

Commercial Real Estate Lending

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Richard Hamm
Advantage Consulting & Training
Huntsville, AL

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Agenda

- Introduction and keys to commercial real estate (CRE) lending
- Key #1 – Understanding the key risk areas & enterprise risk management (ERM)
- **Key #2 – Properly developing net operating income (NOI) & cash flow available for debt service (CFADS)**
 - Underwriting concepts; Summary of tax return schedules
 - Case and underwriting worksheet
 - Case review; Cap rates oversimplified
- Key #3 – Appendix (time permitting): Understanding the non-financial risks of CRE Lending

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Agenda (cont.)

- Other keys, not sufficient time to cover today, but covered in Advanced CLS
 - Key #4 – Differentiating properties/projects, analysis and underwriting
 - Key #5 – Utilizing concept of sponsorship (relevant experience of owner/borrower/ guarantor)
 - Key #6 – Developing a global analysis of sponsor's holdings
 - Key #7 – Following appraisal and environmental rules/regulations
 - Key #8 – Effectively administering/monitoring loans post-closing
 - Key #9 – Maintaining portfolio diversification

CRE Loans

- Depend on rental income (from an unaffiliated third party) or planned real estate unit sales as the primary source of repayment [focus of this class]
 - _____ (NOO) usually describes income-producing, investment, development or other true CRE loans
- Contrast to _____ (OO) loans, where most of land and improvements (50%+) to be utilized by owner either directly via same entity, or indirectly via entity with substantially common ownership
 - OO loans [think commercial & industrial (C&I)] are exempt from regulatory concentrations guidance due to lower risk, in general, and less linkage between primary and secondary sources of repayment

Key #1: Understanding the Major Risks

- To your bank's earnings or capital
- Key regulatory categories, from Aug. 2013 Comptroller's Handbook – CRE Lending
 - Most banking products also have these risks
 - Credit risk
 - Interest rate risk
 - Liquidity risk
 - Operational risk
 - Compliance risk
 - Strategic risk
 - Reputation risk
- How CRE loans affect these risk categories is example of _____
(ERM), or how the CRE line of business cannot mitigate or resolve all the risks
 - We cover these risks in-depth in Advanced CLS CRE Risk Management class

Key #2 – Properly Developing NOI & CFADS

- Primary CRE cash flow measure: NOI (net operating income)
 - Old-fashioned net income + depreciation (a non-cash expense) + interest expense (to avoid double-counting with interest as part of debt service) on historical basis
 - To get EBITDA (earnings before interest taxes and depreciation)
 - Then adjust for capitalized expenditures to get historical NOI
 - Then adjust for expenses (some smoothed, some imputed) to get pro-forma NOI
 - More adjustments, primarily for distributions, to get CFADS, historical and pro-forma
 - Ignores most of the business balance sheet issues (direct method cash flow, as you have studied in the Foundational CLS), because
 - Land/building likely only significant asset
 - Loan/mortgage likely only significant liability

Underwriting Variables

- Basic steps to NOI (bankers and appraisers) and CFADS (bankers)
- 1. Develop gross potential income or gross rents, historical and pro-forma
 - Not provided by tax returns
 - Need rent roll or property configuration
 - # units x rental rate per month x 12 months
- 2. Historical vacancy
 - Also not provided by tax returns
 - For historical analysis
 - Start with *gross potential income* developed above
 - Then subtract your “gross rents” or “rents received” from the top line of the tax return
 - Example blank Form 8825 on page 15



Underwriting Variables (cont.)

- Bankers work backwards to determine historical vacancy

Customer Data and Bank NOI Worksheet	Tax Return Data (Sched. E or Form 8825)
Gross Potential Income	////////////////////////////////////
Less: Vacancy	////////////////////////////////////
Gross Effective Income ← ← ← ← ← ← ←	“Rents Received” on Schedule E “Gross Rents” on 8825

- **Stabilization** occurs when occupancy of subject property reaches “market” levels (100% – market vacancy)

Underwriting Variables (cont.)

3. Pro-forma vacancy

- Combination of
 1. _____ and trend of property (non-construction, where data available)
 2. _____ and trends/conditions
 3. Loan policy minimums/guidelines
- Blindly using historical levels and/or policy guidelines is trap to avoid
- Two types of vacancy
 1. _____ (credit or collection loss)
 - a. Late or no payment, b. Check bounces, or c. Rent concessions or give-aways
 2. Physical (unit is empty)

Differentiated Underwriting Guidelines Example

* Example Only *	Apts ≥100 Units	Unanchored Shopping Center	Multi-Tenant Office Building
Max LTV	80%	75%	75%
Max FDICIA LTV	85%	85%	85%
Max LTC	85%	80%	80%
Min Equity (Cash)	15% (5%)	25% (15%)	20% (10%)
Min DSC	1.20x	1.35x	1.30x
Min Vacancy Factor	10%	15%	5%
Min Pre-Leasing/Pre-sales	NA	0.70x	0.70x
Max Construction Term	36 months	24 months	24 months
Max Loan Term	5 years	5 years	5 years
Max Amortization	30 years	20 years	20 years

Underwriting Variables (cont.)

4. Impute pro-forma management fee

- Usually at market rate (4-6%?) of gross effective rents, even if no actual fees paid in historical data
 - Class example will use 5%
- Not to simulate bank cost if foreclosure occurs
 - Real reason is “cost” of managing a true CRE property, whether in owner’s time or out-of-pocket payment to another party, or
 - If large portion of potential purchasers will not self-manage, so this affects market value
 - Then assessed by appraiser in income approach to value, using NOI as cash flow



Underwriting Variables (cont.)

5. Historical maintenance and repair costs

- Most costs will be expensed in current year and shown on Schedule E or Form 8825
- Tax and accounting rules require some costs to be capitalized onto balance sheet, then depreciated or amortized over several years
 - If improvement extends useful life of property, it should be capitalized
 - This is very subjective, leaving room to fully expense cost in year made, especially if customer wants to defer or avoid current taxable income

Underwriting Variables (cont.)

6. Create pro-forma maintenance reserve
 - Sometimes called *reserves for replacement*
 - Usually imputed in pro-forma column at 2-3% of gross potential income, with 5% often more appropriate in medium to smaller properties
 - Pro-forma amount may be higher due to property age, historical trends or observed need for deferred maintenance
 - Historical costs tend to fluctuate greatly, so pro-forma is an estimate of expected, average, ongoing annual expenditures over time
 - Assessed even in first years of new properties – “sets aside” cash flow annually for big ticket repairs down the road
 - Usually not funded or escrowed, unless required by
 - Lender due to significant deferred maintenance
 - Government programs, such as state affordable housing

Underwriting Variables (cont.)

- _____
 - May be assessed as a one-time expense
 - May create material cash flow change from year to year, requiring multi-column, discounted cash flow (DCF) analysis by banker and appraiser
 - Obvious improvements needed to render property lease-able (in purchase or renovation situation)
 - New paint or carpeting
 - Integrity of roof (leaks)
 - Potholes in parking lot



Underwriting Variables (cont.)

7. Operating expenses

- Historical expenses generally come from customer data (property operating statement) or tax returns
 - Both NOI and CFADs exclude depreciation expense and interest expense
- Pro-forma expenses generally based on high point of recent history or obvious trend
 - Generally, inflation neutral, because cap rate used with pro-forma NOI (to make value estimate) does not have a direct time value of money component
 - Sometimes based on “rule of thumb” per square foot, per unit, per bed or % of rents

Underwriting Variables (cont.)

8. Optional: Create pro-forma re-lease and rollover reserve

- Ongoing cost to attract tenants or get lease renewals over time
 - Marketing and advertising
 - Leasing commissions
 - Minor *tenant improvements* (TIs) related to renting or re-leasing space
- More common in larger properties in larger markets
- Generally not funded, but assessed at 1% or less of gross effective income

Underwriting Variables (cont.)



9. Result/subtotal: NOI

- Pro-forma NOI used to _____
 - Pro-Forma NOI ÷ Estimated Cap Rate
 - “Missing link” in most analyses by bankers
- Value estimate and loan amount used to determine current estimated loan-to-value (LTV)
 - Pro-forma NOI can be reduced by 10%, divided by
 - Estimated cap rate increased by 0.5% or 1.0%
 - Result: stress-test value estimate
 - Stress-test LTV: Loan amount divided by stress-test value estimate

Underwriting Variables (cont.)



10. Adjust NOI for distributions to owners, and other items not in NOI; New result: CFADS

- Appraisers generally stop at NOI as cash flow measure
 - Not concerned about DSC
 - Distributions to owners, other non-real estate pass-through items (such as interest income) do not affect NOI
- Distributions found on Schedule K-1s or business tax return Schedule M-2, net of any contributions
- Other cash items found on Schedule K, Schedule M-1 or Schedule M-2 of business tax return and not already used within NOI

Underwriting Variables (cont.)

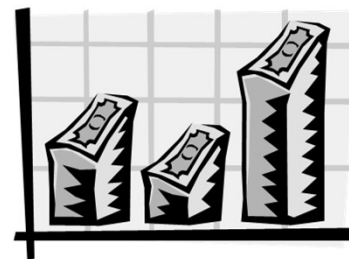
10. Adjust NOI to get CFADS (cont.)

- CFADS used by bankers to determine debt service coverage (DSC)
- $DSC = CFADS \div \text{Annual Debt Service}$
 - Tested against guideline ($\approx 1.25x$)
 - Stress-Test DSC: Combining a higher annual debt service (by increasing interest rate +2% or +3%) with a lower CFADS (by factor of 10-15%)
 - Adjust/increase interest rate, even if fixed rate in place for 3-5 years
 - New rate at end of 3-5 years is unknown



Underwriting Variables (cont.)

- Summary: For transaction-level stress-testing, at minimum, most banks change
 - Interest rate \uparrow and CFADS \downarrow
 - DSC \downarrow
 - Hopefully $\approx 1.0x$ or higher
 - NOI \downarrow and cap rate \uparrow
 - Value \downarrow
 - LTV \uparrow
 - Hopefully $\approx 100\%$ or lower



Preferred Worksheet Format

- Shows historical data columns (if available) along with underwriting or pro-forma column that is not necessarily the next year, but a representative year in the short-term or next few years of the property
- In most medium-to-smaller-sized properties, data can be compiled on dollar basis, similar to tax return or financial statement data
- For larger properties, data is often expressed on a per-square-foot basis
- Some bankers include more advanced calculations (for larger loans), such as
 - Supportable Loan Amount (DSC-based and LTV-based)
 - DSC Breakeven points (for interest rate, rental rate and/or vacancy rate)

Case Study: Smith Apartments

- Customer has reached five-year balloon on an original \$2,550,000 loan at 7.0% fixed interest rate
 - Seeking to renew \$1,950,000 outstanding at 6.0% fixed for three more years on remaining 10-year amortization
- Your bank's vacancy underwriting guideline for apartments is 10%
- For ease of calculation, use a 10% cap rate at the appropriate place
- Annual debt service for the renewal will be \$259,800
- Stress-test annual debt service will be \$283,800
- Work the case in small groups of your choosing; if CRE is new for you, try to partner with someone with more experience

Case Study: Smith Apartments (cont.)

- Step one: calculate gross potential income from rent roll:
 - Bldg A has 8 two-BR units that rent for \$1,200 per month
 - Bldg B has 4 two-BR units that rent for \$1,200 per month
 - Bldg C has 4 one-BR units that rent for \$ 375 per month
 - Bldg D has 12 one-BR units that rent for \$ 375 per month
 - Bldg E has 12 one-BR units that rent for \$ 375 per month
- Step two: calculate historical NOI & CFADS for Year 5
 - Case data on page 14, worksheet on facing page, page 15, if printing two-sided
- Step three: complete the pro-forma column
- Step four: compute DSC and stress-test DSC
- Step five: develop value estimate and LTV using the 10% capitalization rate (“cap” rate)
 - ❖ *Work in small groups, if CRE is new for you, work with someone with more experience*



Case Study: Smith Apartments (cont.)

- Step one: calculate gross potential income from rent roll

Bldg. A-2BR _____ = \$ _____

Bldg. B-2BR _____ = _____

Bldg. C-1BR _____ = _____

Bldg. D-1BR 12 x \$ 975 x 12 = 140,400

Bldg. E-1BR _____ = _____

Total Possible Annual Rents \$ _____ [Gross Potential Income]

**Rental Real Estate Income and Expenses of a
Partnership or an S Corporation**

OMB No. 1545-0123

Attach to Form 1065 or 1120-S.
Go to www.irs.gov/Form8825 for instructions and the latest information.

Name	Employer identification number
------	--------------------------------

1	Enter the address and type of each rental real estate property. For each rental real estate property listed, report the number of days rented at fair rental value and number of days of personal use. Attach page 2 to list additional properties. See instructions.				
	(a) Physical address of each property (street, city, state, ZIP code)	(b) Type (Enter code 1-8; see page 2 for list.)	(c) Type (Enter code A-I; see page 2 for list.)	(d) Fair rental days	(e) Personal-use days
A					
B					
C					
D					

Rental Real Estate Income 2a Gross rents b Other income related to rental real estate activity c Total rental real estate income for each property. Add lines 2a and 2b Rental Real Estate Expenses 3 Advertising 4 Auto and travel 5 Cleaning and maintenance 6 Commissions 7 Insurance 8 Interest (see instructions) 9 Legal and other professional fees 10 Real estate taxes 11 Repairs 12 Utilities 13 Wages and salaries 14 Depreciation (see instructions) 15 Reserved for future use 16 Reserved for future use 17 Other deductions (attach Schedule A (Form 8825)) 18 Total rental real estate expenses for each property. Add lines 3 through 17 19 Income or (loss) from each rental real estate property. Subtract line 18 from line 2c 20a Total rental real estate income. Add total rental real estate income from line 2c. See instructions b Total rental real estate expenses. Add total rental real estate expenses from line 18. See instructions 21 Net gain (loss) from Form 4797, Part II, line 17, from the disposition of property from rental real estate activities 22a Net income (loss) from rental real estate activities from partnerships, estates, and trusts in which this partnership or S corporation is a partner or beneficiary (from Schedule K-1) b Identify below the partnerships, estates, or trusts from which net income (loss) is shown on line 22a. Attach a statement if more space is needed. (1) Name _____ _____ (2) Employer identification number _____ _____ 23 Net rental real estate income (loss). Combine lines 20a through 22a. Enter the result here and on Schedule K, line 2, of Form 1065 or 1120-S		Properties			
		A	B	C	D
2a					
2b					
2c					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20a					
20b	()				
21					
22a					
23					

Case: Tax Return Information for Oak Trace Apartments

Form 8825 (attached to pass-through business tax returns: Form 1120S and Form 1065)

Name: **Smith Apartments, LLC**

(data compiled from three separate tax returns, shown here in one consolidated chart)

1	Name and physical address of each property	Type-Enter code 1-8 see page 2 for list	Fair Rental Days	Personal Use Days
A	Oak Trace Apartments Huntsville, AL 35811	2	365	0

Rental Real Estate Income		Year 3	Year 4	Year 5
2	Gross rents	499,500	492,300	493,800
Rental Real Estate Expenses				
3	Advertising	11,100	9,600	9,300
4	Auto and travel	4,800	4,800	4,500
5	Cleaning and maintenance	900		
6	Commissions			
7	Insurance	8,700	9,300	12,000
8	Legal and other professional fees	600	1,800	1,500
9	Interest	180,900	140,100	134,100
10	Repairs	21,000	27,600	42,600
11	Taxes	27,300	29,100	29,400
12	Utilities	7,200	9,000	8,400
13	Wages and salaries			
14	Depreciation (see instructions)	159,000	135,000	135,000
15	Other (list) >			
16	Total expenses for property Add lines 3 through 15	421,500	366,300	376,800
17	Income or (Loss) from property Subtract line 16 from line 2	78,000	126,000	117,000

Form 1065 U S Return of Partnership Income

Schedule L - Balance Sheets per Books (active rows only)

	12/31/Year 2	12/31/Year 3	12/31/Year 4	12/31/Year 5
1 Cash	42,000	54,000	75,000	90,000
9a Buildings and other depreciable assets	2,934,000	2,934,000	2,961,000	2,976,000
9b Less: accumulated depreciation	552,000	711,000	858,000	993,000
11 Land (net of any amortization)	258,000	258,000	258,000	264,000
14 Total assets	2,682,000	2,535,000	2,436,000	2,337,000
16 Mortgages, Notes Payable in less than 1 Yr.	279,000	279,000	279,000	279,000
19b Mortgages, Notes Payable in 1 Yr. or More	2,259,000	2,064,000	1,869,000	1,692,000
21 Partners' capital accounts	144,000	192,000	288,000	366,000
22 Total liabilities and capital	2,682,000	2,535,000	2,436,000	2,337,000

Schedule M-2 - Analysis of Partners' Capital Accounts

1	Balance at beginning of year	144,000	192,000	288,000
2	Capital contributed: a. Cash			
	b. Property			
3	Net income (loss) per books	78,000	126,000	117,000
4	Other increases (itemize)			
5	Add lines 1 through 4	222,000	318,000	405,000
6	Distributions a. Cash	30,000	30,000	39,000
	b. Property			
7	Other decreases (itemize)			
8	Add lines 6 and 7	30,000	30,000	39,000
9	Balance at end of year	192,000	288,000	366,000
	Subtract line 8 from line 5			

REAL ESTATE LOAN UNDERWRITING WORKSHEET

(Rev. 01/2026)

CUSTOMER or PROPERTY: Smith Apts. LLC/Oak Trace

LOAN AMOUNT: \$1,950,000

Date of Analysis: _____	<< oldest		most recent >>	Pro-Forma
Year	Year 3	Year 4		
Source	tax return	tax return		

(customer prepared, tax return, etc.)

NET OPERATING INCOME (NOI) and CASH FLOW AVAILABLE FOR DEBT SERVICE (CFADS)

Gross Potential Income	\$500,400	\$500,400		100%		100%
Vacancy	900	8,100		%		%
GROSS EFFECTIVE INCOME	499,500	492,300				
Management Fees	0	0	0	%		%
Maint.Exp.& Repairs//Reserve	21,900	27,600		%		%
Capitalized Expenditures*	0	15,000		%		%
Insurance Expense	8,700	9,300				
Utilities Expense	7,200	9,000				
Property Tax Expense	27,300	29,100				
Other Expenses or Reserves**	16,500	16,200				
TOTAL EXPENSES	81,600	106,200		%		%
NET OPERATING INCOME	\$417,900	\$386,100		%		%
Distributions, Other***	30,000	30,000				
CASH FLOW AVAIL FOR DS	\$387,900	\$356,100				

DEBT SERVICE COVERAGE ANALYSIS

Cash Flow Avail. For Debt Serv.	\$387,900	\$356,100		
Total Annual Debt Service****	\$275,100	\$275,100	\$91,700	\$86,600
DSC (x)	1.41	1.29		
CFADS x 90%	\$349,110	\$320,490		
Total Debt Serv.@ Int.Rate+2%	\$310,200	\$310,200	\$103,400	\$94,600
Stress Test DSC (x)	1.13	1.03		

Debt Yield [NOI ÷ Loan Amount]

LOAN-TO-VALUE ANALYSIS

Most Recent Appraisal	Date	03/22/Year 1	Value	\$3,192,000	LTV	61%
Pro-Forma NOI (from above)			Current		Current	%
Est. Current Cap Rate	10%		Est. Value		Est. LTV	
Mortgage Constant			← [Debt Service ÷ Loan Amount]			
Pro-Forma NOI x 90%			Stress-Test		Stress-Test	%
Est. Current Cap Rate + 1%	11%		Est. Value		Est. LTV	

Notes:

*Calculated using [(incr.) decr. in net bldgs. & depreciable assets, from Sched. L] - depreciation expense

** Excluding interest exp. & depreciation; can include release/rollover reserve, etc.

***Distributions net of any contributions; other cash items from Schedule K, M-1 or M-2 if not used within NOI

**** Usually test historical CFADS against historical debt service; can test against proposed debt service if preferred

Stress-Testing at Transaction Level Grid Example #1

DSC (target = 1.2x)		Interest Rate +/-					
		(1.0%)	0.0%	1.0%	2.0%	3.0%	4.0%
CF –	0%	1.28	1.23	1.17	1.12	1.07	1.03
	(5%)	1.22	1.16	1.11	1.07	1.02	0.98
	(10%)	1.15	1.10	1.05	1.01	.97	.93
	(15%)	1.09	1.04	1.00	.95	.91	.87
	(20%)	1.03	.98	.94	.90	.86	.82

Stress-Testing at Transaction Level Grid Example #2

LTV (target = 80%)		Cap Rate +/-					
		(1.0%)	0.0%	1.0%	2.0%	3.0%	4.0%
NOI –	0%	53%	58%	64%	70%	76%	82%
	(5%)	55%	61%	68%	74%	80%	86%
	(10%)	58%	65%	71%	78%	84%	91%
	(15%)	62%	68%	76%	82%	89%	96%
	(20%)	66%	73%	80%	88%	95%	102%

Cap Rates Oversimplified

- Appraisers have several methods for developing cap rate
 - Most dominant is _____ from comparables
 - Also popular are _____
 - More academic is _____, which is a great way for us bankers to conceptualize it

- Example, using Smith Apartments case

<u>Funding Portion</u>	<u>% of Deal</u>	<u>Cost Factor</u>	<u>Weighted Row</u>
Loan	80%	9%	$= 7.2\%$
Equity	<u>20%</u>	<u>15%</u>	<u>$= 3.0\%$</u>
Total	100%		$10.2\% \leftarrow$ cap rate or overall rate (OAR)



Cap Rates Oversimplified (cont.)

- Typical explanation from appraisal
 - The selected capitalization rate of 10.0% is believed to properly reflect the various risks/rewards inherent in the ownership of the particular property upon comparison with yields currently available from other both realty and non-realty investments.
 - This overall rate is based in part that a cash-on-equity return of a minimum of 15% would be required to attract a knowledgeable investor and that a mortgage loan at 80% of market value could be obtained.
 - This potential long-term financing likely would be amortized over 20 years at a 7.00% to 7.25% interest rate. Such terms likely would include a term or “call” within 5 to 7 years.



Cap Rates Oversimplified (cont.)

- Example, using large apartment complex in nearby city

Funding Portion	% of Deal	Cost Factor	Weighted Row
Loan	90%	$7\% = 6.3\%$	
Equity	10%	$10\% = 1.0\%$	
Total	100%	7.3% ← cap rate	



- Mortgage constant = annual debt service ÷ loan amount
- Tables above substitute a market-based loan interest rate (five yrs., fixed) for mortgage constant for institutional quality deals, likely another 150-200bp if not
 - Similar numbers, move up and down together, but loan rate easier for bankers to derive on a daily basis without access to specific loan parameters in the formula above

Cap Rates Oversimplified (cont.)



- Bands of investment or mortgage/equity method
 1. Helps frame your understanding of cap rate levels and their reactions to market forces
 2. Explains why larger, investment-grade projects have lower cap rates (those you are likely to read about)
 3. Helps you determine where investor return demands are today (starting point) and will likely react to changes in the economy

Cap Rates Oversimplified (cont.)



- Importance of developing a database from appraisals to begin to track cap rates over time
- Importance of general movements in interest rates, since the loan cost and the investor return are critical factors
- Appraiser cap rates generally lag actual market by six months

Cap Rates Summary

- Ideally, market extraction (from comparables) is balanced against bands of investment (and even lender's yield or market/investor survey) for appraiser's cap rate conclusion

✓ $\text{NOI} \div \text{Actual Sale Amount} = \text{Cap Rate}$

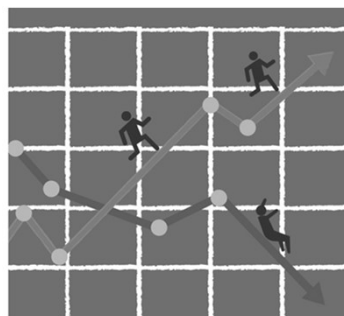
✓ $\text{NOI} \div \text{Actual Sale Amount} = \text{Cap Rate}$

✓ $\text{NOI} \div \text{Actual Sale Amount} = \text{Cap Rate}$

From Comparables \Rightarrow Cap Rate \downarrow

Final Cap Rate Conclusion

From Bands of Investment \Rightarrow Cap Rate \uparrow



Cap Rates Summary (cont.)

- From *Policy Statement on Prudent Commercial Real Estate Loan Accommodations and Workouts* (June 29, 2023) Appendix 3: Valuation Concepts for Income Producing Real Estate
 - Selecting Discount and Cap Rates: The choice of the appropriate values for discount and “cap” rates is a key aspect of income analysis.
 - In markets marked by both a lack of transactions and highly speculative or unusually pessimistic attitudes, analysts consider **historical** required returns on the type of property in question.
 - Where market information is available to determine current required yields, analysts carefully analyze sales prices for differences in financing, special rental arrangements, tenant improvements, property location, and building characteristics.
 - In most local markets, estimates of discount and “cap” rates used in an income analysis generally should fall within a fairly narrow range for comparable properties.
 - The discount rate is the required rate of return accomplished through periodic income, the reversion, or a combination of both. In contrast, the “cap” rate is used in conjunction with a stabilized NOI figure.
 - The fact that discount rates for real estate are typically higher than “cap” rates reflects the principal difference in the treatment of periodic income streams over a number of years in the future (discount rate) compared to a static one-year analysis (“cap” rate).

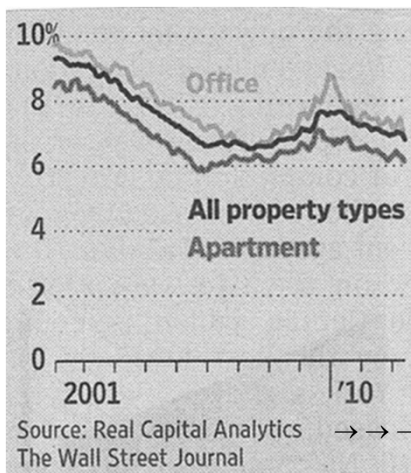
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Cap Rate Data

May 2012↓

March 2016→



	Most Active Markets	Volume \$B	Cap Rate
1	NYC Metro	\$88.7	5.4%
2	LA Metro	\$38.1	5.5%
3	SF Metro	\$36.3	5.8%
4	DC Metro	\$24.6	6.0%
5	Chicago	\$23.0	6.3%
6	Boston	\$20.1	6.1%
7	South Florida	\$18.3	6.3%
8	Dallas	\$17.5	6.5%
9	Atlanta	\$16.0	6.8%
10	Seattle	\$13.5	5.6%
11	Denver	\$11.6	6.3%
12	Phoenix	\$11.4	6.4%
13	San Diego	\$10.1	5.9%
14	Houston	\$8.7	6.6%
15	Philadelphia Metro	\$8.3	6.4%
16	Austin	\$7.9	6.5%
17	Orlando	\$6.0	6.9%
18	Raleigh/Durham	\$5.3	6.7%
19	Portland	\$5.2	6.4%
20	Tampa	\$5.0	6.9%

Real Capital Analytics:
all property types, deals valued \$10 million +, under contract or closed in last 12 months

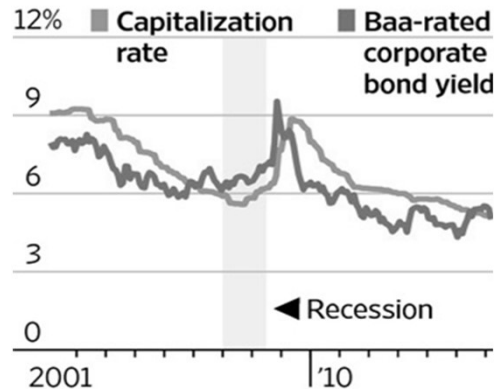
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Cap Rate Data (March 2016)

- “Cap rates close to Triple B bond yields”
 - Lowest investment grade rating for S&P and Fitch
 - “Baa” (Moody’s equiv.) at left
 - “Good risk proxy” (per Green Street Advisors)
- Update: Baa
 -
 - 5.63% at 10/10/2024
 - 5.64% at 03/31/2023
 - 5.39% at 06/07/2022
 - 3.98% at 02/14/2022
 - 3.58% at 02/26/2021
 - 3.52% at 02/25/2020
 - 4.59% at 05/23/2019
 - 5.19% at 11/19/2018
 - 6.97% “long-term ave.” at 02/27/2025

Commercial real-estate returns



Note: Capitalization rate reflects annual income generated by a building as a share of purchase price.

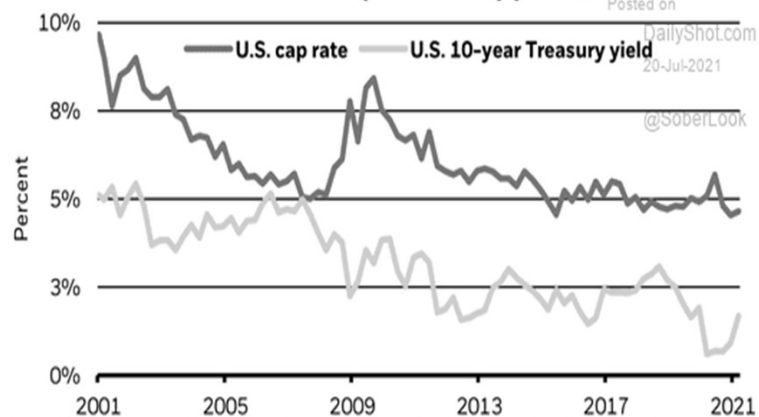
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Cap Rate Data (July 2021)

“CRE cap rates have trended lower since the financial crisis, indicating higher valuations. The ave. cap rate is about 300 bp above the 10-yr. Treasury yield, in line with the 20-year ave., according to BlackRock.”

U.S. real estate valuations vs. 10-year Treasury yields, 2001-2021



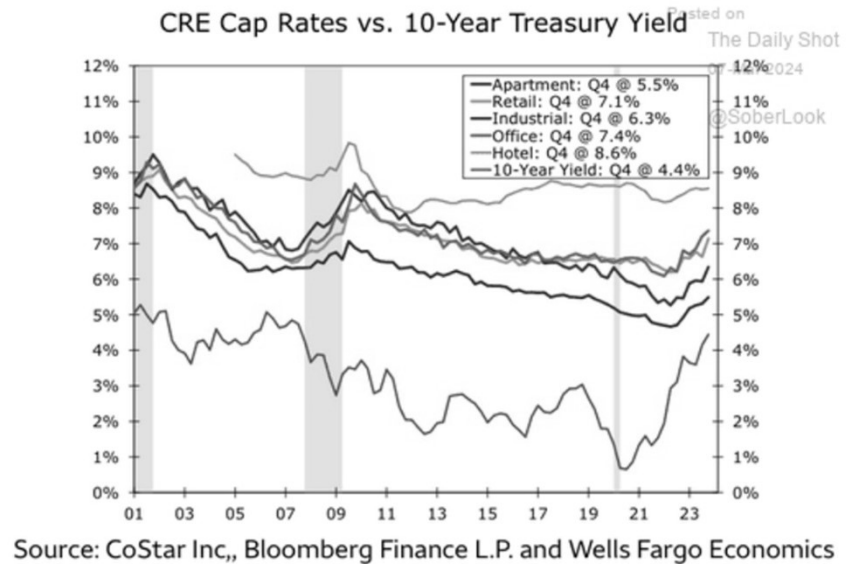
Sources: BlackRock Investment Institute, National Council of Real Estate Investment Fiduciaries, with data from Refinitiv Datastream, as of March 31, 2021. Notes: The orange line shows U.S. core real estate cap rates as represented by the NCREIF Property Index. The yellow line shows the yield of the Refinitiv Datastream U.S. 10-year benchmark government bond index. Cap rates – calculated as net operating income/property value – are a commonly quoted valuation metric for real estate. It is similar to an earnings yield – a lower cap rate means higher valuations. Past performance is no guarantee of future results.

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Cap Rate Data by Property Type (2001 to Q4 2023) vs. 10-Yr. UST

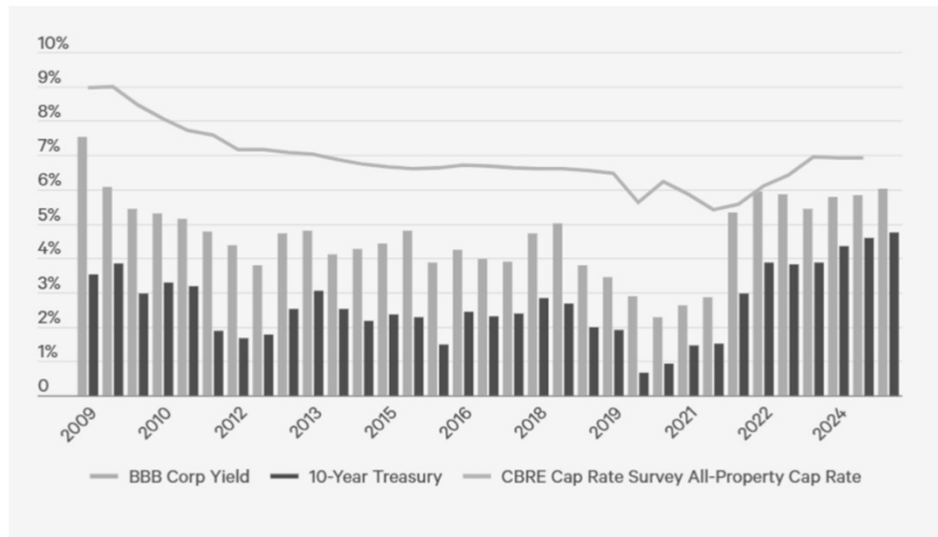
Cap Rates Across Property Types Have Risen Over the Past Year, Except for Hotels



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Real Estate Cap Rate and Bond Yields, Period Average (2009 – 2024)

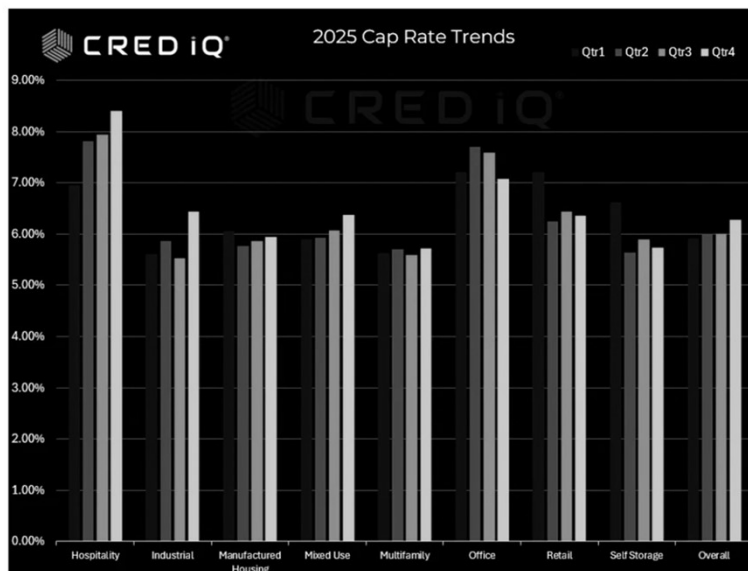


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Cap Rates in 2025, Quarterly by Property Type (for Large Transactions)

Cap rates across CRE widened modestly, with hospitality and industrial properties seeing the sharpest increases, while multifamily and retail showed resilience and compression



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Appendix #1 (Time Permitting): Non-Financial CRE Loan Risks (Beyond Cash Flow, DSC and LTV)

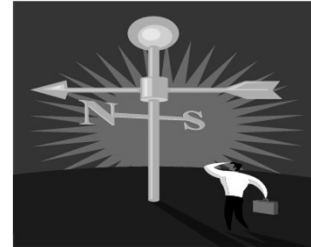


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Non-Financial CRE Loan Risks

- Qualitative, CRE-specific risks
 - Completion risk
 - Refinancing risk
 - Re-lease or rollover risk
 - Market cycles
 - Physical plant
 - Ongoing property management
- Lender's challenge
 - Which of the risks apply to the opportunity? How do you mitigate the applicable risks?
 - Not always strong DSC, low LTV or other financial aspects/strengths



Construction/Completion Risk

- Definition: Failure to complete construction
 - According to original plans and specs
 - On time
 - Within budget
- Some SOLUTIONS
 - Separate, licensed and qualified general contractor
 - Bonding of gen. contractor or 10-15% standby letter of credit
 - Customer equity injected first, before loan draws
 - Adequate contingency in budget
 - Assignment of construction contract
 - Draws and 3rd party inspections



Refinancing Risk



- If your bank chooses not to renew, project can't be financed elsewhere
- Previous permanent commitment is not honored or can't perform
- Some SOLUTIONS
 - Underwrite as if you keep the loan to full payout
 - Conduct normal lending due diligence
 - Develop your CRE network

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Re-Lease or Rollover Risk

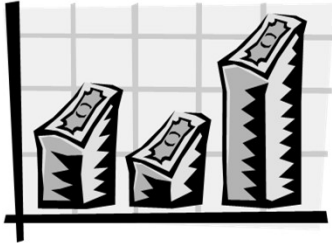
- Definition: Initial term of lease(s) shorter than proposed amortization (“overhang”)
 - More prevalent in properties with business tenants
- Some SOLUTIONS
 - Tenant “invests” in finish out
 - Location, location, location
 - Periodic inspections for upkeep
 - Develop your CRE network



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Market Cycles

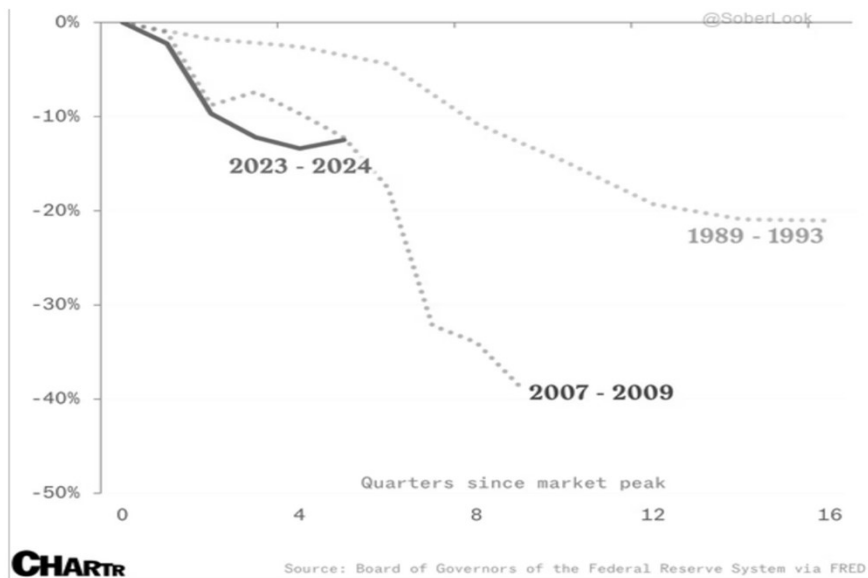


- Loan matures/balloons or project fails at bottom of cycle
- Some SOLUTIONS
 - Conservative LTV limits
 - Outside (non-CRE) strength of sponsor
 - Portfolio diversification

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Market Cycles: Decline in CRE Index, Peak to Trough, by Years



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Physical Plant

- Unusual or trendy style becomes obsolete
- Limited alternative uses
- Some SOLUTIONS
 - Stick with “vanilla” styles
 - Be boring, boring, boring
 - Know that “beauty is in the eye of the beholder”



Ongoing Property Management



- Property is not adequately maintained, serviced or cleaned
- Some SOLUTIONS
 - Periodic inspections
 - Talk to tenants
 - Professional management in place
 - Develop your CRE network

Appendix #2: Newcomer (for Banks, at Least): *Debt Yield Ratio*

- In recent years, more and more banks are calculating **debt yield: $\text{NOI} \div \text{First Mortgage Debt}$**
- This ratio has been used by CRE “permanent lenders” [life insurance companies, commercial mortgage-backed securities (CMBS), etc.] for years
 - In general, higher values are better, with minimums of 8%-10% depending on property type
 - Problem: both banks and our regulators seem enamored with this “new” ratio, but we lack experience with what it truly means and how it can correlate to a project’s success through inevitable CRE cycles and downturns
 - Two viewpoints follow . . .

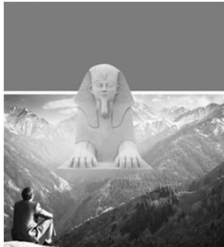
“An Underutilized Ratio at the Community Bank Level”

- The RMA Journal, Dec. 2014/Jan. 2015 (www.rmahq.org)
- Ratio excludes mezzanine and subordinated debt, since they do not affect the first mortgage holder
- Deserves place alongside DSC and LTV because it provides a cash-on-cash return on the bank investment
- Also indicates: (1) The borrower’s risk of default, and (2) the tangible value expectation should bank need to foreclose
- Overcomes inherent weakness in
 - DSC due to longer amortizations and historically low interest rates
 - LTV due to historically low cap rates elevating property values
- Proponents cite debt yield as a way to enhance underwriting and reduce defaults on CRE loans



“The Riddle of the Debt Yield”

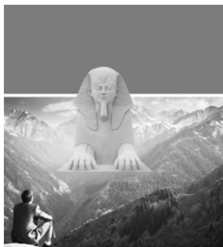
- The RMA Journal, Dec. 2015/Jan. 2016
- This article, one year later, is not convinced that **debt yield** deserves equal footing with DSC and LTV; then critiques three supposed benefits of debt yield



1. Loan amount is more straightforward relative to annual debt service, which can be manipulated, while loan amount can't
 - ❑ Conclusion: does not disagree
2. Debt Yield represents the lender's expected return if it were to take back the property
 - ❑ Problematic: When was the last time you took back a property and the NOI was the same as at origination?
 - ❑ Deterioration in NOI is the prime reason for liquidation, so how can debt yield accurately project your return in such a scenario?

“The Riddle of the Debt Yield” (cont.)

3. CRE and CMBS investors want to prevent low interest rates, low cap rates and high leverage from pushing CRE valuations to sky-high levels
 - Debt yield, itself, cannot isolate a property from changes in interest rates, cap rates and leverage levels



- ❑ CMBS industry pioneered this ratio as a helpful way to classify the loan-specific return for loans packaged together and sold to investors. Appropriately, the focus is on performance at inception
- ❑ Further, CMBS pools differ in terms of property types and geographic location, but typically have uniform amortizations, so debt yield helps stratify loans of similar amortizations