THE JOURNAL OF REAL ESTATE RESEARCH

The Relationship between Healthcare REITs and Healthcare Stocks

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Abstract. **A two-factor regression model was used to examine the relationship between returns on healthcare equity REITs (EREITs) and healthcare stocks from 1985 to 1992. General stock indices were incorporated in the model to account for the influence of the market. Multiple positive contemporaneous relationships were found between six of the seven REITs studied and portfolios of other healthcare stocks. Furthermore, in four of the six REITs with positive results, significant correlations were evident between individual REIT portfolios and the SIC indices with which they showed a significant relationship. These results are consistent with a common factor or factors affecting the returns of both healthcare EREITs and stocks.**

The relationships found between returns on healthcare EREITs and healthcare stocks, especially the correlation between the classification of the EREIT portfolios and SIC indices, indicate the importance of real estate management for healthcare firms and asset subclassification choice for the real estate manager. Although this study specifically investigated healthcare EREITs and healthcare stocks, the results may be more widely applicable to other single-property-type EREITs.

Introduction

An estimated 25% of a corporation's value, as reported by Zeckhauser and Silverman (1983), is vested in the firm's real estate. As discussed by Myer and Webb (1993, 1994), this suggests that at least a portion of the variance of a stock's return can be explained by variation in the value of corporate-owned real estate. From the opposite perspective, equity REITs (EREITs) appear to behave much more like the returns on common stocks, than like the returns on unsecuritized real estate. EREITs are probably more like stocks than unsecured real estate for several reasons. First, EREITs are traded on exchanges that are very different from unsecuritized real estate markets. In addition, EREIT stock returns are transaction based, whereas the returns on unsecuritized real estate are appraisal/accounting based.

The empirical studies of Gyourko and Keim (1992) and Myer and Webb (1994), however, provide significant evidence that real estate stock returns contain economically important and timely information concerning unsecuritized real estate markets. Lagged EREIT returns have been shown to have the ability to predict current returns of the Russell-NCREIF Property Index, especially prior to the fourth quarter which is the period of greatest appraisal activity. This implies that the stock market signals changes in

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Date Revised—May 1995; Accepted—June 1995.

the appraisal value of real estate, as given in Russell-NCREIF returns, prior to any accounting activity generated by the increase in appraisal values. Appraisal-based data is currently not available, but is needed, for unsecuritized healthcare real estate.

This study employs a methodology similar to a detailed study by Myer and Webb (1994) of the relationship between retail stocks and securitized and unsecuritized retail real estate. The results of the Myer and Webb study, after accounting for the market return, showed evidence of a positive contemporaneous relationship between retail stocks and retail EREITs. Myer and Webb argue that the provision for percentage rents in retail REIT lease contracts links the financial success of the retail properties more closely to the success of tenants operating retail facilities. Percentage rent clauses are also standard in healthcare EREIT sale/leaseback arrangements. This provision may provide for a closer relationship between healthcare stocks and healthcare EREITs.

Healthcare REITs, as a subclass, gained popularity with investors in 1986 and 1987 due to the Tax Reform Act of 1986 (Lutz, 1989). During this period the REIT structure was also a much talked about alternative for financing from the healthcare provider's perspective (Monroe and Peach, 1987). Most healthcare trusts were spin-offs from large, for-profit healthcare companies. Healthcare chains typically sold a small portion of their assets in order to raise capital and fund expansion programs. EREITs were an attractive source of capital because they provided funds equal to 100% of the facility's market value and acted as an off balance sheet source of capital. In addition to using REITs to raise capital, hospital companies also typically established subsidiaries to advise the REITs, which led to additional income for the healthcare chain, and commonly owned stock in the REIT, up to 10% of the outstanding shares (Lutz, 1989).

Literature Review

Gyourko and Nelling (1994), in their study of systematic risk and diversification in association with EREITs, warn investors to interpret the higher returns on retail properties over recent years as compensation for greater systematic risk. EREITs investing primarily in retail properties tended to have a *beta over* 50% larger than EREITs specializing in industrial properties. Gyourko and Nelling argue that the percentage rent clauses included in most retail leases creates systematic risk as the REIT shares in their tenant's cash flow risk. Healthcare EREITs, which were also included in the Gyourko and Nelling study, were found to have the second highest *beta* of the six property types studied.

Healthcare REITs have historically invested solely in healthcare properties. The singular nature of the healthcare REIT holdings, in addition to the nature of healthcare leases, make healthcare real estate a more appropriate classification than retail for studying the relationship between REITs and stocks. Healthcare REITs also provide historical single-property-type REIT data, providing insight into the performance of recent single-property-type REIT IPOs.

Healthcare EREIT Lease Agreements

As outlined by Monroe and Peach (1987), sale/leaseback agreements are the standard method for a healthcare company to obtain equity financing through a REIT. A healthcare institution sells a property to a REIT, generally for 100% of the facility's fair market value, and then leases the property from the trust. Typical leases are triple net and long-term, ten to fifteen years, with options every five years after the initial lease period to renew the lease or repurchase the facility at the current market price.

The base rent for the lease is determined by the healthcare company's financial condition and the purchase price of the facility, but commonly ranges between 10% and 15% of the initial purchase price. The base rent must be paid over the lifetime of the lease, usually regardless of the occupancy of the facility. Typically, lease payments are required to be guaranteed through the sponsoring company or a lending institution by a letter of credit.

In addition to base rent, it is standard for the lessee to pay percentage, or participating rent. After the first year, every year that the operator's gross revenues increase, a percentage of the increase in revenues is paid to the REIT. Initial percentage rents range from 5% to 9%, depending on the type of facility. A transition level of gross revenues is also usually specified, after which percentage rents on additional revenue are in the range of 1% to 2%. Percentage rents are commonly paid on a quarterly basis and adjusted annually. The provision for percentage rents in healthcare REIT lease contracts should link the financial success of the healthcare properties more closely to the success of the healthcare providers operating the facilities.

Under typical sale/leaseback agreements, the healthcare provider is responsible for, and has control of, all operations of a facility. However, if a prospective change in operations will have significant impact on revenues for the property, or capital improvements are sought, the lessee must negotiate such changes with the REIT. Capital additions may be financed by the REIT, resulting in additional rents. Once any REIT-financed capital changes have been made they commonly become the property of the REIT upon termination of the lease. The lessee's control over the sale of a property to a third party when the lease expires is usually limited to rights of first refusal to repurchase or renew the lease at the third party-negotiated rates.

Data and Research Design

Selection Criteria

Although a significant positive relationship was found between the index of retail EREITs and three indices of retail stocks in the Myer and Webb study (1994), a significant positive relationship was found for only two of the eight individual retail EREITs studied. In the Myer and Webb study, retail EREITs were identified from the 1992 *REIT Sourcebook* published by NAREIT. This method of identification may have been a weakness with the investigation. Although the EREITs chosen had a least 80% of their investments in equity retail at the time the data were collected by NAREIT for publication in the 1992 *Sourcebook*, the composition of the REITs' portfolios over the period of the study (1983 to 1991) was unknown.

Healthcare EREITs included in this study were initially identified from the 1991 and 1992 *REIT Sourcebook* and then tracked through the annual reports of each trust. A REIT was considered to be a healthcare EREIT if 100% of its portfolio was in healthcare and at least 75% of investments were equity. As shown in Exhibit 1, seven REITs were identified for inclusion in the study. They are American Health Properties, Health and Rehabilitation Properties Trust, Health Care Property Investors, Health Equity Properties, Medical Properties, Nationwide Health Properties, and Universal Health Realty Income Trust. A brief description of each healthcare EREIT is included in Appendix B.

Exhibit 1
List of Healthcare Equity REITs

Company Name	Start Date	Last Date	Perm Number
American Health Properties	3/87	12/92	71300
Health & Rehabilitation Properties Trust	1/88	12/92	70703
Health Care Property Investors	6/85	12/92	67598
Health Equity Properties	1/88	12/92	70340
Medical Properties	4/87	10/92	72274
Nationwide Health Properties	1/86	12/92	68312
Universal Health Realty Income Trust	2/87	12/92	72864

	% Equity Healthcare							
Company Name	1985	1986	1987	1988	1989	1990	1991	1992
American Health Properties	0.0	0.0	100.00	82.22	75.00	81.03	84.51	92.34
Health & Rehabilitation Properties Trust			<75.00	82.82	77.14	<75.00	89.87	87.72
Health Care Property Investors	84.62	91.40	91.80	93.53	91.28	86.40	89.97	84.98
Health Equity Properties				100.00	100.00	100.00	100.00	100.00
Medical Properties			100.00	100.00	100.00	100.00	100.00	100.00
Nationwide Health Properties		100.00	100.00	100.00	100.00	100.00	100.00	100.00
Universal Health Realty Income Trust			100.00	93.04	not available	not available	91.39	96.57

Research Design

In order to investigate the relationship between returns of the healthcare EREITs and returns of healthcare stocks, the following two-factor multiple regression model was employed:

$$r_{r,t} = a_r + br_{m,t} + cr_{s,t} + e_{r,t}\,, \tag{1}$$

where:

a_r = the intercept of the returns,
$r_{r,t}$ = the dependent variable; the return on an individual healthcare REIT at time t,
$r_{m,t}$ = an independent variable; the return on a market index at time t (the S&P 500, CRSP equally weighted or CRSP value weighted),

$r_{s,t}$ = an independent variable; the return on a stock index at time t (based on SIC classifications of healthcare stocks),
$e_{r,t}$ = a random error term, and
b and c are constants.

By including a market index as a contemporaneous term in the model, the relationship between the healthcare EREITs and healthcare stocks can be examined directly since the effects of the stock market in general have been controlled.

Data

The S&P 500, CRSP equally weighted and CRSP value-weighted stock indices were used as a proxy for the market in the model just explained. As shown in Exhibit 2, equally weighted portfolios of healthcare stocks were formed on the basis of their industry group SIC classification for use as stock indices in the model. Health services firms, as a group, are classified under the 8000 SIC heading. Industry groups, such as "Nursing and Personal Care Facilities" and "Hospitals," are designated by the second digit from the right in the group SIC classification. For example, Nursing and Personal Care Facilities are found within the 8050 to 8059 SIC classification while Hospitals are classified within 8060 to 8069. SIC code ranges for the industry groups are referred to as 805X and 806X, respectively, in the following discussion of this study.

Indices of the industry groups 802X (Offices and Clinics of Dentists), 803X (Offices and Clinics of Doctors of Osteopathy) and 804X (Offices and Clinics of Other Health Practitioners) were not included in the study because these classifications contained three or fewer firms over the study period (1985 to 1992). An index of the industry group 801X (Offices and Clinics of Doctors of Medicine) was also not included in the study due to the limited amount of data available. The number of firms included under the other SIC indices are listed in Exhibit 2. Brief descriptions of the SIC industry group indices included in the study are given in Appendix A.

Return data for the healthcare EREITs selected, the market indices, and the SIC code stock indices were taken from the CRSP NYSE/AMEX monthly tape from 1985 to 1992. The relationship between individual healthcare EREITs, the market, and the SIC indices was examined for different time periods based on the status of the REIT during the study period and the availability of data. Healthcare EREITs were included when initiated as a REIT and were dropped from the study if they changed their equity status. Missing data points for the EREITs were also not included in this study.

Exhibit 2
List of Healthcare Stock Indices

SIC Code	Description	Count
80XX	Health Service	92 (total)
805X	Nursing and Personal Care Facilities	16
806X	Hospitals	21
807X	Medical and Dental Laboratories	11
808X	Home Health Care Services	7
809X	Miscellaneous Health and Allied Services	27

Results

The results of estimating the relationship between individual healthcare EREITs and an equally weighted portfolio of healthcare EREITs and healthcare stocks are shown in Exhibit 3. As expected, multiple positive contemporaneous relationships were found for six of seven of the individual healthcare EREITs studied and various healthcare stock indices. Only one significant positive relationship was found for Health Care Property Investors. American Health Properties, Health and Rehabilitation Properties Trust, Health Equity Properties, Medical Properties, Nationwide Health Properties, and Universal Health Realty Income Trust all had several significant relationships with healthcare stock indices. The equally weighted portfolio of healthcare EREITs also demonstrated multiple positive contemporaneous relationships with the healthcare stock indices.

To further highlight the relationships demonstrated between the healthcare EREITs and healthcare stocks, the portfolios of the EREITs can be unbundled down to their SIC classification of the facilities. Of the six EREITs that had multiple significant positive relationships with the SIC indices, four show a significant correlation between the classification of their portfolios and their SIC indices.

Universal Health Realty Income Trust (UHRIT) showed a significant positive relationship with the 806X (hospital) index using all three market indices (at confidence levels of 1% and 5%) and a significant positive relationship with the 809X (outpatient) index using two of the market indices (with a confidence level of 1% for both models). UHRIT had equity investments in six acute care, two rehabilitation and two psychiatric hospitals in 1992, representing 96.6% of its total investment. UHRIT's facilities would most probably be classified under the 806X SIC code for hospitals, and would most probably provide significant outpatient services, as described under the 809X index.

Similarly, American Health Properties (AHP) showed a significant positive relationship with the 809X (outpatient) index using all three market indices (at a confidence level of 1% for all three models). AHP had equity investments in ten acute care hospitals, three rehabilitation facilities and three psychiatric hospitals in 1992, representing 92.3% of its total investments. Again, these facilities would most probably provide significant outpatient services, as described under the 809X index.

Health and Rehabilitation Properties Trust (HRPT) also showed a significant positive relationship with the 806X (hospital) index using all three market indices (at confidence levels of 5% and 10%) and a significant positive relationship with the 809X index using all three market indices (at confidence levels of 1% and 5%). In 1992 HRPT had equity investments in twelve rehabilitation facilities and two psychiatric hospitals, representing 29.1% of its total investments. HRPT's equity investments in rehabilitation facilities and psychiatric hospitals would most probably be classified under the 806X SIC code for hospitals and would most probably provide significant outpatient services.

Finally, Health Equity Properties (HEP) showed a significant positive relationship with the 805X (skilled nursing) index using all three market indices (at confidence levels of 5% and 10%). HEP had equity investments in seventy-four nursing homes and two personal care facilities in 1992, representing 100% of its investment. HEP's investments would most probably be classified under the 805X SIC code for skilled nursing facilities.

The two exceptions in looking at correlations between EREIT portfolio composition and significant SIC indices are Medical Properties (MP) and Nationwide Health Properties (NHP). MP had a significant positive relationship with the 808X (home

Exhibit 3

	805	S&P 500	806	S&P 500	807	S&P 500	808	S&P 500	809	S&P 500	800's	S&P 500
American Health Properties												
Coefficient of Index	−.035	.562***	.195	.306	.037	.481**	.059	.409*	.294*	.195	.293*	.160
P-Value of *t*-Test	(.7063)	(.0083)	(.1431)	(.1807)	(.5922)	(.0147)	(.4440)	(.0792)	(.0234)	(.3779)	(.0848)	(.5532)
Health and Rehabilitation Properties Trust												
Coefficient of Index	−.058	.447***	.176*	.197	.073	.320**	.006	.373**	.238**	.166	.222*	.138
P-Value of *t*-Test	(.3951)	(.0040)	(.0826)	(.2417)	(.1656)	(.0231)	(.9132)	(.0277)	(.0150)	(.2822)	(.0844)	(.4725)
Health Care Property Investors												
Coefficient of Index	.000	.206	.075	.128	.036	.173	−.028	.248*	.101	.118	.100	.101
P-Value of *t*-Test	(.9993)	(.1041)	(.3604)	(.3558)	(.4391)	(.1414)	(.5428)	(.0575)	(.1622)	(.3462)	(.3425)	(.5159)
Health Equity Properties												
Coefficient of Index	.303	−.001	.246	.043	−.065	.327	.136	.070	.327	.085	.477*	−.204
P-Value of *t*-Test	(.0199)	(.9987)	(.2111)	(.9131)	(.5256)	(.3422)	(.2183)	(.8560)	(.1341)	(.8395)	(.0605)	(.6302)
Medical Properties												
Coefficient of Index	.026	.280	.394	−.106	.267	.063	.518***	−.620	.397	−.115	.875***	−.712
P-Value of *t*-Test	(.9116)	(.5989)	(.2588)	(.8560)	(.1258)	(.8956)	(.0072)	(.2594)	(.2623)	(.8451)	(.0427)	(.2864)
Nationwide Health Properties												
Coefficient of Index	.015	.398**	.090	.320	.007	.408**	.031	.366*	.251**	.181	.222	.176
P-Value of *t*-Test	(.8610)	(.0290)	(.4652)	(.1144)	(.9174)	(.0160)	(.6478)	(.0544)	(.0295)	(.3272)	(.1529)	(.4359)
Universal Health Realty Income Trust												
Coefficient of Index	.101*	.262*	.241***	.110	.045	.333***	.075	.243*	.189**	.175	.316***	.006
P-Value of *t*-Test	(.0813)	(.0508)	(.0047)	(.4446)	(.3220)	(.0093)	(.1339)	(.0984)	(.0354)	(.2371)	(.0038)	(.9720)
Equally Weighted Portfolio of Healthcare EREITs												
Coefficient of Index	.063	.268**	.162**	.165	.430	.294***	.089**	.200*	.146**	.206*	.295***	.022
P-Value of *t*-Test	(.2207)	(.0139)	(.0203)	(.1558)	(.2858)	(.0041)	(.0258)	(.0677)	(.0188)	(.0531)	(.0009)	(.8644)

Of the three market indices used in the model (S&P 500, equally weighted CRSP and value-weighted CRSP), only the results obtained with the S&P 500 are shown. The results obtained with the CRSP indices were omitted for brevity as they did not differ significantly from the S&P 500 results. 805, 806, 807, 808, 809, and 800's refer to indices of healthcare stocks. Asterisks to the right of the index coefficients and *p*-value indicate the level of significance: *indicates significance at the 10% level, **indicates significance at the 5% level and *** indicates significance at the 1% level.

Exhibit 4
Correlation Matrix for Healthcare Stocks and S&P 500 Indices

	805	806	807	808	809	800's	S&P 500
805	1.00						
806	.436	1.00					
807	.253	.417	1.00				
808	.428	.465	.349	1.00			
809	.446	.568	.380	.506	1.00		
800's	.683	.764	.634	.759	.795	1.00	
S&P 500	.491	.615	.361	.533	.500	.712	1.00

health) index with two of the market indices at a significance level of 1% for both models. MP's holdings, however, include two acute care hospitals and one medical office building, with little chance of overlap with the home healthcare industry. (It should be noted that MP is unique within the healthcare EREIT sample group due to the limited nature and poor performance of its portfolio.) NHP had a significant positive relationship with the 809X (outpatient) index with all three market indices at significance levels of 5% and 10%. However, NHP's properties have almost exclusively been long-term care facilities (111 facilities out of 113 in 1992, representing 95.48% of total equity investment) which would fall within the 805X (skilled nursing) classification and would most probably offer little or no outpatient services.

A correlation matrix for the various healthcare stock indices and the S&P 500 is given in Exhibit 4. The correlations shown, in general, are not large enough to cause significant multicollinearity problems. Multicollinearity, if it affects the data analysis described in this study, would cause the reported results to be less significant that they truly were, not more significant. Therefore, at a minimum, multiple positive contemporaneous relationships were found between six of the seven REITs studied and portfolios of other healthcare stocks, and in four of the six REITs with positive result, significant correlations were evident between individual REIT portfolios and the SIC indices with which they showed a significant relationship.

Summary and Conclusions

A two-factor regression model was used to investigate the relationship between returns on healthcare equity REITs and healthcare stocks from 1985 to 1992. General stock indices were incorporated in the model to account for the influence of the market. As expected, multiple positive contemporaneous relationships were found between six of the seven REITs studied and various healthcare stock indices. Furthermore, of the six EREITs that had multiple significant positive relationships with the healthcare stock indices, four show a significant correlation between the classification of their portfolios and their SIC indices. The best example of this is Health Equity Properties, which invests exclusively in equity holdings of long-term care facilities and exhibited a strong positive relationship with the 805X SIC index composed of skilled nursing facility stocks.

These results are consistent with the argument that a common factor, or factors, affects the returns of both healthcare equity REITs and stocks. Although a previous study by Myer and Webb (1994) investigating the connection between retail EREITs and stocks also seems to confirm this idea, significant positive relationships were found for only two of the eight individual retail EREITs in their study. Healthcare EREITs' homogeneous nature, in addition to the provision for percentage rents in healthcare REIT leases, may create a closer link between the financial success of the healthcare facilities and the healthcare providers than other categories of real estate.

The relationships found between returns on healthcare equity REITs and healthcare stocks, especially the correlation between the classification of the EREIT portfolios and SIC indices, indicate the importance of real estate management for healthcare firms and asset subclassification choice for the real estate manager. Although this study specifically investigated healthcare EREITs and healthcare stocks, the results may be more widely applicable to other single-property-type EREITs.

Appendix A
SIC Index Descriptions

805X SIC Index: Nursing and Personal Care Facilities

Firms represented in this industry group provide inpatient nursing and health-related personal care, but not hospital services. Examples of facilities included in this index are convalescent homes (including psychiatric convalescent hospitals), nursing homes and personal care facilities.

806X SIC Index: Hospitals

Firms represented in this industry group provide diagnostic services, extensive medical treatment, surgical services, and other hospital services in addition to continuous nursing care. Examples of facilities included in this index are general medical and surgical hospitals, psychiatric hospitals, rehabilitation hospitals, substance abuse hospitals, and other specialized centers.

807X SIC Index: Medical and Dental Laboratories

Firms represented in this industry group provide professional analytical diagnostic services. Examples of facilities included in this index are blood analysis laboratories, x-ray facilities and dental laboratories.

808X SIC Index: Home Health Care Services

Firms represented in this industry group provide skilled nursing or medical care in the home setting, under supervision of a physician. Visiting nurse associations are an example of firms included in this classification.

809X SIC Index: Miscellaneous Health and Allied Services, Not Elsewhere Classified

Included in this industry group are firms that provide specialized outpatient services and other allied health services. Examples of firms listed under this classification are kidney dialysis centers, outpatient substance abuse programs, blood banks and health screening services.

Appendix B
Healthcare EREIT Descriptions
(summarized from Annual Reports and 10-Ks)

American Health Properties: American Health Properties' initial public offering (IPO) was held in February of 1987. The IPO raised over $200 million and was the second largest REIT equity offering to that date. The proceeds of the offering were used to purchase seven acute care hospitals from American Medical International, Inc. (AMI). AMI initially retained a 9.8% interest in the EREIT, served as an advisor to the trust and continued to operate the facilities for American Health Properties (AHP). AHP terminated its advisor relationship with AMI in 1988. In 1992, the EREIT's portfolio included twenty-one healthcare facilities, including ten acute care hospitals, three rehabilitation facilities, six psychiatric hospitals and two development projects. The properties were located in thirteen states and were operated by twelve hospital management companies. In 1992, after a $45 million devaluation of the psychiatric hospitals, AHP owned over $552 million in equity assets, representing 92.3% of total investment. On average, the AHP has been moderately leveraged with a debt-to-total asset ratio of 44.0%.

Health and Rehabilitation Properties Trust: Health and Rehabilitation Properties Trust's IPO was held in December of 1986 and raised approximately $63 million. The EREIT purchased several of its original properties from Greenery Rehabilitation Group, Inc. (GRG) and Continuing Health Care Corp. (CHC). GRG and CHC retained interests in the EREIT totalling 12.4%, served as advisors to the trust and continued to operate the facilities purchased by Health and Rehabilitation Properties Trust (HRPT).

In 1992 CHC became the focus of a congressional hearing on fraud and abuse in the healthcare industry. Due to concern about the effects of its association with CHC or HRPT's stock price, the trust divested $130 million of investment in CHC, including sale or releasing of CHC-operated facilities, redemption of CHC's stock in HRPT and termination of the advisory relationship between CHC and HRPT. GRG, however, continues in its advisory capacity.

At the year end 1992, HRPT owned equity interests in forty-seven properties operated by various management companies. The properties, including twelve rehabilitation facilities, thirty-three long-term care facilities and two psychiatric hospitals, are located in twelve states. HRPT owned over $280 million in equity assets in 1992, representing 87.7% of total investment. On average, HRPT has been moderately leveraged with a debt-to-total asset ratio of 39.6%.

Health Care Property Investors: HCPI was the first major health service company-sponsored REIT to go public, the first to diversify through operators other than the sponsor and the first to obtain an investment grade bond rating from both Moody's and Standard & Poor's (unusual even for the general REIT industry). Health Care Property Investors' IPO was held in May of 1985 and raised approximately $90 million. The proceeds from the offering were used to purchase interests in forty-two properties, including thirty-eight long-term care facilities, one rehabilitation hospital, two acute care facilities and one psychiatric hospital. A 9.8% stake in the EREIT was retained by National Medical Enterprises, Inc. (NME), advisor to the EREIT and operator of a majority of facilities purchased by Health Care Property Investors (HCPI). HCPI ended its advisor relationship with NME in 1987.

In 1992, HCPI owned over $497 million in equity assets, representing 85.0% of total investment. Property holdings included 138 long-term care facilities (nursing homes), five acute care hospitals, nine congregate care/assisted-living facilities, one psychiatric hospital, six rehabilitation facilities and six medical office buildings. The properties continued to be geographically diversified and were operated by thirty hospital management companies. On average the EREIT has been moderately leveraged with a debt-to-total asset ratio of 52.3%.

Health Equity Properties: Health Equity Properties was originally formed as a Master Limited Partnership in 1986 under the name Angell Care Master Limited Partnership. Angell reorganized as an EREIT under the name Angell Real Estate Company in late 1987 and changed its name again, to Health Equity Properties (HEP), in 1990. The trust posted a net profit in 1992 for the first time since changing its status to an EREIT. In 1992 HEP owned interests in seventy-four nursing home properties and two personal care facilities, totalling over $124 million in equity assets and representing 100% of total investment.

Health Equity Properties was highly leveraged from 1988 to 1990, with an average debt-to-total asset ratio of 74.8%. The REIT's debt-to-total asset ratio decreased in 1991 to 47.0% and further decreased in 1992 to 26.5%. The dramatic drop in HEP's debt-to-asset ratio was accomplished through a major restructuring of the EREIT's debt in 1991.

Medical Properties: Medical Properties (MP) was formed in October of 1986 as a captive EREIT sponsored by Nu-Med, Inc. (NM). In formation, MP issued common stock to NM in exchange for two acute care hospitals and one medical office building located in California. NM retained an 8% stake in MP, served as an advisor to the EREIT and operated the three healthcare facilities. By 1990 the NM-operated facilities were unable to make lease payments. Although NM originally guaranteed the leases, the company has not been able to fulfill the guarantee since 1991.

MP terminated its advisor relationship with NM in 1991 and filed for protection under Chapter 11 of the Federal Bankruptcy Code in October of 1992. In 1992, after devaluation of the MP properties by more than $22 million, the EREIT owned less than $20 million in equity real estate, representing 100% of total investment. MP's debt-to-total asset ratio was low from 1988 to 1990, averaging 37.9%, but rose dramatically due to the property devaluation to 86.6% in 1992. To avoid foreclosure on the properties, MP entered into a standstill agreement with its lender in February 1993, pledging "furniture, furnishings, fixtures, inventory, supplies and equipment" owned by NM as collateral.

Nationwide Health Properties: Nationwide Health Properties was originally organized as an EREIT under the name Beverly Investment Properties. Beverly Investment Properties' IPO was held in October of 1985 and raised over $104 million. Proceeds from the offering were used to acquire thirty-nine long-term care facilities (nursing homes) from Beverly Enterprises. As the initial sponsor of the EREIT, Beverly Enterprises retained a 5% interest in Beverly Investment Properties, served as an advisor to the trust and operated all of the Beverly Investment Properties' facilities. Beverly Investment Properties terminated its advisor relationship with Beverly Enterprises in 1988 and changed its name to Nationwide Health Properties (NHP) in 1990.

By 1992, NHP owned equity investments in 113 properties, including 111 long-term care facilities and two rehabilitation hospitals. The properties continued to be geographically diversified and were leased to twenty-one hospital management companies. Equity assets for NHP totalled more than $344 million in 1992, representing 81.5% of total investment. On average, NHP has been modestly leveraged, with a debt-to-total asset ratio of 32.2%. NHP received an investment grade bond rating from Standard and Poor's and Duff and Phelps in 1992.

Universal Health Realty Income Trust: Universal Health Realty Income Trust (UHRIT) was established in December of 1986 as a captive EREIT for Universal Health Services, Inc. (UHS). Shares in the trust were exchanged for ten properties and related debt financing from UHS. UHS retained a 6% interest in the EREIT; it served (and continues to serve) as an advisor to the trust and operated the facilities exchanged in the formation.

In 1992 UHRIT owned equity interests in ten facilities, including six acute care hospitals, two rehabilitation facilities and two psychiatric hospitals. All but one of these properties were operated by affiliates of UHS. Lease payments from UHS and affiliates accounts for 89.0% of UHRIT's total revenues for 1992. Although two of the EREIT's properties have been experiencing operating difficulties, UHS, as guarantor, has continued to make lease payments. In 1992 UHRIT equity interests totalled over $137 million, representing 96.6% of total investment. On average UHRIT has been modestly leveraged, with a debt-to-total asset ratio of 32.6%.

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