

Real Estate Portfolio Performance Measurement Sources

Index	Organization	Specific Measurements
Business RE Returns; All Equity Composite and Portfolio Returns	<p>Ibbotson & Assoc. 225 North Michigan Avenue Suite 700 Chicago, IL 60601 www.ibbotson.com</p> <p>Main: 1 312 616 1620 Fax: 1 312 616 0404</p>	<p>Began 1947. Annual total returns of income & capital component. Using inflation load and real estate risk premiums, is a portfolio or composite return series. Since 1997 high correlation with NCREIF. Business sources include Building Cost Index to measure capital appreciation uses NCREIF. Strong artifact orientation in calculations. Problems: Changes in source bases over time; differences in source property records.</p>
Capitalization Rate Series	<p>Am. Council of Life Insurers 10001 Pennsylvania Av. NW Washington, DC 20004 www.acli.org</p>	<p>Developed quarterly from insurance companies' mortgage commitment reports (ex ante return). Uses property level data (stabilized current income divided by estimated, cost or appraisal value). Equity yield for leveraged properties can be developed when using cap rate info & loan data.</p>
Capitalization Rates	<p>Ricks; Sirmans & Webb; Grissom & Hattzwell; Liu</p>	<p>Weighted Overall returns/cost of capital rates; IRR/holding period return rate models based on ACLI data on Leveraged properties supporting loan commitments. Results depend on model used.</p>
CB Commercial National Investor Survey	<p>www.cbrichardellis.com</p>	<p><i>Biannual study citing favorite types of investments, best markets, 12 month projection of market value increases by types, loan-to-value ratios, debt-coverage ratios, reported interest rates, 12 month projection for long-term rates.</i></p> <p><i>CBRichardEllis also publishes: National Real Estate Index examining 65 local markets; Office Vacancy Index of the US; and Industrial Vacancy Index of the US.</i></p>
<p>1) Commercial Mortgage-Backed Securities Index;</p> <p>2) Commercial Mortgage-Backed Securities AAA Ten Year Tracking Index;</p> <p>3) Agency Multifamily Securities Index</p>	<p>Banc of America Securities Commercial Mort. Research 100 North Tryon Street Charlotte, NC 28255 www.bofasecurities.com</p> <p>Michael D. Youngblood 704.386.4900</p>	<ol style="list-style-type: none"> 1. CMBS Index - 1,420 rated classes of 229 individual CMBS; all ratings (B- or greater) property types; issuer types, offering, security, tax elections, loan types and maturities. 2. CMBSAAA10YR Index – Aggregate of market-weighted total returns of all included classes. 3. Single class FNMA, GNMA, FHA pass-throughs and FHA 221(d)(4) loans representing 9.4% of the mortgage securities market.
<p>CMBS Index: Investment Grade,</p> <p>High Yield, IO Index, Commercial Conduit Whole Loan Index</p>	<p>Lehman Brothers Alex Golbin 212.526.8012 www.lehman.com</p>	
Commercial Vacancy Rates	<p>Coldwell Banker Cmcl. Chicago, IL 213.613.3223</p>	
Ellwood Differential Additive (DA)		<p>Yield measures from cap rates from mortgage-equity financial data. Incorporates loan-to-value ratios, overall cap rate, cost or appraised values, and nominal interest rate from ACLI's periodic interest data.</p>
Equity Dividend Rates	Gutermann & Smith	Broad Band of Investment Models derived from ACLI data.

Fact Book and Directory	Mort. Ins. Co's of America (MICA) 727 15 th Street NW, 12 th Flr, Wash, DC 20005	General Industry Statistics.
Gilberto-Levy Comm. Mortgage Performance Index	John B. Levy & Co., Inc. One Capitol Square 830 East Main Street, Suite 2100, Richmond, Virginia 23219 Ph: (804) 644-2000 Fax (804) 644-2022	The Index tracks the investment performance (total return and its components) of fixed-rate, fixed-term commercial mortgages. The Index's methodology follows standard fixed-income calculations, including marking loans to market each quarter. The Index was first produced in 1993. Historical returns and descriptive statistics are available from 1972 on; separate indices for apartments, offices, retail and industrial are available from 1978 on. The Index is used to create customized portfolio benchmarks and for asset allocation studies. The index is based on data from Barron's/Levy National Mortgage Survey, American Council of Life Insurance, National Council of Real Estate Investment Fiduciaries, Federal Reserve Board of Governors, Lehman Brothers and proprietary data collected by John B. Levy & Company
KYI Index Return	Korpacz www.korpacz.com/survey	Began 1988. Survey direct return measures. Includes IRRs, cap rates (going-in and going-out) and other income data (Yield comparisons for sale). Quarterly mail survey (<i>ex ante</i> results). Limited to Chicago, Dallas, Los Angeles, New York, and Washington (but can target specific property types in those markets).
Mortgage Bank'g Perform. Report	MBA: 202.557.2700 www.mortgagebankers.org	Bal.Sht., Inc. Stmnt., Performance Ratios, Servicing Surveys.
Mortgage Loan Portfolio Profile	ACLI	Delinquencies, foreclosures by property type, region; end of year summaries of losses
NAIOP Industrial Income & Expense Report	Nat'l Ass'n of Industrial & Office Properties 2201 Cooperative Way, 3d Flr, Herndon, VA 20171-3034 www.naiop.org	Excellent Cross-Link
National Real Estate Index	Koll 4343 Von Karman Avenue Newport Beach, CA 92660 (949) 833-3030 (949) 975-0136 FAX	Capitalization Rates on CBD office buildings, retail facilities, warehouses and apartments. Rents and sales per sq.ft. Broadest geographic market index available; includes suburban office buildings and is not limited to institutional or investment grade properties. Survival problem. Raw data contributed.
NCREIF Property Index	National Council of Real Estate Investment Fiduciaries (NCREIF) Two Prudential Pl., Ste 2515, Chicago, IL 60601 www.ncreif.org	Began 4Q 1977 (based on value of 100). Existing institutional grade properties held in fiduciary capacity by members that are pension funds, insurance companies, and other portfolio managers. Composite index based on current leases: appraised values (adjusted for actual transactions in current period). Includes income and capital appreciation components. Capital component based on appraisal values (checked against actual transactions). Rates of return: total, income, Capital appreciation; annual and annualized; quartile ranges; mean and median returns. Quarterly returns of indiv. prop. before asset mgt fees deduction; income, capital appreciation also calculated. Cautions: survivorship, appraisal "smoothing;" accrual/cash-flow measurement differences.
NCREIF Return Computations	NCREIF	Combination of cash and accrual accounting measures promulgated by Ass'n for Investment Management Research (AIMR). Annualizes data. Midpoint adjustment for capital improvements.
NREI Yield Calculation	Koll	Return Series begins with 1986. D P% applied as capital

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Newport Beach, CA 92660
(949) 833-3030
(949) 975-0136 FAX
www.koll.com

component.

Commercial Mortgage
Performance Index

LifeComps

Quarterly Total Return Index.

Real Estate Research Institute Pension Real Estate Ass'n 95
Glastonbury Blvd.
Glastonbury, CT 06033

ReisAmerica Quarterly

National overview of four U.S. property markets. ReisAmerica Quarterly Narrative and quantitative analysis founded on Reis's proprietary database of top metros. Quarterly (Free).

REIT Performance Statistics National Association of Real Estate
Investment Trusts (NAREIT)
www.dcrco.com

EBITDA/Interest; EBITDA/Int. + Pref. Div., EBITDA-
Capex/Int. +P.Div; FFO/Pref. Div.

"REIT
Quarterly" (Duff&Phelps)

Dividend Payout/FFO; FFO/Total Debt

Debt/Adj. Total Capitalization

Total Debt/Tot. Mkt. Cap.

Credit Analysis Updates w/ consolidated bal. sheets

RERC1/RERC

Real Estate Research Corporation &
ERE Yarmouth

Cap rates and yeilds; ratio/yield analysis (*ex ante*). Information from before 1992 based on transaction & appraisal data (can be used to verify results derived from NCREIF). RERC is longer term. Information after 1992 is derived from extensive, detailed personal interviews of thirty market participants. Acquisition and pricing parameters. Quarterly updates.

The Asset Manager
(Quarterly)

Amer. Soc. of Asset Managers
(ASAM)
303 W. Cypress, Box 12528,
San Antonio, TX 781212-0528
www.building.org

Management articles; legal developments

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