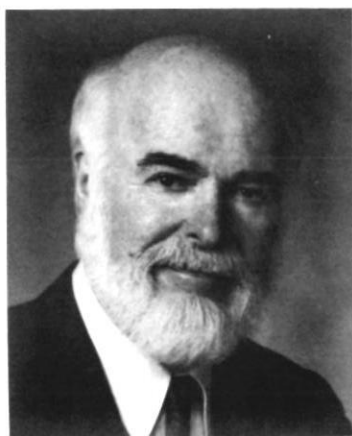


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RICHARD D. SIMMONS, SR., CRE, RECEIVES 1994 LUM AWARD



Richard D. Simmons, Sr., CRE

Richard D. Simmons, Sr., CRE, chairman of Simmons Associates Limited, Saugus, Massachusetts, has been named the 1994 recipient of the Louise L. and Y.T. Lum Award. In receiving this award, Simmons is recognized for his distinguished contribution toward the advancement of knowledge and education in the real estate counseling profession. The award was established by the late Y.T. Lum, CRE, to encourage the continuing professional education of those engaged in real estate counseling through an understanding of its principles, theories, techniques and practices. Simmons' career as a real estate counselor reflects with honor the criteria this award sets forth.

Simmons has been a real estate practitioner for 40 years. He was invited to membership in The Counselors of Real Estate (American Society of Real Estate Counselors) in 1970 having counseled clients in real estate matters concerning land use, taxation, brokerage and property management. As a member of The Counselors, he has served as a vice president and as chairman and member of numerous committees including Education, Publications and Strategic Planning. Simmons is a past chairman of the New England Chapter, and he also served as its first secretary/treasurer. Simmons has been recognized by the Massachusetts Board of Real Estate Appraisers with the Scholastic Achievement Award in his name to recognize his many contributions to appraisal education. Currently, he is working with fellow CRE, J. Daryl Lippincott on the privatization of the real estate industry in Central Europe. Simmons regularly contributes articles and columns on real estate counseling to the *New England Real Estate Journal* and the *Banker and Tradesman*.

Previous recipients of the Louise L. and Y.T. Lum Award include CREs Eugene G. Bowes, (1993), John McMahan (1992), Wayne D. Hagood (1991), Charles W. Bradshaw, Jr. (1990), Jared Shlaes (1989), John R. White (1988) and Thurston H. Ross (1987).

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JOURNAL EXPANDS

As Counselors of Real Estate, we know that to stay on top of our profession and our potential, we must change and progress. So it is with *Real Estate Issues (REI)*; it, too, must change and progress in order to continue being regarded as one of the best journals in professional real estate. And so with this issue we are implementing plans for increased service to our member CREs and valued subscribers by expanding and modifying the scope of *Real Estate Issues*.

First, *REI* will be published three times per year (up from our previous frequency of two times per year), with issues coming out in April, August and December. The April issue will be a "regular" issue, containing articles on a variety of topics, as determined by the selections of the editorial board from the articles we receive. Second, the August edition will be a "Focus" issue, in which approximately one-half of the articles will relate to a particular topic, with the remaining articles covering a variety of topics. Third, the December issue will continue our practice of having a "Special Edition," with all the articles devoted to a particular topic or theme. Our most recent special edition, **Counselors and the Law**, as well as our previous special editions on contaminated real estate and capitalization rates and yields, have generated a great deal of interest within the real estate industry. They illustrate the broad-based competencies that Counselors bring to the community of professional real estate.

Finally, the *REI* Editorial Board is committed to bringing the most meaningful, interesting, relevant and useful information to our readership in the pages of *REI*. I encourage you to write and submit articles on topics that you believe are useful and interesting to other members and nonmember professionals. Your participation can help insure that *REI* continues as a top-rated journal and that its articles contain the information you want to read.

As the new editor in chief of *Real Estate Issues*, I pledge to maintain and attempt to build on the high standards and progress made by my predecessors—Jared Shlaes, CRE, and Rocky Tarantello, CRE. They and Linda Magad, managing editor, as well as the entire editorial board, deserve our appreciation for the fine publication *REI* is today. I feel honored to have been asked to carry on this work, and my goal is to be worthy of the trust placed in me. I hope you feel proud, as I do, that *Real Estate Issues* is **our** publication.



Halbert C. Smith, CRE
Editor in chief

THE PRESIDENT SPEAKS

A GARDEN GREW

As we begin our 41st year, The Counselors of Real Estate build on an unprecedented foundation of integrity, accomplishment, excellence, professional ethics, fellowship, networking and service to the users of real estate problem solving and counsel. We celebrated this tradition in convention last November and recorded some of our history in an anniversary journal. As part of that production we asked several of our distinguished members and past presidents to contribute some of their memories and fond recollections of years in which they fulfilled a leadership role.

In recalling the early years, Hunter Moss, CRE, wrote, "To become a Counselor a man or woman had to be at the top not only in real estate but also in community life... We worked hard on deciding the criteria for becoming a real estate counselor." John R. White, CRE, president in 1969 recalled, "I stressed educational programming as a major goal." In 1970, Abel E. Berland, CRE, and Carrie Maude Jones, the first executive director, proposed "sponsoring an educational session in an interesting location which would be designated as a *High Level Conference*." During the presidential term of Neil J. King, CRE, the society published its first book on real estate counseling.

George M. Lovejoy, CRE, our president in 1982, reflected on the 80s by highlighting "long range planning, a commitment of growth, service to members, institutional and offshore memberships and promotion of the CRE Designation." He added that "The Counselors have reinforced my experience and belief that people make the difference." Wayne D. Hagood, CRE, president in 1985 added, "The CRE Designation is more than just an honor, it is an obligation." He wrote of respect for each other, a commitment to improve one's level of performance and a recognition of the privilege associated with being a member. J. Daryl Lippincott, CRE, 1988 president, "visualized the opportunities of expanding international activities into a worldwide counseling network." L. Dickson Flake, CRE, our leader in 1989, reminisced that, "It was not the formal organization, but rather the close association with the most genuine, interesting group" that was his most lasting memory. He called the society a "body unique" and spoke of intellectual curiosity combined with breadth of interest.

In recalling 1990, his year as president, James E. Gibbons, CRE, penned these meaningful words, "We dedicate ourselves anew and with heightened intensity to the mission of increasing awareness of the CRE Designation throughout our broad economy." He further described The Counselors as the preeminent organization in real estate consulting.

As John White pointed out, "A year is too brief a period to achieve any recognizable improvement." But I believe that each of our presidents and our other leaders in their time planted the seeds that were nurtured and cultivated by their successors in bringing the society to its esteemed position of prominence in the real estate profession. As we begin our 41st year, we are planting again with the hope that the harvest will be fruitful.



Franklin Hannoeh, Jr., CRE
President
The Counselors of Real Estate

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Office Buildings and the Role of Downtown in the Polycentric City

Wayne Archer and Marc T. Smith

Urban form has evolved rapidly in the past two decades as economic functions have become increasingly suburban. As suburbanization continues, the role and viability of the downtown is unclear. Using data from Jacksonville, Florida, office building rental rates indicate that downtown buildings have been a better investment than suburban building in recent years. Therefore, according to real estate market participants, there is a continuing viability for downtown as a unique office center.

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Harold "Skip" Perry, Jr., CRE

Commercial mortgage securitization has been around for over a decade traveling many bumpy roads with stops and starts. Due to the current limited access to capital, commercial securitization is in overdrive. This article discusses securitization from the differences between residential and commercial, various structures, the process, credit enhancement issues, the problems and pitfalls and its commercial potential.

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The Intangible Business Component of Commercial Real Estate Investments

Jeremy G. Hall

This article identifies the operating business component of investing in real estate, its importance in property operations and how it is priced at both the portfolio and property levels. The thesis presented here is as follows: real estate is an operating business which renders it both an asset class within the investment world and a distinct business area within the real economy. The broadening scope of real estate management has made property and asset managers more like CEOs able to control and add value to individual properties through comprehensive strategic planning and marketing.

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The Causes of Loss in Value: A Case Study of a Contaminated Property

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Acquiring Property at a Former Military Base: The Process and the Law

Richard K. Gsottschneider, CRE, Jimmy E. Hicks
and Jeffrey S. Donohoe

The article describes the unique federal laws which govern the planning and disposition of military bases. These laws directly impact the real estate community seeking to advise on the reuse of a military base. Described are the Base Closure and Realignment Act (BRAC), the Federal Property and Administrative Services Act, the Surplus Property Act and the national Environmental Policy Act.

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Valuing Partnership Interests in Real Estate Companies

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A new ruling by the IRS facilitates taking discounts for lack of control when valuing minority interest of real estate partnerships for estate tax purposes. Counselors need to be aware of this ruling when advising estates and others on the value of such positions. In preparing valuations, discounts should be taken for the lack of liquidity and other factors which make the sale of minority interests in real property difficult if not impossible.

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New Neighbors, New Taxes? The Escalation Of Property Taxes Due To Population Growth

Vincent S. Scerbinski, Susan C. Christoffersen
and Elizabeth H. Granitz

The article investigates the relationship between population size and property taxes in the towns and counties of New York State. Research findings indicate that towns and counties with the fewest residents have the highest per capita levies. The levies trend down in the mid-range and trend up again at the high end. The initial decrease is ascribed to economies of scale, and subsequent increases are due to the ability and necessity of offering more services.

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ABOUT THE COUNSELORS OF REAL ESTATE

The Counselors of Real Estate, now in its 40th year, is an international group of high profile professionals including members of prominent real estate, financial, legal and accounting firms as well as leaders of government and academia who provide expert, objective advice on real property and land-related matters.

Membership is selective, extended by invitation only on either a self-initiated or sponsored basis. The organization's **CRE Designation** (*the Counselor of Real Estate*) is awarded to all members in recognition of superior problem solving ability in various areas of specialization such as litigation support, asset management, workouts, valuation, feasibility studies, acquisitions/dispositions and general analysis.

Networking is the hallmark of The Counselor organization. Throughout the year, educational programs provide Counselors with opportunities, both nationally and locally, to meet with fellow members and professional colleagues to discuss the latest trends affecting commercial real estate. A publications program, highlighted by our award winning professional journal, *Real Estate Issues*, provides a venue for members to showcase their knowledge of such areas as office buildings, retail centers, hotels/motels, real estate counseling, etc.

What is a real estate counselor?

A counselor is a real estate practitioner whose primary business is providing expert, experienced advisory services to clients for agreed-upon fees. Counseling denotes an activity that is, by its nature, relational. The client relies upon the counselor for skilled and objective aid in the client's real estate needs, implying both trust on the part of the client and trustworthiness on the part of the counselor. The counselor typically has acquired a broad range of experience in the real estate field, possesses technical competency in more than one real estate discipline, and places those competencies at the service of the client. While objective in analysis, the counselor directs his efforts toward the client's best interests through the development of particular strategies, evaluating options available to the client,

advocacy of the client's interests, and - where required - execution of strategy on the client's behalf.

Those designated as Counselors of Real Estate (CRE) have been recognized and esteemed by their peers as persons meeting the above definition in an exemplary fashion. They have demonstrated knowledge, experience, integrity and judgment in their real estate expertise. The CRE subscribes to and is bound by The Counselors' Code of Ethics and Standards of Professional Practice and endeavors to generously assist fellow CREs who are performing client services in a spirit of collegiality. Thus, the commitment to the individual client is complemented by a commitment to raise the standard of counseling practice for the industry as a whole.

Users of counseling services

The demand increases for expert counseling in real estate matters worldwide. Through the years, institutions, estates, individuals, corporations and federal, state and local governments have recognized the necessity and value of a Counselor's objectivity in providing advice. These real estate professionals honor the confidentiality and fiduciary responsibility of the client-counselor relationship.

CREs service both domestic and foreign clients. Assignments have been accepted in Africa, Asia, the United Kingdom, the Caribbean, Central and South America, Europe and the Middle East. The Counselor has the benefit of proven knowledge and experience which qualifies him for practical application and proper interpretation of trends affecting real estate. A major player in the technological revolution, the Counselor regularly accesses the most advanced methodologies, techniques and computer-generated evaluation procedures available.

Determinants of compensation

The CRE is compensated by pre-agreed fee or salary for services, rather than by commission or contingent fee. The counseling fee itself is assured and rendered for advice rather than achievement or outcome of the transaction. Overall compensation can be determined by the complexity of the service performed, its value to the client, the time and expense involved, the breadth of the Counselor's knowledge and experience, and the responsibilities assumed. **Anyone involved in real estate should consider consulting with a CRE.**

For more information on The Counselors of Real Estate, contact The Counselors' office, 430 North Michigan Avenue, Chicago, Illinois 60611; 312.329.8427; fax 312.329.8881. ■

OFFICE BUILDINGS AND THE ROLE OF DOWNTOWN IN THE POLYCENTRIC CITY

by Wayne Archer and
Marc T. Smith

Urban form has evolved rapidly in the past two decades from the traditional urban pattern where economic functions are found predominantly in the central business district. Today suburbia has more economic activity than downtown by several measures.^(28,23,10) The emergence of polycentric cities^(12,14,18,26) and the continued expansion of that form suggests the future role of downtown may simply be as one node among a number in a metropolitan area without a predominant place in the metropolitan hierarchy. Some argue that the reliance of the suburbs on center cities is lessening and the suburbs are becoming more independent.⁽²⁸⁾ Others demonstrate that downtowns have a unique role in key activities^(6,28) and a special function in the metropolitan economy.

The rise of edge cities has made the monocentric city and the exponential density function increasingly irrelevant for explaining urban patterns.⁽²⁰⁾ There are two explanations for suburbanization and the growth of polycentric cities: one is a natural evolution theory which states that decentralization has been driven largely by transportation advances; the second emphasizes the role of social and fiscal problems of central cities. It is not always clear empirically which explanation dominates, and it has been concluded that both are important.⁽²⁰⁾

Firms may move to the suburbs instead of concentrating in the CBD for cost savings in land, labor and transportation; if those costs dominate then a nonmonocentric city will result.⁽²⁷⁾ CBDs cease to grow when agglomeration benefits fail to dominate congestion costs and greater advantage can be obtained in other centers.⁽¹³⁾ The extent of polycentric development in a metropolitan area is therefore dependent on trade-offs among commuting costs, congestion benefits of agglomeration and labor costs,⁽¹⁸⁾ with these trade-offs benefiting outlying areas at present. Siting preferences in current markets are targeted to relatively undeveloped or well-off fringe communities with good highway access

Wayne Archer teaches real estate finance in the Department of Finance, Insurance and Real Estate, College of Business Administration at the University of Florida. He has done research in the areas of mortgage securities, mortgage prepayment and valuation, office markets and housing prices. Archer received his doctorate in economics from Indiana University, and he is an active member of the American Real Estate and Urban Economics Association and the American Real Estate Society.

Marc T. Smith, associate director of the Shimberg Center for Affordable Housing, College of Architecture at the University of Florida, has taught real estate market analysis, real estate analysis, construction, finance and housing. His research interests include housing policy, government regulation and office markets. Smith earned his doctorate in real estate at Ohio State University.

and sites suitable for campus environments, rather than to poorer inner city communities.⁽⁹⁾ Those trends will continue due to a clustering of activities and favorable property tax and public service balances. Traditional location theories talk more about inter city location than about distribution of growth between rich and poor communities in a metropolitan area.⁽⁹⁾

The appropriate role of governments in addressing urban problems varies with which theory is followed. If natural evolution dominates, then governments should accommodate the needs of that evolution. For example, transport planning should not be oriented to the CBD, and it is inefficient for economic development efforts to retain downtown jobs and promote downtown revival.^(14,26) If social and fiscal factors dominate, and fiscal factors are causing distortions, then policy should target those issues. For example, open housing laws in the suburbs would stimulate center city housing by ending downtown concentrations.⁽²¹⁾

Another line of work examines the gentrification or reurbanization of cities. While some argue that the trend is toward the expansion of metropolitan settlement through an outward movement of population,⁽²²⁾ others debate the importance of a movement back to the city. Focusing on housing, some conclude that the extent and impact of gentrification have been exaggerated,^(3,4) while others argue that reurbanization is an important phenomenon.⁽²⁾ World cities may have a special role in which the core will be a key node of activity in the information and financial flows of the evolving economy.⁽¹⁹⁾ Advances in telecommunications will have a centralizing influence in certain nodes because of opportunities to interact with other sources of information.

Therefore, two general views are advanced: one advancing the continued growth of polycentric cities, the other for a rebirth of downtowns. The rebirth may only occur in world class cities; however, what of the cities that are not so identified? Have the forces leading to suburbanization, exurbanization and polycentric cities overwhelmed the traditional urban core so it no longer has a unique function? Or does the downtown continue to have a special role in the economy? Suburbanization of employment has left central cities dependent on offices as a source of tax revenue and employment.⁽¹⁵⁾ The role of downtowns in the office market has important implications for the design of strategies to attract economic activity, mitigate the problems of inner-city residents and address such other metropolitan problems as transportation and land use patterns.

Thesis: The Role Of Downtown In The Office Based Economy

New office buildings in downtown Los Angeles may be a visual symbol, but they are not an indicator of downtown revival.⁽¹⁴⁾ The past two decades have seen the suburbs with more office space than downtowns, although downtowns also have experienced expansions in space particularly in the early to mid-1980s. Decentralization of manufacturing, office parks and retail and wholesale activity was more pronounced than the expansion of downtown office buildings during the 1980s.⁽²²⁾ Because of the poor amenity packages in CBDs, many new firms which provide job sources have looked to the suburbs for location and growth. New entertainment and shopping complexes may enhance the attractiveness of CBDs as an office location.⁽¹⁵⁾

Examination of downtown versus suburban office space has tended to focus on firms renting office space.^(7,8,11,15,16,17,30) The results of a Toronto study indicate that downtowns are centers for higher order functions where face-to-face contact is important. Based on a study of the New York metropolitan area, suburban firms have a subservient role and a need for activities found in the downtown.⁽²⁸⁾

Examining the locational choices of office firms at a point in time can fail to capture the dynamic element of change in the evolution of the urban environment. If the current direction of change is ongoing, it may be only a matter of time for the demise of downtown. Advances in communication have enabled more firms in the non-world city to move out as they overcome the inertia which holds them in the downtown. Alternatively, downtowns may stabilize and even grow as office centers. An approach to more dynamic elements of change is to determine the investment potential of downtown as indicated by the investment value of downtown versus suburban office buildings.^(31,5,24,29) The behavior of participants in the office market, as indicated by rental levels, is an indicator of their views regarding the market's viability. If the future is decline and the recent spurt of downtown office construction was more tax and financing driven than economically motivated, then this should be reflected in rent trends. Likewise, if downtowns have a unique role in the metropolitan office market, then rent levels should reflect that assessment by participants.

This article first identifies the market factors, as supported by research, for general purpose office buildings which have the potential to affect long-term rental rate growth. Secondly, we test the experience of the market in Jacksonville, Florida, a medium-size office market and non-world class city, to determine the relative rental growth rates in

different locations. By doing this, tentative conclusions are drawn which can be tested in other markets concerning the viability of downtown investment and the implications for the future of downtowns. The hypothesis to be tested is that downtowns have a function and a fixed location that will make downtown office buildings outperform suburban buildings.

Factors Affecting Long-Term Growth

Location, Location and Location

It is axiomatic to consider location as a factor in relative growth potential. The body of research in geography and in land economics attests to the significance of access to transportation nodes and economic centers as potential factors. Further, office research specifically emphasizes access to face-to-face contact; this may be the most intense form of location sensitivity.^(7,15)

In addition to communication and transportation as factors determining office location, there appears to be an image or visual presence factor. Previous analysis indicates that downtown high-rise office buildings function as a marketing device which accords a valuable visual presence for the primary occupant.⁽¹⁾

Beyond Location

In addition to the location factors, office buildings may be distinguishable by their potential to offer demand economies of scale. That is, there are market-generated services and amenities that can be elicited only by the presence of numerous offices clustered in close proximity. The benefit of these advantages is enjoyed primarily by offices within the cluster. Second, there appears to be a potential marketing value from being in the "right" suburban cluster. For complex business and professional services (because the product itself is very difficult to evaluate by a prospective client), the image of a firm can be important as a first step to generate business. Selecting a favorable business environment or neighborhood appears to be an important element in establishing a favorable image. Finally, employee retention may be enhanced by cluster benefits.

Vulnerability to Change

Office markets have at least two special risks. First is technological change. A cursory review of office building history in the 20th century reveals that office buildings have gone through several phases of dramatic technical change. Certainly, during the last 50 years the office building has experienced the same change in materials and systems as residential properties plus important others, such as elevator improvements; new lighting methods (fluorescent); the communication evolution (e.g., fiber optics); new uses of glass, steel and synthetic materials in basic design; and the resultant changes

in size and shape. Furthermore, for office buildings which are less restrained by tradition and convention than residential properties, the effect of such innovations has been more extensive. As a result, the technical vintage could be a major factor in the competitiveness of an office building.

A second risk, especially to the suburbs, is the changing characteristics of a given location. The completion of new bridges, circumferential freeways, tollways, etc., inevitably must have an impact on the relative accessibility of suburban locations and downtown as well. Variation in this risk must cause variation in the growth potential of rental rates as the "right" address changes. Similarly, changes may occur in surrounding land use which impacts the environment, image and the growth potential of an office building.

Conclusion about Influences on Rental Rate Growth

The downtown high-rise appears to be the most enduring type of building in rent and value growth. With its location the most constant in character and its image less directly dependent upon technical vintage (e.g. the Chrysler Building or the Empire State Building), the downtown high-rise preserves relative durability in market position. Further, the size of many high-rises provides the potential to create a cluster effect both in terms of demand economies of scale and in terms of neighborhood or environment.

Also, regarding market durability, demand economies of scale and image benefits of a quality cluster may enable the larger cluster to resist erosive effects of changing location and technology. Least durable are the isolated buildings. Without the stabilizing benefits of neighborhood image and demand economies of scale, isolated buildings are the most vulnerable to change.

Empirical Tests Of Rental Growth

The following information is the result of examining data from Jacksonville which tested the growth of rental rates. The approach is to compute the growth rate in the quoted rental rate for individual office buildings (or appropriate groups of buildings) over the time period available, and then use multivariate statistical regression to explain variation in the growth rate.

Over a long period, the growth in quoted rental rates should be a good indicator of how the market perceives a building.¹ The growth rate is influenced little over time by differences in initial costs or in operating expenses, since the market will control the rental rate through the vacancy level. Therefore, by analyzing rental growth rates, the influence of market perceptions upon investment returns and value is isolated.

For Jacksonville, appropriate data were available for 27 office buildings or groups of buildings. Rental rates were available for 1978 and 1988. Although the number of buildings in the sample represents only about 10% of the general business office buildings in the Jacksonville market, they represent over one-third of all the general business office space, an even larger percentage of rental office space and a much larger percentage of the buildings that existed in 1978.

The 27 buildings excluded any known cases of major rehabilitation or renovation, and did not include any with unusually high vacancy in 1988. With a relatively small sample, it is important they include the various types of buildings already identified in this article, e.g., downtown high-rise, isolated suburban, small cluster suburban and large cluster suburban. The suburban buildings included buildings from the first major office park in Jacksonville, as well as buildings from more established major office parks. They are distributed locationally as follows: downtown, 7; major suburban cluster, 6; small suburban cluster, 5; suburban non-cluster, 9. They range in size from 10,000 square feet to over 750,000 square feet and in floors from 1 to 34.

To explain variation in rental rate growth over the test period, characteristics of the individual buildings are used to proxy for the influences already discussed. These include:

Located in the CBD. The CBD is, at once, the largest office cluster in most cities, and it may also be the most stable point in the transportation matrix. Frequently its location was originally selected due to special topographical features that may have made it attractive for urban development relative to surrounding areas. In addition, it is surrounded by other development usually of a different order of magnitude than with other office clusters. For these reasons, we allow for a unique CBD influence through a binary (dummy) variable; 1 - in the CBD and 0 not in the CBD.

Building Space and Floors. Rental growth rates could vary positively with building scale for two reasons. First, larger buildings could permit demand economies of scale internally by having the volume of activity to support food services, delivery and transportation services, etc. Second, larger and especially taller buildings have greater potential image value.

Because scale is related to both space and height, both are used as explanatory variables. But one would expect increased scale to have a diminishing incremental effect on demand for the structure as scale increases. Therefore, log forms of the scale variables seem appropriate.

The log of gross square footage of building area and the log of the number of floors were used. *Year Built.* If technological change is a prominent aspect of office buildings, then building vintage could affect the competitive strength of the building over time. Newer buildings would enjoy a stronger market position and a greater capacity to raise rental rates.

Cluster Size. An office building's attractiveness to tenants may depend upon the size of the cluster in which it is located. Through direct inspection, buildings in the study areas were aggregated into clusters. The size of each cluster was determined, and the cluster size was associated with each building as a characteristic. As with scale variables, it is probable that the effect of cluster size diminishes as cluster size is larger. Therefore, we use the log of cluster size.

Beginning Rental Rate. If variation in rental rates depends strictly on the investment in the space offered, then there is no clear reason to expect initial rental rates to affect rental growth rates. However, this may not be the complete story. Either temporary windfall rents or mispricing may be present.

It is not an uncommon assertion that real estate markets are less than competitive. This might be due to unique locational advantage that provides some measure of monopolistic advantage, or it might be due to the cost (scarcity and complexity) of information in real estate markets that increases the likelihood of mispricing. Since one would not expect either monopolistic advantage or mispricing to be enduring, the presence of either phenomenon at any point would be temporary. The implication of either phenomenon is that the initial rental rate would tend to be inversely related to the long period rental growth rate. As a control for this possibility, the initial rental rate was used.

Jacksonville Statistical Tests

The growth in rental rates was computed for individual buildings over a minimum of ten years followed by use regression analysis to explain variation in the growth rate. In the tests, we controlled locational characteristics indicated for major building characteristics and basic lease terms. The small sample of usable buildings however, limited the number of controls we could impose. The variables were cast in binary (category) form which facilitates interpretation of the results.

The explanatory locational characteristics include:

- Downtown vs. suburban
- Large suburban cluster
- Small suburban cluster
- Suburban, non-cluster

Comparing to the last category of building (suburban, non-cluster), all of the other categories should have superior rental rate growth. Thus, in a regression using suburban, non-cluster as the default category, all other categories should exhibit a positive influence upon rental rate growth. The clusters were designated after extensive field examination of the Jacksonville office market.

Basic leasing terms in 1989 (gross vs. net) could affect rental rate growth in several ways. First, gross lease rates should exceed net lease rates, all else equal. Thus, if buildings with gross lease terms in 1989 were net in 1978, the feature should show a (false) positive effect on growth rates. If lease terms were the same in both years, there should not be any significant effect on growth rates over a ten year period. Since there appears to be no combination of leasing data characteristics which would imply a negative effect on rental rate growth associated with a building having gross lease terms in 1989, such a finding would indicate that having gross lease terms is a proxy for some unidentified, non-leasing characteristics.

Table 1 shows the results of our regression analysis. The base (default) case is a non-cluster suburban building of 1 or 2 floors, under 50,000 square feet in size with net lease terms in 1989. For this case the growth rate in rental rates was the constant of .0510. For downtown buildings this was increased by .0410 to a total of .0920. The downtown effect on the growth rate is not only extremely significant statistically, it was extremely significant economically. For the sample, the downtown effect raised the growth rate by 80%.

The effect of being in a major suburban cluster also is statistically significant (5% level), although the effect, at .0100, is distinctly smaller than the effect of being downtown.

The effect of being in a minor suburban cluster appears to be insignificant. The difference between small vs. major suburban clusters favors buildings in major suburban clusters.

Building effects are somewhat different than expected. In building floors, only a height exceeding 6 floors had a mildly statistically significant effect (10% level), but the effect in Jacksonville was negative, $-.0137$. Possible reasons for this are not obvious. On the other hand, the effect of being larger than 50,000 square feet was very significantly positive (2.5% level) and mildly significant economically at .0127.

Lease terms have a highly significant effect statistically (1% level) but in the negative direction. This result does not appear to be interpretable as a problem with leasing information in the data. Rather it appears to result from leasing terms serving as a proxy for economic differences not accounted for in the data.

Conclusion

The Jacksonville results indicate that downtown high rise buildings have a greater potential for rental growth than other buildings in the metropolitan area. These results should be viewed as suggestive and need to be verified in other cities. However, the Jacksonville results imply greater appreciation for downtown buildings than for suburban buildings. This superior growth in investment

TABLE 1

Regression Results for Jacksonville

Dependent Variable: Compound Growth in Rental Rate, 1978 to 1991

Regression Output:

Adjusted R Squared: .832
Number of Observations: 27
Mean of Dependent Variable: .0477

Variable	Estimated Coefficient	t Statistic	*Level of Significance
CBD	.01099	2.205	95.0%
Floors (log form)	.00574	2.732	98.0%
Floor Space (log form)	.00183	0.911	—
Cluster Size (log form)	.00413	3.374	99.0%
Year Built	.00045	2.879	99.0%
Rental Rate in 1973	-.01408	-6.326	99.9%
Constant	-.80101	-2.697	98.0%

*one-tail test

value signals that downtown continues to be a viable location for office space, and the demise of downtown is not imminent.

To the extent that the Jacksonville results are representative—and the review here of the relevant economic factors suggests that they should be—there are significant implications for valuing office buildings. Specifically, one should expect the rates of capitalization appropriate to the various classes of office buildings to differ significantly; large downtown buildings would have the lowest rates, and isolated suburban offices would have the highest.

The results have more general implications for downtown development efforts of cities. Some office-based firms need or desire a downtown presence because of either face-to-face contact needs or as an image to the local market. Efforts to attract those firms should be a focus of economic development programs. To expand the number of firms choosing downtown locations, cities expand the amenities available to firms and their employees located downtown.^(15,7) Given the social and fiscal problems confronting cities, it is difficult to address major needs such as improving infrastructure. But efforts to attract health clubs, child care, restaurants, entertainment and shopping services (Ihlanfeldt and Raper use the example of Underground Atlanta), some of which are available in suburban office parks, may make the downtown more attractive as an office location. While further research is required to determine the potential size of the downtown office market, it appears that downtowns continue to have a unique role. Despite the continuing evolution of urban form, the decisions made by real estate investors and office tenants indicate the importance of a center to the metropolitan area for office activity.

NOTE

1. Any difference between quoted and effective rental rates should be dominated by growth in the overall level of rental rates. Note that only variation in the ratio of effective to quoted rental rates is of concern here. As the time interval examined increases, this variation is increasingly bounded relative to the overall magnitude of change.

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COMMERCIAL MORTGAGE SECURITIZATION— AN OVERVIEW

by Harold W. "Skip" Perry, Jr., CRE

The securitization of residential mortgages during the late 1970s and 1980s has been very successful and lucrative for the entire industry. Securitization allowed lenders to maximize loan activity by effectively and quickly recycling funds available to loan. Collateralized residential mortgages became one of Wall Street's shining stars of the 1980s and continue to be an important vehicle in the 1990s. Now, it appears the era has begun for commercial mortgage securitization.

Although the general concepts between residential and commercial mortgage securitization are somewhat similar, there are several key structural differences that have caused commercial securitization to stumble for over a decade, while residential securitization has been incredibly successful.

Residential vs. Commercial Securitization

Table 1 highlights the differences between commercial and residential securitization. First, the U.S. government established programs to promote and encourage home ownership through guarantees and special loan programs. Guaranteed repayment of principal and interest by governmental and quasi-governmental agencies like Fannie Mae, Freddie Mac and Ginnie Mae is a very attractive attribute of residential mortgages in the secondary mortgage market. There is no equivalent for commercial mortgages.

Second, most residential mortgages are written using standard underwriting and documentation. This facilitates packaging into securitized structures and also eases the ability to forecast performance based on past performance of similar assets. Similarly, home mortgages tend to be in a relatively small dollar range, \$25,000 to \$500,000, while commercial mortgages can range from under \$100,000 for a small commercial building to several hundred million dollars for a major office building. It is obvious why standardization of commercial mortgages would be difficult given these parameters and why development of generally accepted rating models also has been difficult. The rating models in place during the 1980s imposed a very strict and unwieldy process that was unworkable given the rapid financing changes prevalent in the mid-1980s commercial real estate boom. During the 1980s, there was no reason to struggle with commercial securitization since so many other capital sources were readily available. These other sources were

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relatively easy and cheap alternatives that effectively crowded out commercial mortgage securitization.

TABLE 1

Commercial vs. Residential

Residential	Commercial
<ul style="list-style-type: none"> • Guaranteed by US Government (FNMA, FHLMC, GNMA) • Standardization of underwriting & documentation • Wealth of long-term performance data to assist statistical analysis • Existence of generally accepted rating models • Easy money readily available in 1980s • Advent of credit crunch in 1989 brought drastic change in real estate capital markets. 	<ul style="list-style-type: none"> • Not generally guaranteed • No established standards • Dearth of dependable, long-term performance data • First rating models introduced in November 1984 with limited applications. • "Hard money" ignored in favor of more readily available funding in 1980s. • Advent of credit crunch in 1989 has brought drastic change in real estate capital markets.

The glory days of commercial real estate have been over for quite some time. The savings and loan crisis, an overbuilt market and new government regulation (specifically FIRREA) brought a drastic change in lending policy, drying up the credit which was readily available only a few years earlier. Lenders became focused on cleaning up existing messes rather than extending credit. The recovery of traditional lending activity will continue to be extremely slow. Because of this, a window has opened to commercial securitization.

Securitization Structures

Securitization is the process of dividing or segmenting the cash flow associated with a group of discrete assets into new cash flow streams or classes of particular interests to certain investors. Securitization can be accomplished through single class or multiclass structures (See Table 2).

In a single class instrument, all investors are treated identically. This is a very simple structure. In a multiple class instrument, investors are able to choose one of several classes, which are given different preferences. Instruments anywhere between 2-8 classes and larger are possible. Typically, all classes are paid interest currently while all principal goes to the first class until repaid in full. Obviously,

the first classes will have an investment of considerably shorter duration than subsequent classes. This is an important feature of the multi-class structure since some investors need an investment with a relatively short maturity while others look for a longer term investment.

TABLE 2

Securitization Structures

- Whole loans
- Participation certificates
- Single-class securities
- Fast pay/slow pay multi-class structure
- Senior/subordinated multi-class structure
- Zero coupon security (class)
- Participating security (class)
- Hybrid

Senior/subordinated multi-class structures

One specific example of a multi-class investment is the senior/subordinated multi-class structure. In this structure, the senior class has first priority for repayment of interest. If done properly, this structure should allow the senior class to be rated as a suitable investment vehicle by the rating agencies. The subordinate class boosts the overall collateralization of the structure, which strengthens the senior class instrument. The subordinated class, because it is second in line, is usually not investment grade, but can be attractive to big investors seeking a higher interest rate and willing to accept greater risk.

Another example of a multi-class structure involves strips of investments. This is a modified multi-class structure. Each class receives a designated portion of the underlying cash flow. For example, Class A might receive 60%, Class B 30% and Class C 10% of principal received until the class is paid off. Assuming that the classes have relatively equal original balances, Class A will pay off much faster than the other classes, which offers several options for the investor. One specific strip structure commonly used is the interest only/principal only (IO/PO) strip. This is a two class structure where, as the name implies, all interest received flows to one class while all principal received flows to the other class. Clearly, the principal class would be much larger than the interest class. As one might guess, the structural possibilities are numerous, limited to the creativity of the deal structure and what the market finds attractive.

Typically, all classes in a multi-class structure are paid interest currently. However, one variation is

TABLE 2.1

RTC Mortgage Trust 1993-N1

Loans	# Of Loans	Book Balance	% Of Total Pool DIV Balance	DIV Balance	% Of Total Pool DIV Balance
>\$300,000	310	\$575,648,000	93.16%	\$282,388,000	93.16%
<\$300,000	427	\$ 42,242,000	6.84%	\$ 20,721,000	6.84%
Total	737	\$617,890,000		\$303,109,000	

to defer the payment of interest on a particular class or on the instrument as a whole. The name normally associated with instruments or classes that defer interest is zero coupon, Class Z or accrual bonds. These structures are paid neither principal nor interest until all prior classes are paid in full. Once again, although the risks may be higher, the return is also higher. There are many investors in Class Z residential CMOs from the mid-1980s with bonds accruing interest at 11% and more, a tremendous return for government guaranteed bonds in today's market.

Financial structure

The following example, a transaction known as the RTC Mortgage Trust 1993-N1 with Salomon Brothers as investment advisor, demonstrates the financial and organizational structures needed for success in securitization of a pool of non-performing loans with a multi-class structure.

The securitization consisted of 737 loans with a total book balance of \$617,890,000. DIV calculations were performed on all loans with a principal balance of \$300,000 higher, which came out to be 310 loans. These 310 loans had a total book balance of \$575,648,000 and the Derived Investment Value (DIV) balance for these loans was \$282,388,000. The DIV balance for the remaining loans was extrapolated based on the ratio of DIV to book balance of the >\$300,000 loans. These 427 <\$300,000 loans had a DIV balance of \$20,721,000. Table 2.1 provides a brief synopsis of the DIV calculations and the book balances of the loans.

The securitization involved four separate bond classes. The transaction was assumed to have a disposition rate of 7%, meaning that 7% of the assets were to be disposed of quarterly. The disposition factor was 100%, which meant that each asset was assumed to be disposed of at 100% of DIV value. Table 2.2 summarizes the transaction structure.

The total face value of the bonds issued for this securitization is \$225,000,000, which is approximately 74% of the DIV value and 36% of the book balance. The coupon rate is segregated into two separate rates. The initial rate is the beginning rate of the class. The highest rate represents increases in interest based on the failure of the pool to meet performance objectives regarding the disposition of assets. Should these performance hurdles not be met, the coupon rate triggers higher, increasing up to the maximum rate established as the highest.

Based on the face value of the bonds and the total book balance of the loans, the total gross receipts (not including transaction costs) as a percentage of book value are calculated in Table 2.3.

Total gross proceeds from the securitization were 35.41% of the total book balance of the loan pool and 72.165% of the DIV value of the loan pool. The risk increases the higher the bond class. With this added risk comes an increased incentive for investment in the form of higher interest rates. The yield of each bond class is increased from the coupon rate if the price is less than 100% and decreased

TABLE 2.2

Transaction Summary

Class	Bond Amount	Coupon Rate		Fixed/ Variable	Price	WAL*	Yield**	Rating	
		Initial	Highest					S & P	Fitch
1	\$114,000,000	4.75%	12.00%	V	100.00%	0.89	L + 152 BP	AA	AA +
2	\$ 43,000,000	6.50%	9.50%	F	96.56%	1.68	9.00%	BBB +	A +
3	\$ 48,000,000	9.00%	12.00%	F	94.69%	2.16	12.00%	BB	BB +
4	\$ 20,000,000	9.00%	12.00%	F	89.13%	2.50	14.50%	B -	BB +

*WAL indicates weighted average life of the assets used to payoff the respective class.

**Variable rate is LIBOR + 152 basis points.

from the coupon rate if the price is greater than 100%. In the case of the RTC Mortgage Trust 1993-N1, the discount (the difference between the face amount of the bonds and the purchase price, represented as a % by price) increases as the class gets higher. Thus, it can be said that the coupon rate of the Class 4 bonds is not justified according to the rating, and the market makes an adjustment to price to bring the yield in line with the risk.

TABLE 2.3

Bond Receipts As A % Of Book Balance

Class	Bond Amount	Price	Gross Receipts
1	\$114,000,000	100.0000%	\$114,000,000
2	\$ 43,000,000	96.5625%	\$ 41,521,875
3	\$ 48,000,000	94.6875%	\$ 45,450,000
4	\$ 20,000,000	89.1250%	\$ 17,825,000
Total	\$225,000,000		\$218,796,875
Gross Receipts as a % of Bond Amount	97.243%		
Bond Amount as a % of Book Balance	36.414%		
Bond Amount as a % of DIV	74.231%		
Gross Receipts as a % of Book Balance	35.410%		
Gross Receipts as a % of DIV	72.165%		

Investor Structure

The organizational structure of a typical RTC securitization includes large financial investors and a servicer. In the RTC Mortgage Trust 1993-N2 transaction, the Wilmington Trust Company was the owner trustee, and the bond trustee was the Bank of America National Trust and Savings Association.

The Investors Limited Partnership held a 49% Class A share, while the RTC held a 51% Class B share. The Class A share is broken down further between limited partners and general partners. In this example, the investors as limited partners held a 98% stake in the non-RTC share with the general partnership holding the remaining 2%. This general partnership is comprised of equal ownership among Aldrich, Eastman & Waltch, L.P., J.E. Roberts Company, and Secured Capital Corp. and a 1% ownership stake held by a management corporation which is equally owned by the three. These groups handle the servicing of the trust, including servicing fees, disposition fees and distributions under a servicing agreement between the owner trustee, the investors limited partnership and the management limited partnership.

Securitization Process

Regardless of the structure employed, certain fundamentals of the securitization process will apply.

There are many ways to illustrate the actual process of securitization. The most basic elements to begin the securitization process are the borrower, the investor, collateral and an intermediary. The borrower is the developer or financial institution that is looking to collateralize the mortgages and raise capital or restructure a portfolio. The investor is the party that will ultimately provide the funds to the borrower, acting as the lender. The collateral consists of mortgages or properties. A successful securitization would require seasoned and/or stabilized products. Securitization of properties or new mortgages on properties is referred to as primary securitization, while a transaction involving existing mortgages is referred to as secondary securitization. An investment banker is typically used to bring all the parties together, coordinating the efforts of the underwriting and documentation processes, developing a proper structure, closing the transaction and marketing and distributing the product.

From the issuer's perspective, the first and probably most important step is preliminary planning. At this stage there are three key steps: establish objectives, identify collateral and inventory the type and quality of data. It is critical for the issuer to know **why** it wants to pursue securitization. Like any business endeavor, without clearly defined objectives the project is likely to drift aimlessly, which is inefficient and quite expensive. By establishing objectives, all the necessary people, from top management down, will be focused in the same direction.

Second, the issuer needs to tentatively identify the collateral to be securitized. Certain collateral characteristics may lend themselves to a particular structure, pricing strategy or marketing approach. If the collateral has not been identified, drifting is likely once again. The third step in the preliminary planning stage is assessing the data. Are the files complete and well organized? Are they readily accessible? Are the necessary personnel available to get through the due diligence and documentation processes? Most issuers are not honest with themselves. The quality and availability of data is clearly important to the securitization process. The most obvious impact is on the timing of the project. The underwriting will take longer if the files are poor and time means money. Someone will have to gather all the information and gain a certain comfort level with the information. The costs of having employees finish this task is acceptable if they have the time and ability. However, if the condition of the files is overestimated, attorneys and accountants may be spending the time to gather missing information and reconstructing poorly organized information at significant billing rates. Regardless of the

actual condition of the data, it is important to complete a frank assessment and structure the timing accordingly in the preliminary planning phase.

The next step in the process is to evaluate alternatives. The structure of the deal should follow the economics of the deal. Careful consideration should be given to several structural possibilities which best fit the economics. After tentatively selecting an alternative, a first cut evaluation of the economic, accounting and tax consequences should be completed. Will the deal work based on the assumptions and projections? Some reconsideration of other alternatives may be necessary if the first cut results are unacceptable. Several iterations may ultimately be necessary.

At the same time that evaluations are being done, the due diligence should begin. The data should be assembled and organized for the due diligence team. The due diligence team will want to see all documentation relating to the deal, so it knows the deal structure reflects the reality. The due diligence should begin at this point even though the deal has not been finalized. Due to the amount of work to be completed in the due diligence phase, it is usually worth the risk to begin early so this task is completed on time.

Finally, the due diligence is completed and a final structure selected. At this point, the issuer must set the final timing and pricing of the project, considering the effects of market and interest rate changes. This is the point of no return for the issuer as the ultimate go/no go decision must now be made. The instruments then are distributed and sold to the investors.

Subsequent to the issuance of an instrument, there is ongoing administration and support required. This is important, but fairly mundane, consisting of collecting principal and interest from the underlying borrowers, distributing funds to the investors and complying with reporting requirements.

Credit Enhancement

Given the current condition of the real estate markets and economy as a whole, one of the key current topics in the securitization process is credit enhancement. Simply put, many mortgage pools are not strong enough to support a securitized instrument on their own. Credit enhancement techniques add to the strength of the instrument (see Table 3). The most common example is overcollateralization, meaning that the amount of collateral exceeds the amount of the bonds. This offers protection against defaults of the underlying mortgages. Another technique is that the borrower may be required to submit a line of credit or hold cash in reserve to cover cash shortfalls. A surety bond may be purchased from an independent party to cover

all or part of the amounts to be paid that may be defaulted. Mortgage insurance is similar in that an insurance premium insures against defaulted payment.

TABLE 3

Credit Enhancement

-
-
- Overcollateralization
 - Cash reserves
 - Letter of credit
 - Surety bonds
 - Mortgage insurance
 - Guarantees
 - Loan substitution/repurchase
 - Subordinated position
-

Guarantees offer similar enhancement. Loan substitution and repurchase are less common situations. When this happens a bad loan is removed from the portfolio and replaced by another. Finally, certain classes may be subordinated, which strengthens the more senior classes. All these techniques bolster the credit worthiness of the instrument and make the instrument more appealing to the investment community.

Problems And Pitfalls

Certain problems and pitfalls have been encountered in the securitization process that can turn a potentially strong transaction into a costly failure (see Table 4).

TABLE 4

Problems & Pitfalls

-
-
- Unrealistic expectations
 - Poorly defined objectives
 - Structure myopia
 - Lack of issuer control / weak organizational commitment
-

First, many issuers have unrealistic expectations: securitization is not a cure-all. Second, poorly defined objectives probably will cause the securitization process to fail. Many issuers do not know why they are pursuing securitization or what results to expect. It is difficult to find the destination when you don't know where you are going. Many issuers also suffer from structural myopia. There is a tendency to fixate on one alternative without sufficiently analyzing key attributes and other possible

alternatives. Finally, many issuers lose control over the process or fail to give the project adequate organizational commitment. Simply put, the securitization process requires a major commitment of time, human resources and financial resources. Without the commitment from key members of the organization, the effort will be terribly inefficient at best and a disaster at worst.

Potential Of Commercial Securitization

The biggest spark to the commercial securitization has been the RTC. In an effort to divest itself of the mortgages and properties acquired from failed savings and loans, the RTC has made a big entrance into the securitized commercial mortgage market. The RTC has demonstrated that this process can be a successful tool.

The potential for commercial securitization is tremendous and yet remains largely untapped. During the real estate boom of the 1980s, thousands of commercial properties were constructed and financed. These projects are the opportunities of the 1990s. As Table 5 illustrates, there are enormous dollar amounts of commercial mortgages out there waiting for the market to catch up. Given the credit crunch from more traditional financing sources, savvy investors, financial conglomerates and institutions have warmed to commercial mortgage securitization.

TABLE 5

Potential of Commercial Securitization

- Estimated \$800 billion of commercial mortgages available for securitization
 - RTC securities have paved the way for the commercial securitization market
 - Increased regulation forcing lenders to move mortgages
 - Emerging roles of industrial - financial conglomerates (i.e. General Electric)
 - Stabilization of real estate market through long-term capital over short-term high leverage financing
-

Conclusion

There are numerous opportunities for all sorts of players. First and foremost, commercial securitization is an important new financing source. It can be used for new financing, which is quite scarce at this time, or as a means of restructuring and refinancing existing portfolios. Experts will be needed to structure and manage the deals from commercial securitization. This is a ground floor opportunity for lenders, investors, investment bankers, accountants, lawyers and consultants.

THE INTANGIBLE BUSINESS COMPONENT OF COMMERCIAL REAL ESTATE INVESTMENTS

by Jeremy G. Hall*

**Mr. Hall was the recipient of a scholarship from The Counselors' Educational Development Trust Fund. Scholarships are presented annually to deserving students in graduate programs at 19 identified schools in the United States and Canada. This article was taken from his graduate thesis for the Center for Real Estate at M.I.T.*

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Increasingly, investors are re-examining commercial real estate both as an investment in an operating business and in an asset class. This scrutinizing has sparked a debate over the role of real estate in a multi-asset portfolio and the importance of asset management to the success of an investment in real estate. Commercial real estate straddles two markets: the market for space and the market for capital. The space market is a business, subject to forces of supply and demand, which requires a great deal of human capital to maintain its fiscal well-being. Like any other business, investment real estate is an operation where products and services (space and amenities) are created to satisfy customers (tenants).

There is an increasing awareness of the real estate industry's complexity and its multifaceted role in the market. Of particular importance is a new understanding regarding the extent to which human capital is necessary to maintain the performance of the investment. Property and asset management are only now being appreciated as vital functions for maintaining and enhancing property value. Real estate is viewed as having investment and operating characteristics which renders it both an asset class within the investment world and a distinct business area within the real economy.¹ Consequently, the role of the asset manager is being redefined with a broader scope. To some extent, this is the result of an emphasis on strategic planning, market acceptance and long-term growth for value enhancement.

This article identifies the intangible business component of real estate investing, assesses its importance and presents evidence of how it is priced in the market. Commercial real estate markets are examined along with how they are interrelated, and a static economic model, devised by DiPasquali and Wheaton, illustrates how markets reach equilibrium and the implicit of owner involvement and business expertise. The model demonstrates graphically where and how business management can affect investment performance of the asset and the implications on market equilibrium. Also the article discusses the changing role of real estate management and how value can be maintained and even added through this property function, along with evidence of pricing these intangible business assets in the secondary real estate market. Operating parallels are drawn between real estate and other companies using data from real estate investment trusts (REITs) and publicly-traded real estate companies (RECs).

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Two Markets, One Business

Economists have noted that real estate markets are two distinct but interrelated markets: the market for real estate assets and the market for real estate space. The former deals with real estate's role in a diversified portfolio of investments in equities, bonds, cash and real estate. Its price is determined by investor demand to own real estate and the supply of appropriate real estate investment vehicles. The latter deals with real estate as a consumer and capital good and the demand to occupy space. As a consumer good its rent is determined by household demand to occupy housing and the supply of housing able to meet this demand. As a capital good rent is determined by company demand for land and capital factors of production needed to produce goods and services and the available supply of land and capital. This important distinction of the two markets is the premise for separating the operating characteristics from the pure investment characteristics of real estate investments.

These two dynamic markets are constantly adjusting toward equilibrium. Changes in supply and demand in the space market are repriced in the capital market while changing prices relative to construction costs in the capital market affect the

supply of space in the space market. DiPasquali and Wheaton demonstrated the links between the two markets in a four-quadrant model (Exhibit A).² The capital market is graphically depicted on the left, and the space market is graphically depicted on the right. The links occur at two junctions along the Y axis: first, rent levels in the space market determine demand for real assets, and second, construction levels in the capital market determine supply in the space market.

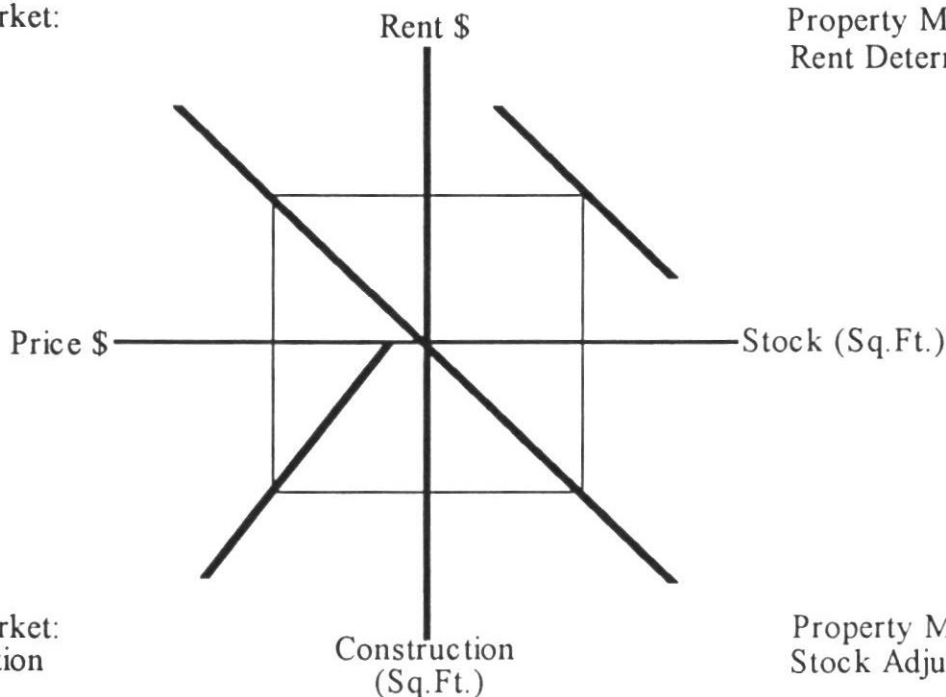
In the northeast quadrant, demand for space is depicted as the relationship between rent levels and the state of the economy. Movement along the curve determines how much space would be demanded given a particular rent level on the Y axis. The slope of the curve depends on the elasticity of demand and can change due to endogenous variables, that is, internal market changes in tastes, needs or operating leverage that could change market sensitivity to rent levels.

In the northwest quadrant a ray emanating from the origin represents the relationship between rents and prices in the capital market. It is the ratio of rents to price, or the capitalization rate, and its slope is generally determined by four factors:

Exhibit A Real Estate: The Property and Asset Markets

Asset Market:
Valuation

Property Market:
Rent Determination



Source: DiPasquali and Wheaton

long-term interest rates, expected growth in rents, perceived risks in the rental income and treatment of real estate in the tax code. An exogenous change in any of these factors could increase or decrease the capitalization rate thereby rotating the ray clockwise or counter-clockwise respectively.

In the southwest quadrant a curve of construction costs represents the relationship between prices and new construction. Costs are assumed to increase with increased building activity. The slope of this curve is determined by the elasticity of demand for new construction. The southeast quadrant indicates the affect of new construction on the long-run stock of space. The change in stock equals new construction less losses due to depreciation and scrappage. The ray emanating from the origin is the rate of scrappage and determines what level of construction is necessary to maintain an equilibrium stock of space. Exogenous changes in building materials or user space needs and tastes can affect the rate of scrappage by extending or shortening physical and functional lives of buildings. This would cause a rotation of the scrappage ray.

As previously mentioned, the two markets are constantly adjusting and striving toward a long-run equilibrium in the asset and space markets. This is depicted by the dotted line in Exhibit A. Changes in any quadrant will have corresponding changes in the other three quadrants in a counter-clockwise direction until equilibrium is reached once again. The two markets react simultaneously to changes in either, and characteristics of both are priced in the capital market.

Business Influences On The Markets

Fundamental to any economist's theory is the assumption of rational behavior. It means that given a person's goals and knowledge, people take actions likely to achieve the goals and avoid actions likely to detract from those goals.³ The prudent-man rule is a similar concept adopted in the business community by institutions and fiduciaries. Implicit in these concepts is to effectively manage investments so they perform as expected. Economic theories do not work unless people make rational decisions to maximize returns, whether intrinsic or extrinsic, and/or minimize risk.

Fiduciary behavior is driven by the prudent man rule. It dictates that investment occurs only when bought by a prudent man of discretion and intelligence, seeking reasonable income and preservation of capital.⁴ This describes the basic function of money managers. They buy and sell securities based on their own portfolio risk and return requirements. They have no direct involvement in the businesses they invest. When investing in private-market real estate, however, investors and managers are directly involved in the operations of the

asset. Therefore, rational behavior in real estate investing dictates that effective business management of real estate assets is necessary to achieve market returns.

The presence of an operating business component in portfolio investing is unique to real estate because real estate straddles space and capital markets. Intangible business assets are present in the space market and priced in the capital market. The space market is no different from any other product market where goods and services are sold to the public. Planning, organizing and controlling is involved to offer the best possible product at the lowest cost to the most profitable market.

In the northeast quadrant of Exhibit A, the demand curve represents how the demand for space depends on rents, given the state of the economy. Rent is a measure of the value placed on space by tenants. The actual physical environment of the space is one function of this value. Rent also pays for services and amenities, management, benefits of tenant agglomeration and other intangible enhancements such as the right address and the owner's reputation or stability. Given this it follows that management, in concert with the physical asset, plays an important role in determining market rent. Therefore, there is a certain degree of human element which influences the value of real estate.

Superior real estate management can facilitate an atmosphere which is less sensitive to rent levels thereby making demand more elastic. This can reduce the downside risk of the asset by being better able to maintain rents during periods of increasing supply. In providing superior service to tenants, relative to the competition, management can maintain or enhance value through intangible benefits to tenants. Conversely, an asset could under perform the market through incompetent management. If an owner/manager fails to recognize the value tenants place on space, he could lose this value by not contributing the intangible component.

Real estate management can also influence the space market in the rate of scrappage depicted in the southeast quadrant of Exhibit A. The ray emanating from the origin represents the rate of depreciation through physical deterioration and functional obsolescence. Management's strategic planning and repositioning of existing real estate can extend the economic life of an asset. This can have positive effects on existing assets in two ways. First, it can make existing properties more profitable through continued operation and second, it can reduce additions to supply by decreasing the rate of scrappage.

What remains is determining how these intangible assets in the space market are priced in the capital market. As with any investment in a multi-

asset portfolio, assets are priced relative to their return volatility compared to market return volatility. Therefore, any intangible enhancement due to an operating business component is indirectly priced through its impact on cash flows. In other words, management's impact on rent elasticity can minimize rent and occupancy volatility. Rent is capitalized into value in the northwest quadrant of Exhibit A. Among others, factors influencing the capitalization rate include the perceived risk associated with the rental income stream and expected growth in rents. Business enhancements on the rental stream can reduce the capitalization rate resulting in a positive impact on value. This could be shown graphically in Exhibit A as a counter-clockwise rotation of the capitalization rate ray. Conversely, incompetent management that fails to meet the rational behavior assumption could cause a property to under perform in the market by increasing its return volatility and increasing its capitalization rate. This would have a dampening effect on property value.

Managing The Business

Traditionally, real estate management was relatively simple and without much consideration by developers and investors in speculative real estate. It was locally oriented with little attention to long-term positioning of the property for market acceptance. Management's primary duties were to collect rents and maintain facilities. Asset manager and property manager were virtually synonymous, and there was little involvement of property managers in the initial conceptual phase of a development. The industry perception was that if you built something, it would lease as long as a manager maintained the physical property.

As the market became more competitive, the need for being more attentive to the customer and the bottom line income became apparent. The scope of management services broadened to where two distinct categories of management have evolved: standard property management and asset management. Real estate asset management has taken on new challenges and changing objectives. Managers must be knowledgeable in financial analysis, accounting, real estate law, tenant relations, marketing and personnel management. Decisions are made with more broad-based considerations of the competition, target market and impact on a larger portfolio of assets.

Widespread troubled assets have become the norm in the marketplace. Asset managers now identify the unique characteristics of each property and assess its position in the marketplace. They must develop strategic options and propose creative solutions to owners in the face of impending foreclosures. Responses to a recent asset management

survey by M.I.T. of pension plan sponsors, advisors and consultants are indicative of the more comprehensive role of today's asset managers.⁵ Three main themes came from the responses: control, value maximization and surrogate ownership. Real estate managers now are sophisticated professionals who function as business managers rather than caretakers. They are strategists with definite business plans to differentiate each property from competition in the marketplace.

Value-Adding Through Real Estate Asset Management

Asset managers can add value to real estate by either increasing net income or decreasing the perceived risk of the asset relative to its income stream. Increasing net income involves improving an asset's perceived worth by tenants in the marketplace. Tenant perceptions of the product's worth offered for lease dictates market rents, turnover rates and average marketing periods. Location, building quality, accessibility, visibility and functional use are the obvious physical factors that contribute to the worth of the space to tenants. Other intangible factors affecting worth include tenant services and amenities such as management, security, maintenance, concierge and secretarial service, etc., as well as benefits from other tenants through business symbiosis and agglomeration.

The key to successful value-adding of real estate is for all activities to be market-driven.⁶ Identification of a target market for each property enables asset managers to assess the space demand for each building and customize the space to meet that demand. By simple cost/benefit analyses, asset managers can determine which building services and amenities offer productive uses of capital. Understanding the target market's demand also can aid the manager in assessing the physical and functional building environment and in identifying ways to cure deficiencies, if possible. Any physical enhancements must fit the market; renovation does not have to create the most glamorous building in the market. Managers strive to make the most effective use of renovation dollars to improve the building's condition and image to meet the target market's needs.

Marketing skills for the asset manager are important in differentiating a property to win a high degree of market acceptance. Research into business cycles and trends, consumer tastes, tenant profiles and competing space in the market must be combined with market-derived estimates of tenant buying power and financing needs. This also includes being responsive to existing tenants. Recently, much has been written regarding the importance of management relations with tenants. In today's highly competitive market, tenant

retention is most important for a property's fiscal success. Buildings are successful when they have been effectively differentiated in the marketplace.

Real estate managers must be able to control operating expenses. This may seem intuitive however, its benefits go far beyond maximizing net income. By reducing the amount of fixed costs, managers can hedge the risk of high vacancy periods. Variable operating expenses reduce operating leverage thereby reducing volatility in net income. Furthermore, in many types of commercial properties, some or all expenses are passed through to the tenants. Tenant relation problems can arise out of careless or ineffective management of operating expenses. Managing expenses has three benefits: maximizing net income, reducing net income volatility and maintaining good tenant relations.

Asset managers also add value to real estate by reducing specific risk on the property through a comprehensive risk management program, common to any business. This can be done by anticipating cash flow fluctuations and working to minimize return volatility. There is a continual refining of assumptions to convert as much speculation to fact as possible and to provide tolerance for the uncontrollable surprises. This means adopting a realistic view of the market's current condition rather than cling to original project expectations.

Through statistical research, management can reduce future uncertainty by determining local proxies to anticipate future downside potential. By devising and implementing a business strategy for each property, negative impacts can be averted in order to maintain rents and occupancy levels. Anticipated business or demographic shifts enable the manager to reposition the property, structure leases and time capital expenditures to ensure the property responds to the market in a timely manner.

Asset managers can reduce risk through diversification of tenants. Just as with property types in a real estate portfolio, each multitenant property can achieve a certain degree of industry diversification by seeking an optimal tenant mix tailored to the local economy. Even among similar type tenants, management can achieve diversification through size and lease terms. Generally, larger tenants are more stable and on longer lease contracts. They are typically perceived as lower risk; however, the loss of one large tenant can be devastating to occupancy. Smaller tenants generally are less stable and have shorter lease terms; however, they can have higher growth potential and can be combined with other like tenants to reduce the effects of loss. A mix of the two can provide a hedge against possible short-term rent or occupancy fluctuations in the market. Asset managers should be aware of the

specific risks associated with each tenant and strive for an optimal tenant mix for each property.

Risk management does not end with the trough of a down cycle, nor end with the life of the investment. Even during times of growth, unforeseen fluctuations or entire reversals in market conditions can occur for which the manager should prepare. The fiscal well-being of the asset, beyond disposition, should be considered to ensure the highest possible reversionary price. Since real estate is valued relative to performance and future expectations, asset managers can enhance a sale price by positioning a property and structuring leases for the long-term beyond their own investment horizon.

Empirical Evidence Of The Operating Business In Real Estate

Of the three factors of production—land, labor and capital—human involvement or labor is where any business enhancement to value is found. General and administrative expenses are used to measure the intensity of human involvement. This expense category is broadly defined to include all indirect operating expenses including property management and marketing, as well as property-specific and nonproperty-specific professional services including asset/portfolio management, legal services and third-party advisors.

The Data

The data used for these analyses are real estate investment trusts (REITs) and public real estate companies (RECs). Reports from 1992 fiscal year-end forms 10K were examined for the company's income and expense characteristics. Annual average stock prices were taken from Standard & Poor's to determine the average 1992 total capitalization of each company. Time series analysis was not performed with the exception of historical revenue growth since 1990. The following is a summary of companies used for this study.

	REITs	RECs
Total Surveyed	34	24
Total Capitalization	\$4.57 bil.	\$3.46 bil.
Average Size	\$134.4 mil.	\$144.3 mil.
Long-Term Debt Ratio	42%	45%
Real Estate as % of Total Assets	81%	66%
Asset Mix		
Land/Single-Family Residence	3%	50%
Office/Industrial/Apartment	26%	4%
Hotel/Retail/Restaurant	26%	25%
Mixed Asset Portfolio	44%	21%

The Methodology

The objective of the study is to determine the relationship of administrative intensity of REITs versus RECs, the influence on pricing and the presence of

any scale economies. The study assumes general and administrative expenses (G&A) are indicative of the business operations intensity in each REIT. No allowance is made for the quality of management or its efficient implementation. Management quality would require knowledge of participants and practices not available in the data set. It would also involve devising a series of quality rankings for each REIT manager which is beyond the scope of this study.

G&A expenses are compared across REITs and RECs to answer two questions: 1) Are RECs more management intensive than REITs? and 2) Is management intensity related to pricing? From the data set, total capitalization is consistent with total assets net long-term liabilities. Overall, the average ratio of the two is 0.993 which indicates the market is efficiently pricing book equity in both REITs and RECs. This varies slightly between the two with 1.061 for REITs and 0.892 for RECs.

Only two financial statement variables were found to be statistically significant in REIT pricing variations: total assets and net earnings ratios. They accounted for 30% of the variability about the mean. Total assets are positively correlated indicating no price discounting for scale economies. Since REITs are portfolios of properties, greater amounts of diversification are likely to further reduce specific risk. This would reduce required returns and boost prices. In other words, size is a proxy for risk. The ratio of net earnings to total revenues is also positively correlated. This is intuitively correct as higher percentages of net incomes should command higher price premiums. Of particular importance is the ratio of G&A expenses to total assets. This variable is not statistically significant. It indicates that the intensity of business management is not significant in determining REIT price discounts or premiums from the mean ratio of price to assets. It does not, however, address the quality of management.

The previous analysis focused on REIT pricing and the relative affects of business involvement. It has shown relative insignificance in value-adding or discounting given higher expenditures for business involvement. It has not demonstrated a need for business involvement to maintain asset value or shown that real estate investing is as much an operating business as any other company. In Exhibit B, G&A expenses as a percent of total assets were examined in relation to total assets and revenues to determine the strength of the correlation between REITs and RECs. It also revealed whether a significant difference exists between REITs and RECs in the amount of business involvement relative to total assets. Regressing company type, size and relative incomes to total assets reveals a strong correlation

to G&A expenses relative to total assets. The accompanying graph is in a logarithmic scale to accentuate differences between actual and predicted values.

All three independent variables are significant at the 99% confidence interval, and they account for over 83% of the variability in business intensity. The first variable indicates a 3.5% difference between REITs and RECs. As was previously mentioned, G&A expenses for REITs represent those "below-the-line" for properties included within them. Therefore, only a portion of the total G&A expenses are reported in the data set.

Industry surveys published by the Institute of Real Estate Management (IREM), the National Association of Industrial and Office Parks (NAIOP), and Pannell Kerr Forster (PKF) provide a basis for adjusting G&A expenses for a more accurate comparison. Table 1 combines industry averages of administrative and management expenses with data from the REIT data set. The 3.5% difference in G&A expenses derived from the regression analysis appears to be somewhat offset by the 1.2% G&A expenses from "above-the-line" operations on individual properties. Thus, it appears that REITs are slightly less business-intensive than RECs by about 2.3% of total assets.

The second independent variable, Total Assets, indicates economies of scale exist in G&A expenses. A strong negative correlation coefficient indicates that administration "below-the-line" can be spread among assets more effectively as the size of the portfolio increases. The third independent variable, Revenues as a Percent of Total Assets, indicates a strong positive correlation between the business intensity cash flow return to the portfolio. This does not mean that spending more money on the business would increase returns, just that there is a strong positive relationship between the two. This is a proverbial chicken and egg problem; are G&A expenses higher because income is higher or is income higher because G&A expenses are higher? Both may be true to some extent since G&A expenses are recognized as variable in "above-the-line" property operations while their scale economies display characteristics of fixed elements.

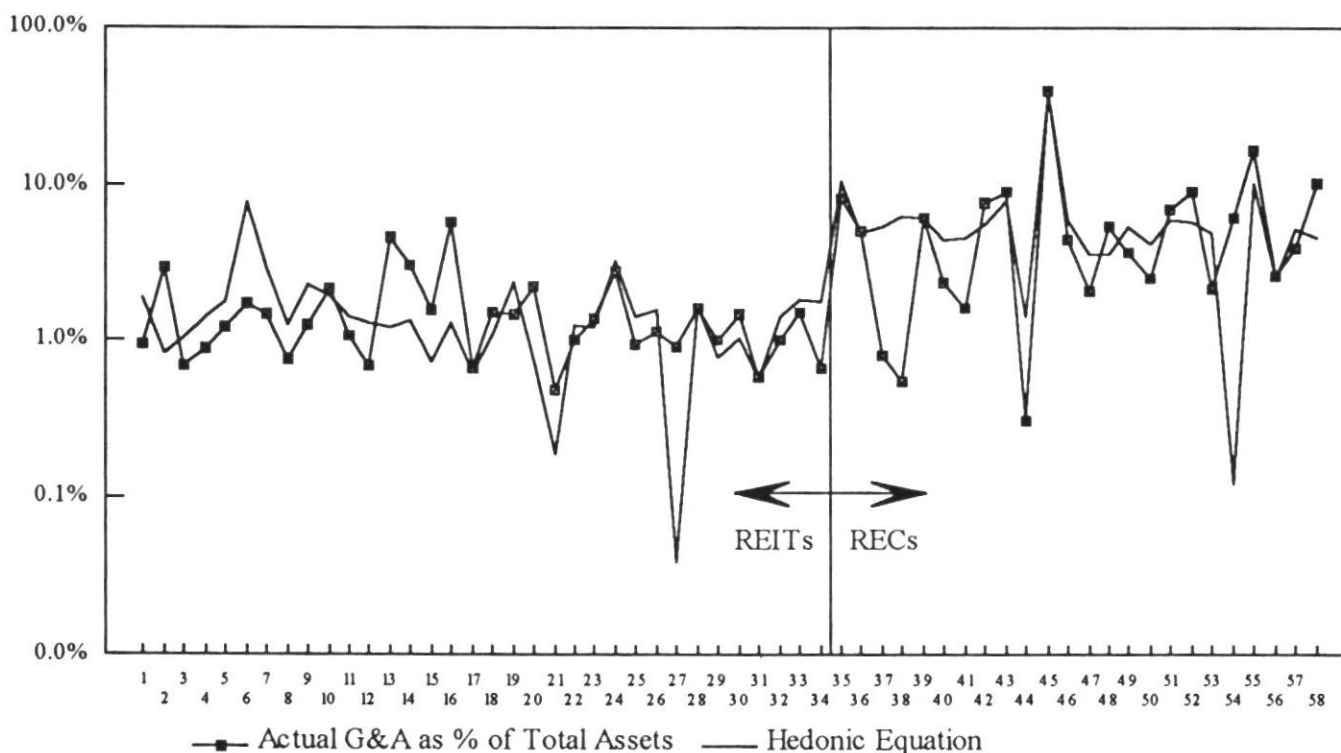
Fourteen REITs in the data set separately listed advisory fees from other G&A expenses. Advisory fees represent management fees for the portfolio similar to asset/portfolio management fees for private investment funds. They averaged 46 basis points as a percent of total assets and 124 basis points as a percent of total capitalization. A study

EXHIBIT B

Influences On Business Intensity

Dependent Variable	General and Administrative Expenses as % of Total Assets		
Constant	0.0321		
Standard Error of Y Estimated	0.0241		
R Squared	0.8324		
Number of Observations	58		
Degrees of Freedom	54		

	REIT Dummy	Total Assets	Revenues as % of Total Assets
X Coefficient(s)	-0.0352	-2.11E-08	0.1736
Standard Error of Coefficient	0.0070	6.48E-09	0.0126
T-Statistics	-5.0602	-3.2580	13.7913



of 52 large private real estate portfolios in 1991 surveyed asset management fees. A total of \$732 billion of assets were represented by 52 pension plan sponsors. Mean responses equaled 64 basis points of current asset values. The average size of the private portfolio is \$996.2 million while the average size of REITs in the data set is \$134.4 million. The results seem to indicate higher management costs for larger portfolios. To test for the existence of any scale diseconomies, the ratio of advisory fees to total assets were regressed against total assets and total revenues. The two independent variables account for only 28% of the variability in advisory fees, and they are marginally significant around the 80% confidence interval. However, positive correlation coefficients do support the evidence of

diseconomies of scale in advisory fees. As the portfolio grows, the intensity of portfolio management grows. It should be mentioned that there may be differences in management incentives given the size of the portfolios. Stock incentives, not uncommon in smaller companies, might occur more often in REITs than in the larger private funds. Stock incentives do not appear on the income statement.

Table 2 summarizes G&A expenditures for both REITs and RECs. G&A expenses are dictated more by the size of the portfolio than income or price. With all three relative measures, REITs are shown to be less business intensive than RECs.

The presence of a relatively tight fit of REIT G&A expenses around a mean is indicative of the

TABLE 1

Property Type	G&A/ Total Income	Net Income Ratio	Number of REITs
Industrial*	5.0%	55%	16
Apartment**	18.6%	51%	13
Office**	15.3%	50%	16
Retail**	16.8%	65%	20
Hotel/Restaurant***	24.7%	37%	9
Weighted Average	15.2%	54%	
G&A as a Percent of Revenues (Data Set)			14.2%
Average Net Income Ratio			× 54%
"Below-the-Line" G&A Expenses/Gross Revenues			7.7%
"Above-the-Line" G&A Expenses/Gross Revenues			+ 15.2%
Total G&A/Gross Revenues for Real Estate			22.9%
Asset Type	Weight (Data Set)	G&A Expenses	Weighted Average
Equity Ownership in Real Estate	81.4%	22.9%	18.6%
Mortgages and Other Assets	18.6%	14.2%	+ 2.6%
Weighted Average G&A as a Percent of Total Revenues			21.2%
Weighted Average G&A as a Percent of Total Revenues			21.2%
Revenues as Percent of Total Assets			× 12.9%
G&A as a Percent of Total Assets			2.7%
Mean Reported in Data Set			- 1.6%
Difference ("Above-the-Line" G&A Expenses)			1.1%

Sources: *NAIOP **IREM ***PKF

presence of an operating business component in real estate investing. Although it appears that REITs are less business intensive than RECs, differences in the nature of underlying assets in each category could account for the 2.3% difference. The cost of assets in RECs should be lower than REITs as they generally represent work in process before any developer's profit. REITs are comprised of finished products with a cost basis inclusive of any developer's profit. These differences would also carry through into differences with total capitalization and revenues as nonoperating properties are not yet generating income. Thus, the 2.3% difference in G&A expenses is likely due to the nature of underlying assets. This lends support to the idea that REITs are just as business intensive as RECs.

An interesting finding was made in scale economies. Although the size of the REIT in total assets produced significant economies of scale in G&A expenses, the reverse happened with advisory fees when separated. In other words, real estate portfolios appear to become relatively *more* portfolio-management intensive the larger they become. This lends support to the idea that each individual property is a separate business unto itself requiring its

own unique strategic plan and business management. As the portfolio increases in size, it resembles a large conglomerate of businesses requiring more sophistication and personnel to coordinate the many functions of its many owned companies.

This study does not reveal that total G&A expenditures have a significant affect on REIT pricing discounts or premiums. The reasons for these price differences relative to net asset values must lie somewhere other than on the financial statements. Anticipated growth, tenant mix, quality management, inside ownership, conflicts of interest and geographic focus are other variables not included in this study which may impact relative pricing. A survey of real estate industry analysts on REIT pricing was conducted by Elaine Vakalopoulos at M.I.T. All respondents indicated that management quality was a major consideration in REIT price determinations.

Conclusion

There are two sources of business enhancement. The first is at the property level where real estate competes in the space market. Here property and asset managers work to deliver superior products to customers. Product differentiation through services

TABLE 2

REIT Results	G&A as a % of Revenues	G&A as a % of Total Cap.	G&A as a % of Total Assets
Minimum Value	3.69%	0.24%	0.48%
Maximum Value	58.69%	52.46%	5.72%
Average Value	14.18%	7.04%	1.56%
Standard Deviation	12.68%	12.13%	1.13%
Coefficient of Variation	89.48%	172.25%	72.57%
<i>Average Adjusted for "Above-the-Line" G&A</i>			
	21.2%	12.3%	2.7%
REC Results			
Minimum Value	1.16%	1.05%	0.30%
Maximum Value	191.95%	100.13%	39.77%
Average Value	36.60%	21.44%	6.56%
Standard Deviation	37.64%	22.86%	8.01%
Coefficient of Variation	102.84%	106.63%	122.22%

and amenities can enable managers to outperform local competition and reduce specific risk. The second source is at the portfolio level with asset and portfolio managers. Here a global perspective and national recognition can provide individual assets with a competitive edge with prospective tenants and sources of capital. Implementation of modern portfolio theory at this level enables management to add value to a collective pool of real estate assets by reducing risk-adjusted returns. Reduced risk enables properties to compete more effectively in the capital market and increase liquidity.

These issues are important to large institutional investors who are rethinking real estate's role in a multi-asset portfolio. Unless these investments are made through the public REIT market, real estate will require owner involvement in the business. In today's competitive market, this involvement requires a high level of sophistication and knowledge of local markets. Institutional investors are being forced to accept more of the operational responsibility of the investments. Those who do not have this in-house, are forced to find third-party surrogate owners to manage the real estate. Due to the required level of sophistication, intensity of human involvement and potential to add value through intangible assets, a substantial cost is required for business management. This cost must be incurred whether real estate is acquired in the private market by direct costs or whether real estate is acquired through the public market through indirect costs of lower "below-the-line" earnings.

The current debate over asset management fees can be resolved through a recognition of these

operating business components. Opponents to current fee structures argue that the compensation for asset managers and money managers should be similar. These people fail to realize the intensity of involvement and influence real estate asset managers have over the performance of properties in their portfolio. Reform is needed for the compensation of asset management, but not based on money managers who have no influence on individual investment performance.

Recognition of the operating business and potential to add value could change performance measures for asset managers. Viewing the operating business and the market separately could enable owners to effectively assess the performance of the going concern. A problem asset might be the result of poor market conditions, ineffective business management, or both. Being able to separate these components could facilitate easy, objective performance assessment. Rather than based upon asset values, managers could be compensated based upon relative performance to the market through business management benchmarks. Superior managers should be recognized by their ability to create additional business profit. Such effort should be encouraged though profit sharing and compensation similar to other corporate executives. The current fee structure is based on the value of the asset, and the asset management function is viewed as a necessary evil to *maintain* the value of the asset. With the recognition of the potential to add value, competitive and cost effective asset management fees of over 100 basis points should be obtainable by superior managers.

Finally, the recognition of business value could reduce operating leverage in some properties by reducing the fixed expense of ad valorem taxes. To ignore the potential business profit in operating properties beyond what is due to land and improvements can overstate the return to the real estate. Ad valorem taxes are assessed based only on current market values of the real estate. Overstating income to the real estate would cause an overstatement of the real estate's value and result in higher than justified property taxes.

Thus, the implications of recognizing the operating business characteristics of real estate are far reaching in the industry. From the top decision makers in large real estate portfolios to individual property managers, real estate is a business that can be controlled by investors. As real estate markets continue to be relatively inefficient, this investor control should continue to provide opportunities which outperform the competition.

NOTES

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THE CAUSES OF LOSS IN VALUE: A CASE STUDY OF A CONTAMINATED PROPERTY

by Robert W. Hall, CRE

A recent counseling assignment our firm undertook involved estimating the loss in value caused by certain contamination at the Shadyside Apartments. The case presented a multi-faceted problem which required thinking through the entire valuation process and reviewing the reasons why an investor buys an apartment house in the first place. The identity of the complex has been changed, however, the facts are true.

Background

The subject property is located in a suburban growth area reasonably near a major midwestern city. In this area home ownership is over 70%, and the typical range of single-family housing is about \$95,000–\$200,000. Apartment rentals range from around \$375 to over \$600 depending on size, location and amenities offered. The Shadyside Apartments complex is small, of average quality and with sub-normal amenities. There are 32 units with enough land to build 40 more.

The apartments are in two brick buildings of colonial design. Each building has two-story plus basements and 16 units comprised of eight-1 bedroom units and eight-2 bedroom units. The basement areas are devoted to material storage, tenant storage lockers and the complex's management office. There is ample blacktop parking area. The property was built in 1970 and purchased by the present owner in 1972.

At a later date development plans were submitted to the municipality to build 40 more units on the site, and approval was obtained after lengthy negotiations. However, the municipal sewer plant was operating at capacity and plans to expand were being implemented. Consequently, the permits were held in abeyance until the additional capacity would be operational. This did not occur until about 1985.

In late 1987, residents in neighboring homes began to notice gasoline odors in their basements. They complained to the local health authorities who reported the problem to a local pipeline company. After considerable investigation, it was discovered that one of the pipelines had a corrosion leak, and by the time it was located and corrected, about 100,000 gallons of gasoline had escaped. Unfortunately for our client most of this lost product settled in a geological basin under the apartment buildings.

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The pipeline company, working closely with the EPA, made immediate efforts to recover the product. This included the drilling of test, monitoring and pumping wells, and the construction of an aerating tower system for purifying the water table upon which the gasoline was floating. In a period of two years about 60% of the lost product was recovered, and it was planned that operation of the emergency facilities would continue well into the foreseeable future. The EPA advised us that pumping, monitoring and aeration would continue for at least ten years, since the monitoring wells still indicated considerable amounts of benzene, toluene and xylene.

During the weeks and months following the spill, several unpleasant events occurred at Shadyside. Many residents panicked, broke their leases and vacated, especially smokers who were afraid of an explosion in their apartments. Vacancies, previously very low, began to mount, and new tenants became very difficult to find because of the publicity the gasoline leak had received in the news media and the very obvious appearance of the aerating tower. Consequently, income decreased while vacancies and expenses increased from cleaning, lawn maintenance and advertising. It became necessary not only to forgo planned rental increases, but to actually reduce rents in order to secure tenants. As the rental rates came down, the grade of tenancy declined and the complex took on a rather seedy appearance.

Meanwhile, the gasoline floating on the water table contaminated several nearby water company wells requiring permanent shutdown and the need to draw water from other resources. This closure raised the water table under the apartments, and in the basements continual flooding occurred ruining all interior finishes. Maintenance costs increased substantially.

Although the pipeline company was trying diligently to remedy the situation, the owner suffered considerable damages without apparent relief in sight. It was a year-and-a-half after the spill that we were engaged by the owner's counsel to estimate the extent of the damages. The law required conducting a before and after study as of the date of the occurrence on the theory that the damages suffered could be measured by subtracting the after value from the before value, exactly like a partial taking in condemnation. This required imagining the property as it existed on the date of the spill before any damage occurred. Even more difficult was visualizing the property as though all the effects of the spill were apparent and measurable as of the same date. Considerable research was done, and a great deal of judgment was exercised. Fortunately, the owner had kept good records which were made available.

A normal appraisal was conducted to determine the before value. The research uncovered many small apartment sales. The market approach generally indicated value around \$30,000 per unit plus the value of the excess land for the additional 40 units, which was indicated at \$10,000 per unit based on an abundant supply of land sales. That equaled approximately \$1,350,000 from the market. This number was pretty well confirmed by the income approach. The owner's rent roll and expenses proved to be in line with market evidence, but some adjustment was needed to reflect proper management charges and to provide for a reasonable reserve. The market data indicated that a capitalization rate of 9% to 9.25% was appropriate. Nine percent was chosen since the property had an unusually good potential in that location, particularly with the opportunity to build additional units. When the extra land was added to the capitalized net income, value was indicated around \$1.5 million. We believe that apartment houses are purchased for the income they produce, and therefore, the income approach is usually the most significant of the approaches. Thus, the before value was concluded at \$1.5 million. So much for the easy part!

While we were generally familiar with contamination issues, little information was available to provide guidance in the measurement of contamination damages. In addition, most of what was written provided a very superficial approach to the measurement of value. The articles consulted implied that the cost to cure is the measure of damages. While, no doubt, this has validity in many cases, it certainly falls far short in the case of Shadyside. After all the physical problems at Shadyside were cured, the owner still lost a bundle of money.

Possible Factors In A Contamination Study

Presented here is a list of nine possible items which we think should be considered by a counselor in any contamination study. The objective in presenting these items is to call attention to those factors which appear to impact the value of a contaminated property, rather than to suggest methods and techniques for measuring the effects of those factors. Most professional real estate counselors are well-equipped to devise the necessary methods and techniques once the elements of value are recognized.

1. The Cost Of Cleanup

Cleanup should be the major consideration for any contaminated property regardless of the specific cause of the problem. Engineering studies of the particular situation and several estimates of the cost to cure should be obtained and thoroughly reviewed. Great care should be taken in the selection

of the estimators, because extreme variance between estimates is often the rule rather than the exception. These studies should be secured by the client rather than by the counselor.

In the Shadyside case the pipeline company only did what was required to recover the gasoline and to purify the water as much as possible. All increased maintenance, repairs and replacements were performed by the owner's staff. Although sizable, these items were actually the smaller elements of damage.

2. Liability To The Public

The owner of any contaminated property could be faced with a lawsuit claiming damages due to unhealthy conditions. Such suits may be brought by tenants, workmen or visitors to the property. Even if such claims are false or fraudulent, they must be defended, and related expenses can be very high. Often awards in these cases bear little relation to either the facts or reality, and the outcome can easily bankrupt a property owner, especially since such losses are often excluded from liability insurance policies. This consideration of contamination must influence a prospective purchaser of the property, and it can have a decidedly negative impact upon market value. After all, why buy somebody else's problems?

3. Stigma After The Cleanup

Admitting your property is or was contaminated is somewhat like admitting to having a venereal disease. Some buyers will have nothing further to do with the property, because they fear the problem is not removed, and still will have to be dealt with. So the usual attitude is either, "Why should I buy a headache?," or else, "I'll discount the price substantially and get a bargain." In either event, value is negatively impacted.

In the case of Shadyside, a very serious prospective buyer ended all negotiations shortly after the damaging incident. In addition, there is no longer any possibility, in the near term, to build the other 40 units. After the dismantling of the aerating tower (10 years or so hence) and after the pumping finally stops, the new construction may be a viable possibility, but certainly not now.

4. Loss Of Net Income

Since the only real reason to buy an investment property is to make money, the loss of net income can have a drastic effect upon the value of a contaminated property. The income can be affected in three separate ways, and often such a property experiences all three at the same time.

A. Reduced Rental Rates

Many affected properties cannot be rented for rates as high as those buildings which otherwise are equal but never have been contaminated. This is often the case even after an expensive

cure has been administered. However, the condition may be alleviated over time, as people eventually do forget the contamination.

B. Increased Vacancies

The stigma dies hard, and a cured building can easily suffer additional losses from vacancies and increased collection problems, especially since a lower grade of tenant may result.

C. Increased Expenses

Additional testing, monitoring and extra supervisory personnel may be needed in a particular building. Utilities, supplies, advertising and other office expenses, and management and professional fees (engineering studies and appraisals fees) could easily increase, reducing net income and placing the property at a further disadvantage with its competition.

The result is a considerable reduction in net income, at least in the early years after a cure, and if there is less net income to capitalize, there must be lower value.

In the Shadyside case, all three factors came into play: Management was forced to drastically reduce rents so old tenants would stay and new tenants would move in; vacancies rose substantially along with collection problems; expenses soared. In considering the after value the only logical method of capitalizing income seemed to be a discounted cash flow analysis, since the picture would undoubtedly improve over time. But how much time? How long does it take for people to forget?

5. Financing Difficulty Or Inability

The tendency for most lenders is to avoid contaminated properties as if they had the bubonic plague. This attitude is quite understandable since several court decisions have held lenders liable for the cost of cleaning up the contaminated properties which were held due to foreclosure on defaulted mortgages, even though the lenders had nothing to do with the contamination process and were only trying to protect their investment. So, why buy trouble? It is much safer to eliminate the problem by refusing to consider a contaminated property as security for a loan (sometimes even a cured property).

Consequently, the increased difficulty or inability to secure mortgage financing creates great hardship on a property owner trying to sell. After all, the number of cash buyers is severely limited and any prospective purchaser will heavily discount the asking price if cash is used for payment. One possible solution is for the seller to provide financing for the buyer, but this also presents a burden on the ownership which is not generally found in clean properties.

At Shadyside, the owner could not find anyone who would have anything to do with the property.

The original mortgage balance was fairly well paid down, and refinancing would have been quite helpful to the owner in handling all the increased expenses during the extended rent-up time while income was depressed. The prospective purchaser could not have secured a mortgage even if it was wanted.

Occasionally some lenders will make loans on contaminated properties or properties which have been cured or are in process of being cured, upon terms more profitable to the lender and consequently more onerous to the property owner. The lender agrees to assume the added risks of lending on a contaminated property in exchange for some added incentive. This may take one or more, or all, of the following forms:

- A. Reduced loan-to value ratio
- B. Increased interest rate
- C. Decreased loan term
- D. Shortened call period
- E. Extra fees and charges

Thus the financing of a contaminated property is not an easy job and at times is impossible. Substantial loss in value is usually experienced by the owners for this reason.

6. Business Disruption

In owner-occupied properties the loss of rental income is usually not an appropriate consideration. However, during the elimination of hazardous materials, substantial disruption may occur to the business conducted on the property. This can even happen to clean property that is part of an enterprise which owns or leases another property which becomes contaminated. A domino effect can occur.

7. Contingent Liability Forever

Both the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) provide that any person in the chain of title to a contaminated property is individually liable forever for hazardous materials removed from a property, regardless of where the materials are stored or disposed, or by whom they were removed. This contingent liability cannot be eliminated, and forever is a long, long time! Some attorneys have commented that SARA should have been named RACHEL, standing for Retroactive Act Claiming How Everybodys Liable. This liability means that if hazardous material was removed from a property and disposed of in a regulated landfill before you bought the property, and years later the landfill began to leak and the materials migrated to adjacent properties, you could be held responsible for the entire cost to alleviate the problem, plus damages. Although such problems may seem remote, the possibility is very real, and sophisticated market participants will insist upon

being compensated with a reduced sale price for this added risk.

At Shadyside the property owner had no control over the disposal of the recovered product or its handling, either on or off the property. In fact, he did not know anything about the disposal. Yet, according to the law, he is completely liable and can never get out of this position.

8. Increased Discount Rate

In appraisal literature reward is always equated with risk. If the risk is low, so will be the reward. However, as risk increases the reward must also become greater to properly compensate for the added risk. Reason would dictate that properties which are or were contaminated should provide their owners with a greater reward because risks were assumed (either voluntarily or involuntarily) which are considerably greater than those found in uncontaminated properties. This means that the discount or capitalization rate should be higher in contaminated properties and in those which were cured. And if the rate is higher, the property value is lower.

In the case of Shadyside, the road back to profitability will be long and arduous. The owner will suffer from reduced income, high vacancies, collection problems and extra heavy expenses. He may occasionally have to fund the investment and will probably be unable to secure any new financing. If this kind of investment does not deserve a higher return, what does?

In considering the discounted cash flow analysis for the after value, a 10-year forecast of income and expenses was used which began on the date of the spill. Fortunately, as previously noted, the owner kept very good records, and the increase in vacancies and expenses was documented on a month-by-month basis. We knew what had occurred for the first year-and-a-half.

Our forecast predicted a further decline in income and an increase in vacancies and expenses for an additional year, followed by a very gradual improvement over the remainder of the 10-year term, eventually returning to a situation similar to what existed just before the spill. After careful analysis, an ending capitalization rate of 12% was chosen to calculate the reversion. For discounting each annual net cash flow, a rate of 20% was selected for the first year. This was gradually reduced, so that in year six the rate was 15% where it remained throughout the balance of the analysis. This was justified by the assumption that each year the picture would improve somewhat and the involuntarily assumed risk would diminish, thus requiring less reward. In estimating the value of the additional land, we forecast that the value 10 years hence, on a per unit basis, would be somewhat greater than at the time

the contamination occurred. The future value was discounted back to the effective date of the appraisal. Our estimate of after value indicated that the total loss in value to the property would be about two-thirds of the before value.

9. Loss Of Marketability

Any property which is or was contaminated has lost some of its former marketability. This is true regardless of the type of contamination, because the market always becomes thinner when such problems exist, and it becomes progressively smaller as the hazards increase. In a situation where the cost to cure the condition exceeds the value of the cured property, it is no longer marketable and cannot be sold at any price or even given away. And if a property is not marketable, it certainly cannot have a market value. Although the loss in market value may be complete, the property may still provide substantial utility to its owner and thus provide a value-in-use which may be quite sizable.

As already mentioned, a serious prospective purchaser dropped the Shadyside deal like a hot potato once the extent of the problem was recognized. This property has extreme problems, both physical and financial, which will continue into the foreseeable future. Mortgage financing cannot be secured on the property. It appears the property has lost all marketability for the near term and possibly for a very long period. The land for the additional 40 units can only be mowed and only adds to the expenses.

We believe that these nine factors should be considered in any assignment where the measurement of contamination damages is the issue. While it will be a rare case, indeed, where all the factors are involved, there won't be any where some are not important.

Postscript

It has been said (although certainly not by Murphy) that every cloud has a silver lining. It certainly did in the case of Shadyside! A very satisfactory settlement was arranged out of court in which the owner was paid the full before value of the property and was able to keep the property. Although the credit for such a favorable conclusion belongs to the owner's legal counsel who handled the entire case with considerable skill and expertise, we like to think our careful research and analysis also contributed to the result.

ACQUIRING PROPERTY AT A FORMER MILITARY BASE: THE PROCESS AND THE LAW

by Richard K. Gsottschneider, CRE,
Jimmy E. Hicks and
Jeffrey S. Donohoe

The reduction in United States military forces has resulted in an increased number of base closings nationwide. While many of these bases have excellent facilities suitable for a variety of different uses, most real estate professionals and developers do not understand the complex process or laws which influence the acquisition of property at a closed military installation. Also, the federal government originally had unrealistic expectations of market value when it planned the closure of these bases. Current efforts are underway to soften these expectations and to improve communications.

This article briefly outlines the process used to plan for the redevelopment of closed military facilities. It also discusses the key players involved in the reuse of a base, the relevant laws and the opportunities former military bases represent to real estate professionals and their clients.

Background

Since 1988 over 200 military bases across the United States have been designated for closure by the federal government. Also, realignment, which may involve closing a portion of a base, has been recommended for an additional 152 military facilities. Not since the period from 1964 to 1977, when almost 100 military bases were closed, has the country experienced such a major retrenchment of federal real estate holdings.

This current round of military base closings was initiated in 1988 with the enactment of Public Law 100-526. The law created the Secretary of Defense's Commission on Base Realignment and Closure (BRAC) and charged the commission with preparing a list of domestic bases for closure and realignment. In 1988, under BRAC, 86 military bases were recommended for closure and 59 were designated for realignment.

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In 1990, Congress enacted Public Law (PL) 101-510 which created an independent five-year Defense Base Closure and Realignment Commission. Under this new law the commission was required to conduct public hearings to review a list of base closures and realignments recommended by the secretary of defense and to review any proposed changes the commission might make in the list. In addition, PL 101-510, which is entitled the Defense Base Closure and Realignment Act of 1990, required the commission to meet in 1991, 1993 and 1995 to consider additional base closure recommendations prepared by the secretary of defense. Currently the commission is working on the 1995 closure list.

In 1991, the commission recommended 34 base closings and 48 realignments. The 1993 commission recommended an additional 130 bases for closure and 45 for realignment. Once military bases have been officially designated for closure, the federal property disposal process is initiated. While the process has been criticized by some as cumbersome and excruciatingly slow, understanding of the requirements of federal laws and regulations is necessary for those interested in acquiring property at closed military facilities.

Major Players

Several organizations play a major role in any public or private sector effort to acquire property at a former military installation. Historically, the General Services Administration (GSA) has been the federal government's real estate arm. Over the years, in accordance with the Federal Property and Administrative Services Act of 1949 and the Surplus Property Act of 1944, the GSA has developed procedures and regulations for the disposal of federal property. Under existing GSA regulations, the disposal of surplus federal property follows a specific path. First, surplus federal property is made available to federal agencies including other branches of the military; if a property is not selected by a federal agency, then it is made available for acquisition to state, county and local governments. Property not acquired directly by a governmental organization is offered for sale through a sealed bid or public auction.

Under the Defense Base Closure and Realignment Act of 1988, GSA authority for disposing of property at closed and realigned military installations has been delegated to the secretary of defense. This new law requires that property be disposed at "fair market value", but the federal/state screening process of surplus property still is followed. All proceeds from the sale or lease of property must be deposited in a special base closure account that can be used for expenses associated with closing military installations across the

country. It should be noted that this provision is a significant change from base closure procedures used in the 1960s and 1970s when many closed military bases often were turned over to local and state governments for as little as \$1.

A third major group involved in the redevelopment of closed military facilities are local and/or state reuse organizations. Most of these groups are financially supported, in part, by funding from the Office of Economic Adjustment (OEA), an agency of the Department of Defense. With OEA funding and assistance, communities impacted by base closings are involved in preparing plans to reuse the buildings and land at former military installations. Many of these organizations also become involved in marketing base facilities to developers or companies interested in creating new employment opportunities. These organizations also have access to specialized resources and information (such as existing operating/maintenance costs and building specifications) that may be useful for a developer considering property acquisition.

Understanding The Process

Before attempting to acquire property at a former military base, it is necessary to understand the process and legal requirements involved in transferring property from the federal government to a new owner. While the existing process is lengthy and complex, changes are being proposed to make the process more realistic.

Most bases designated for closure or realignment will undergo an extensive reuse planning and evaluation effort. However, often more than one organization is involved in planning for the facilities reuse. For example, Public Law 101-510 requires that the provisions of the 1969 National Environmental Policy Act (NEPA) apply to all property disposed at closed or realigned military bases. As a result of this provision, the military department that oversees the operation of a closed base must prepare an Environmental Impact Statement (EIS). The EIS, which can take from 12 to 24 months to complete, must identify existing conditions at the base and address possible environmental impacts associated with reusing the facility over a 20-year period. The findings of the EIS also provide the basis for a Record of Decision (ROD) which outlines the property's preferred disposal and reuse.

In addition to the reuse planning undertaken to prepare the EIS, the local reuse organization also is involved in completing a plan to redevelop the closed military facility. This effort usually takes six to nine months and is financed, in part, by OEA. The planning effort enables the community or region impacted by the base closure to assess the types of economic activity and land uses appropriate for the former military facility. Also, a strategy

for implementing the reuse plan usually is identified. In many instances the reuse plan provides a basis for enacting zoning and other land use regulations necessary to manage the site's redevelopment.

It is very important that the local reuse plan be prepared concurrently with the EIS, or even before the EIS. This will ensure that local reuse plans for the property are evaluated in the EIS. In one of the first bases closed under BRAC in 1988, an environmental group contended that the final EIS did not adequately address possible air quality impacts associated with the reuse plan adopted by the redevelopment organization. Subsequently, a lawsuit was filed challenging the adequacy of the EIS. Although the lawsuit, which is still under litigation, has not halted redevelopment efforts, some observers say the lawsuit has created a sense of uncertainty which has delayed potential tenants from acquiring property at the former base.

As noted earlier, any property determined to be surplus to the needs of the Department of Defense (DoD) will undergo a screening process prior to its actual disposal. It is first screened by other DoD agencies and federal departments to determine whether there is a demonstrated need to keep the property under federal control. At the same time, under the terms of the McKinney Act, the property is made available to organizations which provide housing for the homeless. At those bases where a substantial number of housing or dormitory type rooms exist, efforts should be made early on to work with local and regional organizations that provide shelter for the homeless. This will likely avoid confrontations later in the redevelopment process that could delay the reuse of the facility.

Any property remaining after federal review is made available to state and local governments. These governmental organizations have several options for obtaining property at a closed military base. A commonly used approach involves the public benefit conveyance of property used for such purposes as aviation, recreation, wildlife conservation, education, public health or historic preservation. While the property can be transferred at little or no cost under this arrangement, there are usually specific deed restrictions regarding the property's use and future disposition.

Another approach that state and local governments can use to acquire surplus military property is referred to as a negotiated sale. While property under this approach has to be purchased at fair market value, based on the findings of a professional appraisal, the property can be used or resold without deed restrictions for a variety of industrial, commercial and residential uses.

Any remaining property is made available to public and private organizations through either a

public auction or sealed bid sale. It is important to recognize that while federal government operations do not have to comply with municipal regulations, any property disposed of in this manner is subject to local land use controls such as zoning. Consequently, the future use of the land acquired by public auction or sealed bid sale will most likely be regulated by the local government.

The actual disposition of property at a closed military base may not occur for a significant period of time after the official closure of a facility. In fact, to date very few properties have actually been formally transferred because of either financing, market or environmental issues. In particular, the environmental restoration requirements have made the actual disposition of property more complicated. A recent precedent has been set at Pease AFB in New Hampshire where 1,700 acres of land adjacent to a superfund site were transferred from the federal government to the state designated development authority via a 55-year lease. A unique indemnification law, whereby the federal government formally accepted responsibility for the site, was a key ingredient in this conveyance. However, the federal government has been unwilling to provide this same level of indemnification of other bases.

During the interim period between closure and disposal, the military department in charge of the base will retain a caretaker organization to provide security, fire protection and overall maintenance of buildings and grounds. Recently, various local/regional reuse groups have been hired as caretakers.

Relevant Laws

There are a number of federal laws that impact the redevelopment of former military installations. While some of these laws apply specifically to the federal property disposition process, others are part of an increasing number of environmentally related statutes that impact many large public and private development projects.

As noted earlier, the Defense Base Closure and Realignment Act of 1990 requires compliance with the provisions of the National Environmental Policy Act (NEPA). Since the closure or realignment of a military base is considered a significant action, an EIS must be prepared. While the EIS process requires a significant amount of time and can delay the transfer of land from the federal government, the EIS document usually provides real estate professionals and developers with useful information about a base. For example, an EIS can contain information about the location of possible hazardous waste sites and sensitive environmental areas, regional traffic trends and data about important social/economic factors.

Although the authority for the disposal of property at closed and realigned military bases has been delegated to the Secretary of Defense, the DoD must comply with all regulations developed by GSA under the Federal Property and Administrative Services Act of 1949. However, many communities in the early rounds of recent base closures have criticized various aspects of the 1949 Act. For example, the act requires approval by a congressional oversight committee for the transfer or sale of any surplus federal property with a value in excess of \$100,000.

The Property and Administrative Services Act also regulates the option of a community that acquires surplus property under a negotiated sale to resell property. Many redevelopment organizations feel this requirement severely limits their ability to transfer buildings and vacant property to a subsequent buyer that would create new employment opportunities. A number of reuse organizations have indicated they would like the authority to acquire property at a closed military base and then flip it to a private business. Currently a so-called pass-through sale is permitted only if a local or state governmental agency acquires the property through a negotiated sale and then makes substantial improvements to the property after acquisition. These improvements could involve such actions as the construction of new sewer lines or the demolition of obsolete buildings. Because a significant investment was made to improve the property after it was acquired from the federal government, a portion of the property could be sold to a third party.

Many local redevelopment organizations have attempted to use real estate brokers in marketing specific buildings and sites at closed bases. Federal regulations, however, prohibit the payment of commissions by the federal government for the sale or lease of federal property. These regulations do not preclude the payment of commissions by some other entity. Recently, several local redevelopment organizations have established a fund within their agency to pay commissions to real estate brokers that assist in the sale or lease of federal property at a closed military base in their community. This approach is generally viewed as a "win-win" opportunity by both the local reuse organization and real estate brokers, since marketing efforts are improved while marketing costs are controlled. However, the total proceeds from the sale or lease transaction goes back to the federal government.

Development Opportunities

Despite the number of hurdles that must be overcome, closed military bases offer real estate professionals and their clients a number of interesting development opportunities. For example, prior to the actual disposal of property at a former military

facility, existing buildings that are no longer required for a specific military mission can be leased to a private business. The interim leases can even be negotiated and implemented prior to the closure of a base. At Chanute Air Force Base in Rantoul, Illinois, a local window manufacturer leased a building for a new production line in 1992, even though the base was not scheduled to close until September 1993.

Approval of an interim lease is a complex process. The lease has to be reviewed by a number of DoD officials and an environmental assessment may be required. In some instances, where the level of private sector use is extensive or the environmental impacts are severe, an EIS may also be required. The requirement for an EIS, however, could effectively negate any advantage of the interim lease.

To date, the interim lease process has had only limited success. Some interim lease applications have required more than a year to approve, which is generally too long a time period for most businesses. This lengthy approval process is primarily due to delays in legal and environmental reviews. However, recent legislative efforts have focused on streamlining the interim lease process, with the goal of reducing the maximum time for approval to six months.

Interim leases have a number of factors which limit their appeal to the private sector. First, under the Federal Property and Administrative Services Act, DoD can write these leases for a maximum period of only one year. In addition, interim leases usually have a 30-day cancellation policy. Finally, federal regulations prohibit the tenant from directly purchasing the leased facility in the future. The combination of these factors makes it difficult for most private companies to justify investing in a building they may not be able to occupy in the longer term.

Any business wishing to acquire property at a closed military base must remember two important points. First, a private business cannot negotiate directly with the federal government to acquire property. Second, while a private business can acquire federal property directly through the bid or auction process, it runs the risk of losing the property to a competing bidder.

However, other options are available. For example, since a community reuse organization is considered a governmental entity, it can acquire a specific parcel at a closed base through a negotiated sale or a protection and maintenance agreement. This organization can then lease the property to a private business with the option to buy. Since federal regulations prohibit pass through sales to limit the possibility of the local organization making an

excess profit, it is likely the lease will have to remain in effect for three to five years. At the end of this period, the reuse organization can sell the property without paying a penalty to the federal government.

Current Legislative Initiatives

In August 1993, Congress passed the Pryor Amendment which is intended to streamline the transfer of title of former military bases. Currently, Department of Defense (DoD) officials are seeking to write regulations to implement the new law. While these regulations have not been finalized, the following issues are being addressed.

- The potential for a less than fair market value conveyance of property and in certain cases, an outright gift of the property to a state or local development authority.
- The potential for property transfer in phases, to reflect market reality and the ability of a community to absorb the operating costs of the facility.
- The potential for a joint venture, recognizing that the absorption and redevelopment of many former military installations may take 20-40 years.

The redevelopment of closed military installations represents an unique opportunity for individuals involved in real estate development. To capitalize on this opportunity, developers and knowledgeable real estate professionals must work quickly to clearly define what they can offer affected communities. It is important to understand this is not a typical real estate project. Creativity and perseverance will be required to redevelop facilities at a closed military base. A successful developer must fully understand both the laws and the established procedures used in redeveloping close military facilities.

VALUING PARTNERSHIP INTERESTS IN REAL ESTATE COMPANIES

by S. Douglas Weil, CRE
and Richard J. Hindlian

How interests in real estate partnerships are valued can result in significant savings for gift or estate tax returns. According to a new IRS ruling, Revenue Ruling 93-12, the percentage of ownership should be considered in determining value. Significant discounts can be taken because of a lack of control. This is particularly true if the interest to be valued is not a controlling interest.

Traditionally, partnership interests in real estate were valued by a simple and straightforward method. A property (or a number of properties) was appraised as if it was sold on the date of transfer or death. If the property was appraised at \$5 million and the estate had a 10% interest, then the value for estate tax purposes was \$500,000. Federal and state estate tax returns were prepared on that basis. This method was applied even if the property was not being sold immediately or if the deceased had no control over the property.

The same technique has been traditionally used for holdings in a private real estate fund or partnership. For instance, if management of the fund valued the net assets at \$100,000 per unit and the estate owned 5 units, the interest in the fund or partnership was valued at \$500,000 for estate tax purposes.

The problem with both these valuations is that the estate's interest in the two examples could not be sold for \$500,000, since a ready market does not exist for units in private partnerships or in minority, non-controlling interests in specific properties.

The IRS, in Revenue Ruling 93-12, now appears to understand this dilemma. The ruling recognizes the need for considering minority interest discounts in the transfer of closely held stock of a corporation with respect to gift tax valuation. Acting as representatives, we have seen the same reasoning applied to appraisals of interests in real estate partnerships. It also has been accepted by the IRS with respect to estate tax returns.

A major difference in valuing a non controlling interest in real estate versus a controlling one, is that the building probably will not be sold in the near future. Frequently there is a low tax basis. The low tax basis means that a significant part of the proceeds of any sale above the existing mortgage balance would be subject to income tax and the tax

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TABLE 1

ABC Property Partnership
Value Based on Cash Flow Capitalization

Property	Cash Flow	Cap Rate	Value	10% Partnership Interest Value
A	\$25,000	10%	\$250,000	\$25,000
B	\$15,000	11%	\$136,364	\$13,636
C	\$10,000	12%	\$ 83,333	\$ 8,333
	<u>\$50,000</u>		<u>\$469,697</u>	<u>\$46,969</u>

payable may well exceed the cash realized from the sale. This often occurs when a previously refinanced property is sold. Such a situation eliminates much of the incentive for the remaining partners to sell. This is particularly true for many older family real estate partnerships and may well be true for properties controlled by the new up-REITS which have become so popular during the last 12 months.

There are two other factors to consider, particularly for portfolios comprised of older properties: (1) the buildings may have non conforming uses because of zoning changes, and (2) there may be a significant need for capital improvements to make the buildings salable in today's market. These factors need to be considered when selecting capitalization rates for the net operating income to arrive at a reasonable gross value for the entire property. From that amount discounts are applied for a minority interest and for any needed capital improvements.

Therefore, in valuing non controlling interests, we have used discount rates of 10% to 25% of the cash flow, depending on the quality of the real estate involved. To determine current value, we have assumed that none of the properties in the portfolio would be sold for 10 years and we have deducted the cost for needed capital improvements.

TABLE 2

ABC Property Partnership
Value Based on Discounted Cash Flow
(and after deducting future capital expense and partnership costs)

Property	Ten-Year Cash Flow	Discount Rate	Value	10% Partnership Interest Value
A	\$ 586,300	12.5%	\$228,300	\$22,830
B	\$ 344,400	13.5%	\$128,600	\$13,860
C	\$ 215,500	15.0%	\$ 74,500	\$ 7,450
	<u>\$1,146,200</u>		<u>\$431,400</u>	<u>\$43,140</u>

TABLE 3

ABC Property Partnership
Value Based on Discounted Cash Flow
Minority Valuation Discounted for Liquidity

Property	Discounted Value	10% Interest	Liquidity Discount 25%	Partnership Interest Value
A	\$228,300	\$22,830	75%	\$17,123
B	\$128,600	\$12,860	75%	\$ 9,645
C	\$ 74,500	\$ 7,450	75%	\$ 5,688
	<u>\$431,400</u>	<u>\$43,140</u>		<u>\$32,456</u>

Once the property and/or portfolio is valued, an additional discount of 25%-35% was taken due to the ownership of a minority interest. This discount was applied knowing that a market does not exist for non controlling partnership interests. Publicly-traded partnership interests and other partnerships generally trade for a discount of at least 25% to 50% of a pro rata value of the net assets, and this provides a comparable value example.

The impact of these discounts are shown in Tables 1, 2 and 3 which indicate valuation based on capitalizing first year cash flow, discounting cash flow after deductions for capital expenses and arriving at valuation based on a minority interest. As shown in Tables 1, 2 and 3, the impact of these discounts is to reduce the value of portfolio interest which might be valued initially at \$47,000 to \$32,000. This methodology has resulted in considerable tax savings for estates.

Such discounts are defensible because a purchaser of a partnership minority interest has no control over the underlying assets. This is particularly true for closely held family partnerships. It is very difficult to sell partial interests to non family members even with deep discounts. Experience teaches that most third party investors have no interest in buying into such situations at any price.

The IRS has recognized some of these constraints on value in Ruling 93-12. The constraints on value are based on an IRS policy reversal which makes available a discount for a non marketable minority interest in a corporation that owns real estate even when the majority interest is owned by other family members. Discounts have been accepted by the IRS due to the non marketable and illiquid nature of the minority interest being valued. Such discounts represent a reversal of a long-standing IRS policy which has been frequently litigated with taxpayers who believed otherwise. These cases were received by the courts with mixed

results, with the taxpayer or the IRS favored on this issue.

However, Revenue Ruling 93-12 does not address many other issues which can materially affect valuation of a minority interest. For example, a swing vote control premium may exist in certain cases. In a swing vote, an individual partner's vote may decide which group of partners is the majority under a majority control partnership agreement. Othertimes, local law fiduciary duties owed by the majority to the minority may exist under certain state laws, and the valuation of a minority interest may increase when there is a creeping control purchase program in effect by certain other owners who want to obtain control of the partnership so it will take certain actions. Lastly, the valuation of a minority interest when ownership by three partners is other than one-third each (the limited factual case covered by Revenue Ruling 93-12), may be viewed differently by the courts. Many factors can affect the valuation and professional analysis and advice is essential.

REAL ESTATE AUCTIONS: THE NEW METHOD TO SELL REAL ESTATE

by Lawrence F. Sherman
and Jamie Bussio

An auction is a sale concluded by an increase of bids over a reservation price. Something is finally sold to the person who makes the highest bid. Auctions are a viable way to successfully complete real estate exchanges; a quick way to unload unwanted but valuable real estate; an often emotional event that brings together many buyers; and a risky but often lucrative sales technique for the buyer and/or seller.

Auctions previously were viewed as a way to dispose of distressed properties. However, as the economy changed, financing complexities increased and liquidity became more of an issue. Real estate auctions now have become an accepted and profitable way for the real estate person to do business.

Auction Terms

Auctions can be defined by property ownership and property quantity.

Stand Alone Auction (also called Single Product/Single Owner). This is the most expensive type of auction because its costs cannot be spread over many properties. Only a single building or residential development is offered, e.g., the developer's portion of the housing units in a subdivision. The advantage of this type of auction is that it can be initiated at any time without input from other parties.

Single Ownership/Multiple Property Auction. This type of auction also can be initiated at any time, because it still only involves the single owner. Here, the single owner's portfolio of properties is auctioned, and the costs are spread over all of the properties.

Multiple Owner/Multiple Property Auction. This type of auction is popular because it includes many different types and sizes of properties which enables the auction costs to be shared among many property owners.

Auctions Can Be Defined By Their Rules Of Sale

Absolute Sale Auction (also called Absolute With No Minimum Bid). Properties at this auction will be sold regardless of the prices bid. These auction rules produce the most risk for the seller, but they generally attract more buyers, which can lead to higher prices.

Stated Minimum Bid Auction (also called Absolute With a Minimum Bid). Properties at this auction will

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be sold only if the prices bid are higher than the minimum bid specified by the owner. It is not necessary for the owner to notify the bidders of the required minimum. If bidding fails to reach the minimum, sellers often approach the highest bidder and offer the property at the minimum bid price.

Confirmation by the Seller Auction (also called Reserve). Properties at this auction are sold only if the highest bidder has reached or surpassed the reserve amount specified by the owner. The reserve is not necessarily communicated until the bidding is completed. To make the reserve auction more popular, an incentive can be offered to compensate the high bidder if the seller rejects that bid. Auction promotional materials which do not specify the type of auction usually are reserve auctions.

Auctions Can Be Described By Their Rules Of Bidding

Public Auction: Buyers get together in a room and bid against each other until someone wins. This is the most common form of auction.

Sealed Bid Auction: Bids are mailed in; the buyer is notified by return mail of his high bid.

Spot Bid Auction: Buyers bring secret bids to the auction site where the auctioneer announces the winning bid.

Negotiated Sales: Written and telephone offers are taken by the auctioneer before the auction date. The highest offer is accepted on the auction date.

The sale price at an auction is known by two other names: knockdown price, because at the conclusion of the sale the auctioneer's hammer is knocked down; and strike price, because at the conclusion of the sale the item is struck from the auctioneer's list.

Who Holds Auctions?

The easy answer to this question is the auction companies. These companies provide important services to the property owner before, during and after the auction. A reputable auction company will have marketing strength, an understanding of real estate auctions and the local real estate market, the ability to provide financial and legal services (pre and post auction), proven attention to auction day details and a sensitivity to buyers who are unfamiliar with auctions. The auction company pays all promotion and advertising expenses and has fees similar to those of real estate brokers.

It is the property owner who provides the auction company with the product to sell. The reasons the owner is selling the property and the property itself determine whether an auction is the best way to part with the property.

In addition to private property owners, developers, probate, estate and tax sales, there are many government agencies with real estate to sell at auction.

- *The Resolution Trust Corporation (RTC):* The RTC holds a broad array of properties including vacant land, industrial parks, single family homes and apartment buildings. The RTC holds property that has been collected from liquidated financial institutions, such as banks. Good buys are available on many of the RTC properties.
- *The Federal Deposit Insurance Corporation (FDIC):* The FDIC also has a broad array of properties, since a failed financial institution's assets will go to either the FDIC or RTC, depending upon the legal circumstances.
- *Fannie Mae and Freddie Mac:* Primarily single family homes are held by these agencies. Some good deals are available, but unlike the RTC, these agencies are not under the same pressure to sell.
- *Department of Housing and Urban Development (HUD):* Lower class housing is HUD's specialty. Good buys are available for investors to purchase, fix up and resell.
- *Department of Veteran's Affairs:* These properties are slightly worse than HUD properties. Good deals are available, but be prepared for extensive renovation.
- *General Services Administration:* This agency encompasses a hodgepodge of properties and services.
- *Farmers Home Administration (FHA):* The FHA has some great deals if you are persistent. However, in order to effectively utilize their services, you probably will have to move to the country.
- *Bureau of Land Management:* This agency is strictly for the adventurous who want to capitalize on the federal government's urge to give away odd land at \$5 an acre or less.

Why Are These Auctions Held?

Property is sold through auctions to accomplish inventory clearing with expediency. Inventory can consist of just one single family home, a condominium complex, five shopping centers, or any other combination of REO (real estate owned).

Any owner of property can participate (sell) in an auction. Any potential purchaser of real estate can participate (buy) in an auction. Some properties do not lend themselves to auction sales, and some buyers should not use auctions as a medium for property purchases. Sellers should avoid auctions if their property cannot be offered in the standardized, pre-established package that auctions provide, or if they are unable to accept not controlling the property's sale price.

Auctions are primarily used for properties which:

- a. must be sold (forced liquidations or the owner just cannot afford to spend any more for carrying costs).
- b. are unique and desirable (prospects bid against each other, raising the strike price).
- c. are built specifically to sell at auction. The auction medium is often used by developers.

Auctions are held because they provide advantages to the seller.

- Auctions are the fastest method of converting real property into cash. The advantages of speedy sales are:
 - a. Carrying costs, such as interest and maintenance charges, can amount to more than 30% of an unsold property's value each year; time is important in real estate transactions.
 - b. When property values are failing, an auction sale is likely to be much more profitable than an individual broker sale at some unspecified time in the future.
 - c. Where speed is desirable, property involved in divorces, settlement of wills and other legal commitments can be auctioned advantageously.
- Property is sold as is at auctions; the seller is not liable for unknown problems with the property once the sale is completed.
- Auctions permit the property owner to know that on a certain date his property will be sold.
- Auctions create interest in the area; nearby properties often will sell once the auction sales are completed.
- Auction attenders must provide registration information about themselves; this provides a list of prospects for the real estate owner and/or broker after the auction is concluded.
- Auctions can be used as a valuation tool.
 - a. When property prices are uncertain (such as in a new residential development in an area undergoing rehabilitation), an auction of some properties in the development can help the owner determine realistic prices for the remaining properties.
 - b. Property that has remained unsold for a long period of time can either be sold or at least revalued by placing it at auction. This is useful for brokers trying to convince clients that their listing price is much too high.
- Auctions create a sense of urgency; buyers cannot go home to think it over or just wait patiently for the price to fall.
- Auctions freeze out nearby properties; buyers tend to review the properties to be auctioned before they will make any other buying decision. Often, buyers will wait until after the auction is

completed before considering any real estate purchases.

While there are some difficulties with auctions, their popularity continues to grow.

- Since buyers usually have to pay cash for property purchased at auction, they must often procure financing in advance of the auction date.
- Auction companies charge a fee. The auctioneer also gets a typical settlement fee of 1% or 2 % if no one reaches the minimum bid.
- The sales price is not controlled by the seller but by the buyer.
- Auctions can harbor dishonesty. Before the auction, be sure to check the track record of the auction company.

Psychological Tricks

At an auction, the seller has numerous advantages. In order for the auction buyer to compete successfully with the auctioneer, who is appointed by the seller, the buyer needs his own bag of auction tricks. The kind of buyers who should not attend auctions are those who will not take the precautions described here. Buyers of auction property can uncover bargains, but in order to improve the odds for success as an auction buyer, the following precautions are strongly recommended:

- Always know the real estate value of what you are buying.
- Never get auction fever.
 - a. Take a break from the auction when you realize you are afraid to take a break because you might miss something.
 - b. Take a break from the auction when you forget to look at the index card in your hand that shows your maximum bid.
 - c. Take a break from the auction when you begin to feel light-headed or when you realize you are staring at the auctioneer and nothing else.
- Always inspect the property before the auction.
- Always read the conditions of sale before attending an auction.
- Never forget that an auctioneer is a salesman, and he has something to sell you. The auctioneer will use everything in his power for you to make a higher bid.

There are techniques to counteract the practiced expertise of the auctioneer.

- a. Counter the auctioneer's enthusiasm.
- b. Make a few very low bids. It throws off the auctioneer's timing and slows down the auction.
- c. Set your limit. Write your limit down and do not bid past it.

Be warned: It is very easy to catch auction fever. Those people who think psychological tricks are

unnecessary will likely be the very people who need them the most.

Before The Auction—Buyer's Viewpoint

To ensure a successful auction experience, the buyer must take action before the auction. Using the psychological tricks, described here, requires advance planning. Before the auction date the buyer must complete a property inspection so the property can be valued correctly and the maximum bid determined. It is not possible to accurately choose a maximum amount to bid without seeing the property.

It is prudent to hire a certified property inspector to accurately value the properties in which you are interested. Before hiring the property inspector, inspect the properties yourself. Eliminate properties which do not meet your needs; this decreases the number of properties you pay the inspector to review.

Examine the property at its least advantageous times of day, e.g., when residents are home from work. How much parking is available? Does the neighborhood appear safe?

Observe the exterior of the property. If the exterior does not meet your standards, don't waste your time looking at its interior.

- Is the property located near a toxic waste dump, polluted river or other undesirable entity?
- Review the overall noise level of the area. Is the property too close to a freeway or main street? How much traffic passes by the property?
- How private is the property? What are the neighbors like?
- How is the property situated? Is it at the bottom of an incline where flooding could occur?

Evaluate the property's proximity to local amenities: shopping, public transportation, fire stations, recreational and cultural facilities, religious institutions, schools and hospitals.

- Examine the roof. Are the shingles warped? Do the gutters need repair?
- What is your overall impression of the property? Would you want to live or work there? Could reliable tenants be easily found?

Both residential and light industrial properties should be evaluated, as described here, but answers to the questions can result in differing values. For example, extremely close freeway proximity would be an asset to a light industrial property but a deterrent to the purchase of a residential property. If your review of the exterior property produces serious doubts about the property, go to the next property. If the exterior review provides acceptable results, proceed to review the interior.

- Are the floors level? Solid? Carpeted? Carpeting may be used to hide defects.
- Check the walls and ceiling for stains and peeling. These can indicate water damage and/or leaks. Don't forget the attic and basement.
- Check the water pressure. Turn on the shower and sink, then flush the toilet. Does the shower or sink water flow decrease significantly?
- Look for infestation. Termite infestation can practically destroy a property's value. Bring a flashlight to look for signs in corners and other dark areas.
- Make a list of needed repairs. Calculate what these repairs will cost.

In addition to the property inspection and corresponding valuation, the prudent buyer has additional responsibilities.

- Find out about the property's legal status. Tenants can be difficult to eject from the property. Some sellers are allowed to redeem the property back from the buyer for up to two years after the sale, depending upon the legal circumstances. Know the correct dollar amounts of all encumbrances.
- Check the time, location and date of the sale. Check the properties that are to be sold. Keep checking on these items right up to the morning of the sale. There are often changes and postponements up to the last minute.
- Be prepared with financing. Auctions often expect the strike price to be paid on auction day, not weeks later when you have arranged financing. Before the auction, consult with a professional regarding the best way to manage auction financing. On auction day, the high bidder will sometimes need to pay only a down payment or earnest money, rather than the full strike price. Before the auction check on the specific details regarding payment. There is no standard down payment at auctions.

Before The Auction—Seller's Viewpoint

Having decided to sell a property at auction, the seller chooses a reliable auction company. The seller should be aware that the property to be auctioned will be off the market for approximately six weeks: three weeks for the auction company to plan and prepare for the auction and three more weeks for advertising, promotion, publicity and inspection. Closings take place up to eight weeks after the auction date.

Before The Auction—Realtor's Role

Auctions are another way for realtors to collect commissions. The realtor can register his prospect with the auction company (only simple paperwork is required), take his registered prospect to the auction

and encourage him to bid, and then collect a commission from the auction company, whether or not the prospect buys. Each auction company has its own rules regarding commission payments; realtors should contact local auction companies for these rules.

After The Auction

After winning the property at auction, the usual practice is endorsement of the cashier's check brought to represent the down payment, earnest money or full strike price. The auction company will provide instructions regarding when and where the closing will occur. It is prudent to have your attorney work with the auction house to prepare the closing paperwork. Never use the seller's attorney for this purpose.

When the closing occurs on the day of the auction, bring your attorney along to ensure that all the paperwork is properly concluded. If you cannot bring your attorney, sign all documents with this conditional clause: "This document subject to review by my attorney." If the auction house balks at this clause, do not buy the property.

Whatever the terms, expect to complete all the usual steps for buying any kind of real estate, such as having the site surveyed and a title insurance policy in hand, by the closing date.

Buyers who remain attracted to a property they did not win at the auction still can hope to eventually purchase it. Most auctioneers keep a list of the unsuccessful bidders for each property. Unsuccessful bidders often put a request for "Right of First Refusal" in writing to the auctioneer the day after the auction. If the winning bidder cannot buy the property or utilize the buyer's remorse law to change his mind, the individual with the right of first refusal will be next in line.

Conclusion

Auctions are no longer used only to dispose of distressed real estate properties. Although auctions are not suitable for every real estate transaction, they have become an increasingly popular choice among many real estate buyers and sellers. As long as real estate buyers and sellers take precautions to ensure reasonable, timely and profitable auctions, they should continue to grow in popularity, sophistication and attendance throughout the coming years.

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NEW NEIGHBORS, NEW TAXES? THE ESCALATION OF PROPERTY TAXES DUE TO POPULATION GROWTH

by Vincent S. Scerbinski,
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"Those coming in and making vast fortunes developing this beautiful countryside should pay for it, and they are not. They're putting the burden on those already here."¹ So says Mayor Kapp of Flemington, New Jersey, regarding property owners paying higher taxes because of growth in nearby Raritan.

Forty years ago the towns of Flemington and Raritan merged their school districts, and now the taxpayers of Flemington, whose population is stable, are helping to pay for Raritan's rapid growth. The frustration of Flemington's mayor typifies a mood found across the country as long-time property owners are being forced to share the costs of building additional roads and schools to accommodate the new residents.

Taxpayers React

Proposition 13, passed by California voters in 1978, was a response to escalating property taxes. It affectively shielded pregrowth property owners from the costs of new schools, roads and other public services. Governments now require the developers to pay for the new infrastructure, and developers, in turn, pass the costs on to the new home owners. The results have been the escalation of new home prices and often the curtailment of services.

Despite the passage of Proposition 13 in California, intuitive arguments still are heard on both sides of the issue. Developers say that additional residents will share in the costs of government and thus reduce the per capita costs. Preservationists claim that increases in population density create a demand for a wider range of services and a burgeoning bureaucracy. This increases the burden on the pregrowth home owner. The debate centers around those local governmental expenditures which have the greatest influence on property taxes. The critical issue is the effect of population increases on these expenditures.

Local Governmental Expenditures And Revenues²

Governmental expenditures in New York State, excluding New York City, are \$31.8 billion or \$2,982 per resident.³ Table 1 lists school expenditures as the largest component of governmental expenditures.

Governmental expenditures are financed through a variety of sources with property taxes being the single largest component. In New York State, property taxes constitute 41.4% of governmental revenues, a total of \$12.2 billion.⁵ Of the

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property tax revenue, 54.9% (\$6.7 billion) is for schools. Of the schools' revenues, property taxes account for 50.1%, with the balance coming mostly from state aid.⁶

TABLE 1

Major Categories of Governmental Expenditures.⁴

	\$ in billions	% of total
1. Schools	13.8	43.0
2. Economic Assistance	3.4	10.7
3. General Government	2.3	7.3
4. Police	2.0	6.3
5. Health Services	1.9	6.0

Does a larger population require new and/or expanded services for the broader population and thereby increase the per capita tax burden even as the number of people sharing the costs increases?

To answer this, we analyzed governmental expenditure data, county-by-county, for New York State. Segmenting the data allowed for the explicit analysis of growth on school expenditures and non-school expenditures; each regression analysis estimated the impact of population growth on expenditures; and lastly, a simulation table illustrated these results.

Effect Of Increasing Population On Governmental Expenditures

The regression analysis illustrates that population increases have a significant impact on expenditures. The regression results follow:

Regression Equation 1:

Government expenditures = $-5484.3 + 2.1 \text{ pop} + 271.3 \text{ pden} + 6.3e-07 \text{ pops}$

t-statistic (-0.22) (10.4) (6.5) (3.8)
 Probability⁷ 17.4% 99.9% 99.9% 99.9%
 Adjusted R² = 0.9864

pop = population; pops = population squared;
 pden = population density divided by land area;
 pdens = population density squared; inc. = median income⁸

All three factors: population size, population density and population squared, had a positive impact on governmental expenditures.⁹ As population size and density increase so will total governmental expenditures. The more interesting question is whether per capita expenses will increase? The positive coefficient of the population squared variable indicates that yes, per capita expenses will increase.

Based on this regression equation, the following simulation table illustrates the effect of both a 5% change in population and a 10% change in population on governmental expenditures. The basis for comparison is an average county, constructed using the averages for each variable in the data base.

The simulation illustrates that costs increase by \$7 per person for a 5% increase in population.¹⁰ A 10% increase in the county's population results in a \$14 increase in per capita governmental expenditures. Per capita expenditure increases because a 5% increase in population results in a 5.3% increase in total governmental expenditures. Similarly, a 10% increase in population results in a 10.6% increase in expenditures.

The Effect Of Increasing Population On School Expenditures

To better understand the various components driving the governmental expenditures, school expenditures were analyzed separately. There is considerable debate on how population growth affects school expenditures. The debate centers on whether or not economies of scale exist.

Economies of scale may occur because a larger district can structure optimally-sized classes, fully utilizing the teachers' time. Additionally, transportation costs per pupil may fall as the population becomes denser. However, as a school district increases in size, it frequently offers a broader spectrum of courses and activities which tend to decrease the potential economies of scale.

The willingness of residents to pay also influences school expenditures. Willingness to pay is associated with ability to pay, therefore the regression equation includes median income to account

TABLE 2

Simulation of Population Increase on Governmental Expenditures

	Total Population	Population Density	Land Area	County Expenditure	Expenditure Per Capita
Average County	187,156	227	823	\$474,625,700	\$2,536
+ 5%	196,514	239	823	\$499,771,300	\$2,543
+ 10%	205,872	250	823	\$525,025,500	\$2,550

TABLE 3

Simulation of Population Increase on School Expenditures

	Total Population	Population Density	Land Area	School Expenditure	Expenditure Per Capita
Average County	187,156	227	823	\$188,504,600	\$1,007
+ 5%	196,514	239	823	\$197,143,700	\$1,003
+ 10%	205,872	250	823	\$205,904,900	\$1,000

for this influence.¹¹ The school expenditure regression results follow:

Regression Equation 2:

$$\text{sch exp} = -124906.7 + 0.55 \text{ pop} + 7.1\text{e-}07 \text{ pops} - .009 \text{ pdens} + 6.12 \text{ inc}$$

t-stat (-3.6) (5.5) (8.4) (-2.3) (4.8)
 Probability 99.9% 99.9% 99.9% 97.4% 99.9%
 Adjusted R² = 0.9834

Here again the population and the population squared both have positive effects on total school expenditure. However, as population grows and the population density increases, there is a negative impact on expenditures. This suggests that as population becomes more concentrated some savings exist, e.g., in transportation. The population's median income also positively affects school expenditures; counties with higher median incomes spend more on education.

Thus, which dominates as the population increases, the saving effect or the spending effect? The results of the simulation below illustrate that while total school expenditures increase, the per capita expenses decrease as population grows.

A 5% increase in population increases total school expenditures by 4.58%, while a 10% increase in population increases school expenditures by 9.23%.

The impact of decreasing expenditures per capita may not relieve the burden of property taxes. The impact depends upon the changes in full value assessment. If total full value assessment for the county increases by less than 4.58%, then the tax rate will go up.

Increasing Population And Its Effect On Net Governmental Expenditures

To complete the analysis, we examined governmental expenditures excluding schools:

Regression Equation 3:

$$\text{Net Government} = 53207.6 + 1.45 \text{ pop} + 290.96 \text{ pden} - 3.54 \text{ inc}$$

t-stat (0.82) (18.5) (7.9) (-1.5)
 Probabilities 58.5% 99.9% 99.9% 87.1%
 Adjusted R² = 0.9748

In this regression, population and population density both had positive impacts on expenditures. The median income had a negative effect indicating that counties with wealthier citizens require fewer governmental expenditures. As economic assistance and health services comprise 30% of the net expenditures, this income effect is appropriate.

This simulation illustrates that net governmental expenditures per capita increased by \$14 when population grew by 5%. Total expenditures grew by 5.96% and 11.52%, respectively, for 5% and 10% population growth.

Discussion Of Regression Results

For total governmental expenditures, the regression predicts that a larger population is positively correlated with an increase in total expenditures. Per capita expenditures also increase when there is a larger population. When we isolate school expenditures, a major component of governmental expenditures, per capita expenses decrease and economies of scale exist. Thus, the increase in expenditure due to development arises in the non-school categories. These expenditures include economic assistance, general government, police and health services.

The simulations provide a sense of the distribution expenditures for a given increase in population. For example, if population increases by 5%, per capita school expenditures decrease by \$4 and non-school expenditures increase by \$11, for a total change of \$7. Clearly, the growing expenditures in other categories outweigh the per capita savings in school expenditures.

Property Tax Implications

How does the increase in governmental expenditure resulting from population growth affect property taxes? This depends on changes in full value assessment for the entire county. If the total full value assessment of the county does not increase sufficiently to accommodate the expenditure increase, existing residents will face higher tax rates.

The following example illustrates this point. If a 5% increase in population results in a 5% increase in expenditures, then per capita expenditures are

TABLE 4

Simulation of Population Increase on Net Governmental Expenditures

	Total Population	Population Density	Land Area	County Expenditure	Expenditure Per Capita
Average County	187,156	227	823	\$283,141,200	\$1,513
+ 5%	196,514	239	823	\$300,018,300	\$1,527
+ 10%	205,872	250	823	\$315,755,600	\$1,534

unchanged. Even with unchanged per capita expenditure, if a county's total full value assessment increases by less than 5%, then the residents' tax rates must increase to pay for the newcomers.

This study shows that a 5% increase in population causes a 5.3% increase in total expenditures, which results in higher per capita expenses. In order for the tax rate to remain the same, the county's total full value assessment must increase by 5.3%. If 5% more houses are built, the full value assessment might not increase by the necessary amount because the vacant land is already on the tax rolls. Only the additional value added by the new house increases the appraised value.

Although we may look for economies of scale in the schools to offset the costs of growth, this may not be the case. While school expenditures fall, per capita total school expenditures rise. If the population grows by 5%, school expenditures increase by 4.58%. If the full value assessment does not rise by 4.58%, then residents will experience a tax increase from the school portion as well as from the non-school portion.

Conclusion

This study makes clear that the preservationists are correct in terms of governmental expenditures. Even if governments do experience economies of scale in schools, this is outweighed by the diseconomies of scale in other government functions. Population growth increases the tax burden on existing residents, and new residents should expect their taxes to be higher than current taxes.

Suggestions For Future Research

These results motivate the consideration of a pay for savings program. Under such a program, the government purchases undeveloped land and thereby limits population growth and preserves open space. Frequently pay for savings schemes do not appear economically viable, but the savings are forever, therefore the payoff period should be similarly long-lived. If there are other benefits to the open land, the purchases are more easily justified. This study projects the costs of growth and provides a

minimum on what a municipality might pay to limit development.

NOTES

1. Robert Hanley, "Explosive Growth Jams Schools in a Jersey Town," *The New York Times*, Nov. 30, 1987, p.B2.
2. The data analyzed in this study is the "financial data for all classes of municipal governments summarized by county." It includes expenditures by the county, cities, towns, villages, fire districts and school districts. The data excludes New York City, joint activities, library systems, community colleges and cooperative and vocational education programs. Office of the State Comptroller, State of New York. *Special Report on Municipal Affairs for Local Fiscal Years Ended in 1990, 1991*, p.421. Hereinafter *Special Report*.
3. *Special Report*, Table 8. p.456.
4. *Special Report*, Table 8. pp. 454-455.
5. *Special Report*, Table 8. p. 452.
6. *Special Report*, Table 8. p. 452.
7. For each t-statistic, we report the probability that the given coefficient is significant, that it is not equal to zero and is correctly signed.
8. Variable List: pop = Population; pops = Population squared; pden = Population density, population divided by land area; pdens = Population density squared; inc = Median income.
9. The model establishes population and population density as important determinants of governmental expenditures. The population squared term enters into the equation because the relationship between expenditures and population is not linear; the squared term improves the predictive power of the model by taking account of the non-linearity.
10. Another measure is the increase in expenditures per acre, as the primary source of revenues is property taxes and the land area does not change. With a 5% increase in population, governmental expenditures increase by \$47.74 per acre.
11. Median income data by county is from the U.S. Department of Commerce, Bureau of the Census, *1990 Census of Population and Housing: Summary of Social, Economic, and Housing Characteristics—New York*. p.245.

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7. For uniformity and accuracy consistent with our editorial policy, refer to the style rules in *The Chicago Manual of Style*.

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The editorial board of *Real Estate Issues* (REI) is accepting manuscripts in competition for the 1994 Ballard Award. The competition is open to members of The Counselors of Real Estate and other real estate professionals. The \$500 cash award and plaque is presented in November during The Counselor's annual convention to the author(s) whose manuscript best exemplifies the high standards of content maintained in the journal. The recipient is selected by a three person subcommittee comprised of members of The Counselors of Real Estate. Any articles published in REI during the 1994 calendar year are eligible for consideration and must be submitted by October 1, 1994.