Hoyt Advisory Services

REIT Analyses

Table of Contents

Hoyt Advisory Services

"Hoyt Advisory Services identifies relevant research questions by working closely with real estate decision makers."

Dr. Maury Seldin
President, Hoyt Advisory Services

Hoyt Advisory Services

Introduction

Hoyt Advisory Services (HAS) is a real estate consulting corporation focusing on complex real estate issues requiring cutting edge research. HAS is a wholly-owned subsidiary of the Homer Hoyt Institute (HHI), the nation's leading real estate research foundation. HAS serves as the asset manager for the Institute's investments and as the Institute's research and development unit. In some circumstances, it accepts special assignments directly from real estate decision makers to solve particular problems.

With its connection through HHI to a wide network of university researchers, HAS is a unique entity that is able to call upon academic research for state-of-the-art techniques to answer industry's questions. Examples of HAS assignments are the development of a new analytical model to forecast demand for retirement and second homes in resort areas, the first integration of econometric and judgmental models for forecasting office space absorption, gravity models for retail site selection, and local area analyses for hotel investment companies. Other assignments include development of white papers, executive education curriculum, and a real estate center at a public university.

In addition to its consulting assignments, HAS maintains a rigorous program of internal research. Internal research programs include REIT valuation and risk analysis, REIT model development, model backward testing and development of three monographs dealing with various aspects of REITs.

In its capacity as the Institute's research and development unit, HAS identifies relevant research questions by working closely with real estate decision makers. In turn, it provides guidance to HHI on the relevance of research and data collection efforts. HAS' specialized assignments center on expanding the real estate body of knowledge through specifically selected work.

The Hoyt Model

Description and Performance

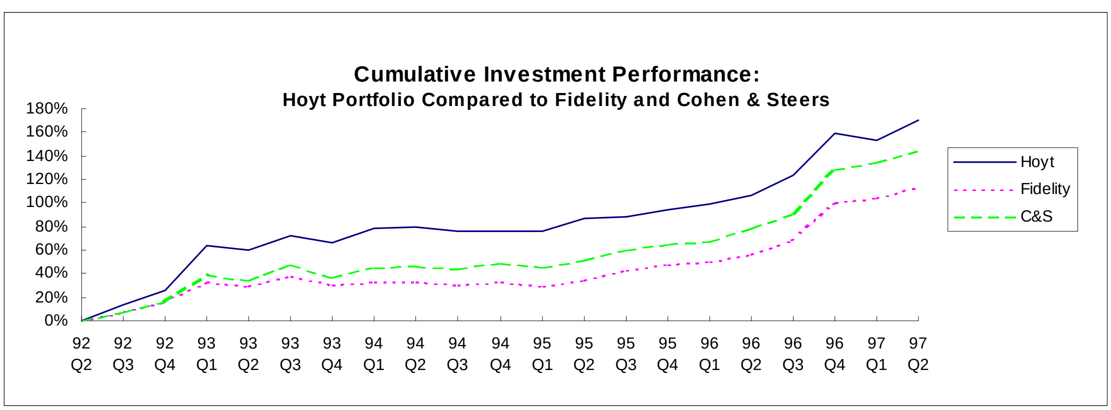
The Hoyt Group recognized the potential for REIT industry growth in 1992 and began a REIT analysis and investment program. The analysis program resulted in the development of a REIT valuation model now known as the Hoyt REIT Model. Since 1992, the Institute has used the evolving Hoyt REIT Model as an important tool for investing its endowment. The results of that analysis and investment program are shown on the following chart.

The prevailing methods for the valuation of REITs focus on the REIT as a business enterprise. The Hoyt REIT Model differs in at least two ways. The first difference is that the Model has a foundation of valuing the real estate portfolio of each REIT. Additionally, the Model integrates the valuation of real estate with a valuation of the enterprise as an on-going business with explicit consideration of capital structure.

The Model by decomposing the cap rates explicitly considers 39 major factors in analyzing the differences in capitalization rates between the real estate segment of the capital market and the securities market. This provides critical information to the valuation and risk analyses. This multidimensional analytic focus allows RIAS to distinguish among REITs that are overvalued, appropriately valued, and undervalued by the securities markets. It also allows RIAS to construct REIT portfolios diversified by risk.

The Model considers the space market characteristics of the properties, capital structure of the REIT, management quality, portfolio strategy, and growth prospects. The space market analysis makes use of millions of dollars of research at top universities sponsored by the Hoyt Group over the course of more than a decade. An internally consistent analytical system has been developed to compare REITs based on their portfolio and operating characteristics. There is also on-going work on peer group analysis.

The Hoyt REIT Universe is in the process of being expanded from 50 equity REITs to approximately 80 REITs, each with a market capitalization in excess of $150 million. RIAS focuses on core property types which are defined as residential, office, industrial, and retail.



The Hoyt Model

Unique Dimensions

The Hoyt REIT Model ("model") is a unique proprietary model which both *values REITs* and *assesses risks* on a variety of dimensions. It does this by decomposing the cap rate used to value the REIT in the securities market.

The decomposition is in three major areas:

Real Estate,
Capital Structure, and
Management.

This decomposition enables the Hoyt staff to value the underlying real estate on Main Street, then value the real estate in REIT ownership under the existing capital structure of the REIT, and finally to value the REIT shares on Wall Street.

Typical Models

The typical models for REIT securities analyses forecast earnings, funds from operations, or some variation of profitability and cash flow including funds available for dividends. They also go after a target price for a near term. Some even go as far as to forecast a rate of return for the near term. The focus of analyses is short term with long term considerations implied.

The Hoyt Model Technical Aspects

Capitalizes the income flow from real estate in order to get values of the real estate owned by the REITs,

Adjusts the cash flow for capital structure and then values the real estate in the REIT form of ownership within the REIT's capital structure without management, and

Further analyzes the income flow to value the existing management in place along with valuing the real estate in REIT form within the REIT capital structure.

In addition, to being a pricing model, the Hoyt Model is a risk rating model in which the decomposition of the cap rate results in valuing risks. Thus, there is a series of cap rate adjustments which reflect risks associated with the variables to which the cap rate is decomposed. (See Exhibit I.)

Exhibit I

Hoyt Model

4/10/1998

				I. Real Property									
				1. Physical Asset				2. Markets				3. Tenancy	
Base Real Estate Cap Rate:		9.03	Typical	Asset Quality		Comp Position		Mkt Segment		Metro Area		Tnnt Rltnshp	
			Prp Type	Range	1.200	Range	.600	Range	.240	Range	1.760	Range	.320
			Met Area	RE Rng	6.104	RE Rng	6.104	RE Rng	6.104	RE Rng	6.104	RE Rng	6.104
			Cap Rate	Weight	**.197**	Weight	**.098**	Weight	**.039**	Weight	**.288**	Weight	**.052**
				Rating	Adj	Rating	Adj	Rating	Adj	Rating	Adj	Rating	Adj
CBL	CBL	*mall*	8.43%	1.51	.005	1.20	-.060	1.00	-.040	1.49	-.007	1.20	-.032
CWN	Crown American	*mall*	8.43%	2.36	.346	1.80	.060	1.80	.024	1.79	.169	1.40	-.011
GGP	General Growth	*mall*	8.43%	1.20	-.120	.90	-.120	1.00	-.040	1.36	-.080	.90	-.064
MAC	Macerich	*mall*	8.43%	1.11	-.157	1.40	-.020	1.00	-.040	1.36	-.085	.90	-.064
SPG	Simon Prop	*mall*	8.43%	1.32	-.073	.80	-.140	1.00	-.040	1.51	.006	.40	-.117
URB	Urban Shopping	*mall*	8.43%	.75	-.300	1.00	-.100	1.00	-.040	1.38	-.067	.90	-.064

	3. Tenancy				4. Leases								
	Mkt Strength		Credit Strngth		Lease Struc		Lease Durat		Lease Term		RE Rng		
	Range	.320	Range	.320	Range	.480	Range	.384	Range	.480	**6.104**		
	RE Rng	6.104	RE Rng	6.104	RE Rng	6.104	RE Rng	6.104	RE Rng	6.104		RE	RE
	Weight	**.052**	Weight	**.052**	Weight	**.079**	Weight	**.063**	Weight	**.079**	1.000	Adj	Cap Rate
	Rating	Adj	Rating	Adj	Rating	Adj	Rating	Adj	Rating	Adj			
CBL	1.20	-.032	1.20	-.032	1.41	-.014	.98	-.066	1.11	-.062		-.340	8.69%
CWN	1.70	.021	1.80	.032	1.24	-.042	1.49	-.001	.93	-.092		.506	9.54%
GGP	1.20	-.032	1.20	-.032	1.20	-.048	1.09	-.052	.90	-.096		-.684	8.35%
MAC	1.20	-.032	1.20	-.032	1.21	-.046	1.42	-.010	.91	-.094		-.580	8.45%
SPG	1.50	.000	1.50	.000	1.29	-.033	1.50	-.001	1.00	-.079		-.478	8.55%
URB	1.00	-.053	1.00	-.053	1.22	-.045	.93	-.072	.92	-.093		-.887	8.15%

The difference in cap rates in the market and the warranted cap rates, as indicated by the Hoyt Model, identify overvalued and undervalued REITs. Exhibit II shows summary adjustments and the difference between the market and warranted dividend cap rates. These REITs' cap rates may be plotted and graphically represented as a scattergram. (See Exhibit II.) The spread between market cap rate and warranted cap rate may be represented by a bar chart. (See Exhibit III) The valuation difference is shown in Exhibit IV, Valuation Difference.

Exhibit II

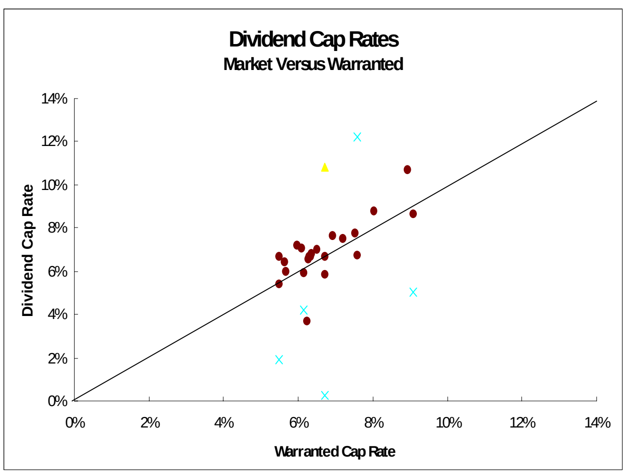


Exhibit III

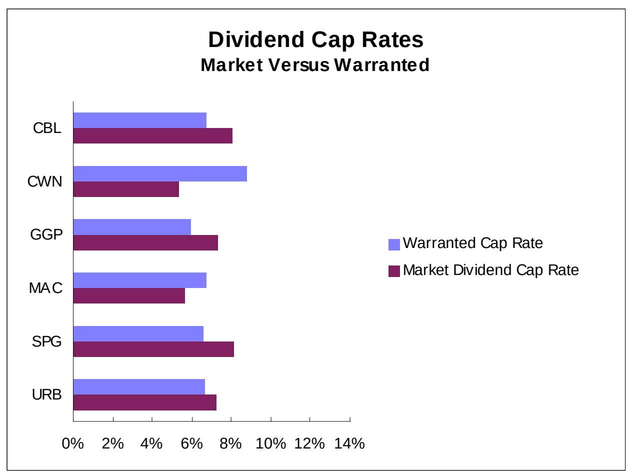


Exhibit IV - Valuation Difference

		Latest Quarterly Dividend	Annual Dividend	Warranted Cap Rate	Warranted Value	Recent Market Price	Amount Overvalued	Percent Overvalued
CBL	CBL	.465	1.86	6.78%	27.42	24.50	-2.92	-10.7%
CWN	Crown American	.200	.80	8.80%	9.09	9.38	.29	3.2%
GGP	General Growth	.470	1.88	5.95%	31.60	36.88	5.27	16.7%
MAC	Macerich	.460	1.84	6.73%	27.32	29.75	2.43	8.9%
SPG	Simon Prop	.505	2.02	6.62%	30.51	34.25	3.74	12.3%
URB	Urban Shopping	.525	2.10	6.65%	31.57	33.00	1.43	4.5%

Risk Profile Concept and Analyses

Real estate is useful in a mixed asset portfolio because real estate risks occur in different combinations than the risks of other assets. The three most important risks in a real estate investment are

> Getting one's money back, sometimes called business risk,
> The loss of purchasing power (price level risk), and
> The chance of loss from quickly converting to cash (liquidity risk).

The Hoyt Model structures the decomposition of risk, as earlier discussed, by real estate, capital structure, and management risks. It also may be used to assess diversification among REITs focused on three dimensions of business risk, price level risk and liquidity risk. That risk combination analysis is being developed for REITs as well as stocks and bonds so that the mixed asset portfolio may be diversified by risk rather than ownership interest, i.e., the four quadrant system. The present system, however, decomposes the risks utilizing the real estate, capital structure, and management set of risks.

REITs cluster as to risks so that their risk profile is somewhat different from directly owned real estate and from other small cap stocks. However, when looking at the universe of REITs, the risk clusters of individual REITs with common characteristics may vary widely. While there was variation in liquidity and sensitivity to price level change, the biggest variation is in business risk. This business risk is most closely associated with the local economy, and the market for property services by property type as well as the existing tenancies. Thus, REIT portfolios may be constructed with substantial diversification on the business risk dimension.

A portion of the Hoyt portfolio of REITs shows the following ranges of risks:

Exhibit V

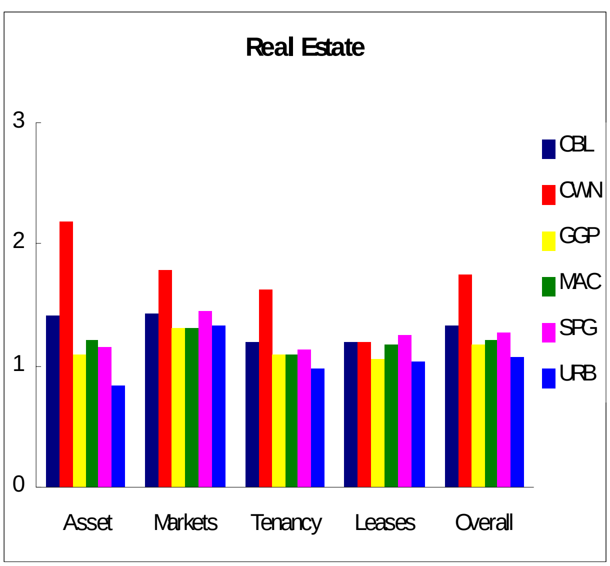
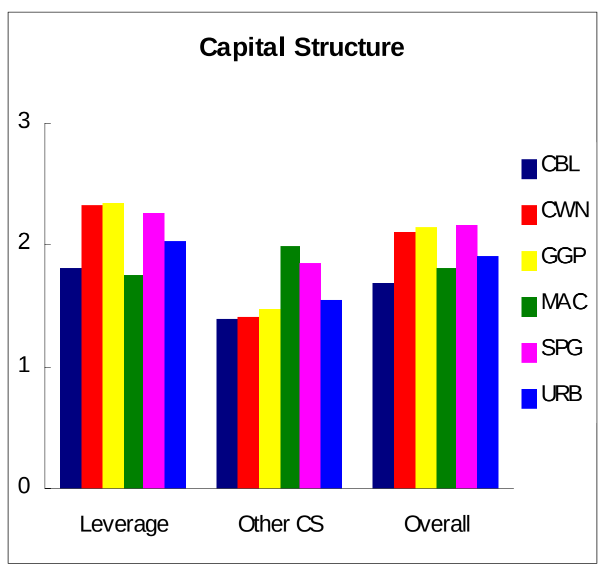


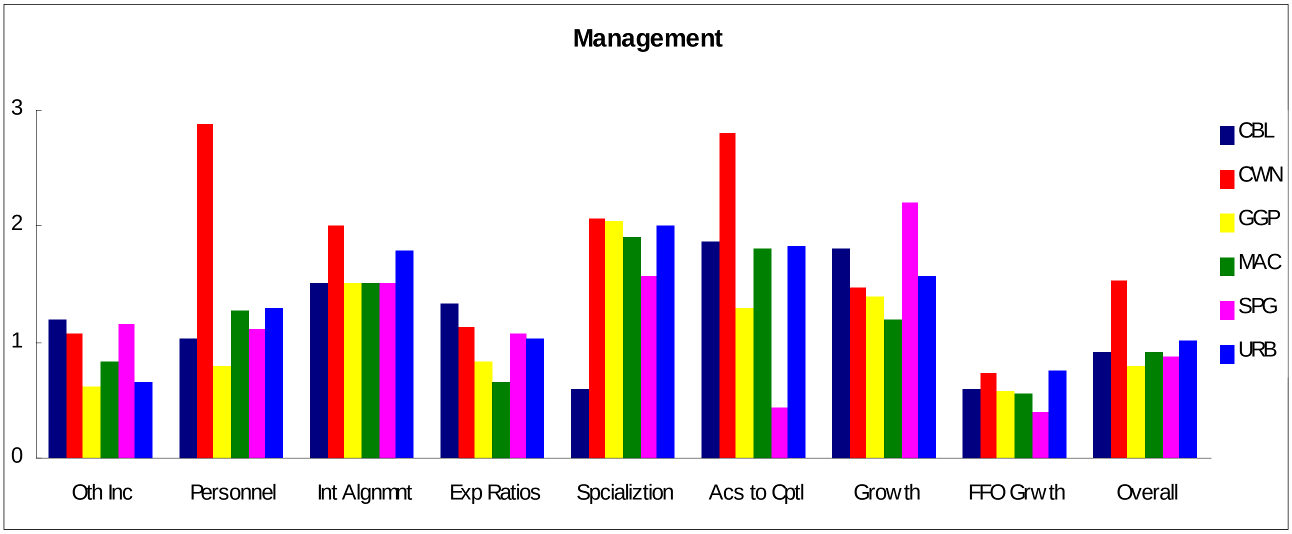
Exhibit VI



"Through our association with the Homer Hoyt Institute, we have access to leading academics and industry participants. We have invested a great deal of time and effort in keeping abreast of the REIT market, and we would be pleased to share the fruits of our labor."

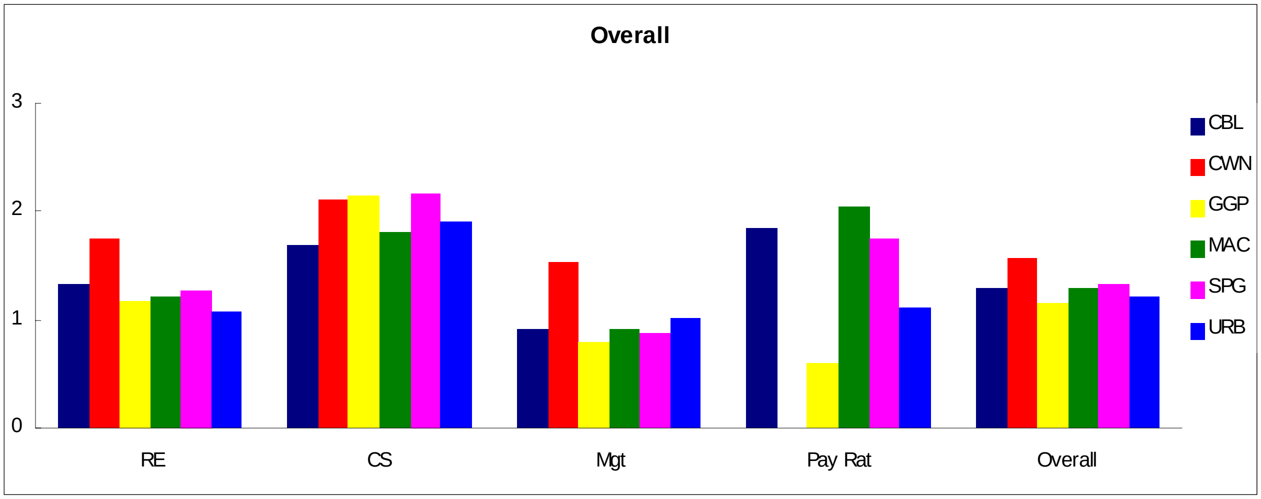
Dr. Ron Donohue
Executive Vice President, Hoyt Advisory Services

Exhibit VII



Representation of risk classifications may be made by bar charts. The charts use a nominal scale of zero to three along which the potential risk is rated. The bar chart is a continuum. The ratings of malls is shown in Exhibit VIII.

Exhibit VIII



Other Aspects

Portfolio Context

The Hoyt REIT Model values REITs and assesses risks based on numerous variables. By profiling the risk characteristics and quantifying the premium for the cap rate, it provides a basis for selection of individual REITS and for REIT portfolio construction.

In the REIT portfolio context:

The basic model can be used to pick undervalued stocks,
The model may be used to identify pure plays,
The risk profile may be used for diversification, and
Portfolios may be constructed for

Income and/or
Growth.

These portfolio strategies are described in a monograph being written.

Analyses of Individual REITs

The Hoyt Model may also be used for

Policy analyses by REIT management,

Merger and acquisition analyses, or

Selection of REITs by institutions having real estate to exchange for REIT shares.

This model is developed as an analytical system to assist in understanding REIT values and risks. The information is believed to be reliable. However, no warranties are made with regard to the data or the judgment even though best efforts have been used in good faith.

The key personnel involved in Hoyt Advisory Services (HAS) synthesize advanced academic degrees and professional designations with hands-on experience in order to deliver consistently superior service to HAS clients.

Key Personnel

Bio Sketches

- **Dr. Maury Seldin**
  Dr. Seldin is a Chair Professor Emeritus of the Kogod College of Business Administration of The American University. His previous faculty appointments were with the University of Southern California and Indiana University. He is Chairman of the Board of the Homer Hoyt Institute, and president of the Homer Hoyt Advanced Studies Institute, and Hoyt Advisory Services. He has BS and MBA degrees from the University of California, Los Angeles, with majors in real estate and urban land economics and a minor in finance. He has a doctorate in business administration from Indiana University, specializing in real estate administration with fields in finance and money and banking. Dr. Seldin is a past president of the American Real Estate and Urban Economics Association. Dr. Seldin has served as a consultant to the Executive Office of the President of the United States and the National Science Foundation as well as a wide array of business and professional organizations. He has given testimony on real estate issues before Congressional committees, and has served as an expert witness in landmark court cases. He holds the professional designation of CRE (Counselor of Real Estate).

- **Dr. Ron M. Donohue**
  Dr. Donohue is Executive Vice-President and Director of Research for Hoyt Advisory Services. He has been with the Hoyt Group since 1992 where he has served as Research Fellow and as General Manager. He received his B.A., Master of Urban Planning and Ph.D. (Urban, Technological and Environmental Planning) degrees from the University of Michigan. Dr. Donohue has consulted on major commercial REIT projects, including the development of a standardized database of REIT financial statements. He has co-authored Opportunities in Single-Tenant Retail Properties with Dr. Seldin and has been the lead researcher in the development of the Hoyt REIT Model and a series of Monographs dealing with REIT Analyses. He has also participated in valuation, retail trend and local economic analyses research projects.

Key Personnel

Bio Sketches

- **Dr. Ronald L. Racster**
  Dr. Racster is President of the Homer Hoyt Institute, Dean of the Weimer School, and Chief Financial Officer for all Hoyt Group organizations. Dr. Racster is also Professor Emeritus, The Ohio State University, and serves as the Director of the Center for Real Estate Education and Research. A past president of the American Real Estate and Urban Economics Association, Dr. Racster has been involved with the research/education programs of various professional real estate organizations, including the American Institute of Real Estate Appraisers, the Industrial Development Research Council, the American Institute of Corporate Asset Management, and the National Association of Realtors. Dr. Racster has served as a consultant for numerous commercial, industrial, and residential developers, real estate investors, and financial institutions. He has written articles and contributed to textbooks on real estate principles, appraisal, and market analysis.

- **Dr. Halbert C. Smith**
  Dr. Smith has been a professor of Finance and Real Estate at the University of Florida since 1972 and was Director of the Real Estate Research Center from 1973 to 1991. He is Chairman of the Advisory Board of the Homer Hoyt Institute as well as an officer and director of the Homer Hoyt Institute, Hoyt Advisory Services and the Homer Hoyt Advanced Studies Institute. He is a past president of the American Real Estate and Urban Economics Association and has served as Chairman of the Department of Finance, Insurance and Real Estate at UF. Prior to joining the faculty at Florida, he was Chief Economist for the Federal Home Loan Bank Board in Washington, DC. He holds the professional designations MAI (Member, Appraisal Institute) and CRE (Counselors of Real Estate), and in 1995 was named a Fellow of the International Center for Economic Research in Turin, Italy. He has written some 10 books and numerous articles on real estate topics and currently serves as Editor-in-Chief of Real Estate Issues, the journal of the Counselors of Real Estate.

Contract Research

Client List

- **ARTHUR ANDERSON**
- **BARUCH COLLEGE, STEVEN L. NEWMAN REAL ESTATE INSTITUTE**
- **BIRCH, HORTON, BITTNER, & CHEROT**
- **CNL GROUP, INC.**
- **COMMERCIAL INVESTMENT REAL ESTATE INSTITUTE (CIREI)**
- **COMMERCIAL NET LEASE REALTY**
- **EXPRESS STAR SYSTEMS**
- **MEDALLION HOTELS, INC.**
- **PENSION REAL ESTATE ASSOCIATION**
- **STARCORP**
- **TELERES**

For an expanded view of Hoyt Advisory Services, you may refer to our website at www.hoyt.org.