5.00%
Average	2.90%	2.90%	3.08%	2.33%
Change (Basis Points)		0	- 18	+ 57
EXPENSE CHANGE <sup>b</sup>				
Range	2.00% - 4.00%	2.00% - 4.00%	2.00% - 4.00%	2.50% - 5.00%
Average	3.00%	3.00%	2.92%	3.13%
Change (Basis Points)		0	+ 8	- 13
MARKETING TIME				
Range	2 – 9	2 – 9	2 - 9	2 - 12
Average	5.0	5.0	4.8	5.8
Change (▼, ▲, =)		=	<b>A</b>	▼
a Rate on unleveraged, all-cash transactions	b Imital rate of change	c In months		

## **Pacific Region Warehouse Market**

In spite of a growing level of new supply, the Pacific warehouse region continues to perform well, maintaining an overall industrial availability rate below that of the nation as a whole. Specifically, the western portion of the United States posted an availability rate of 6.7% in the first quarter of 2016 while the U.S. average was 9.2%, as per CBRE. A year ago, these figures were 7.4% and 10.0%, respectively. The three West Coast cities that reported the lowest availability rates in the first quarter were the San Francisco Peninsula at 3.1%, Oakland at 3.8%, and Orange County at 3.9%.

While the Pacific region continues to enjoy strong leasing demand and

steady net absorption trends, certain' investors question whether such trends will continue over the next 12 to 18 months. "New construction has the ability to quickly slowdown this sector's momentum," comments a participant. Of the 18 metros analyzed in our PwC real estate barometer for the industrial sector, 13 of them are forecast to enter the contraction phase of the cycle by year-end 2017, character-" ized by rising vacancy rates and slower rent growth, primarily due to expected high levels of new supply. "The ability to continue to achieve signifi-, cant rent growth is a concern for us and many other warehouse owners in this region," shares an investor. +

KEY 2Q16 SURVEY STATS*				
Tenant Retention R	ate:			
Average -	65.0%	=		
Range 50.	.0% to 75.0%			
Months of Free Ren	nt <sup>(1)</sup> :			
Average	3	=		
Range ·	1 to 6			
% of participants using	100.0%	=		
Market Conditions	Favor:			
Buyers	0.0%	=		
Sellers	80.0%	=		
Neither	20.0%	Ė,		
* ▼, ▲, = change from prior (1) on a ten-year lease	quarter	t		

Table 28
PACIFIC REGION WAREHOUSE MARKET
Second Quarter 2016

.*	CURRENT TO	LAST QUARTER	'i YEAR'AGO	3 YEARS AGO
DISCOUNT RATE (IRR)*	1 ,		1	
Range	5.50% - 9.00%	5.50% - 9.00%	6.00% – 9.00%	6.50% - 8.50%
Average	6.65%	6.80%	7 08%	7.44%
Change (Basis Points)		- 15	- 43	– 79 <sub>.</sub> ,
OVERALL CAP RATE (OAR)		•	;- ·	- :
Range	3.75% - 7.00%	3.75% - 7.00%	4.00% - 7.00%	5.00% - 7.25%
Average	5 20%	5.28%	5.46%	6 06%
Change (Basis Points)		8	- 26	- 86
RESIDUAL CAP RATE				
Range	4.50% - 7.50%	4.75% - 7.50%	5.00% - 7.50%	5.50% - 7.50%
Average	5 80%	5.90%	6.13%	6 48%
Change (Basis Points)		- 10 <sub></sub>	- 33	- 68
MARKET RENT CHANGE <sup>b</sup>				
Range	0.00% - 5.00%	0.00% - 5.00%	0.00% - 6.00%	0.00% - 5.00%
Average	2.40%	2.40%	3.25%	. 2.42%
Change (Basis Points)	٠	. 0	- 85	- 2
EXPENSE CHANGE <sup>b</sup>	*	,		•
Range	2.00% - 3.00%	2.00% - 3.00%	2.00% - 3.00%	2.00% - 3.00%
Average	2.80%	2.80%	2.92%	2.88%
Change (Basis Points)		0	- 12 	-8
MARKETING TIME <sup>c</sup>				,
Range	1 – 6	1 – 6	1 – 6	1 12
Average	32'	3.2	3.3	3.9
Change (▼, ▲, =)	•	=		, ▼

## **National Apartment Market**

The outlook for future rent growth in the national apartment market steadily improved following the great recession until one year ago when it began to gradually decline. While still above 3.00%, its average initial-year market rent change rate slips ten basis points this quarter to 3.08% (see Table 29). Although demand trends appear steady, Survey participants point to "too much inventory," particularly in the Class-A apartment sector, putting downward pressure on rental rates and negatively impacting tenant retention.

According to Reis, a total of 258,071 apartment units will be delivered in 2016, followed by 163,722 units next year. As a result of all this

new apartment supply, the overall vacancy rate for the 82 markets Reis covers is expected to rise from 4.4% in 2015 to 5.1% by the end of 2017. At the same time, annual effective rent growth is estimated to decline from 5.0% to 3.4%.

These softening market fundamentals and the shift in the demandsupply balance are pushing the national apartment market further toward the contraction phase of the real
estate cycle. As shown in Forecast-4
on page 11, our PwC real estate barometer shows 47 metros in the contraction phase by year-end 2016,
compared with only 21 metros in various stages of expansion. •

### **KEY 2Q16 SURVEY STATS\* Total Vacancy Assumption:** 5.8% ▼ Average Range 2.0% to 10.0% Months of Free Rent(1): Average 0.8 = Range 0 to 2 % of participants using 50.0% ▼ **Market Conditions Favor:** 0.0% = **Buyers** Sellers 50.0% Neither 50.0%

\* ▼, 🎍 , = change from prior quarter

(1) on a one-year lease

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*			•		
Range	5.50% - 10.00%	5.00% - 10.00%	5.00% - 10.00%	5.00% - 14.00%	5.25% - 14.00%
Average	7.28%	7.28%	7.24%	8.04%	8.63%
Change (Basis Points)		0	+ 4	- 76	- 135
OVERALL CAP RATE (OAR)*					
Range	3.50% - 8.00%	3.50% - 8.00%	3.50% - 8.00%	3.50% - 10.00%	4.00% - 10.00%
Average	5 29%	5.35%	5.30%	5.70%	6.10%
Change (Basis Points)		- 6	- 1	- 41	- 81
RESIDUAL CAP RATE					
Range	4.25% - 7.50%	4.25% – 8.50%	4.25% – 8.50%	4.25% - 9.75%	4.75% - 9.75%
Average	5.76%	5.86%	5.93%	6.18%	6.35%
Change (Basis Points)		- 10	- 17	<del>-</del> 42	59
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 7.00%	0.00% - 6.00%	0.00% - 8.00%	(2.00%) – 7.00%	(2.00%) - 5.00%
Average	3.08%	3.18%	2.98%	2.60%	1.70%
Change (Basis Points)		- 10	+ 10	+ 48	+ 138
EXPENSE CHANGE <sup>b</sup>					
Range	2.00% - 4.00%	2.00% - 4.00%	1 00% – 4.00%	1.00% - 3 50%	0.00% - 4.00%
Average	2.81%	2.91%	2.74%	2.67%	2 49%
Change (Basis Points)		- 10	+ 7	+ 14	+ 32
MARKETING TIME <sup>c</sup>					
Range	1 – 9	1 - 9	1 - 9	0 - 18	0 - 18
Average	3.6	3.8	4.2	5.1	5.5
Change (▼, ▲, =)		▼	▼	▼	₩

## **Regional Apartment Markets**

Most investors in the Survey's three regional apartment markets -Mid-Atlantic, Pacific, and Southeast believe that current market conditions favor sellers. However, some are still watching trends that could have a detrimental effect on apartment values during the balance of this year. "One of the key factors behind property value changes will be the availability of investment capital," remarks an investor focused on the Mid-Atlantic region. A participant primarily investing in the Pacific region explains, "We are watching renovations of 1990s product, where owners are investing substantially and turning over a large number of units." In the Southeast

region, concerns include "weakening investor confidence" and "rent concessions in cities with high levels of new supply."

Quarterly shifts in the average initial-year market rent change rates for two of the three regional apartment markets underscore investors' concerns. The most dramatic decline occurs in the Pacific region, where this key average plunges 110 basis points, falling below 4.00% for the first time since the third quarter of 2013. In the Mid-Atlantic region, the first-year market rent change rate average dips 73 basis points (see Table 31).

Even though the outlook for rent growth has dimmed, investors are still

actively acquiring apartment assets with total sales volume in the first quarter of 2016 18.8% higher than a year ago, as per Real Capital Analytics. As a result of ongoing trades, the average overall cap rate falls 23 and 15 basis points this quarter in the Mid-Atlantic and Southeast regions, respectively. The Pacific region reveals a two-basis-point increase in its average overall cap rate this quarter.

Regardless of investors' increased watchfulness and certain shifts in key investment criteria for these apartment regions this quarter, the outlook for property value increases in the coming year remain positive for each. Survey apartment region. •

Table 30	
SOUTHEAST REGION	APARTMENT MARKET
Second Quarter 2016	<u>.</u> *

	CURRENT	LAST QUARTER	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)	4 6			<u> </u>	1.7
Range	5.75% - 10.00%	6.00% – 10.00%	6.00% - 10.00%	7.00% - 10.00%	6.50% - 11.00%
Average	7.53%	7.58%	7.60%.	8.10%	7.98%
Change (Basis Points)	,	-5	<b>-</b> 7	- 57	- 45
OVERALL CAP RATE (OAR)*	131		4		1. Y 1.
Range	3.50% - 6.50%	3.75% - 7.00%	3.75% - 7.00%	4.50% - 7.25%	5 00% - 7 50%
Average	5.15%	5.30%	5.30%	5.80%`	6.10%
Change (Basis Points)		- 15	- 15	- 65	95
RESIDUAL CAP RATE		• .			· ,
Range	4.50% - 7.00%	4.50% - 7.00%	4.75% - 7.00%	5.25% - 7.50%	5.50% - 9.75%
Average	5.75%	5.78%	6.05%	6.35%	6.85%
Change (Basis Points)	, , .	- 3	- 30	<u>.</u> - 60	ب 110 ع
MARKET RENT CHANGE <sup>b</sup>					,
Range	1.00% - 4.00%	1.00% - 4.00%	1.00% - 4.00%	2.00% - 5.00%	(10.00%) - 3.00
Average	3.05%	3.05%	2.95%	3.35%	0 38%
Change (Basis Points)		o	+ 10	- 30	+ 267
EXPENSE CHANGE <sup>b</sup>	<del></del>				(
Range	2.00% – 3.00% ՝	2.00% - 3.00%	2.00% - 3.00%	2.00% – 4.00%	o oo% - 3.00%
Average	2.80%	, 2.80%	2.80%	3.00%	2.25%
Change (Basis Points)	•	0	0 * *	- 20	+ 55
MARKETING TIME		1	*		4 ,
Range	1 – 6	1 – 6	1 - 6	1 - 12	1 – 18
Average	3.1	3.1	3.0	4.3	6.8
Change (▼, ▲, =)	+	· =	·, A <sub>.</sub>	▼	▼
a. Rate on unleveraged, all-cash transactions	b Initial rate of change	c In months			

REGIONAL APARTMENT MARKETS Second Quarter 2016	INT MARKI	ETS								
	MID-ATLANTIC REGION	C REGION				PACIFIC REGION	Z			004 044
	CURRENT	LAST QUARTER 1 YEAR A	1 YEAR AGO	3 YEARS AGO	5 YEARS AGO	CURRENT	LAST QUARTER 1 YEAR AGO	1 YEAR AGO	3 YEAKS AGO	5 YEAKS AGO
DISCOUNT RATE (IRR)* Range Average Change (Basis Points)	5.50% 10.00% 7.50%	5.50% - 10.00% 7.75% - 25	5.75% – 10.00% 7.92% – 42	5.00% – 14.00% 8.69% – 119	5.80% – 14.00% 9.40% – 190	5.50% - 9.00%	5.50% - 9.00% 6.83% - 3	5.50% - 10.00% 7.29% - 49	5.25% - 12.00% 8.00% - 120	6.00% – 12.50% 8.81% – 201
OVERALL CAP RATE (OAR)* Range Average Change (Basis Points)	3.00% – 7.50% 5.23%	4.00% - 7.50% 5.46% - 23	4.00% - 7.50% 5.46% - 23	4.00% - 7.50% 5.67% - 44	4.00% - 8.00% 6.10% - 87	3.50% – 6.00% 4.52%	3.50% – 6.00% 4.50% + 2	3.50% – 6.50% 4.77% – 25	3.50% – 7.00% 4.92% – 40	4.00% - 7.50% 5.60% - 108
RESIDUAL CAP RATE Range Average Change (Basis Points)	4.25% – 7.00% 5.53%	4.25% - 7.50% 5.69% - 16	4.25% - 7.50% 5.77% - 24	4.50% - 9.75% 6.31% - 78	4.50% - 9.75% 6.73% - 120	4.00% – 6.00% 5.05%	3.75% – 6.00% 5.05% 0	4.00% - 7.00% 5.48% - 43	4.00% - 7.50% 5.65% - 60	4.00% – 8.50% 6.19% – 114
MARKET RENT CHANGE <sup>b</sup> Range Average Change (Basis Points)	0.00% – 4.00%	0.00% - 4.00% 2.83% - 73	0.00% – 4.00% 2.67% – 57	(5.00%) - 6.00% 2.63% - 53	(5.00%) – 6.00% 1.83% + 27	0.00% - 5.00%	2.00% – 6.00% 4.20% – 110	1.00% - 7.00% 4.04% - 94	0.00% – 10.00% 3.71% – 61	0.00% - 5.00% 2.58% + 52
EXPENSE CHANGE <sup>b</sup> Range Average Change (Basis Points)	100% - 3.00%	1.00% – 3.00% 2.75% – 5	1.00% – 3.00% 2.75% – 5	1 00% – 3.00% 2.75% – 5	1.00% - 3.00% 2.58% + 12	2.00% – 3.00%	2.00% - 3.00% 2.83% 0	2.00% – 3.00% 2.88% – 5	2.00% – 3.00% 2.79% + 4	2.00% - 3.00% 2 79% + 4
MARKETING TIME <sup>c</sup> Range Average Change (▼. ▲. =)	2 - 9 4.2	2 – 9 4.3	2 - 9 4.6	1 – 18 •	1 – 18 6.2 •	1-9	1-9	1-9	1 – 12 4.9	1 – 12 5.8
a Rate on unleveraged, all-cash transactions	b Initial rate of change	hange c In months								

### **National Net Lease Market**

The investment arena is highly competitive for the three types of net lease deals - sale leasebacks, net lease sales, and 1031 exchanges. However, the pace of sales in the first three months of 2016 cooled relative to the end of 2015. Specifically, industrial net lease sales dropped 52.0% over that time period, followed by the retail sector (a 34.0% decline) and the office sector (a 4.5% decrease), according to Real Capital Analytics. Over the past two years, the top three buyers in the retail and office sectors were U.S.-based firms while foreign institutions dominated sales in the industrial sector.

Despite a quarterly decline in

sales activity, the outlook for net lease property values remains optimistic. Our Survey results reveal that investors foresee increases of as much as 15.0% with an average property value increase of 4.7% – the fourth highest among all of the markets surveyed.

In the net lease market, the demand for 1031 exchanges has rebounded after a precipitous drop during the recession. "Newly built assets have the highest demand among 1031-exchange investors as they typically have the longest lease terms," remarks an investor. However, investors are keeping close tabs on proposed tax code changes that would make 1031-exchanges less attractive for buyers. ◆

KEY 2Q16 SURV	EY STA	rs*
Market Conditions Fa	avor:	
Buyers	0.0%	=
Sellers	80.0%	A
Months of Free Rent:		
Average		(1)
Range		(1)
% of participants using		(1)
Portfolio Allocation:		
Sale leasebacks	24.0%	=
Net lease sales	35.0%	₩
1031 exchanges	19.0%	A
Build to suit	22.0%	₹
* ▼, ▲, = change from prior qua		

Table 32	
NATIONAL NET LEASE M	ARKET
Second Quarter 2016	•

	CURRENT: デルデス	LAST QUARTER	1 YEAR AGO ∵:	3 YEARS AGO	5 YEARS AGO
DISCOUNT RATE (IRR)*	**-				क्षेत्रका स्टब्स्
Range	6.00% – 10 00%	6.00% - 10.00%	6 00% - 10.00%	7.00% - 9.00%	7.00% - 9:00% i
Average	8.00%	8.00%	7.92%	7.94%	8 13%
Change (Basis Points)	, b	0	+ 8	+ 6	-13 ^ .
OVERALL CAP RATE (OAR)*	7 .		,		* * * 1. 1 " 1
Range	5.25% - 9.00%	5.25% – 9.00%	5.50% <b>-</b> 9.00%	6.00% - 8.50%	6.00% - 10.25%
Average	6.75%	6.75%	6.83%	7.03%	8.34%:
Change (Basis Points)	*	0	- 8	- 28	<b>– 1</b> 59
RESIDUAL CAP RATE		,	,		1 + * '
Range	6.00% - 9.00%	6.00% - 9.00%	7.00% - 9.00%	7.00% - 9.00%	7.00% - 12.00%
Average	. 7 63% ·	7.63%	7.88%,	8.06%	9.00%
Change (Basis Points)	, =	0	- 25	43	- 137
MARKET RENT CHANGE <sup>b</sup>					٠,
Range	0.00% - 3 00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	(3.00%) - 4.00%
Average	1.80%	1.80%	1 80%	1.35%	1 07%
Change (Basis Points)		,,o	0.	+ 45	+ 73
EXPENSE CHANGE <sup>b</sup>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Range	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%	0.00% - 3.00%
Average	1 70%	1.70%	1.70%	1.90%	1.82% ·
Change (Basis Points)		0	0	- 20	<del>-</del> 12
MARKETING TIME		,			
Range	2 - 12	1 – 12	1 - 12	2 - 12	1 – 18
Average	4.8	4.4	4.3	4.8	5.9
Change (▼, ▲, =)		<b>A</b>	<b>A</b>	=	<b>▼</b> .

# **National Medical Office Buildings Market**

While surveyed investors unanimously believe current market conditions favor sellers in the national medical office buildings (MOB) market, they do not foresee dramatic property value increases in the coming year. "Cap rates and values are expected to remain stable for good quality on-campus MOB product," states an investor. Specifically, the average expected change in property values is an increase of 1.3% in the next 12 months, down from an average of 1.9% a year ago.

Investors allude to the potential increase in the cost of capital, as well as a likely decrease in the availability of debt, as factors that could nega-

PwC

tively impact values. On the upside, an abundance of overseas money flowing into U.S. commercial real estate, limited quality MOB offerings, and still low interest rates should continue to have a positive impact on property values.

Although this market's average overall cap rate holds nearly steady this quarter, investor optimism is reflected in its average initial-year market rent change rate, which rises to 2.41% this quarter (see Table 33). This average is higher than that of the national suburban office market (2.25%), but lower than the aggregate average for the 19 city-specific office markets surveyed (2.81%). •

### **KEY 2Q16 SURVEY STATS\* Tenant Retention Rate:** 79.0% Average 60.0% to 90.0% Range Months of Free Rent(1): 3 = Average Range 1 to 6 75.0% # % of participants using **Average Overall Cap Rates:** Market (as a whole) 6.81% ▼ On campus 6.42% Off campus 7.20%

\* ♥, ≠ , = change from prior quarter

(1) on a ten-year lease

Average Change (Basis Points)	5.50% - 11.00% 8 13%	1.AST QUARTER 5.50% - 11.00%			
Range Average Change (Basis Points)	0 0	5 500/ 11 000/			
Average Change (Basis Points)  OVERALL CAP RATE (OAR)*	8 13%	5.50% - 11.00%	6.00% - 11 00%	6.00% - 13.00%	7.50% – 13.00%
		7.96%	8.02%	8.84%	9.47%
OVERALI CARRATE (OAR)*		+ 17	+ 11	- 7 <b>1</b>	- 134
OVERALL CAP RATE (UAR)					
Range	4.50% - 10.00%	4.75% - 10.00%	4.75% - 10.00%	5.50% - 11.00%	6.00% - 11.50%
Average	6.81%	6.83%	6.93%	7.82%	8.28%
Change (Basis Points)		- 2	- 12	- 101	- 147
RESIDUAL CAP RATE					
Range	5.25% - 10.25%	5.50% - 10.50%	5.50% - 10.50%	6.00% - 11.00%	7.00% – 12.00%
Average	7.09%	7.13%	7.38%	8.04%	8.50%
Change (Basis Points)		- 4	- 29	- 95	- 141
MARKET RENT CHANGE <sup>b</sup>					
Range	0.00% - 4.00%	0.00% - 4.00%	0.00% - 3.00%	(5.00%) – 3.00%	0.00% - 3.00%
Average	2 41%	2 31%	1.92%	1.09%	1 15%
Change (Basis Points)		+ 10	+ 49	+ 132	+ 126
EXPENSE CHANGE <sup>b</sup>					
Range	1.00% - 4.00%	1.00% - 4.00%	1.00% - 4.00%	1.00% - 4.00%	0.00% – 4.00%
Average	2.41%	2.34%	2.46%	2.41%	2.33%
Change (Basis Points)		+ 7	- 5	0	+ 8
MARKETING TIME <sup>c</sup>					
Range	1 – 12	1 – 12	1 – 9	1 – 12	1 – 12
Average	4.4	4.4	4.3	4.8	5-9
Change (▼, ▲, =)		=	<b>A</b>		

# **National Development Land Market**

Surveyed investors remain divided when asked which property sector presents the best opportunity for dévelopment land investing in the near term. While some believe that undeveloped residential land represents the best prospects for investing, a few others feel that land readied for retail development stands as the best opportunity for investors. "Getting land ready for retail development could turn out to be a good play as that sector is mostly in recovery," says an investor. Lastly, one participant feels that light-industrial land ownership is

While investors may be divided when it comes to which land type to pursue, they unanimously see positive \* opportunities for this sector over the near term and are eager to partake. Their exuberant viewpoint is quite a change from three years ago when the key word among them was "patience." Within the CRE industry, Reis reports that construction activity across all major property types continues to increase fueled by the ongoing recovery in the economy and CRE fundamentals.

Total spending on U.S. private construction was up 8.5% on a yearover-year basis in March 2016, according to the U.S. Census Bureau (see Table DVL-1). When looking more closely at spending, private residential construction was up 7.8% while pri-

**DISCOUNT RATES (IRRS)** Second Quarter 2016

Rate on unleveraged, all-cash transactions; including developer's profit

Exhibit DL-1

**FREE & CLEAR** 

Range Average

vate nonresidential spending was up 9.3%. In the nonresidential sector, amusement & recreation, lodging, and office reported the highest year-overyear gains in spending as of March 2016. Moreover, all nonresidential categories reported an annual increase over that time period with the exception of manufacturing, which dipped 2.0%.

#### DISCOUNT RATES

Free-and-clear discount rates including developer's profit range from 10.0% to 20.0% and average 15.50% this quarter (see Exhibit DL-1). This average is unchanged from the fourth quarter of 2015 and assumes that entitlements are in place. Without entitlements in place, certain investors increase the discount rate between 100 and 1,000 basis points (an average increase of 470 basis points).

### GROWTH RATE ASSUMPTIONS

Growth rates for development expenses, such as amenities, real estate taxes, advertising, and administration, typically range from 1.0% to 5.0% and average 3.3%. For lot pricing, investors indicate a range up to 8.0%; the average growth rate for lot pricing is 4.0%.

### ABSORPTIO

**CURRENT QUARTER** 

10.00% - 20.00%

15.50%

The absorpt an entire pr

depending on such factors as location, size, and property type. This quarter, preferred absorption periods for participants range from one to 20 years. The mean absorption period is 8.4 years, a bit lower than the absorption period reported six months ago.

### FORECAST VALUE CHANGE

Over the next 12 months, all investor participants except one foresee development land values to increase. Appreciation ranges from 2.0% to 10.0% and averages 5.9% - up quite a bit from six months (5.2%) and well above the average a year ago (3.6%). None of our surveyed investors expect property value declines in the national development land market over the next 12 months.

### MARKETING PERIOD

The typical time that a property is on the market prior to selling ranges from three to 36 months and averages 16 months. ◆

		Office
ON PERIOD		Educational
tion period required to sell		Commercial
,		Transportation
oject varies significantly		Communication
•		Health Care
<del></del>	1	Religious
	l	Power
		Manufacturing
FOURTH QUARTER 2015		Total
		Residential
10.00% – 20.00% 15.50%	-	Total Private
0		* Private construct
•		Source: U.S. Censu

March 2015 to March 20	016
Nonresidential	Year-Over-Year Change
Amusement & Recreation	+ 29.5%
Lodging	+ 28.8% *
Office	+ 23.9%
Educational	+ 21.6%
Commercial	+ 13.2%
Transportation	+ 10.9%
Communication	+ 10.8%
Health Care	+ 5.9%
Religious	+ 6.7%
Power	+ 2.0%
Manufacturing	- 2.0%
Total	+ 9.3%
Residential	+ 7.8%
Total Private	+ 8.5%
* Private construction Source: U.S. Census Bureau, sea	sonally adjusted



NT MARKETING TIME	MONTHS	6 to 24	9	6 to to 12	9 20 6	5 Q ZI
	PER SQUARE FOOT	\$0.10 to \$0.25	\$0.15 to \$0.30	\$0.25	\$0.25 to \$0.50	\$0.20 to \$0.50
	UNDERLYING VACANCY & CREDIT LOSS	3 0% to 8.0%	10% to 2.0%	3 0% to 8 0%	5.0% to 7.0%	4.0% to 7.0%
SNC	TENANT RETENTION	60 0% to 80 0%	70 0% to 75 0%	75 0% to 80.0%	70 0% to 80.0%	50 0% to 75 0%
VACANCY ASSUMPTIONS	MONTHS	9 to 24	4 to to 6	6 to 12	6 9 9	6 12 13
OVERALL CAP RATE (OAR)	FREE & CLEAR	4.00% to 9.00%	4.00% to 6.50%	4.50% to 9.00%	4.00% to 9.00%	4.00% to 6.00%
DISCOUNT RATE (IRR)	FREE & CLEAR	6 00% to 11 50%	5.50% to 7.50%	6.00% to 10.00%	6.00% to 11.00%	5.50% to 7.50%
	SELLING	2.0% to 3.0%	0.8% to 1.0%	0.5% to 1.0%	1.0% to 3.0%	0 5% to 2.5%
RESIDUAL	CAP RATE	4.00% to 9.00%	5 00% to 7.25%	5.00% to 9.00%	4.25% to 9.00%	5.00% to 7.50%
GE RATES	ES CPI	2.0% to 4.0%		10% to 3.0%	3.0%	2 0% to 3 5%
INITIAL-YEAR CHANGE RATES	EXPENSES	2 0% to 5.0%	3 0%	10% to 3.0%	3.0%	2.0% to 3.5%
INITIAL-Y	MARKET RENT	3.0% to 5.0% Year 1; 2.0% to 5.0% Year 2	3.0% Years 1 to 3	0.0% to 1.0% Year 1, 1.0% to 2.0% Year 2	3 0% Years 1 to 3	2 0% to 3 5% Years 1 & 2
		PUBLIC REAL ESTATE COMPANY ← Forecast Period: 4 to 7 years Mannly 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.	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 bold steady over the next six months.	REIT ◆ Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct after capital replacement reserve but before TIS an no longer uses rent spikes; expects overall cap rate the next six months.	PUBLIC C CORP + Forecast Period: 7 to 10 Mainly uses direct capitalization; in direct cap, capit Tis, leasing commissions, and capital replacement is longer awarded; does not use rent spikes, expects ov hold steady over the next six months	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.

	INITIAL!	INITIAL-YEAR CHANGE RATES	E RATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY. '	ONS		REPLACEMENT RESERVE	T MARKETING TIME
	MARKET	EXPENSES	: CPI	CAP	SELLING	FREE & CLEAR.	FREE & CLEAR	1	TENANT RETENTION	UNDERLYING VACANCY & N CREDIT LOSS		MONTHS
***  ***  ***  ***  ***  **  **  **  *	0 0% Year 1, 0 0% to 1.0% Year 2, 1.0% to 1.5% Year 3	%°°°,	, % 00,	6.00% to '8.00%	1.5% to 2.5%	to 00%	• 550% to 7.50%	8 to 0 .	60.0% to 80.0%	5 0% 10 00 10.0%	\$0.20 to \$0.35	బ్ కి
PENSION FUND ADVISOR + Forecast Period: 10 years Prefers DCF analysts; 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%	80 °	30%	5.50% to 6.75%	1.0% to 2.0%	6.00% to 7.00%	5 00% to 6 50%	6 to to	55 0%° 65 0%° to 75.0%	50%, to 8.0%	Does not not	or 50 ♣.
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	, % % o	%°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°	6.25% to 6.50%	1.5% to 2.0%	6,50% 6,75%	550% .to 625%	, 12 to 12 ,	65.0% to 70.0%	5.0% to . 8.0%	\$0.20 to \$0.30	o 5 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 5,0% in year 5.	0.0% to 5.0% Years 1.8.2	2.0%	2,0%	7.00% to 9.00%	2.0%	8,00% 10,00%	,6.00% to 7.00%	4 t 8	60 0% to 75.0%	5 0% to 10 0%	\$0.20	420
PENSION FUND + Forecast Period: 10 to 15 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI after capital replacement reserve bit before TIs and leasing commissions; uses face rents and reflects concessions when they are scheduled to occur.	1.0% to 3.0%		10%	.5.00% to ,800%	2 0% to 3.0%	9.00% to 10 00%	6.00% to 8.00%	. 50 51 - 52 52 52 52 52 52 52 52 52 52 52 52 52	55 0% to 80.0%	1.0% to 2.0%	\$0.15 to \$0.25	9 to 18
				,								



NATIONAL STRIP SHOPPING CENTER MARKET-SELECT SURVEY RESPONSES Second Quarter 2016 Discou	X MARKE	T-SEL	ECT S	URVEY	RESPO	NSES DISCOUNT	OVERALL CAP	VACANCY	3,40		REPLACEMENT RESERVE	MARKETING	
	INTITAL-YEAR CHA	AR CHANGE	ANGE RATES	RESIDUAL CAP	SELLING	RATE (IRR) FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	MONTHS	
INSTITUTIONAL INVESTOR + Forecast Period: 10 years Uses both DCF and direct captalization, in direct cap, capitalizes NOI before deducting TIs, leasing commissions and capital replacement reserve; does not use rent spikes	2 0% to 3 0%	30%	*	6.00% to 7.00%	1.0% to 3.0%	6.75% to 7.50%	5 00% to 7.50%	6 to 12	65 0% to 80 0%	1.0% to 3.0%	\$0.20 to \$0.50	ر م دو د	
INSTITUTIONAL INVESTOR + Forecast Period: 10 years Invests primarily in 200,000- to 400,000-square-foot, well-anchored communty centers and good credit quality anchored power centers: rehes on DCF; uses face rents and reflects concessions when they are scheduled to occur; does not use rent spikes.	30%	3 0%	3.0%	6 00% to 6.50%	2 0% to 2.5%	7.00% to 7.25%	5.25% to 6.00%	6 to 8	65.0% to 70.0%	5 0% to 10.0%	\$0.15 to \$0.25	9 9	
REIT + Forecast Period: 1 to 3 years Uses both DCF and direct capralization: in direct cap, capitalizes NOI before deducting Tils, leasing commissions and capital replacement reserve; does not use rent spikes.	0.0% to 1.0%	3 0%	3 0%	6 00% to 9 75%	1.0% to 2.0%	8.00% to 10.75%	7.00% to 9.50%	9 to 15	70 0% to 75.0%	2.5% to 5.0%	\$015 to \$0.25	9 to 12	·
REIT + Forecast Period: 10 years Primarly 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 mcrease 25 to 50 basis points over the next six months.	2 0% to 3.0%	3.0%	3.0% to 4.0%	6.25% to 7.00%	4.0% to 5.0%	6.25% to 7.75%	5.00% to 9.00%	9 to 18	65 0% to 75 0%	3 0% to 7 0%	\$0.25 to \$0.50	0 to 0	
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.	3 0%	3.0%	3.0%	4.75% to 7.00%	1.0% to 3.0%	6.00% to 8.25%	450% to 6.50%	6 to 15	60.0% to 75.0%	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 o	3.0%	3 0%	5.75% to 6.25%	1.0% to 3.0%	6.00% to 6.75%	4.75% to 5.75%	0 to	65 0% to 75 0%	4 0% to 7 0%	Does not use	3 C C	
comes Descend survey conducted by PwC during April 2016					İ								Ł

NATIONAL CBD OFFICE MARKET-SELECT SURVEY RESPONSES Second Quarter 2016	ELECT S	URVEY	RESP	ONSES				*				
	INTITAL	INITIAL-YEAR ČHANGE RATES	E RATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	SNO		RESERVE RESERVE	NT MARKETING TIME
	MARKET RENT	EXPENSES	ceri	CAP	SELLING	FREE & CLEAR'S	FREE & CLEAR	MONTHS	TENANT	UNDERLYING VACANCY & V CREDIT LOSS	PER SQUARE FOOT	MONTHS
LIFE INSURANCE COMPANY + Forecast Period: 10 years Uses manly DCF analysis, in direct cap, capitalizes NOI before tenant Improvements, leasing commissions, and capital replacement reserve; may use a rent spike of 7 0% in year 1, 6.0% in year 2, and 5.0% in year 3.	0 0% to 7 0%	2 0% to 4 0%	1.0% to 3.0%	4.75% to 6.50%	0.5% to 2.5%	5 75% to 7 00%	3.50% to 6.50%	6 50 18 18	50 0% to 75 0%	4.0% to to 9.0%	\$0.20 to \$0.50	e 2 e
PENSION FUND + Forecast Period: 10 to 15 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.	10% to 2.0%	30%	1.0% to 3°%	5.00% to 7.00%	2.0% to ' 3.0%	8.00% to 10.00%	5.00% to 7.00%	6 to 12	60.0% to 75.0%	1.0%' to to 2.0%	\$0 10 to \$0.20	e 5° ts
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; may use a rent spike of 6.0% in years 2 and 3.	2 0% to 6.0% Years 1 & 2	2 0% to 3.0%	2.0 <b>%</b> to 3.0%	6.00% to 7.00%	1.0% to 1.5%	5.75% to 7.00%	4.50% to 7.50%	6 to 12	60.0% to 70.0%	5.0% to 8.0%	Does not use	22 to 6
PENSION FUND ADVISOR + Forecast Period: 10 years Prefers DCF analysis: also uses direct captalization; 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 year 3 and 5.0% in year 4.	0 0 % to 3 0 %	3.0%	% %	65.00% 15.00% 16.00%	1.0% to 4.0%	5.75% to 6.50%	4.50% 10, to 5.75%	, 658 ′	65.0% to 75.0%	3.0% to 7.0%	\$0.15 to \$0.30	48,4
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%	1 30% 30% 30%	5.50% to .7.50%	1.0% to 2.0%	5.50%, to 7.00%	. 5.50% to 7 00%	6 9	65 0% to 85.0%	1.0% to 5.0%	\$0.25 to \$0.50	3 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.	2.0% to 3.0%	30%	, 2. 0%. to . 3.0%	5.50% • to . • 6.50%	10% to 3.0%	8 00% : to . 10.00%	. 5.50% to to . 6.50%	6-6 12 21 22 24 25 25 25 25 25 25 25 25 25 25 25 25 25	70 0% to 75.0%	.20% to 50%	\$0 25 to to \$0 50	8 9 6

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	INITIAL-YEAR CH	EAR CHANGE RATES	ATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ONS		REPLACEMENT RESERVE	MARKETING TIME
	MARKET RENT		CP1	CAP	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	MONTHS
REAL ESTATE ADVISOR + Forecast Period: 5 to 10 years Uses DCF and face rents; prefers 24-hour othes across the country, uses a rent spike of 6 0% in years 2 and 3; uses effective rents in DCF analysis.	0.0% Year 1, 3.0% Year 2	3 0%	2 0% to 3.0%	5 50% to 7.50%	1.0% to 4.0%	6.00% to 9.00%	Not disclosed	6 to 18	65.0% to 75.0%	10% to 90%	\$0.15 to \$0.40	3 to 6
LIFE INSURANCE COMPANY + Forecast Period: 8 to 12 years Uses both DCF and direct capitalization; m direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes.	0.0% to 3.0%	2 0% to 3.0%	15% to 3.0%	6.50% to 9.50%	1.0% to 2.5%	6 00% to 9.00%	5 00% to 8 50%	6 to 12	50 0% to 67.0%	7.0% to 15.0%	\$0.20 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; uses 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	6 to 33
PUBLIC REAL ESTATE FIRM + Forecast Period: 5 to 10 years Manhy 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 5.0%	2.0% to 3.0%	2 0% to 3.0%	6.50% to 8 00%	1.0%	5.75% to 7.00%	5.00% to 7.50%	9 to 12	55 0% to 70 0%	5.0% to 9.0%	Does not use	3 6 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	3.0%	3.0%	3.0%	6.50% to 7.50%	1.0% to 3.0%	7 50% to 8 25%	5.50% to 7.00%	9 to 12	65.0% to 75.0%	0 0% to 3 0%	\$0.10 to \$0.25	6 to 12
LIFE INSURANCE COMPANY + Forecast Period: 10 years Uses mannly DCF analysis; in direct cap, capitalizes NOI before tenant improvements, leasing commissions, and capital replacement reserve, does not use rent spikes	0 0% to 5.0%	2 0% to 4 0%	10% to 30%	6.00% to 8.50%	0.5% to 2.5%	6.50% to 9.00%	4.50% to 7.50%	6 to 24	50.0% to 75.0%	5.0% to 10.0%	\$0.20 to \$0.50	9 to

ATLANTA OFFICE MARKET-SELECT SURVEY RESP Second Quarter 2016	SURVEY		ONSES			,	a l	-				
	INITIAL-YEAR CHAN	AR CHANG	GE RATES	RESIDUAL	,	DISCOUNT, RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	IONS		REPLACEMENT RESERVE	TIME
	MARKET	EXPENSÈS	ī.	CAP RATE	SELLING	rree & Ctear	FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION 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 hold steady over the next six months.	3.0% to 5.0%	2.8% to 3.5%	25.% 35.%	.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 8.25% (cuburbs)	6 .	50 0% to 75.0%	4.0% to 6.0%.	\$0.15 to \$0.25	1 to to
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, r 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%	30%	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 2 2 · .
INVESTMENT BANKER + Forecast Period: 5 to 10 years Prefers DCF analysis; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve, may use a rent spike of 7.5% in year 5; expects overall cap rates to hold steady over the next six months.	4 0% to 7 0%	15% to 2.5%	15% to 2.5%	6.75% to 7.25% (CBD); 6.75% to 7.50%, (suburbs)	1.0% to 2.0%	7.00% to 8.75% (CBD), 7.50% to 9.00% (suburbs)	6.00% to 7.50% (CBD); 6.50% to 8.00% (suburbs)	φ <del>t</del> ο.	75.0% to 80 0%	5.0% to 7.0%	\$0 10 to \$0.25	କ୍ଷ କ
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; uses face rents and reflects concessions when they are scheduled to occur.	3.0% to 4.0% Years 1.8° 2	0.0% to 1.0%	2 0% to: 3.0%	7.00% to 8.50% in both CBD & suburbs	1.0% to 1.5%	7.00% to 9.00% in both CBD & suburbs	6.00% to 8.00% (CBD); 6.50% to 8.00% (suburbs)	, 6 6 - 10 - 10 - 10 - 10 - 10 - 10 - 10	:65.0% to 70.0%	%0·01	\$0.20 to \$0.40	හ <del>1</del> 4
LIFE INSURANCE COMPANY + Forecast Period: 10 years Uses DFC direct captalization, and sales comparison approach; in direct cap, captalizes cash flow after Tis, leasning 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 3 0% Years 1 & 2	2.5% 10.5% 3.0%	3.0%	6.00% to 8.50% (CBD); 6.50% to 8 7.5% (suburbs)	0.7% to to 1.5%	7 00% to 9.00% (CBD),,, 750% to, 9.25% ; (suburbs)	6.00% to 8.75% (CBD); 6.00% to 9.00%	, 4 to 12.	60 0% to 70 0%	6.0% to 10.0%	\$0.20 to \$0.35	6 to



Second Quarter 2016	TATTER T	Second Quarter 2016	A T	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ONS		REPLACEMENT RESERVE	REPLACEMENT MARKETING RESERVE TIME
	MARKET	EXPENSES	CPI	CAP RATE	SELLING	1	FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	MONTHS
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	2.0% to 3.0%	3.0%	3 0%	6.00% to 7.50% (CBD); 6.50% to 8.25% (suburbs)	2.0% to 3.0%	6.50% to 7.75% (CBD); 7.00% to 8.50% (suburbs)	4.50% to 7.00% (CBD), 5.00% to 7.25% (suburbs)	6 to 8 to	65 0% to 70.0%	4.0% to 6.0%	\$0.20 to \$0.25	6 to to 12 is
PENSION FUND ADVISOR + Forecast Period: 3 to 6 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 3.0%	0 0% to 3.0%	10% to 3.0%	7 00% to 8.00% (CBD); 7.00% to 9.00% (suburbs)	1.0% to 3.0%	6 00% to 8.00% (CBD), 8.00% to 10.00% (suburbs)	7.00% to 8.00% (CBD); 7.00% to 9.00% (suburbs)	6 to 12	50.0% to 80.0%	4 0% to 10 0%	\$0.15 to \$0.50	6 to
REAL ESTATE ADVISOR + Forecast Period: 10 to 12 years Uses DCF and direct capitalizaton: in direct cap, capitalizes NOI before ITs, leasing commissions, and capital replacement reserve; may use rent spikes of 7.0% in years 1 and 2 and 5.0% in year 3.	40% to 70%	3 0%		5.00% to 5.50% (CBD); 6.75% to 7.50% (suburbs)	1.0% to 3.0%	6 00% to 6 50% (CBD), 7 25% to 7.75% (suburbs)	4.00% to 4.75% (CBD), 6.00% to 6.25% (suburbs)	6 9	65 0% to 70 0%	1.5% to 3.0%	\$0.20 to \$0.75	6 to 12
PRIVATE EQUITY INVESTOR + Forecast Period: 5 to 10 years Uses both DCF and direct capitalization; in direct capitalizes NOI before IIs, leasing commissions, and capital replacement reserve; no longer uses rent spikes	3 0%	2.5% to 3.0%	2 5% to 3.0%	5.75% to 6.50% (CBD); 6.50% to 7.50% (suburbs)	2.0% to 2.5%	7 00% to 7.50% (CBD); 7.50% to 8.50% (suburbs)	5.50% to 6.50% (CBD), 6.75% to 7.50% (suburbs)	5 to 9	65 0% to 70 0%	2 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 eap, 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%	30%	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 8	70 0%	4 0%	Does not use	400
LIFE INSURANCE COMPANY + 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, does not use rent spikes	50% to 60%	3.0%	3.0%	5.50% to 6.25% (CBD); 6.75% to 8.00% (suburbs)	1.0% to 3.0%	6.00% to 6.50% (CBD); 7.00% to 8.00% (suburbs)	4.00% to 5.00% (CBD); 7.00% to 8.00% (suburbs)	7 to 10	65 0% to 70.0%	5.0% to 8.0%	\$0.20 to \$0.50	4 to 7

	INTITAL-Y	INITIAL-YEAR CHANGE RATES	RATES	'RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ONS		REPLACEMEN RESERVE	REPLACEMENT, MARKETING RESERVE TIME
	MARKET RENT	EXPENSES,	, CPI	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS VACANT.	TENANT RETENTION	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	SHINOW
/ 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	0.0% to 3.0%	3.0%	1.0% to 3.0%	5.50% to 7.00% (CBD); 6.00% to 8.00% (suburbs)	0.5% to 1.0%	7 00% to 8 50% (CBD), 7 50% to 9.00% (suburbs)	6.00% to 8.00% (CBD); 6.50% to 8.50% (suburbs)	5 to* 10	65 0%. to 75 0%	5.0% to 10.0%	\$0.10 to \$0.25	1 to 21
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 GBD; may use a rent spike of 6.0% in year 4, sees overall cap rates holding steady over the next six months.	4.0% to 6.0%	· 1.8% to 2.8%	. 2 3% to . 2.8%	6.50% to 7.50% (CBD); 7.00% to 7.75% (suburbs)	1.0% to 3.0%	775% to 9.00% (CBD); 8 00% to 10 00% (suburbs)	6.25% to 7.25% (CBD); 6.75% to 8.00% (suburbs)	4 5 5	75 0% 75 0%	5.0% to 7.5%	\$0.10 to \$0.25	9 <del>2 4</del> .
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 increase over the next sx months; may use a rent spike in year 2.	0.0% to 5.0%	2 8% 2 8% 3.0%	25% to 2.8%	6.50% to 7.50% (CBD); 7.00% to 8.50% (suburbs)	10% to 3.0%	7 50% to 9.75% (CBD); 8.50% to 11.00% (suburbs)	. 6.50% to 7.50% (CBD); 7.00% to 8.00% (suburbs)	6 6 6 7 10 10 10 10 10 10 10 10 10 10 10 10 10	65 0% to ` 70.0%	5.0 <b>%</b> to 10.0%	\$0.15 to \$0.25	6 5 3
PRIVATE INVESTOR + Forecast Period: 3 to 7 years Mainly uses DCP analysis, in direct capitalization, capitalizes NOI before Its, leasing commissions, and capital replacement reserve, believes that market conditions favor sellers; expects overall cap rates to hold steady over the next six months; may use a rent spike of 5 0% in year 1 and 4.0% in year 2	3 0% to 4.0%	2.0% to 2.5%	2 0 % 12 5 %	6.75% to '7.75% (CBD); 7.50% to 8.50% (suburbs)	1.5% to 2.5%	8 00% to 9.50% (CBD); 9.00% to 10.50% (suburbs)	6.25% to 7.25% to 7.25% to 8.75% (suburbs)	, 7 to 10		7 0% to 10.0%	\$0.25 to \$0.40	431
INVESTMENT MANAGER + Forecast Period: 3 to 10 years Uses all three approaches to value; in direct cap, capitalizes NOI before TIs, leasning commusions, and capital replacement reserve; expects overall eap rates to decrease 25 to 50 basis points over the next six months; no longer uses a rent spike.	.25% . to	2 0%	2 0% to 3.0%	5.50% to 5.50% to 6.50% (CBD); 6.50% to 8.50% (suburbs)	1.0% to 1.5%	6 50% to 7 50% (CBD); 7 50% (CBD); 7 7 00% to 7 9 00% (CBD); 7 8 10% (CBD); 7 10% (Suburba)	5.50% to 5.50% (CBD); 6.00% to 7.00% (subirrhs)	4 5, 9	70 0% ± to 80 0%	3 0% to 6.0%	\$0.25 to \$0.50	4 50 4

	MARKETING TIME	MONTHS	4 to 4	و د د	4 th 80	8 2 <b>9</b>	2 S S S	6 t 3	рис
:	REPLACEMENT RESERVE	PER SQUARE FOOT	\$0.25 to \$0.50	\$0.25 to \$0.50	Does not use	\$0.15 to \$0.25	\$0.25 to \$1.00	\$0.20 to \$0.30	

						DISCOUNT BATTE (IBB)	OVERALL CAP	VACANCY ASSUMPTIONS	SNO		REPLACEMEN RESERVE	REPLACEMENT MARKETING RESERVE TIME
	MARKET	INITIAL-YEAR CHANGE KALES MARKET RENT EXPENSES OPI	S 5	CAP	SELLING	FREE &	FREE & CLEAR	MONTHS	TENANT RETENTION	UNDERLYING VACANCY & CREDIT LOSS	PER SQUARE FOOT	MONTHS
LIFE INSURANCE COMPANY + Forecast Period: 5 to 10 years Relies mannly 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%	6.50% to 8.00% (CBD); 7.50% to 9.00% (suburbs)	0.8% to 1.5%	7,50% to 8,50% (CBD), 8 00% to 9,00% (suburbs)	5.50% to 8.00% (CBD); 7.50% to 10.00% (suburbs)	6 9	65.0% to 70.0%	8 0% to 12 0%	\$0.25 to \$0.50	9 t 4
	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 2.3%	6.75% to 9.50% (CBD), 8.00% to 11.00% (suburbs)	5.50% to 8.00% (CBD); 7.00% to 10.00% (suburbs)	6 to 6	60.0% to 75.0%	10 0% to 15 0%	\$0.25 to \$0.50	3. 6
PRIVATE REAL ESTATE FIRM + Forecast Period: 10 years Uses mainly direct capitalization; major focus is on the initial cash-on- cash return; hypically 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%	%0 8	Does not use	4 0 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	10% to 20%	3.0%	2 0% to 3.0%	5.50% to 7.50% (CBD), 8.50% to 9.50% (suburbs)	5.0%	9.00% to 10.00% (CBD), 11.00% to 12.00% (suburbs)	5 50% to 7.50% (CBD); 8.50% to 10 00% (suburbs)	6 to 9	60.0% to 70.0%	8 0% to 12.0%	\$0.15 to \$0.25	3 6 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	4 5%	3 0%	3.0%	5.75% to 6.50% (CBD); 7.50% to 10.00% (suburbs)	1.0%	6 00% to 7.50% (CBD), 7.50% to 9.00% (suburbs)	5.00% to 5.75% (CBD): 7.00% to 9.00% (suburbs)	9 to 12	65.0% to 75.0%	5 0% to 8 0%	\$0.25 to \$1.00	6 6 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 holding steady over the next six months.	0 0% to 3 0%	3 0% to 4.0%	2 0% to 3.0%	5.50% to 6.00% (CBD), 8.00% to 10.00% (suburbs)	to to 1.5%	6.00% to 7.00% (CBD); 8.25% to 11.00% (suburbs)	5.00% to 6.50% (CBD); 7.50% to 9.00% (suburbs)	5 to 52	60.0% to 75.0%	3.0% to 7.0%	\$0.20 to \$0.30	6 to 3

CHICAGO OFFICE MARKET-SELECT SURVEY RESPONSES Second Quarter 2016

	INTIAL-YI	INITIAL-YEAR CHANGE RATES	RATTES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ONS		REPLACEMENT RESERVE	T MARKETING
	MARKET	EXPENSES	CPI CPI	CAP	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT RETENTION	UNDERLYING VACANCY & N 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 8.50% (suburbs)	1.0% to 3.0%	6.00% to 8.00% (CBD), 9.00% (suburbs)	5.00% to 8.00% (CBD); 6.00% to 7.8.00% (suburbs)	9 t 6	65.0% to 75.0%	2 0% to 5 0%	\$0 10 to \$0.25	ა მა
REAL ESTATE ADVISOR + Forecast Period: 10 years Manhy uses DCF analysus; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve, believes that thus market favors sellers; does not use rent spikes; expects overall cap rates to decrease 10 to 20 basis points over the next six months.	2.0% to 2.5% Years 1.8.2	3.0%	, %5.5 , , ,	7.00% (CBD); 7.00% to 8 00% (suburbs)	2.0% to 2.5%	6.50% to 7.00% (CBD), 7.50% to 8.00%, (suburbs)	5.90% to 7.00% (CBD), ; 6.50% to 7.50% (suburbs)	. 826	70.0% to 75.0%	3.0% to 5.0%	\$0.25 to \$0.45	 
LIFE INSURANCE COMPANY + Forecast Period: 10 years Uses both DCF and durect 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 are neutral.	0.0% to 2.0% Year 1, .1.0% 'to 3.0% Year 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 25% to ,7 25% (CBD); 6.00% to 7.75% (suburbs)	10 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 commussions, 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 & 2	30%	Did not disclos <b>e</b>	6.25% to 7.25% (CBD)	0 5% to 1 0%	7.25% to: 8.50% (CBD)	5.50% to 6.00% (CBD)	აგ <b>ა</b>	65 0% to 75 0%	1.0% to 5.0%	\$0.15 to \$0.25	4 th 20 th 10 th 1
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%	3.0%	3.0%	6 50% to 7 00% (CBD); 6 75% to 7.25% (suburbs)	1.0%	7.00% to 7.50% (CBD); 7.50% to 8 00% (suburbs)	·· 5 50% to 7.00% (CBD); 5.75% to 6.75% (suburbs)	. 6	. 65.0%	3.0%	\$0.50	: 420
							1					



Second Quarter 2016						DISCOUNT	OVERALL CAP	VACANCY			REPLACEMENT	MARKETING
	INITIAL-YEAR CHA MARKET RENT EXPEN	NGE R	l.	RESIDUAL CAP RATE	SELLING	RATE (IRR) FREE & CLEAR	RATE (OAR) FREE & CLEAR	MONTHS	TENANT RETENTION	UNDERLYING VACANCY & N CREDIT LOSS		MONTHS
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; may use a rent spike of 5.0% in year 1.	3.0% to 4.0% Years 1.8.2	3 0% to 3 5 0%	3.0%	5.75% to 7.00% (CBD), 7.00% to 8.50% (suburbs)	0.5% to 3.0%	7 00% to 8.00% (CBD), 8.00% to 9.00% (suburbs)	5.75% to 7.00% (CBD); 6.75% to 8.00% (suburbs)	6	50 0% to 75 0%	5.0% to 8.0%	\$0.10 to \$0.20	1 to 5
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	3.0% to 4 0% Years 1 & 2	2.0% to to t	2 0% to 2 5%	5 75% to 7.00% (CBD); 7.00% to 8.00% (suburbs)	1.0% to 3.0%	6.50% to 8.00% (CBD); 7.50% to 8.00% (suburbs)	5.00% to 6.00% (CBD): 6.50% to 7.50% (suburbs)	6 to 9	70.0% to 75.0%	7.0% to 8.0%	\$0.15 to \$0.25	2 2 4
PRIVATE REAL ESTATE FIRM + Forecast Period: 10 years Uses both DCF and direct capitalized; 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% to 4.0% Years 1.8.2	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 25% (suburbs)	∿ 2 ∞	60 0% to 70.0%	10% to 20%	\$0 20 to \$0.30	6 6 6
UND INVESTOR + Forecast Period: 10 y CF analysis: in direct cap, capitalizes NOI after ca recree but before TIs and leasing commissions; b arket conditions favor sellers; does not use rent s	3.0% to 4.0% Years 1.&.2	2 0% to 3.0%	2 0% to 3 0%	6.00% to 6.50% (CBD); 7.00% (suburbs)	15% to 2.0%	6 75% to 7 00% (CBD); 7 25% to 7.50% (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	4 to 6 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.	3.0% Years 1.&.2	%0.6	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)	929	70.0% to 75.0%	5.0% to 10.0%	\$0.10 to \$0.30	<b>ల</b> ఫిల

REAL ESTATE ADVISORS + Forecast Period 3 years REAL ESTATE ADVISORS + Forecast Period 3 years REAL ESTATE ADVISORS + Forecast Period 3 years Relation to UP; also use general companion and sales companion and sales companion and sales companion to 10 60% 2.5% (CBD); 1.5% 6.50% (CBD); 1.5% 7.50% (CBD); 1.5% 7.5% (CBD); 1.5% 5.5% (CBD); 1.5% 7.5% (CBD); 1.		INITIAL-YE	INITIAL YEAR CHANGE RATES	ATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ** ASSUMPTIONS	·.·		REPLACEMENT RESERVE	NT MARKETING TIME
REAL ENTATE DIVISIONS + Forecast Period; 1years   (8 cm)   (8 cm		MARKET	EXPENSES	C <sub>F</sub>	. CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT		1 ' 1	MONTHS
PRIVATE REAL ESTATE FIRM + Forecast Period; 3 to 7 years	** **REAL ESTATE ADVISORS ** Forecast Period: 3 years Relies on DCF: also uses direct capitalization and sales companson approach; uses effective rents; in direct cap, capitalizes cash flow after TIs, leasing commissions, and capital replacement reserve; expects overall cap tates to increase 25 to 50 basis points over the next six months.	(8.0%) to (6.0%) Year 1	.5%	15% to 18%	6.00% to 6.50% (CBD); 6.25% to 6.75% (suburbs)	15% to 2.5%	6.50% to 7.00% (CBD), 7.50% to 8.00% (suburbs)	6.00% to 6.25% (CBD); 6.25% to 6.75% (suburbs)	, 12 to 18 t	50.0% to 60.0%	5.0% to 10 0%	\$0.25	
Uses both DCF and other creater Period: 10 years	PRIVATE REAL ESTATE FIRM + Forecast Period: 3 to 7 years Uses both DCF and direct capitalization; also looks at discount to replacement toost, 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 %	30%	6.50% to 7.50% (CBD), 7.00% to 8.00% (suburbs)	1.0% to 1.5%	8.00% to 9.00% (CBD), 9.00% to 11.00% (suburbs)	6 00% to 8.00% (CBD); 7.00% to 8.50% (suburbs)	, to 55	<b>%</b> 0 08	, 5,0% to '	\$0.15 to \$0.30	ణవిత.
PENSION FUND ADVISOR + Forecast Period: 10 years Uses both DCF and direct captualization; in direct cap, capitalizes NOI  before TIs, leasing commissions, and capital replacement reserve, uses  to before TIS, leasing commissions, and capital replacement reserve;  to commissions, and capital repl	LIFE INSURANCE COMPANY ← Forecast Period: 10 years Uses both DCF and direct captalization; in direct cap, capitalizes NOI after capital replacement reserve but before Its and heasing commissions; uses face rents and reflects concessions when they are scheduled to occur, believes market conditions favor buyers.	0 0% Years 1 & 2°	•	3,0%	6.75% to 7.75% (CBD); 7.25% to 8.75%	2.0% to 3.0%	7 25% to	5.75% to 7.25% (CBD): 6.75% to 8.00% (suburbs)	8 to 01	65.0%	8.0% to 10.0%	\$0.20 to \$0.25	ប្រជ
PRIVATE REAL ESTATE FIRM + Forecast Period; 3 to 7 years 0.0% 1.2.0% 1.2.0% 2.0.% 1.0.0% (CBD); 1.0% 10.0.0% (CBD); 0.6.0% (CBD)	<ul> <li>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.</li> </ul>	0.0% to 3.0%	3.0%		7.25% to .7.50% (CBD)	1.0% to 2.0%	ı	6.00% to 6.50% (CBD)	9 to 18	65.0% to 70 0%	10%· to 50%	\$0.15 to \$0.20	6 to 12
	PRIVATE REAL ESTATE FIRM + Forecast Period: 3 to 7 years Uses both DCF analysis and direct captalization; in direct cap, captalizes NOI before IIs, leasing commissions, and captal replacement reserve; believes that market conditions currently favor sellers; does not use rent spikes.	0.0% to 3.0% Years 1 to 3	. 1	.3.0%	7 00% to 9.50% (CBD); 7.50% to 10.00% (suburbs)	l	8 00% to 10.00% (CBD),~ 9.00% to 11.50%. (suburbs)	; 6.50% to 8.00% (CBD); 7.00% to (suburbs)		. 65 0%. to 75.0%	7 0% to 15.0%		4. to 6

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Second Quarter 2016												C. Santa	
	INITIAL-YEAR CI	AR CHANGE RATES	ATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ONS		REPLACEMENT RESERVE	MARKETING	
	MARKET RENT	EXPENSES	CFI	CAP RATE	SELLING EXPENSE	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT RETENTIO	UNDERLYING TENANT VACANCY & RETENTION 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 markets to hold steady over the next six months	3 0% to 5 0% Years 1 & 2	3.0%	3.0%	5.00% to 6 00% (CBD); 5.50% to 6.50% (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)	9 to 0	70 0% to 80.0%	5.0% to 7.0%	\$0.15 to \$0.25	1 3	
TATE COMPANY + s DCF analysis, in direc nmissions, and capital 1 % in years 2 and 3; bel sellers	3 0% to 7 0% Year 1, 4 0% to 7.0% Year 2	2.0% to 3.0%	2 0% to 3.0%	6.75% to 7.50% (CBD); 6.00% to 7.50% (suburbs)	1.0% to 1.5%	6 50% to 7 00% (CBD), 5.50% to 6 75% (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	6 6 6	
INVESTIMENT BANKER + Forecast Period: 5 to 10 years Prefers DCF analysis; also uses direct cap; in direct cap, capitalizes NOI Pefor 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 year 5; expects overall cap rates to hold steady over the next six months.	2.0% to 5.0% Years 1 & 2	2 0% to 3 0%	2.0%	7.00% to 8.00% in both CBD & suburbs	2.0%	6 00% to 9.00% in both CBD & suburbs	5.00% to 7.00% in both CBD & suburbs	4 t t t	65 0% to 75 0%	5.0% to 10.0%	\$0.15 to \$0.25	4 to 0	
LIFE INSURANCE COMPANY + Forecast Period: 3 to 15 years Reless primarily on DCF, also uses direct captalization; in direct cap, capitalizes NOI after capital replacement reserve but before TIs and leasing commissions; may use rent spikes, expects overall cap rates to hold steady over the next six months	3 0% to 5.0% Year 1, 3 0% to 4 0% Year 2	3.0%	25% to 3.5%	5.00% to 7.00% (CBD); 6.00% to 8.00% (suburbs)	1.0% to 2.0%	6.00% to 8.00% (CBD), 7.00% to 8.50% (suburbs)	4.75% to 6.00% (CBD), 6.00% to 7.50% (suburbs)	6 to 10	65 0% to 70 0%	10%	\$0.10 to \$0.15	3 3 to	
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.	3 0% to 4.0% Years 1 & 2	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% (CBD); 6 75% to 8.00% (suburbs)	4.50% to 6.25% (CBD); 4.75% to 7.25% (suburbs)	8 6 6	65 0% to 70 0%	4 0% to 6.0%	\$0.20 to \$0.25	8 8 21 21	
												4	1

	INITIALY	INITIAL-YEAR CHANGE RATES	YTES	RESIDUAL	۲	DISCOUNT (RATE (IRR)	OVERALL CAP	VACANCY ASSUMPTIONS	SNO		REPLACEMENT RESERVE	MARKETING
,	MARKET RENT	EXPENSES .	1 . 1	CAP RATE	SELLING	FREE & CLEAR ,	FREE &	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	1	
INVESTMENT BANKER + Forecast Period: 11 years Strongest interest is in Midtown; uses both DCP and direct capitalization; does not use rent spikes; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve.	1.0% to 3.0%	1.0% to to 3.0%	1.0% to 3.0%	5.50% to 7.00%	4.0%	6 50% to to 8.50%	4.50% to 6.00%	3 to 12	65.0% to 75.0%	5.0% to 10.0%	\$0.15 to \$0.25	3 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%	88 10	70.0% to 75.0%	2 5% to 3.0%	\$0.35 to \$0.50	6
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 of 5.0% in years 1 and 2.	4 0% to 5.0%	30%	3.0%	4-75% to 5-25%	3.8% , to 4.0%	5.75% to 6.25%	3.75% to 5.25%	6 to 12	60 0% to 70 0% .	0.5% to 10%	\$0 10 to \$0 25	3 3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
INVESTMENT ADVISOR + Forecast Period: 3 to 10 years Uses both DCF and direct captalization; 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 0% to 2.0%	2 0% 1 to : tr	10% to t 3.0% 8	6.50% to 8 00%	2.0% to 3.0%	8 00% to 9.00%	6.50% to 8.00%	6 6 6	50 0% to 75.0%	2 5% to 7.5%	\$0.15 to \$0.50	to.
LIFE INSURANCE COMPANY + Forecast Period: 10 to 12 years Uses both DCF and direct capitalization; in direct cap, capitalizes NOI before IIs, leasing commissions, and capital replacement reserve; uses effective rents in DCF analysis; does not use rent spikes	6.0% to 6.5%	3.0%	3.0% to t t 4.0%	5.25% .5.25% .6.00%	1.0% to 3.0%	5.50% to 6.25%	.400% to .5.00%	s to	65 0% to 75.0%	5.0% to 7.0%	\$0.25 to \$0.50	4 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%	30%	3.0%	5.75% to 6.75%	1.5% to 2.0%	6 25% to 7 25%	4 00% to .5.75%	5 to 8	.65 0% to 70 0%	3.0% to 6.0%	\$0.20 to \$0.25	4 to 0,



	EX INTERN	INTITAL VEAR CHANGE RATES	ATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	ions		REPLACEMENT RESERVE	T MARKETING TIME
	MARKET	EXPENSES	CPI	CAP	SELLING	1	FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	MONTHS
REIT + Forecast Period: 3 to 7 years Uses both DCF and direct captablization; in direct cap, capitalizes NOI before TIs, leasing commissions, and captal replacement reserve: uses the ernts and reflects concessions when they are scheduled to occur: expects overall cap rates to decrease 10 to 25 basis points over the next six months; does not use rent spikes	0.0% to 2.0% Year 1, 1.0% to 2.5% Year 2	1 0% to 2.0%	2.0% to 2.5%	7.00% to 8.50%	15% to 20%	7.50% to 8.50%	6.50% to 8.00%	6 to 15	50 0% to 75.0%	5.0% to 7.0%	\$0.25 to \$0.50	m 2 v
LANCE COM  and direct co sing commiss reflects conce reflects conce ent spikes.	0 0% to 2.0% Year 1, 1.0% to 2.0% Year 2	2 0% to 3 0%	2.5% to 3.0%	6.75% to 8.50%	1.0% to 3.0%	6 50% to 9.00%	6 75% to 8 00%	9 to 12	60 0% to 70 0%	5.0% to 10.0%	\$0.50 to \$0.75	6 6 6 9
Forecast Per ation, in direct ut before IIs a to hold steady	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 6.75%	6 9	60 0% to 70.0%	3.0% to 5.0%	\$0 15 to \$0 25	ი ლი
LDVISOR + Forecast Period: 5 lirect capitalization; in direct cap, capit ent reserve but before TIs and leasing test, believes market conditions are ner	0 0% to 3 0% Year 1, 1 5% to 3 0% Year 2	3.0%	3.0%	5 75% to 8.50%	1.0% to 4.0%	6 00% to 9.50%	5.25% to 8.00%	6 to 9	70 0%	20%	\$0.15 to \$0.25	3 6 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 DOF, 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%	%0:0	6.00% to 8.00%	2.0% to 2.5%	6 50% to 9.50%	5.00% to 8.50%	8 12 13	65 0%	10% to 3.0%	\$0.25	e 2 v

PACIFIC NORTHWEST OFFICE MARKET-SELECT S Second Quarter 2016	CET-SEL	ECT SU	RVEY	URVEY RESPONSES	NSES.				7	ę .		
	INITIAL-Y	INITIAL YEAR CHANGE	GE RATES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP	VACANCY ASSUMPTIONS	SNO	*	REPLACEMENT RESERVE	T MARKETING TIME
v	MARKET	EXPENSES	CPI	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT RETENTION	UNDERLYING VACANCY & N 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	3.0% to 5.0%	3.0%	3.0%	5 00% to 6.00% (CBD), 5.50% to 6.50% (suburbs)	0.5% to • 1.0%	5.50% to 7.00% (CBD); 6.00% to 7.50% (suburbs)	4.50% to 6.00% (CBD); 5.00% to 6.50% (suburbs)	ot. 6	70 0% to 80.0%	8.0%	\$0.15 to \$0.25	1 to 1 3 3 3 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5
* 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.	3.0% to 4.0% Years 1.8,2	3 0%	30%	5.75% 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 9	70 0% to 75 0%	3.0% to 6.0%	\$0.15 to \$0.25	3 6 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%	5.75% to 6.50% (CBD); 6.50% to 7.25% (suburbs)	3.0% to 4.0%	6 50% to 7 25% (CBD); 7 25% to 8.50% (subfurbs)	5.50% to 6.00% (CBD); 6.00% to 7.00% (suburbs)	, se.	70 0% to 75.0%	3.0% 5.0% %%	* \$0.15 \$0.25	ە 3 ئ
PRIVAITE 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%	15% to 3.0%	.5.00% to .9.00% (CBD)	2.0% to 4.0%	8.00% to' 9.00% (CBD), 8.00% to 10.50% (suburbs)	5.00% ; to .8.00% (CBD)	6 to 12	50 0% to , 75 0%	10% to 2.0%	\$1 00 to \$2.00	6 to 6
REAL ESTATE SERVICE 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, may use a rent spike of 6.0% in year 1; expects overall cap rates to hold steady over the next six months.	\$ 50% to 70% Years 1&2	2 5% to 3.0%	25% to 30%	6.50% to 7.00% (CBD); 7.00% to 8.00% (suburbs)	1.0% to 3.0%	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 9	70.0% to 75.0%	. %0.5	\$0.10 to .\$0.20	, n24
LIFE INSURANCE COMPANY + Forecast Period: 7 to 10 years Uses both DCF and direct captalization; 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%	30%	, ~6.00% to .7.50% (CBD)	2.5% · to 3.0%	6.50% to 8.50% (CBD)	5.50% to 6.50% (CBD)	66 to the transfer of the tran	65 0% to 70 0%	2 0%, to 8 0%	\$0.20 to \$0.50	3 &
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NUMBER   N	PHILADELPHIA OFFICE MARKET-SELECT SURV) Second Quarter 2016	LECT SU	JRVEY K	ESF	EY RESPONSES								
MANAGET   REPENSIS CT   RAIT   REPENSIS CLEAR   CLEAR   VACANT   REPENTION CREDITLOSS POOT		INTHAL-YE	AR CHANGE R	ATTES	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY	ONS		REPLACEMENT RESERVE	TIME
2.0% Tayler 1. 2.5% Tayler 2.0% (TRD); 3.0% 8.25% (TRD); 7.00% (TRD);		MARKET RENT	EXPENSES	I <del>.</del>	CAP RATE	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT	UNDERLYING VACANCY & N CREDIT LOSS		MONTHS
10 kg   10 k	RIVATE INVESTOR + Forecast Period: 10 years ses both DGF and direct capitalizes NOI for expital replacement reserve but before TIs and leasing commissions; se effective rents, expects overall cap rates to hold steady over the next c months, does not use rent spikes	2.0% Year 1, 2.5% Year 2; 2.5% to 3.0% Year 3	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 8.50% (suburbs)	7 to 9 9	65 0% to 70 0%	7 0% to 9.0%	\$0.25	4 0 0
10	EIT + Forecast Period: 10 years es both DCF and direct captalization; in direct cap, capitalizes NOI fore IIs, leasing commissions, and capital replacement reserve; focuses suburhan markets; uses effective rents: expects overall cap rates to crease 20 to 40 basis points over the next six months; does not use nt spikes.	10% to 2 0% Year 1; 2 0% to 3.0% Year 2	3 0%	3 0% to 3.25%	6.00% to 6.75% (CBD). 8.25% to 9.00% (suburbs)	2.0%	7.00% to 8.00% (CBD); 8.50% to 10.00% (suburbs)	6.00% to 7.00% (CBD), 7.25% to 8.25% (suburbs)	<b>∞</b> 5 ∞	65.0%	%0 %	\$0.20	6 12 22
10% 10% 20% 800% (CBD); 20% 800% (CBD); 6650% 5.0% 5.0% 5.0% 5.0% to to to to 7.50% to 7.50% to 10.00% 15 750% 15 750% 7.0% \$0.50	PPORTUNITY FUND INVESTOR + Forecast Period: 5 years ses both DCF and direct capitalization; in direct cap, capitalizes NOI from Its, leasing commissions, and capital replacement reserve, uses ce rents and reflects concessions when they are scheduled to occur; refers suburbs; does not use rent spikes.	3.0% Years 1 to 3	3 0%	3.0%	7 00% to 8.00% (CBD); 8.00% to 9 00% (suburbs)	3 0%	7 00% to 8 00% (CBD); 7.50% to 9.00% (suburbs)	6 00% to 8.00% (CBD); 7.00% to 8.75% (suburbs)	9	65 0%	%0'\$	\$0.25	ლგ ი
5.0% 5.0% 5.0% 5.0% 5.0% 5.0% 5.0% 5.0%	EIT + Forecast Period: 5 to 7 years ses both DCF and direct capitalization. in direct cap, capitalizes NOI fore TIs, leasing commissions, and capital replacement reserve, ses not use rent spikes; expects overall cap rates to hold steady over e next six months	10% to 3.0%	10% to 20%	2 0% to 2.5%	6.50% to 8.00% (CBD); 7.00% to 8.50% (suburbs)	1	7 00% to 8 00% (CBD); 9 00% to 10.00% (suburbs)	6.00% to 7.50% (CBD); 7.00% to 8.50% (suburbs)	6 to 15	65.0% to 75.0%	5.0% to 7.0%	\$0.25 to \$0.50	3.9 6
	RIVATE EQUITY INVESTOR + Forecast Period: 4 to 6 years see mamly DCF analysis; in direct cap, capitalizes NOI before TIS, leasing armissions, and capital replacement reserve; does not use rent spikes; es face rents and reflects concessions when they are scheduled to occur	0.0% to 15% Year 1, 0.0% to 3.0% Year 2	0.0% to 3.0%	0 0% to 3.0%	7.50% (CBD); 9 00% (suburbs)	1.5% to 3.0%	9 00% (CBD), 10.00% (suburbs)	7.50% (CBD); 9.00% (suburbs)	6 to 12	50.0% to 75.0%	5 0% to 10 0%	\$0 15 to \$0.50	က ရာ တ

		-				DISCOUNT	OVERALL CAR				The state of the s	
**	INITIAL-Y	INITIAL-YEAR CHANGE RATES	RATES	RESIDUAL		RATE (IRR)	RATE (OAR)	ASSUMPTIONS	IONS		RESERVE	MARKEITNG
	MARKET RENT	EXPENSES	CPI.	, CAP RATE	SELLING	; FREE & CLEAR	; FREE & CLEAR	MONTHS	TENANT	UNDERLYING TENANT VACANCY & RETENTION CREDIT LOSS	PER SQUARE FOOT	MONTHS
PRIVATE INVESTOR + Forecast Period: 2 to 5 years Manly uses DCP analysts; 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.	2.0% to 3.0% Year 1; 3.0% Year 2	3.0%	3.0%	9.00% (suburbs)	1.0% to 3.0%	10.00% to 11.00% (suburbs)	7.50% to ? 8.50% (suburbs)	9 · 12 · 12	60.0% to 70.0%	7 0% to 15.0%	\$0.20 to \$0.35	ر د د د
LIFE INSURANCE COMPANY + 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 years 1 through 3.	4.0% to 6.0% ,	, %0 °C	3 0%	6.50% to 7.50% (GBD); 7.00% to 8.00% (suburbs)	1.0% to 2.0%	7.00% to 8.00% (CBD), 7.00% to 8.50% (suburbs)	.6.00% to *8.00% (CBD); 7.00% to -8.50% (suburbs)	, p 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	60.0% to 70.0%	0 0% to `. 2.0%	\$0.20 to \$0.25	450
PUBLIC REIT + Forecast Period: 5 to 8 years Uses all approaches to value; in direct cap, capitalizes NOI before TIs, leasing commissions, and capital replacement reserve; believes that this market currently favors sellers; expects overall cap rates to hold steady over the next six months.	3 0% to 7 0% Year 1, ' 3 0% to 6 0% Year 2	1.0% to 3.0%	1.0% to 3.0%	, 5.50% to 7.00% (CBD), 6.50% to 8.00%, (suburbs)	0.5% to 10%	7,00% (0 9,00% (CBD), 7,00% to 10.00% (suburbs)	5.00% to 7.50% (CBD); - 6 00% to -8.00% -(suburbs)	o t 6	60.0% .to 75.0%	4 0% to 7 0%	\$0 10 to \$0.25	1 to 122
REAL ESTATE ADVISOR ◆ Forecast Period: 10 years Maniy 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% to 5.0% in year 3.	3.0% to 5.0% Year 1; 3.0% to 4.0% Year 2	. % . % 	3.0%	6.75% -to -7.50% (suburbs)	1.0% to 3.0%	750% to 8.00% (suburbs)	6 00% to 6.50% (suburbs)	6 to 6	65.0% to 70.0%	7.0%	\$0 20 to \$0 25	4 0 0 0 .
* PRIVATE EQUITY FIRM +* Forecast Period: 5 years Manly uses DCF analysis; in direct capitalization, capitalizes NOI before This leasing commissions, and capital replacement reserve; believes that market conditions equally favor buyens and sellers.	3.0% to 5.0% ' Years 1 to 3	20%, to to 30%	2.0% (2.0%) to 3.0%	6.50% to 2.0% ( 7.00% (CBD); 10 6.50% to 3.0% 8.00% ** (suburbs)	1.0% . to 2.0%	8 oo% to 10.00% m both CBD &	6.00% to 7.00% in both CBD & suburbs	, o o o	65 0%. to 80.0%	5 0% to 7.0%	\$0.15 to	. 2,2



	S. LA TITING	INTERAL VEAR CHANGE BATES	l	RESIDUAL		DISCOUNT RATE (IRR)	OVERALL CAP RATE (OAR)	VACANCY ASSUMPTIONS	SNO	:	REPLACEMENT RESERVE	r marketing Time
	MARKET	EXPENSES	1 1	CAP	SELLING	FREE & CLEAR	FREE & CLEAR	MONTHS	TENANT	UNDERLYING VACANCY & N CREDIT LOSS	PER SQUARE FOOT	MONTHS
WESTOR ← Fore CF analysis; in direct sserve but before TIs: 5.0% in year 3 and 9.	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 to to	60.0% to 70 0%	5.0% to 10.0%	\$0.25 to \$0.35	33 52
ISOR ← Forecast is; in direct cap, cap, id; and it replacementers, expects overall s; does not use rent; s;	3 0% to 5 0% Years 1 to 3	3.0%	3.0%	6 25% to 8.25% (CBD); 6.75% to 8.75% (suburbs)	o 5% to 1.0%	7 00% to 9 00% in both CBD & suburbs	6.00% to 8.00% (CBD); 6.50% to 8.50% (suburbs)	5 to 10	70 0% to 80 0%	0.0% to 5.0%	\$0.00 to \$0.25	1024
PUBLIC REAL ESTATE COMPANY + Forecast Period: 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, 7.0% in year 2, and 5.0% in year 3; believes market conditions equally favor buyers and sellers	4.0% to 6.0% Year 1, 4.0% to 7.0% Year 2	2 0% to 3 0%	2 0% to 3 0%	6.50% to 7 50% (CBD), 6.50% to 7.50% (suburbs)	10% to 1.5%	6.50% to 7.50% (CBD); 6.25% to 7.00% (suburbs)	5.50% to 7.00% in both CBD & suburbs	6 to 12	60 0% to 70.0%	4 0% to 8 0% 8 0%	Does not use	6 2 G
PENSION/CORE INVESTOR ← Forecast Period: 10 years Mannly 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 3.0% Year 1, 3.0% Year 2	2.0% to 3.0%	2 5%	6.50% to 7.00% (CBD); 7.00% to 7.50% (suburbs)	1.5% to 2.0%	7.00% to 7.50% (CBD), 7.50% to 8.00% (suburbs)	6.00% to 6.50% (CBD); 7.00% to 7.50% (suburhs)	6	60 0% to 70.0%	5 0% to 6 0%	Does not use	9
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% r; Years r; 1103	3.0%		5 75% to 6.25% (suburbs)	1.0% to 2.0%	6 50% to 7.00% (suburbs)	5 25% to 5.75% (suburbs)	o 2 6	65.0% to 75.0%	%°71	\$0.15 to \$0.20	6 t 3