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AMERICAN SOCIETY OF  
REAL ESTATE  
COUNSELORS 

# REAL ESTATE COUNSELORS LOOK AHEAD

**I**t is well documented that national real estate markets are not in great shape. In most areas, property values are sagging, and both residential and commercial construction activity have declined substantially. Few markets have yet to exhibit any visible improvement in sales and leasing activity.

Generally, most experts agree that market activity will not return to the rapid pace of the last decade for some time. Overbuilding, recession and consumer reluctance are impacting the broad economic environment that is shaping the next several years. At the same time, notwithstanding these immediate concerns, the general real estate market continues to benefit from long-term growth in both population and employment, a combination which brings market stability and underlying value.

But for real estate counselors and other property specialists, market conditions must be addressed head-on with a clear understanding that the housing and commercial markets will recover although probably at different times. While many owners and investors prefer simply to sit tight and wait to see what happens, real estate counselors are seeking solutions for those unfortunate casualties who cannot afford a benign wait-and-see strategy. Home sellers, landlords of vacant space, construction companies and foreclosing financial institutions seem particularly at risk. These industry groups particularly are fertile areas for the level-headed application of sound counseling advice.

Time and solid problem-solving eventually will cure the ills of today's real estate markets. Meanwhile, it is almost safe to say that if the worst is not yet over, it certainly will be soon.



Editor in chief

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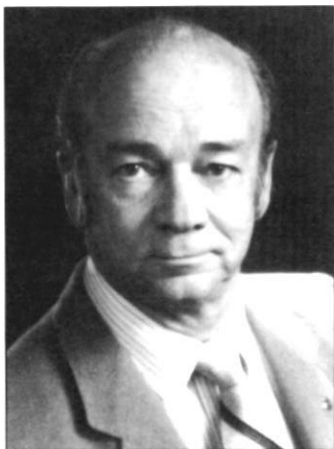
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# WAYNE D. HAGOOD RECEIVES THE LOUISE L. AND Y.T. LUM AWARD



Wayne D. Hagood, CRE

**W**ayne D. Hagood, CRE, chairman emeritus of Hagood Realty Advisors, Inc., Fort Worth, Texas, has been named the 1991 recipient of the Louise L. and Y.T. Lum Award. This honor recognizes Hagood's distinguished contribution to 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. Hagood's distinguished career exemplifies the standards set forth by this award.

An active member of the Society since he was invited to membership in 1970, Hagood served as president in 1985. He also has been a member of the Board of Governors, chaired the Trust Fund Finance and Education Committees and was vice chairman of the Executive, High Level Conference and Membership Liaison Committees. He currently serves as an Educational Trust Fund Trustee and he is a member of the Strategic Planning and President's Advisory Committees.

Hagood has been a regular instructor for the Appraisal Institute and he also has taught the Institute's computer program to CREs. Since 1990 he has served as the Society's representative on The Appraisal Foundation Standards Advisory Board. Here, he has been instrumental in furthering the distinction of counseling as a separate discipline.

In addition to the Appraisal Institute, Hagood's other professional affiliations include the Puerto Rico Institute of Evaluators (honorary member); the Fort Worth Board of Realtors, (served two terms as director and was named Realtor of the Year in 1975); the Texas Association of Realtors, (director in 1980); the National Association of Realtors (national director in 1985); and the Omega Tau Rho Honorary Real Estate Fraternity.

In addition to his professional activities, Hagood has authored various technical valuation papers, and he has taught appraisal courses at 12 universities in the United States, Canada and Puerto Rico. He also is a frequent lecturer at counseling and appraisal seminars from coast to coast.

Previous recipients of the Louise L. and Y.T. Lum Award include CREs Charles W. Bradshaw, Jr. (1990), Jared Shlaes (1989), John R. White (1988) and Thurston H. Ross (1987).





## THE PRESIDENT SPEAKS

## THINK CRE

**E**ven a casual observer today recognizes the fundamental changes taking place in how the real estate industry is developed, financed, owned and operated in the world. While this has not occurred suddenly, recent events have impacted these forceful changes. The savings and loan crises, America's persistent deficit and resultant reliance on outside capital and inflationary pressures in capital-rich countries abroad have exacerbated these and other well-publicized problems in our financial structure. At no other time in recent memory has competent advice been so actively sought by so many on such a wide variety of real estate matters.

The American Society of Real Estate Counselors, the professional consulting affiliate of the National Association of Realtors, has represented preeminence in the field of real estate counseling since it was established in 1954. The CRE designation is awarded to the Counselor by his peers, members of the Society, in recognition of his demonstrated judgment, integrity and experience. By expertly identifying and quantifying the changes occurring in the industry, sound judgments and expert advice can be rendered to the client.

CREs operate individually or frequently as a team in providing advice on virtually all matters pertaining to real estate. Impartial counsel on asset management, debt restructure, renovation or redevelopment and project completion can help even the most experienced real estate professional focus on the relevant issues and identify the most favorable course of action. Through the Society's educational programs, publications such as *Real Estate Issues* and strong personal networking, a CRE is able to stay on the cutting edge of new developments, locally and nationally.

When you consider seeking advice or counsel in real estate matters, may I suggest you THINK CRE. I am sure you will not be disappointed.



**Eugene P. Carver, CRE**  
*President*  
*American Society of Real Estate Counselors*

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Richard T. Garrigan, CRE

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## CONTRIBUTOR INFORMATION FOR REAL ESTATE ISSUES

The journal is published twice a year (Spring/Summer and Fall/Winter), and reaches a lucrative segment of the real estate industry as well as an impressive cross section of professionals in related industries.

Subscribers to *Real Estate Issues* are primarily the owners, chairmen, presidents and vice presidents of real estate companies, financial corporations, property companies, banks, management companies, libraries and Realtor® boards throughout the country; professors and university personnel; and professionals in S&Ls, insurance companies and law firms.

*Real Estate Issues* is published for the benefit of the CRE (Counselor of Real Estate) and other real estate professionals, planners, architects, developers, economists, politicians, scientists and sociologists. It focuses on approaches, both theoretical and empirical, to timely problems and topics in the field of real estate. Manuscripts are invited and should be addressed to:

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### Review Process

All manuscripts are reviewed by three members of the editorial board with the author's name(s) kept anonymous. When accepted, the manuscript with the recommended changes are returned to the author for revision. If the manuscript is not accepted, the author is notified by letter.

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### Deadlines

All manuscripts to be considered for the Spring/Summer edition must be submitted by February 1; for the Fall/Winter edition by August 1.

### Manuscript/Illustrations Preparation

1. All submitted materials, including abstract, text and notes, are to be typed double-spaced on one side of the sheet only, with wide margins. No page limit is imposed. Submit five copies of the manuscript, accompanied by a 50- to 100-word abstract and a brief biographical statement. If possible, submit manuscripts on disk (along with the hard copy) in ASCII file format, WordPerfect preferred.
2. All notes, both citations and explanatory, are to be numbered consecutively in the text and placed at the end of the manuscript.
3. Illustrations are to be considered as figures, numbered consecutively and submitted in a form suitable for reproduction. Type figure legends double-spaced on a separate page.
4. Number all tables consecutively and type double-spaced on separate pages. All tables are to have titles.
5. Include glossy photographs that enhance the manuscript, whenever possible.
6. Title of article should contain six words or less with an active verb.
7. For uniformity and accuracy that is consistent with our editorial policy, refer to the style rules included in *The Chicago Manual of Style*.

## THE BALLARD AWARD MANUSCRIPT SUBMISSION INFORMATION

The editorial board of *Real Estate Issues* (REI) is accepting manuscripts in competition for the 1991 Ballard Award. The competition is open to members of the American Society of Real Estate Counselors and other real estate professionals. The \$500 cash award and plaque is presented in November during the Society's annual convention to the author(s) whose manuscript best exemplifies the high standards of content maintained in the journal. Any articles published in REI during the 1991 calendar year (Spring/Summer and Fall/Winter editions) are eligible for consideration and must be submitted by August 1, 1991.

# WHATEVER HAPPENED TO RENT?

*The excess supply and decline in value of real estate are directly related to the decline in importance of rental income.*

by Richard T. Garrigan, CRE

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Richard T. Garrigan, CRE

**T**he decline in real estate values and corresponding losses at savings and loan institutions in the Southwest region of the United States have been the focus of much recent attention. The Southwestern real estate market is in much greater disarray than other regional markets because of the crash in oil prices, which substantially worsened matters in the oil patch. While more severe in the Southwest than in other regions, the problems of excessive capital investment in real estate and resultant losses in value nonetheless exist nationwide. This article provides an overview of several major interrelationships which collectively led to the current excess supply of real estate. Its focus, however, is on the main cause of that excess supply: the fact that both the real estate and lending industries deemphasized rent in their evaluations of properties that were developed in the 1980s.

## Real Estate's Four Financial Returns

In exploring how far the real estate and lending industries moved away from an adequate consideration of rental productivity, it is useful to review certain aspects of the four basic types of financial returns that may be obtained through a real estate investment: pre-tax cash flow, income tax savings derived from a tax shelter, equity build-up from amortization of mortgage debt, and capital appreciation. While the first two types of returns generally are received during the operational phase of a property's ownership, the latter two are most often realized upon sale of the property.

In the early 1980s, many investors were placing greater emphasis on tax savings and capital appreciation than on either pre-tax cash flow or equity build-up, returns that had been more important 10 to 15 years earlier. This shift occurred for many reasons. The higher rates of inflation following the escalation of the Vietnam War in the mid-to-late 1960s and the oil shocks in the early 1970s were accompanied by significant increases in operating expenses as well as in the costs of acquiring and developing land. Often, initial rents and related early years' pre-tax cash flows did not keep up.

The adequacy or inadequacy of rentals was related to the kind of property that was developed and its quality. For example, during the 1970s, multi-family residential properties did not typically produce rental increases that were equivalent to the level of increases in the consumer price index. On the other hand, because of a heightened demand for

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office space and a demand/supply equilibrium, well-located central area office buildings with short-term leases often produced significantly higher rents following lease expiration and releasing. Similarly, the growing sales volumes of tenants located in regional mall, retail-type properties resulted in higher percentage rents and then in stepped-up basic rents upon the expiration and renegotiation of the leases.

The idea was an elementary one: even if initial rents were inadequate, it was better in an inflationary environment to develop now and freeze the costs for land and improvements. Until the end of the 1970s, this attitude was strongly reinforced by the availability of long-term, single-digit, fixed-rate mortgage financing. While waiting for anticipated increases in rents and associated appreciation, investors, especially those whose income was in the higher tax brackets, could count on tax savings in lieu of rent during the early years of a property's ownership.

### **ERTA And The Role Of Real Estate Syndications**

Thus, as the decade of the 1980s unfolded, there was strong motivation to invest in real estate because of two principal factors. First was the psychology of inflation; many investors believed that the high rates of inflation of the late 1970s and early 1980s would continue. Second, and extraordinarily important as a motivator, were the greatly increased potential tax savings brought about by the Economic Recovery Tax Act of 1981 (ERTA), through which the depreciable lives of both residential and non-residential real property were reduced to 15 years and deferred income was taxed at the favorable 20 percent capital gains tax rate.

#### *ERTA's Impact—An Overview*

The tax shelter made available through ERTA led to an unprecedented demand for real estate investment by individual investors and, correspondingly, for income property mortgage loans. The basic idea—you don't have to make money from operating a property in order to make money in real estate—was to prove especially troublesome when the Tax Reform Act of 1986 substantially eliminated tax shelter benefits. At the time, however, the post-ERTA emphasis on tax shelters and capital appreciation influenced the prices that were paid for real property. As a result, mortgage loans that could not be justified by current rent levels were based on the values that were observable in the marketplace. Ultimately, far too many properties failed to generate sufficient rent to permit the mortgage debt to be serviced, let alone to provide any pre-tax cash flows to equity investors. The result was not capital appreciation but substantial loss in value.

#### *Real Estate Syndications*

The demand for tax shelter investments and related mortgage financing probably would have been far less were it not for the efficiency with which investment securities firms gathered equity funds through tax shelter-oriented syndications. Investors whose income was taxed at the marginal rate of 50%

were strongly motivated to avoid paying high income taxes, and Wall Street had the syndication products that would result in massive levels of investment in real properties. Often, the unrealistic assumption was made that rents would escalate at rates of 8% for the five years following property acquisition. Meanwhile, the high interest rates on mortgage loans that incorporated pay/accrue provisions (which provided that some portion of the mortgage loan's interest could accrue) resulted in higher losses under the tax accounting provisions applicable to limited partnerships. Eventually, inflation was supposed to bail out everyone—syndicator, investor, lender—and inflation was assured because, at that time, it was inconceivable that the Federal Reserve Board would successfully control inflation.

### **The Savings And Loans In The 1980-85 Period<sup>1</sup>**

When the Paul Volcker-led anti-inflation drive began in earnest in late 1979, the S&Ls were among the early casualties. For more than a decade, the understanding that had existed between the S&Ls and the federal government called for the government to control the cost of short-term funds by placing ceilings on interest rates and for S&Ls to finance mortgage loans with long amortization terms at fixed interest rates. By 1980, it was clear that the government was not able to protect the S&Ls from skyrocketing interest rates; thus, the Depository Institutions Deregulation and Monetary Control Act, passed the same year, provided for phasing out ceilings on interest rates on all deposits offered by S&Ls and other financial institutions. Unfortunately, while Congress removed ceilings on the cost of S&L liabilities, it continued to restrict the financial returns that could be realized on the industry's principal investment—single-family residential mortgage loans.

By the end of 1981, more than half of S&L mortgage loans carried interest rates of 10% or less, while the industry's cost of funds had increased to about 11.6%.<sup>2</sup> The hemorrhaging that took place in 1981 and 1982 resulted in losses totaling \$8.8 billion.<sup>3</sup> And while this sum now appears to be small, it was large enough at that time to significantly erode the weak capital base of many S&Ls.

#### *The Garn St. Germain Act—Setting The Stage For Growth*

The Garn-St. Germain (GSG) Depository Institutions Act had an enormous and largely negative impact on much of the S&L industry mainly because of two key provisions: (1) 100% loans on income-producing properties were authorized for federally chartered institutions, and the maximum permissible percentage of assets which could be invested in these loans was increased to 40% from a former limit of 20%; (2) the money market deposit account permitting head-to-head competition with money market mutual fund accounts was authorized. This latter authorization was followed by enormous deposit inflows during 1983—a \$110 billion total increase (\$63 billion in new deposits and \$47 billion in interest credited).<sup>4</sup>

The growth in deposits also was due to a huge increase in brokered deposits. By obtaining funds through brokered deposits, numerous institutions were able to fund rapid growth. Much of the growth in brokered deposits occurred as tens of billions of dollars in funds flowed out of money market mutual funds. Securities brokers used brokered deposits as a way of meeting their customers' yield requirements while earning fees by directing funds to S&Ls that were willing to pay high rates—rates that could be justified only through higher yielding but riskier investments.

#### *The Deregulated Savings And Loan Industry*

S&Ls responded to the substantial deposit inflows that had occurred during the 1970s by greatly increasing the amount of single-family residential lending for both existing housing and new construction. Immediately following the passage of GSG, however, S&Ls found that such lending was not economically feasible because interest rates were much too high for prospective single-family residential mortgage borrowers. Even single-family adjustable rate mortgages could not prudently be priced low enough to substantially increase the demand for home loans.

As operating losses mounted in 1981 and 1982, equity capital at many S&Ls eroded. Without their being able to deploy huge deposit inflows into single-family residential loans, S&Ls faced the prospect of further erosion. This risk led many S&L executives to sell out their ownership interests. Federal regulators were accommodating; they changed the minimum number of shareholders in an S&L from 400 to 1. Many of the new owners were interested in making acquisition, construction and development mortgage loans in order to garner the large fees and potential profits that such deals offered. These investments were structured as loans, but in reality they were direct investments. These investments also were made through affiliates of S&Ls called service corporations, often with a marked lack of success.

Other S&L executives who either could not dispose of their mutual institutions or did not wish to sell their stock institutions worried about breaching the then 3% minimum net worth requirements and thereby incurring the risk of being merged out of existence. Thus, they were strongly encouraged to try to restore lost net worth. Many of these same individuals seized the opportunity to move into construction lending on both multi-family residential and commercial properties as a means of recouping previous losses. The motivation to depart from traditional lending was strongly influenced by the high fees and high prospective yields from such deals.

Also encouraging such lending was the ability of S&Ls to immediately recognize the large front-end commitment and origination fees typically produced by these loans as well as to accrue the interest income set up through interest reserves. It was possible, therefore, for large amounts of income to be earned and for net worth to be partially restored through the use of bookkeeping entries. For permanent loans, interest in many cases was based on

pay/accrue provisions, and the portion of the interest that was not paid in cash increased the outstanding mortgage debt—a process called negative amortization. The properties thus financed were unable to produce net rentals that were high enough to pay the high interest rates prevalent at the time. Given investors' wish to secure tax shelters and realize capital appreciation, rents were of little consideration. This lack of concern for adequate rental income was all the more prevalent because property ownership through syndications typically was financed through non-recourse mortgage loans. Thus, the S&Ls making such loans restricted themselves to the rents and collateral values of the properties should the borrowers default.

Unfortunately, many S&Ls were not able to realistically appraise and evaluate the risks of such properties, much less underwrite or administer such loans. Disaster loomed and ultimately, when the loans did not pan out, the cost of these institutions' insolvency increased greatly.

As a result of these many circumstances, huge amounts of mortgage money flowed into multi-family residential and commercial mortgage loans. From the end of 1982 until the end of 1985, multi-family residential mortgage loans at S&Ls grew from \$38.9 billion to \$66.6 billion, and commercial mortgage investments grew from \$51.3 billion to \$84.1 billion.<sup>5</sup> All too frequently, other S&Ls that were located far away from the sites of the properties they were financing bought into such deals through mortgage loan participation investments.

#### *The Plight Of The Regulators*

When the GSG Act was passed, there was little if any concern that the Federal Savings and Loan Insurance Corporation was intended to insure deposits for a highly regulated, predominantly single-family residential lending industry and that a major conflict existed between deposit insurance and the extensively deregulated S&L business that was brought about by GSG.

Although regulators were overwhelmed by the changes in S&L operations, the federal government was not willing to authorize additional needed staff. It failed to recognize that deregulation required more, not less, examination and supervision, especially given the substantial numbers of newly chartered institutions formed under the liberal statutes of California, Florida and Texas.

#### **1986 Tax Reform Act**

Whatever the other effects of the 1986 Tax Reform Act (TRA), the impact upon real estate values was disastrous. Through the earlier ERTA, the government had encouraged non-economic investment in real estate on an unprecedented scale. Then, only five years later, the 1986 TRA increased the length of depreciable lives, imposed at-risk rules upon real estate investments, significantly increased the capital gains tax rate and all but eliminated real estate investments' ability to shelter externally derived income. It would have been reasonable to expect either grandfathering or transitional rules which would

have cushioned the effect of these draconian changes. Without such modifications, however, real estate investors were hit hard in two significant ways. First, they were not able to achieve the tax savings that provided the motivation for much of their investment. Second, the investment value attributable to the potential tax benefits for future buyers was decimated, ruining the potential for value retention, let alone appreciation. The obvious course of action for many of these investors, especially those using non-recourse debt, was to turn over the properties to the lenders.

Thus, the federal government has given, and it has taken away. Unfortunately, the tax revenues that the government may realize by eliminating tax shelter benefits on properties acquired by S&Ls are minor in comparison to the enormous costs of marking down the values of and operating these properties. Had suitable transitional rules been applied to such properties, tax revenues would be fewer, but the overall cost to taxpayers would be far less.

### The Evolution In Commercial Bank Mortgage Lending

Recently, much concern has been expressed about the quality of real estate loans financed by commercial banks. Before concluding this article, it is desirable to consider how commercial banking practices pertaining to income property lending have changed over the past decade.

In the development of large shopping centers, office buildings, industrial parks and hotels, the construction mortgage lender often has been a commercial bank. Prior to 1980, permanent loan (or takeout) commitments, generally issued by life insurance companies, were an iron-clad requirement before a commercial bank would issue interim loan commitments. Among the key provisions contained in a permanent loan commitment were those dealing with an agreed-upon construction completion date, procedures for approving changes in plans and specifications and rental achievement requirements. By making permanent loan commitments, life insurance companies have been a major element of loan quality control, especially given their policy that their non-recourse mortgage loans would be subject to the production of adequate rentals at the time the permanent loans were funded.

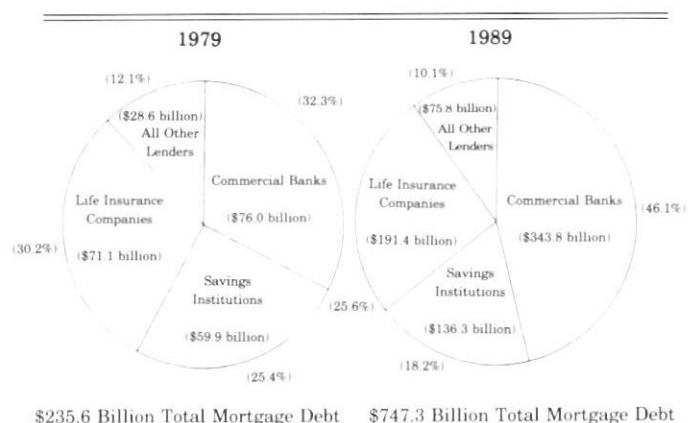
In 1980, however, following the rise in interest rates, life insurance companies closed their permanent loan commitment windows. The banks were then faced with a dilemma. Continuing their policy of requiring permanent loan commitments would require them to shut down their construction loan operations. Because of the importance of construction loans to the banks' total commercial lending operations, the banks eliminated the requirement that a permanent loan commitment must be obtained before the construction loan would be approved.

Over the last decade, many commercial banks have moved into the void created by the departure of the life insurance companies, aggressively expanding their market share of commercial mortgage

loans by making both construction and permanent mortgage loans on such properties. As shown in Figure 1, between the end of 1979 and the end of 1989, bank-financed commercial mortgage loans grew a phenomenal 352%, expanding in dollar value from \$76 billion to \$343.8 billion; meanwhile, banks increased their market share of such loans from 32.3% to 46.1%. In contrast, life insurance companies' market share declined from 30.2% to 25.6% over this same period. An even larger market share decline was recorded for savings institutions, i.e., S&Ls and mutual savings banks. From the end of 1979 to the end of 1989, the market share of these institutions declined from 25.4% to 18.2%.

FIGURE 1

Commercial Mortgage Debt Outstanding for the Years Ending 1979 and 1989



\$235.6 Billion Total Mortgage Debt    \$747.3 Billion Total Mortgage Debt

In making permanent mortgage loans, the principal loan product used by commercial banks has been the miniperm. Miniperms have terms of five to, say, seven years, following the completion of construction, and they are generally priced on a floating rate basis. Missing from the miniperm loan arrangement, however, is the separate evaluation of the project by the external permanent lender, which formerly occurred when the permanent loan commitment request was being processed. Also disquieting is the absence of suitable loan maturities consistent with full amortization of the mortgage debt.

As noted above, the banks' market share of commercial mortgage loans grew enormously during the 1980s. The jury is still out on how severely the losses from these loans will impact banks' capital structures. But the existing vacancy levels for most categories of commercial properties are an ominous sign.

### Conclusions

During the 1980s, far more than a decade's worth of space requirements were built in just ten years. Now the better part of the current decade will be needed to absorb that space. In the capital-driven development environment, real estate for all intents and purposes became paper—paper to produce artificial losses, paper to record non-cash interest, paper to claim "future gains." In the process, rent was forgotten. But real estate as an investment form is like



other investments; its value is determined by its income stream, and that income stream is determined by rent.

The emphasis on tax shelter and capital appreciation thus has proved to be a delusion which has its roots in the inflation of the 1970s. Without rent, obviously there cannot be any pre-tax cash flow. Without adequate rent, there cannot be any equity build-up or capital appreciation either. Mortgage debt has long been ballyhooed as an essential ingredient in the creation of real estate wealth. When used in the extreme, however, it is a negative element for borrower and lender alike. Debt must be a function of the quantity and quality of current rent levels.

When the sheltering of taxes is the overriding reason for investing in real estate and space is thrown on a market, even the best feasibility studies can be rendered worthless by the resulting market disequilibrium. As a consequence, market expertise is devalued. When the mere ownership of real estate and not its successful rental operation is the basis for investment, the services of successful property managers also are undervalued. The potential for rental productivity-driven capital appreciation occurs when a demand/supply equilibrium exists. The emphasis on a tax shelter destroyed that equilibrium.

There is reason, nevertheless, for some optimism. The present re-regulation that is occurring in

both the S&L and commercial banking industries, while painful, will measurably help the real estate industry in the long run. The lessons of the last decade, so severe in nature, will not be easily forgotten.

In the early 1980s, one did not have to be knowledgeable about real estate to make money; ownership permitting tax write offs was sufficient. In the 1990s, a premium will be paid for knowledge, especially given the impact of demographic and employment changes upon the demand for space. While debt will be harder to obtain and more equity capital may be required, once an equilibrium is restored, equity returns based on properties' productive and creative use will be competitive with returns on other investments. For the present, however, it is back to basics, undoing the damage that has been done.

## NOTES

1. For excellent in-depth coverage of the savings and loan industry during this period, see Strunk, Norman and Case, Fred. *Where Deregulation Went Wrong* (Chicago: United States League of Savings Institutions, 1988).
2. Jacobe, Dennis, Smith, Brian P., and Fahey, Noel. "The Thrift Crisis: The Result of High Rates and Bungled Deregulation," *Savings & Loan News* (April, 1982): 46, 48.
3. *Savings Institutions Sourcebook* (Chicago: United States League of Savings Institutions, 1989): 52.
4. *1985 Annual Report* (Washington, D.C.: Federal Home Loan Bank Board, 1986): 8.
5. *Federal Reserve Bulletin* (December, 1985): A39; *Federal Reserve Bulletin* (December, 1986): A39.

# RECENT CHANGES IN INDIVIDUAL INVESTORS' ATTITUDES TOWARD REAL ESTATE

*Investors in 1989 have as much confidence in real estate as they did in 1985, but they are more worried about real estate's risks and its profit expectations.*

by Phillip T. Kolbe and  
Gaylon Greer

Before the ink had dried on the 1986 Tax Reform Act, speculation was rife about its impact on real estate. To be sure, tax changes have not been the principle reasons for the real estate market's transformations during the late 1980s; they have, however, been catalysts for igniting various forces that had been building throughout the 1980s, and they perhaps have been the most disruptive influence on the market. Financing difficulties, overbuilding in many sectors and an influx of foreign investors have made decisive imprints on the real estate market; nevertheless, attention has centered on the reduction of tax incentives for real estate investment and its impact on various forms of ownership entities.<sup>1</sup>

Researchers at Memphis State University have investigated individual investors' reactions to the altered real estate environment. Using the results of a survey conducted by Greer and Farrell in 1985 as a base, the research team conducted a followup study to measure changes in investors' attitudes and practices between 1985 and 1989.<sup>2</sup>

The prior study was developed from a mail survey of a random sample drawn from the 100,000 members of the American Association of Individual Investors (AAII). A parallel survey of the membership was conducted in 1989 to compare individual preferences before and after the transformation in the real estate market.

## Similarity Of The Sample Populations

Demographically, the two sample populations constitute virtual peas in the same pod, a consequence of both having been randomly drawn from the AAI membership roster. Both closely resemble and are statistically representative of the overall AAI membership and, therefore, of the largest identifiable group of individual investors in North America.

Although respondents' ages range from the 20s to the 80s, the median age in each sample is 52. Respondents in each sample are highly educated; more than 80% hold college degrees and nearly 50% have some professional or postgraduate study. Men dominate both samples (over 90%). Slightly more than 25% of each group is retired.

Respondents to both surveys are affluent. Respondents to the most recent survey report slightly higher incomes than those who responded to the 1985 survey; however, the difference is fully explained by the inflation that occurred during the interval between the surveys.

## Who Likes Real Estate Now?

With the recent abundance of bad real estate news, we expected a big drop in the number of investors who own land and rental property. Surprisingly, the proportion of survey respondents who own some investment property remains virtually unchanged: 61%

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of the respondents to the 1985 survey and 62% of the respondents in 1989.

Altered perceptions about real estate's desirability, discussed below, suggest that many investors acquired their property during a period of greater enthusiasm about real estate's potential, and they now wish to reduce or eliminate their real property commitments. Indeed, while the proportion of investors who own some real estate has remained almost constant, the asset now plays a diminished role. The percentage of respondents who dedicate at least half of their portfolios to real estate remains the same in both surveys (25%), but the percentage who say that it is only a minor element of their portfolios is higher in the 1989 survey (28%) than in the 1985 survey (18%).

There is notable positive correlation between educational attainment and the degree of portfolio diversification among investors responding to both surveys; however, the nature of the relationship has changed subtly between 1985 and 1989. In the 1989 survey, individuals who have graduate or professional degrees generally devote less of their wealth to real estate, while those with the least amount of formal education favor the asset. In contrast, the most highly educated investors in the 1985 survey show a marked preference for real estate, along with those who have the least amount of education.

### Altered Perceptions

Views about real estate's risk and yield prospects have shifted significantly. Investors in the 1989 survey in general see real estate as offering more modest yields and as entailing greater risk than those who responded to the earlier survey. They also tend to be more skeptical about prospects for a resurgence of the appreciation trend of the 1970s.

#### Yield Expectations

Real estate yield expectations have become more diverse. Investors who are heavily committed to real estate still feel they are on the right path; however, dissenting voices are growing stronger.

In both surveys, the preponderance of investors who own real estate agree that it produces better returns than other assets do. Moreover, as the percentage of the portfolio dedicated to real estate rises, the level of agreement to this viewpoint increases, until those who have an above average commitment to real estate agree by a five-to-one margin that its yield prospects are bright.

Yet while the heavy real estate investors remain bullish, others are growing increasingly skeptical. Most of the investors who avoided real estate in 1985 have no opinion about its relative yield prospects. Most of these investors in 1989 *disagree* by a two-to-one margin with the thesis that real estate provides better returns than other investments.

#### Risk Perception

Beliefs about risk have shifted even more dramatically. More 1989 survey respondents than 1985 respondents believe real estate entails greater risk than other assets. Investors who previously eschewed real estate agree almost two-to-one that it is more risky

than other investments; the margin of agreement since has grown to three-to-one. Investors who own real estate agree in 1985 by a four-to-one margin that it is *less* risky than other investments; in 1989 they agree by a two-to-one margin that real estate is *more* risky.

Surprisingly, the proportion of investors who agree that real estate is more risky than other investments increases with the degree of commitment to the asset. Those who have a greater-than-average proportion of their portfolios in real estate agree by a three-to-one margin that it is more risky, while those with a below-average commitment to real estate agree with this proposition by only a two-to-one margin.

A more important question, of course, is whether real estate's yield prospects more than compensate for its riskiness. Opinions among real estate investors as a group are about equally divided over this proposition. Among those with a greater-than-average commitment to real estate, however, there is nearly a two-to-one agreement that returns on real estate more than compensate for the risk. Investors who avoid real estate see things differently; they agree even more resoundingly (by a margin of almost three-to-one) that real estate yields *do not* adequately compensate for its risk.

#### Scale Economies

In both surveys, respondents overwhelmingly reject the proposition that better yields accrue to limited partnerships in large projects than to individuals who invest directly in small properties. However, the percentage of respondents who accept this proposition increases slightly (to 13% from 10%) in the most recent survey.

Investors in the two surveys feel approximately the same about real estate's appreciation potential. Those in the most recent survey who own no real estate agree (by a margin of slightly less than two-to-one) that real estate will not begin to increase in value as it did in the 1970s; the margin in the 1985 survey is somewhat *more* than two-to-one. In both surveys, investors who have an above-average commitment to real estate are about equally split on this issue, while those with a less-than-average real estate position agree—each time by only a slim margin—that real estate will not begin to rapidly appreciate.

### Favored Real Estate Assets

Although investors' preferences have shifted since 1985, single-family residential rental units still are the overwhelming favorite in both surveys. Even though personal residences are excluded from this survey category, 49% of the respondents own one or more single-family houses in the 1985 survey and 47% do so in the 1989 survey.

The most dramatic change between 1985 and 1989 is a relative shift in the popularity of limited partnership shares and vacant land. Land is the second most popular real estate asset in 1985, and limited partnership shares are a distant fourth, trailing slightly multifamily residences. Land loses popularity

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## EXHIBIT I

Summary of Key Responses from All Investors (Both with and without Real Estate) in the Survey of Investor Attitudes toward Real Estate Investments

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### Personal Data

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Average Age: 52 years

Sex: Male 90%      Female 10%

Formal education, highest level attained:

Less than high school graduate	0%	College degree (BS/BA)	34%
High school graduate	15%	Graduate degree	50%

Total annual income: (from all sources before deductions and taxes)

\$ 0 to \$19,999	1%	\$ 80,000 to \$ 99,999	14%
\$20,000 to \$39,999	11%	\$100,000 to \$149,999	17%
\$40,000 to \$59,999	23%	\$150,000 to \$199,999	8%
\$60,000 to \$79,999	20%	Over \$200,000	7%

Approximate net worth of estate:

\$ 0 to \$ 20,000	4%	\$200,001 to \$500,000	29%
\$ 20,001 to \$ 50,000	3%	\$500,001 to \$999,999	26%
\$ 50,001 to \$100,000	5%	Over \$1,000,000	20%
\$100,001 to \$200,000	14%		

Retired:      Yes 29%      No 71%

Average number of years before intended retirement: 13

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### Investor Attitudes

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Real estate produces better returns than other investments.

Agree 38%

Disagree 43%

No Opinion 19%

Real estate is less risky than other investments.

Agree 25%

Disagree 60%

No Opinion 15%

Real estate produces returns in excess of those needed to compensate for its risk.

Agree 31%

Disagree 43%

No Opinion 26%

Large real estate ventures (syndications/limited partnerships) produce better returns than small properties

Agree 13%

Disagree 54%

No Opinion 32%

Public real estate offerings produce better returns than direct ownership.

Agree 5%

Disagree 59%

No Opinion 36%

Future changes in federal income tax laws will make real estate a better investment.

Agree 12%

Disagree 49%

No Opinion 39%

Real estate will soon begin to increase in value much as it did in the 1970s.

Agree 31%

Disagree 41%

No Opinion 28%

Seminars that claim to teach individuals how to make a million dollars in real estate can do so.

Agree 5%

Disagree 77%

No Opinion 18%

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by 1989—it drops into a third-place tie with multifamily residential units—and limited partnership shares move to second place.

Slightly less than 25% of real estate investors own some limited partnership shares in 1985; by 1989, the percentage is up to 32%. As in 1985, principal holders are investors who have less than one-fourth of their portfolios devoted to real estate.

Vacant land in particular has lost favor among investors whose portfolios are less than 50% devoted to real estate, but it remains a preferred asset of those who have more than 50% of their portfolios committed to the asset. This is especially true for

those who devote their portfolios *solely* to real estate; 50% of these investors own some vacant land.

There also has been an intriguing shift in the relationship between investors' primary sources of advice and their interest in land. Among those who listen to their accountants, ownership of vacant land has grown significantly. Yet ownership of vacant land has *decreased* by 50% among those who seek advice from real estate appraisers.

Multifamily residential properties are tied with land in the 1989 survey as the third most frequently held real estate asset. Twenty-seven percent of the real estate investors own apartments, up only slightly



## EXHIBIT I (continued)

### Investment Practices

Are you employed in the real estate business?

Yes 6% No 94%

If you are employed in the real estate business, does your employment improve your investment opportunities?

Yes 78% No 22%

Which of the following property categories best represents the nature of your real estate investment activity? (More than one may be selected.)

Do not invest in real estate	38%
Single family residential (houses)	40%
Condominiums/cooperatives	11%
Multifamily residential	18%
Commercial (retail)	10%
Industrial	5%
Office buildings	8%
Land	19%
Retirement/life care centers	1%
Hotel/motels	4%
Public real estate offerings (syndications)	20%

What is the average cost of your typical real estate investment? \$40,248

What is the average current value of all your real estate assets, net of related debt (excluding personal residence)? \$193,072

Are you continually in search of new real estate investments? Yes 13% No 87%

Rank the following benefits of real estate investment in order of their importance to you.

	Primary Importance
Annual cash flow	29%
Increasing property value	55%
High leverage	11%
Tax shelter benefits	24%

Do you employ any of the following as a primary evaluation technique?

Gross income multiplier	8%
Net income multiplier	10%
Before-tax cash return on equity	12%
After-tax cash return on equity	24%
After-tax cash return plus loan repayment expressed as return on equity	10%
Net income return on total investment	26%
Payback period	8%
Internal rate of return	10%
Net present value analysis	8%
Profitability index	5%
Financial management rate of return	4%

From which of the following individuals would you seek help in analyzing real estate investment?

	Always	Sometimes
Real estate brokers	15%	27%
Real estate counselors	3%	18%
Real estate appraisers	17%	29%
Lawyer	15%	24%
Accountant	21%	24%
Banker	9%	22%
Financial Planner	5%	18%

from 25% in 1985. The likelihood that investors will favor multifamily housing increases with the percentage of their portfolios dedicated to real estate, except that just 36% of those who invest *only* in real estate hold any multifamily housing assets.

In commercial real estate, the retail sector is more widely represented among respondents to both surveys than are the office and the industrial sectors, but the inclusion of commercial property of any sort has declined slightly since 1985. Investors with greater-than-average real estate holdings show a strong preference for this sector: nearly one-fourth of these individuals hold some retail rental properties, almost double the percentage of investors who hold either office or industrial properties.

The survey also reveals some interesting geographical variations in asset preferences. Vacant land in 1985 and 1989 is more popular among investors in the South and the Southwest than elsewhere. Mountain-state investors are reducing their relative commitment to all categories of real estate. Multiple-family housing in the 1989 survey is less frequently represented in individual portfolios of investors who reside in Southern, Southwestern and Atlantic areas than it is in the 1985 survey. The Pacific area is the hotbed for multiple-family housing ownership and publicly offered syndication shares.

### Conclusions

Despite the bad press real estate has received since

1985, individual investors retain a high degree of confidence in its investment potential. Virtually the same percentage of survey respondents in 1985 and in 1989 reported that they own some real investment property, although the 1989 group reports substantially more diversification in their investments.

Although most survey respondents believe that real estate remains an attractive investment, investors have become somewhat less optimistic about it. They have increased their assessments of real estate's riskiness and lowered their profit expectations. They continue in 1989 the healthy skepticism they report in 1985 about the prospects of large public syndications, as well as the prospects for real estate to repeat the price spiral of the 1970s.

There have been important shifts in preferred real estate assets since 1985, but residential rental

units remain the runaway favorite, and single-family units continue to be substantially more desirable than multifamily units. Limited partnership shares have gained favor while undeveloped land and commercial property have lost some of their earlier popularity.

#### NOTES

1. See, for example: Hendershott, P.H., Follain, J.R., and Ling, D.C. "Effects on Real Estate," in Pechman, J.A. (ed), *Tax Reform and the U.S. Economy*, (The Brookings Institution (1987): 9-60; Hendershott, P.H. and Ling, D.C., "Likely Impacts of the Administration's Tax Proposals and H.R. 3838," in Follain, J.R. (ed), *Tax Reform and Real Estate*, (The Urban Institute 1986): 87-112; Lentz, G.H. and Fisher, J.D., "Tax Reform and Organizational Forms for Holding Investment Real Estate: Corporation vs. Partnership," *AREUEA Journal* (17:3, 1989): 314-337.
2. Greer, G. and Farrell, M., "Individual Investor's Attitudes Toward Real Estate," *Real Estate Review* (17:3 1987): 101-104.

# INTERESTED BYSTANDERS: THE REAL ESTATE PRO- FESSION AND BEHEMOTH PUBLIC WORKS PROJECTS

*The private real estate sector has been frozen out of gigantic new public works projects in Boston largely because of the lack of communication between big government and the real estate community.*

by Frank J. Parker, CRE

## A City On A Hill

**F**or three years after his arrival in the new world in 1622 until the autumn of 1630, Boston's first white settler, Reverend William Blaxton lived in solitary peace on Beacon Hill, a mere stone's throw from today's state capital building. When the Massachusetts Bay Colony residents began arriving and settling down, no doubt the Reverend Mr. Blaxton muttered to himself: "When is all this infernal construction going to stop?" Thirty-six decades later, residents of Boston, the home city of both Reverend Blaxton and this author, still are asking the same question.

*"And this is good old Boston  
The home of the bean and the cod  
Where the Lowells talk only to Cabots  
And the Cabots talk only to God."  
—John Collins Bossidy*

Since Bossidy wrote this couplet in 1910, the situation in Boston has changed little, if at all. In the current scenario, the generic entity described as "big government" (including federal, state and city) could be assigned the role of the Cabots. The real estate profession could play the role of the Lowells. God would make a return appearance in His original role. As always, the Cabots would be talking only to God, and the Lowells would be ignored by their earthly Cabot counterparts. Their state of diplomatic relations with God would remain unknown.

A chasm in communications between big government and a local real estate community is always serious, but it can be devastating if it persists after the local economy has fallen through the floor. In the glorious "home of the bean and the cod," the decade-long economic miracle that saw the gross product in the Commonwealth of Massachusetts grow at an average annual rate 33% higher than the national average has ended. Unfortunately, the Commonwealth's economic wheels have ground to a halt just as its public sector has geared up to start making more than \$12 billion in structural improvements to Boston's highway, tunnel and sewer systems. If the new construction does not take place—or, even worse, if it is halted midway through—the long-term adverse effects on real estate markets in the Commonwealth will be severe. Best estimates indicate that despite the bonanza in jobs that would be engendered by these public works projects, the Commonwealth's projected revenue shortfalls will approach \$2 billion a year for the foreseeable future.

Such mammoth public sector extravaganzas tend to plow ahead like some ancient brontosaurus. In its presence, local, private real estate professionals feel, at best, like bewildered bystanders and, at worst, like fresh food for the onrushing monster. This article

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discusses the coming surge in public works projects for Greater Boston and the difficulties in bringing them to fruition. The article also describes the internecine warfare in the public sector and the public sector's failure to include the private sector, especially the real estate community, as an active partner in these most important enterprises. Although the problems identified here may be worse in Boston than in other parts of the country because of the scope and costs of the projects involved, similar problems undoubtedly arise elsewhere.

### Artery-Tunnel Project

Automobile traffic in and through the center of the City of Boston has reached crisis proportions. The main thoroughfare, the Central Artery, is an elevated highway that was built at the end of the 1950s and was designed to carry 75,000 automobiles a day. At present, best estimates indicate an average of 200,000 automobiles clog this road system daily. Doomsday predictions of 14-hour-a-day traffic tie-ups by the start of the next century with a resulting loss in productivity of \$2 billion annually to area businesses have terrified the local business community. In response, state and city officials have announced a massive road and tunnel construction project that is intended to ease some of downtown Boston's staggering traffic congestion, drastically improve access to its international airport across the Charles River and double the capacity of both north-south and east-west automobile traffic.

The disruption to downtown Boston from this construction project is almost beyond conception. The seven-mile long project has as its focal point the replacement of the major elevated north-south thoroughfare, the Central Artery, with a new ten-lane roadway, mostly underground. The major east-west thoroughfare, the Massachusetts Turnpike Extension, will be lengthened via a new road and a new four-lane harbor tunnel which hopefully will relieve some of the current pressure on the two antiquated tunnels that serve Logan Airport. There are fears that the reduction in north-south expressway travel lanes during construction will cause traffic to back up onto city streets and stop practically all circulation of automobiles.

Another concern is the fear of disease. Because a large part of the city was built by artificial accretion from the soil in Boston Harbor, there is an enormous rodent population. A recent attempt to build a small parking garage on Beacon Hill dislodged and spilled so many distinctly unhappy four-legged creatures onto adjacent streets and into neighboring buildings that the mind absolutely boggles at what will occur when the digging begins for the Central Artery submersion and the third harbor tunnel— notwithstanding assurances by the contractors that they have hired the world's leading rodent control specialists to solve the problem.

In addition, there is great fear that the substructure of the city will not be able to handle the strains of the digging. Since absolutely everything underground in the central city area will be touched during construction, the possibilities for destruction—

even catastrophe—are present. "Can't happen, here!", roar city and state officials in reply. "We have hired a geotechnical engineer, an architectural historian and a structural engineer to protect ourselves." Perhaps these assurances of safety will prevail, perhaps not. The results won't be pretty, however, if damage does occur to historic landmarks that will be disturbed—the 1711 Old State House, 1825 Faneuil Markets and the 1750s Blackstone Buildings.

What will it all cost? More and more, the answer seems to be: Who knows? State officials who are not known for exaggerated cost estimates of public works projects have increased the final anticipated cost of the artery tunnel project from \$3.3 billion at the project's commencement to \$4.43 billion in 1987 and \$4.97 billion in July 1990. Additional upward cost revisions appear inevitable.

There also is concern that the federal government may reduce its funding commitment to the Greater Boston road and tunnel system before the project is completed. The Federal Highway Trust Fund is the major source of federal monies for roadway projects.

However, until now, the federal government has committed itself to only \$2.3 billion of the project's expenses. Although the election of Republican William Weld as Governor of Massachusetts may elicit a cooperative attitude from Washington, the national budget crisis almost certainly will restrict the overall federal subsidy that will be available. As the project's costs continue to rise, doubts are increasing about how deeply into the Highway Trust Fund the Bush Administration will dig to assist the Commonwealth of Massachusetts.

To make matters worse, downtown Boston's bridge and tunnel project is not the only roadway expenditure facing the Commonwealth of Massachusetts at present. An additional \$15 billion must be found to perform needed repairs elsewhere. It is questionable whether the financially hard-pressed Commonwealth will be able to carry its share of the Central Artery—Third Harbor Tunnel project, which totals 10% of the final accounting plus the amount the federal government refuses to pay, as well as its share of the cost of these other repairs.

During June 1990, the long-awaited plan for the Central Artery and the Third Harbor Tunnel was released for public comment by the Massachusetts Department of Public Works. The report on the project's environmental impact was three years late. It encompassed nine volumes of material in 2,500 pages, weighed 40 pounds, was eight times larger than the telephone white pages for the City of Boston, and cost the Commonwealth of Massachusetts \$10 million to prepare. Nevertheless, the one and only public hearing on the plan was scheduled one week after the report's release.

Heavy criticism has been directed at many of the plan's proposals, including the proposal to place most of the 13.5 million cubic yards of fill generated by digging in the central city on Spectacle Island, the 97-acre eyesore in the middle of Boston Harbor. In the end, it is hoped that a 227-acre public park



will be sculpted from the deposited rubble. Can this proposal work? The federal Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers are highly skeptical. Both possess veto power and both want on-land fill site alternatives.

Criticism also has been expressed by the Sierra Club, which has gone to court to demand that the EPA investigate and grant air quality permits for seven ventilation towers planned for use during construction. The National Association of Railroad Passengers and the ever-active Sierra Club are asking U.S. Transportation Department officials to require a full study of adding a North Station to the South Station rail line before digging can begin. East Boston residents want the toll plaza removed from their neighborhood. In addition, the Army Corps of Engineers is rethinking whether a 40-foot deep tunnel is adequate in light of the accident of January 1, 1990 in which the Turkish oil tanker *Gebze* struck bottom in 42.9 feet of water in Boston Harbor. All in all, \$4.97 billion may be just the initial, not the final, cost of the artery-tunnel project.

### The Scheme Z Fiasco

All other complaints about the proposal put together pale in comparison to the uproar created by Scheme Z. To quote the distinguished architecture critic of *The Boston Globe*, Robert Campbell, the new Central Artery will be "a grotesque monstrosity" because a major part of the new roadway will be a 125-foot high, 300-foot wide, 13- to 18-lane wide bridge over the Charles River rather than a tunnel under the Charles River.

The usually positive and reserved critic was ex-coriating in his criticism: "There is something truly nutty about all of this. The whole point of The Central Artery project is to get rid of the overhead expressway in Boston in order to connect the city to its waterfront. What is the point of replacing one overhead highway with an even bigger one somewhere else? It is as if we were witnessing some perverse law of physics. If you push the artery down in one location, an equal and opposite mass will pop up somewhere else."

The EPA, the main permit-granting hurdle for the Artery-Tunnel Project, agreed with Campbell. The agency termed this Charles Bridge design to be "the ugliest single structure in New England." A host of groups threaten to sue and thus block the Scheme Z part of the plan. Among the dissenters are the Cambridge Conservation Commission, the Charles River Watershed Association, the Cambridge Citizens for Liveable Neighbors, Citizens for a Liveable Charlestown and, as always, the Sierra Club. The Weld Administration has promised a close review of Scheme Z.

### MWRA Boston Harbor Cleanup

Even worse from the Greater Boston area's perspective, is that the problems do not stop at the shoreline. Temporally contemporaneous with the \$4.97 billion Central Artery-Third Harbor Tunnel project is the need for a federally mandated secondary water treatment cleanup of Boston Harbor. Anyone who

saw President Bush's 1988 campaign commercial knows that Boston Harbor has the highest levels of toxic metals and polychlorinated biphenyls found in any American body of water. The fiscal damage from this cleanup is estimated at \$7.0 billion, up from an earlier quotation of \$6.6 billion. But here, no convenient sugar daddy such as the Federal Highway Trust Fund stands on the horizon to cushion the financial shock of the cleanup at the local level.

The 60 Eastern and Central Massachusetts communities that make up the local Massachusetts Water Resources Authority (MWRA) must foot the lion's share of the bill for the harbor cleanup—over 90% of the cost at current estimates. Water rates in the district have more than tripled since 1985, reaching an average assessment of \$377 per ratepayer for fiscal year 1991. By the time the cleanup is scheduled to end in 1999, it is estimated that these rates will more than triple and reach an average yearly payment of \$1,200 per ratepayer.

The scope of the cleanup is daunting: There are 5,300 miles of collection pipes under the control of 43 local governments; 228 miles of larger pipes held region-wide; tens of thousands of lateral connections in private ownership; over 100 governmental agencies with competing or overlapping interests.

From day one, every move of the MWRA has been subjected to public scrutiny, often to withering criticism. Public objection has ranged from the trivial (MWRA paid to have its automobiles washed; MWRA paid for coffee for its employees on break and, worse yet, for an employee Christmas party) to the deadly serious backed by the threat of time and money-consuming lawsuits. MWRA is criticized for its decision to build a \$52.6 million office headquarters in Roxbury, rather than take over facilities in an abandoned shipyard in one of the smaller cities in the district and an equally contested decision is criticized of awarding work only to contractors that employ union labor—an act that the Associated Builders and Contractors of Massachusetts, which represents 750 non-union and semi-union contractors, vowed to challenge in court.

Controversy also has arisen involving the proposed locations for 15 sewerage overflow facilities, of which a number need to be placed in the middle of the City of Boston. A MWRA memorandum best sums up the problem: "Potential impacts include the permanent loss of the 1/4 to 1/2 acre site for any development purposes, periodic truck traffic to remove debris, increased noise from the heavy equipment and cleaning operations, possibly inadequately controlled sewerage odors—existing control systems often malfunction—and undesirable ascetic impacts—concrete work pads and shaft covers—although the remainder of the site could be covered with grass or other landscaping; all of which would adversely affect property values and the marketability of the development."

The disputes described here cannot begin to equal in contentiousness the furor that has surrounded the placement of the sewage by-products landfill. The chosen site will be the principal depository for grit,

twigs, non-treatable plastics and a secondary landfill for sludge products if the MWRA plan to turn harbor sewage into commercially salable fertilizer pellets should fail. The towns that may be selected as landfill sites have thrown tantrums of monumental proportions. As a result, the Commonwealth's executive and legislative branches have avoided making a decision. A thoroughly frustrated U.S. District Court judge set a date at which time he will select the landfill site and order condemnatory proceedings if the legislature avoids its constitutional obligation to do so.

### **The Regulatory Overlay**

The public sector planning and supervision that engulf the artery-tunnel and harbor cleanup projects share a symbiotic relationship with standard environmental and zoning restrictions found in Boston and practically any other large city. This joining together of dissimilar organisms seems to strengthen the regulatory mass as a whole and create a construction environment that is bewildering in complexity, massive and uncertain in cost and forbidding in risk. Zoning and linkage are problems that real estate professionals expect in any major new undertaking. Increasingly, however, solid waste removal, clean air mandates and design review regulations—to name but three important complications that mount continually in Boston—are making the artery-tunnel and harbor cleanup even more daunting than would otherwise be the case. The overall result is that large investors are saying there must be easier places than Boston in which to build, and they are beginning to look elsewhere.

#### *Solid Waste Removal*

Recently a solid waste master plan set up a 46% of total recycling goal that would ban in Massachusetts the burial or burning of certain recyclables during a ten-year period. Many were skeptical of the viability and cost of this project. As if to agree, the Commonwealth simultaneously went ahead with the building of one new large incinerator plant and with plans to expand greatly the capacity of one already existing. Opponents were quick to point out that the private sector company most involved in evaluating and constructing the incinerator plants was heavily staffed with former employees of a number of state environmental agencies. Because of the potential for conflict of interest lawsuits in addition to the litigation that almost inevitably occurs in connection with selecting a site for an environmental treatment plant, the possibility of major disruptions in any construction project in Greater Boston is likely.

#### *Clean Air Mandates*

With no intention of giving air quality problems a back seat to problems concerning solid waste removal, tunnels, roads and water, Massachusetts has set about implementing draconian standards for cutting smog-causing car emissions. This crusade is being led by state environmental regulators whose zeal to cleanse the air in the Commonwealth has reached a fever pitch that perhaps has not been experienced in these parts since Increase Mather and his Protestant clergy brethren were intent upon

cleansing sin from the moral environment of 17th century Massachusetts Bay Colony. Recently regulators announced plans to force a 25% to 40% reduction in carbon monoxide, nitrogen oxides and hydrocarbon emissions from the Commonwealth's four million motor vehicles.

It is probable that the private sector will go along with the proposal to install air pollution prevention devices, which are estimated to increase the cost of new automobiles by an average of \$150 apiece. However, storm clouds are on the horizon. The Massachusetts regulations were announced as part of an eight-state regional pact called Northeast States for Coordinated Air Use Management (NESCAUM). This association of public sector regulators is allied closely with a number of non-profit sector environmental protection groups. As a result, an overall environmentally driven regulatory climate seems to be feeding upon itself and operating almost without reference either to the legislative process or the wishes of the electorate.

Referring to NESCAUM, the Massachusetts Environmental Affairs Secretary in the Dukakis Administration, John DeVillars, stated: "We can do this without legislation. But it is part of a belt and suspenders approach." Such an attitude leads almost inevitably to comments such as the following which were made by a Boston environmental attorney applauding the NESCAUM actions. "Absent of a national program, a regional program is the most effective way of battling the clean air problems facing the Northeast. We would be thrilled by regional action to move forward to adopt California's emissions program. Unfortunately, the federal government is gridlocked and it is up to states like Massachusetts to take the lead. Hopefully today's actions will send a strong message to the White House: President Bush, wake up and smell the ozone!"

#### *Design Review Regulations*

A similar regulatory evangelism permeates the enabling legislation for the Boston Civic Design Commission, an eleven-member group of citizens, at least six of whom must be architects, landscape architects or urban designers. They are appointed by the mayor to review the design (including the environmental impacts) of large-scale and other significant public and private projects within the city limits.

The scope of control that the City of Boston abrogates through the agency of the volunteer Boston Civic Design Commission is truly staggering. In the purpose clause of the legislation, the role of this supervisory group is clearly, if grammatically incorrectly, delineated: "By assisting and advising the city in the design review of projects that affect the public realm, the Design Commission will provide a forum for the general public and the professional design community to actively participate in the shaping of the city's physical form and natural environment."

A number of real estate professionals view this new commission with unabashed concern because the stakes are very high. This design group will be charged with making recommendations to the Boston

Redevelopment Authority about the usage of the 30 acres of prime downtown Boston real estate that will become available when the Central Artery is submerged. Its opinion on air rights usage is similarly crucial. In fact, every major new project for Boston must pass its muster.

The legislation creating the Boston Civic Design Commission is so vague that it is not clear whether the commission's disapproval has the legal weight of a veto or acts merely as a recommendation to the Boston Redevelopment Authority. In either case, it seems safe to say that, when private sector architects and planners receive from a municipality the authority to influence the viability of their competitors' private sector projects, they are given power and control that is subject to abuse. After four years of dispute as to whether there were insoluble conflicts of interest inherent in serving on this commission, the state legislature exempted commission members from state laws on the subject. However, this exemption may not sufficiently shield commission members from civil lawsuits for interference with contracts.

The Boston Civic Design Commission continues the public sector's trend toward seeking advice from financially uninvolved members of the private sector who have a special interest agenda that may be radically different from the agenda of the general public or of those in the private sector who are willing to risk their own capital to construct projects. To the multi-layers of public sector regulators and neighborhood groups that influence the major projects that can be built, to their cost and rent now must be added architects, landscape architects, planners, profit-making environmental design and cleanup firms and public-interest environmental lawyers general tendency to supervise, supervise, supervise before any major project can be started.

No wonder one major developer, frustrated to the breaking point as his stalled project headed toward foreclosure, felt compelled to state in a local newspaper: "Basically the city and state were too greedy. The bureaucratic process, both on the local level and the state level, is out of control in Boston. There is no question that abuse of developers is taking place. Architects and consultants costing \$100 an hour are required to spend numerous meetings with Boston Redevelopment Authority staff while the developer spends \$10,000 a day or more on interest payments waiting for development permits. Here we have people crawling around on the street for food and shelter while hundreds of thousands of dollars are being frittered away to banks on interest charges. All that money could have gone somewhere else. We waste millions of dollars redesigning the minutest detail while the Boston Redevelopment Authority is picking apart a design. Meanwhile homeless people are picking around in the street for lunch. It is sick!"

### Bringing The Sectors Together

The 19th century British historian, Lord Thomas Babington Macaulay, is attributed with promulgating the concept of the public weal and capturing in

essence the sound, healthy prosperous state of well-being in the nation. At present, in Boston few people would speak with great enthusiasm about a state of well-being as the private sector real estate community wrestles to represent its concerns in the middle of public sector real estate squabbles.

The real estate community is a diverse entity. Unlike medicine, law, insurance, theater, physics and numerous other fully matured professions, real estate is not integrated. While members of mature professions perform roughly the same tasks, those who concentrate in real estate perform many different professional tasks, including legal, brokerage, appraisal, engineering, architecture, planning, marketing, banking and public relation functions. As a result, it is more difficult for the real estate community to band together as an entity and speak than it is for other professions.

If the Commonwealth of Massachusetts had undertaken sweeping changes in areas directly affecting law or medicine, for example, these professional groups would band together to make certain that the public sector understood, appreciated and took into account their opinion on proposed changes. Due to the lack of homogeneity of the discipline, such is not the case in real estate.

The public sector predilection to go it alone in real estate ventures is to some degree understandable, even though when it acts independently, the public sector, whether it is national, regional or local, is not capable of addressing all of the ventures' problems. In fairness to the public sector, so many disciplines are affected by its real estate-based decisions that locating proper forums for the expression of interested private sector commentary is difficult. Perhaps here is an agenda for the real estate counselors as a national, regional and local organization. Real estate counselors are broad-based enough to represent all facets of the private sector real estate industry in general discussions with the public sector and its public interest supporters. Their membership also is sufficiently prestigious to act as mediators in disputes between public sector factions that are engaged in real estate-related regulation. The task is daunting but so are the difficulties all public and private sector participants are trying to solve. It is time to begin.

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# GROWTH MANAGEMENT AND THE CONCEPT OF CONCURRENCY: FLORIDA'S EXPERIENCE

*Florida's experimentation with an innovative form of land use planning regulation is intended to bring the level of service (LOS) of public facilities in line with new real estate development.*

by H. Glenn Boggs, II and  
Robert C. Apgar

**"I**t was the best of times, it was the worst of times. . . ." Charles Dickens' observation concerning the state of revolutionary France in the late 19th century may be applied to the problems of managing growth in Florida at the close of the 20th century.<sup>1</sup> Florida's quick, massive growth has produced the best of times for business and the economy but the worst of times in recent memory for the environment.

Florida's problems in managing growth are due to a profound tension between two generally laudable goals. Most citizens enjoy the benefits of business and economic growth—job production, real estate price appreciation and fiscal prosperity—but many citizens openly advocate continued growth. Some residents are voicing concerns about the dangers of business and economic growth to the pure water and natural environment that ensure the tranquil conditions in which they wish to live. They are advocating slower, more regulated growth. The pro-growth advocates often complain that environmental restrictions will stifle growth and ruin the economy, while environmentalists insist that continued growth at the current pace will destroy the quality of life that fosters economic development.

No doubt most members of the general public want *both* a job in a robust economy and a clean, pleasant environment in which to live and work. Inevitably, public policy in this area demands compromise and balance. The Sunshine State appears to be on the cutting edge of experimentation with growth-related public policy. This article discusses Florida's attempt to achieve an equitable public policy that will bring economic growth into balance with the state's ability to absorb new development.

## The Background

Florida's growth and the problems it has created are widely known. Florida is one of the fastest growing states in the nation.<sup>2</sup> However, while its total population has increased rapidly, the percentage of the population living in central cities has declined. In its final report published in June, 1989, the Governor's Task Force on Urban Growth Patterns reported that the rate of population growth in 17 of Florida's 21 metropolitan areas greatly exceeded the rate of growth in the central cities. The city of Orlando, for example, grew by 61% between 1970 and 1988, but the surrounding metropolitan area grew by 117%. The task force reported that the number of counties that are part of metropolitan areas increased from 12 in 1970 to 32 in 1989. The task force

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concluded that this growth trend "is indicative of the urban development pattern known as urban sprawl—scattered, unplanned, low density development that is not functionally related to adjacent land uses—a development pattern that has come to characterize Florida in the minds of many."<sup>3</sup> Although this trend is not limited to Florida, it does reflect the expectation of most new residents of the state: that they will find homes in low density urban settings that preserve green space, beaches, clean water and areas of natural beauty.

While rapid growth takes place, Florida's state and local governments are struggling to fashion an effective statewide growth management program. These efforts have followed two major directions: First, Florida implemented a number of environmental-permitting programs that were designed to protect the fragile natural environment. State statutes and regulations were instituted to protect wetlands, air quality and stormwater discharge, to name but a few. Second, in 1974 the Florida legislature adopted the Local Government Comprehensive Planning Act which required each local government to devise a comprehensive plan for controlling and directing growth.

It became clear in the early 1980s that local comprehensive plans in Florida were, except in a few instances, wholly inadequate for controlling private sector development. In 1985, the legislature made major amendments to the planning act, including detailed requirements for the scope and content of local plans and a requirement that each local government submit its completed comprehensive plan to the state for review and approval.<sup>4</sup> This process is underway and will be completed in 1991, and local governments' continued eligibility for certain state funds will depend on successful completion of state review.

The most controversial addition to the planning act is a provision requiring local governments to ensure that necessary public facilities would be made available *concurrent* with the impacts of new development. This requirement is known as the "concurrency standard" or simply as "concurrency," and it is new in Florida law and in the nation. An analysis of Florida concurrency law is the centerpiece of this discussion.

The concept of concurrency is deceptively simple. It is expressed in the statute as follows:

It is the intent of the Legislature that public facilities and services needed to support development shall be available concurrent with the impacts of such development.<sup>5</sup>

Concurrency has been described as the "teeth" of Florida's new planning and growth management laws.<sup>6</sup> Concurrency is the only element of the Planning Act that requires local governments to control the timing, as well as the location and physical layout, of development.

To implement this concept, the Planning Act requires each local government in Florida to include in its comprehensive plan a capital improvements

element with:

Standards to ensure the availability of public facilities and the adequacy of those facilities including acceptable levels of service.<sup>7</sup>

Finally, and most importantly, the act mandates that Florida's local governments review every proposed development and ensure that public facilities will not be degraded below an established level of service of public facilities, commonly abbreviated as LOS, before they issue a development order:

Not later than one year after its due date. . . a local government shall not issue a development order or permit which results in a reduction in the *level of services* for the affected public facilities below the level of services provided in the comprehensive plan of the local government. (Emphasis added.)<sup>8</sup>

Because of this legislation, the level of services (LOS), has become Florida's newest land use regulatory standard. LOS joins zoning, subdivision regulation, building codes and environmental performance standards in the local regulation arsenal. However, it differs fundamentally from these other regulations in that it concerns primarily the timing of development.

### Administrative Policy

Initially, the concurrency concept was met by strong opposition from the private sector because of the fear that concurrency would be applied in a draconian fashion and would bring growth in Florida to a screeching halt. Probably, development interests throughout the nation harbored the same fear. Early in the implementation process, however, Thomas G. Pelham, Florida's Secretary of the Department of Community Affairs, emphasized that concurrency would be applied "with common sense in a reasonable and flexible manner. . . ." In a letter to Florida State Senator Gwen Margolis of North Miami Beach, Secretary Pelham stated that "taking an unreasonable and inflexible approach would, in my opinion, result in a very quick collapse of our new comprehensive planning process."

In the same letter, Secretary Pelham indicated that the state intended to provide local governments with a means of avoiding involuntary moratoria because of existing over-capacity. He recognized that in many places in Florida public facilities did not meet a minimum LOS even for existing development. He therefore proposed that the Department of Community Affairs would allow local governments to proceed as if they had an under-capacity, as long as existing facilities did not threaten public health or safety and the local government developed and implemented a realistic plan for bringing the LOS within an acceptable range in a reasonable period of time.<sup>9</sup>

### Florida Administrative Code

The Department of Community Affairs has interpreted the concurrency requirement as an administrative rule that requires local governments to adopt LOS standards for six public facilities or services: roads, potable water, sanitary systems and sewers,

solid waste disposal, drainage, parks and recreation. A standard for mass transit also must be adopted if the population governed by a local government exceeds 500,000.<sup>10</sup> The LOS standards must be adequate to meet the public's basic needs, and they must be realistic. If a facility currently does not meet the adopted LOS, the local government must have a plan to achieve the LOS by a certain time.

The primary focus of this administrative rule is to set minimum standards for local governmental review of proposed developments. For example, for potable water, sewer, solid waste disposal and drainage, the local government may issue a development permit only if:

1. The necessary facilities are in place;
2. The permit is conditional on the facilities being in place when development impacts occur;
3. The necessary facilities are under construction; or
4. The necessary facilities are guaranteed in an enforceable development agreement.<sup>10</sup>

The standard for parks and recreation facilities is more liberal. Development is allowed if the construction of parks and recreation facilities is scheduled to begin within one year of the date of issuance of a development permit, pursuant to an executed contract or an enforceable development agreement.<sup>11</sup>

The local government is granted the most latitude for the construction of roads and mass transit. In addition to the situations described above, improvements may be planned if they are included in the first three years of the Florida Department of Transportation five-year work program or if they are included in local capital improvements that meet financial feasibility requirements.<sup>12</sup>

Interestingly, the rule contains no guidance or requirements for developing or applying LOS standards; it simply states that "the local government must develop guidelines."<sup>13</sup> The state thus allows wide divergence among local governments, which is a major concern in the area of transportation. The only available models for local governments are the sophisticated computer modeling methodologies developed to study developments of regional impact and major developments subject to state and regional review under Florida statutes.

However, these methodologies are undesirable for an entire jurisdiction. They focus on one project at a time and typically analyze every roadway link and intersection for which a project is predicted to contribute more than 10% of a specified LOS capacity. Some jurisdictions carry the analysis to a 5% impact. These methodologies require local governments to analyze every project in their jurisdiction and may lead local governments to deny permits for minor impacts on unimportant roadway links or intersections where no improvements are scheduled or desired. To address this problem, several jurisdictions have proposed newer models that allow impacts to be averaged over a transportation corridor or district. The Department of Community Affairs appears to be close to approving an averaging

approach in at least one county, and it seems inevitable that some averaging method will be accepted to replace the facility-by-facility techniques.

As may be expected, a major and continuing dispute regarding transportation LOS revolves around the competing priorities of state and local governments over the state road system. The 1985 planning act was unclear about who would establish the LOS on the state road system. The state insisted on higher LOS, arguing that it must maintain an efficient intrastate system despite the existing congestion on many state highways. Local governments feared that enforcing the state standards would drastically curtail development that would impact state roads. To resolve this dispute, the Department of Community Affairs amended its rules to allow local governments to set the LOS on all public facilities within their jurisdiction,<sup>14</sup> but it requires the local government to consider and meet the Department of Transportation's LOS standard "to the maximum extent feasible as determined by the local government. . ."<sup>15</sup> Later, the Department of Community Affairs announced a new policy:

"...when a state road is operating below the acceptable LOS, the local government must plan for improvements or plan to meet the need on a parallel corridor. The local government must also prevent further degradation in service on the road. In other words, if a local government makes land use decisions that adversely impact LOS on a state road, the local government must take responsibility for making the needed improvements."<sup>16</sup>

This dispute is ongoing.<sup>17</sup>

### Local Concurrency Management Systems

Florida's concurrency rule requires each local government to establish a "concurrency management system." Simply stated, a concurrency management system is an accounting system through which the local government measures the capacity that is available in each affected public facility, subtracts the capacity that is committed to vested or approved projects and derives the remaining capacity, if any, that is available for new projects. The local government then establishes a permitting process for evaluating the impacts of proposed development and making commitments to service capacity. The concurrency rule requires that:

The latest point in the application process for the determination of concurrency is prior to the approval of an application for a development order or permit which contains a specific plan for development, including the densities and intensities of development.<sup>18</sup>

In some circumstances, the local government may include the capacity on public improvements that are under construction or under contract to begin construction or on improvements that are guaranteed by an enforceable development agreement between a developer and the local government.

The jurisdictions that have adopted concurrency regulations typically create a concurrency "certificate" or similar permit. They issue the certificate



based upon a determination of available capacity and guarantee that the necessary capacity will be reserved for the developer's project for periods that may vary from six months to two years.

Experience has shown that the transportation LOS is the most problematic. Florida is experiencing a major backlog of transportation improvements. In many places, the strict application of concurrency regulations would make it impossible to obtain a development permit. The Department of Community Affairs allows local jurisdictions some flexibility in these cases. For example, if a jurisdiction has a funded capital improvements plan that will improve the LOS on a road to an acceptable degree, it may allow additional development that will not add more than 10% of the existing traffic load. Alternatively, the local government may set a "two-tier" LOS: a temporary lower LOS followed by a higher LOS to be achieved at a certain date. Although each jurisdiction is required to meet the minimum standards of the concurrency rule, the ordinances may be more restrictive.<sup>19</sup>

### How Will Florida Courts Respond?

At the time of this writing, no Florida court has ruled on a challenge to the concurrency regulation in general or to any specific LOS standard. Accordingly, a discussion of this issue will necessarily involve an attempt to anticipate future judicial decisions that will resolve controversies in this area and construe applicable statutes, administrative rules and ordinances.

First, however, it is desirable to describe the judicial climate that exists in this area of law, since current decisions and prevailing judicial philosophy undoubtedly will influence future judicial determinations. Perhaps the vanguard case that illustrates the present judicial climate in the area of planned growth management is *Golden v. Planning Board of Town of Ramapo* which was decided in 1977 by the New York state courts.<sup>20</sup>

In *Golden v. Town of Ramapo*, zoning requirements prohibited specified development activities until municipal services were available to accommodate the new growth. The town had an 18-year capital plan to provide the services.<sup>21</sup> In considering the constitutionality of a planned growth system like this, the court said:

In sum, where it is clear that the existing physical and financial resources of the community are inadequate to furnish the essential services and facilities which a substantial increase in population requires, there is a rational basis for "phased growth" and hence, the challenged ordinance is not violative of the Federal and State Constitution.<sup>22</sup>

Before leaving the discussion of *Golden v. Town of Ramapo*, a word of caution should be sounded regarding judicial approval of local planned growth systems. It must be clear to the reviewing courts that a local government's motive for adopting this type of regulation does not stem from a desire to exclude low income or minority citizens from taking

up residence in the community. Instead, planned growth ordinances need to be based on reasonable criteria which provide the capital improvements that are required to serve new residents in an orderly and economically feasible manner.<sup>23</sup>

In addition to challenges of planned growth ordinances from low income groups or minorities, property owners who are dissatisfied by governmental rejection of their development or construction plans also are prone to legally attack ordinances of this type. Of course, the Fifth Amendment to the U.S. Constitution requires the government to pay property owners "just compensation" before taking their private property for a public purpose. However, if the government only regulates the use of property, has it actually taken property and brought Fifth Amendment principles into play? This question, known as "taking issue," is one of the thorniest problems in the area of land use regulation.

One cardinal principle was laid down by the U.S. Supreme Court in 1922 in *Pennsylvania Coal Company v. Mahon*. In an often-quoted opinion, Justice Oliver W. Holmes announced the court's ruling as follows:

The general rule at least is, that while property may be regulated to a certain extent, if the regulation goes too far it will be recognized as a taking.<sup>24</sup>

Earlier in the opinion, he also wrote:

Government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law. As long recognized, some values are enjoyed under an implied limitation and must yield to the police power.<sup>25</sup>

The problem for property owners and for persons analyzing the Florida concurrency requirements is how to decide when regulations that adversely affect property go "too far" and amount to a taking. In recent years, two U.S. Supreme Court cases have shed more light on this question. The first was *Agins v. City of Tiburon* in which the court said:

The application of a general zoning law to particular property effects a taking if the ordinance does not substantially advance legitimate state interests, . . . or denies an owner economically viable use of his land. . . . The determination that government action constitutes a taking is, in essence, a determination that the public at large, rather than a single owner, must bear the burden of an exercise of state power in the public interest.<sup>26</sup>

More recently in 1987, the U.S. Supreme Court approved the *Agins* principles while deciding *Keystone Bituminous Coal Association v. DeBenedictus*.<sup>27</sup> Indeed, the court probably elevated the stature of the *Agins* rationale by stating (when referring to *Agins*):

The two factors that the Court considered relevant, have become *integral parts of our taking analysis*. We have held that land use regulation can effect a taking if it "does not substantially advance legitimate state interests, . . . or denies an



owner economically viable use of his land." (Emphasis added.)<sup>28</sup>

Therefore, Florida courts would be obliged to rule in favor of an aggrieved landowner when and if the challenged regulation was found to "...not substantially advance legitimate state interests, ...or denies an owner economically viable use of his land." The U.S. Supreme Court also has ruled that even when a "taking" by regulatory action is temporary, the state must pay just compensation to the property owner for the period of time that the offending regulation was in effect. This decision was reached in 1987 in *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles*.<sup>29</sup> In this case, the court assumed (because of the procedural posture of the case) that the regulation in question denied the plaintiff "all use" of the property. Under these circumstances, if they proved to be true, the court held that compensation would be required for the period of time the land was over-regulated, even if the regulation was subsequently diminished by repeal or amendment.<sup>30</sup>

If and when challenges to concurrency requirements reach the Florida state courts, the U.S. constitutional principles just described should provide protection for property owners. Much latitude for state court decision-making will still exist regarding the procedures for implementing concurrency (without offending federal requirements) and for deciding whether protections for landowners, in addition to those required under federal law, will be erected in keeping with the state's constitution, statutes, ordinances and administrative regulations.

Hints about what to expect from the courts can be gleaned from decisions that have resolved disputes concerning local governments' adoption of comprehensive plans and zoning decisions. For example, in the 1990 decision of *J. T. Glisson v. Alachua County*, the Florida First District Court of Appeals was called upon to resolve property owners' claims that the Alachua County Comprehensive Plan illegally deprived them of rights to use and develop their property. Citing a number of cases, including *Agins v. City of Tiburon*, the court decided that:

To succeed in a regulatory taking claim, a property owner must demonstrate (1) that a regulation is unreasonable or arbitrary, or (2) that it denies a substantial portion of the beneficial use of the property. . .

A police power regulation is not invalid simply because it denies the highest and best use of the property, . . . or because it dramatically diminishes the value of the property. . .

Rather, "[i]f the regulation is a valid exercise of the police power, it is not a taking if a reasonable use of the property remains."<sup>31</sup>

If the logic developed by the First District Court in *Glisson v. Alachua County* is applied to concurrency disputes, it leaves local governments with a wide range of concurrency implementation options which would probably survive an attack based on a regulatory taking argument. For example, if an owner's request for an intensive development is

denied on concurrency grounds but the local regulation is neither unreasonable nor arbitrary and if the local authorities are prepared to permit some less intensive use of the land, then no regulatory taking should occur.

Another question likely to arise is how to determine whether a concurrency regulation is either "unreasonable" or "arbitrary." When a court is called upon to evaluate a particular concurrency rule, what standard of review should the court use? There appears to be a choice between two possibilities. Courts could follow the process that has already been developed to review traditional local government zoning decisions (not involving a comprehensive plan) or that has been used to measure land use planning decisions. In the 1987 case of *Machado v. Musgrove*, the court held that: "land use planning and zoning are different exercises of sovereign power, . . . therefore, a proper analysis, for review purposes, requires that they be considered separately."<sup>32</sup> Historically and traditionally, local government land use decisions implementing zoning ordinances have been given considerable weight by reviewing courts, and challenges have been successful only when the local body did not have even "fairly debatable" evidence to support its decisions.<sup>33</sup> On the other hand, when a land use decision has been challenged as inconsistent with the comprehensive plan, local decisions have been accorded considerably less deference because decisions that implement the comprehensive plan must be *consistent* with the plan.<sup>34</sup> Accordingly, the standard of review has been the "...non-differential standard of strict judicial scrutiny."<sup>35</sup> If this view is followed, then:

...the burden is on the applicant for rezoning to show by *competent and substantial evidence* that the requested rezoning conforms to...the plan. (Emphasis added.)<sup>36</sup>

Since concurrency decisions must be made in accordance with the dictates of the local comprehensive plan, it seems likely that the correct standard for judicial review will be the same one that governs zoning decisions that implement the plan—namely, "strict judicial scrutiny." Accordingly, if the concurrency requirements in a particular jurisdiction adhere to the adopted comprehensive plan, then the likelihood that they will be judged either "arbitrary" or "unreasonable" should be low. However, reviewing courts that follow the "strict judicial scrutiny" concept probably will cast a sharp judicial eye on local governments in this respect when a case is presented for resolution.

Before leaving this topic, some mention also should be made regarding a local government's decision to adopt concurrency requirements that will become, in effect, a moratorium on development because the government's LOS requirements are high enough that almost any development would cause them to be violated. Generally, local governments have had the power to adopt a moratorium when the government has been making reasonable progress toward solving some *bona fide* crisis and when the moratorium has been temporary.<sup>37</sup> Once again, even

assuming a moratorium passes judicial muster under a state law analysis, federal concepts also must be met to avoid an unconstitutional regulatory taking of a citizen's property. The issue of whether concurrency requirements in some localities have caused a *de facto* and allegedly illegal moratorium will very likely receive judicial attention in the foreseeable future.

## Conclusion

Concurrency management is a new and unique form of land use planning regulation. The full impact of this type of regulation will not become clear until Florida's cities and counties have accumulated experience in concurrency management. We can say, however, that the application of concurrency regulations may result in lengthy delays in development. No Florida court has yet ruled on a direct challenge to the state's concurrency regulation. Based upon previous court cases that have challenged Florida's planning laws, however, it seems unlikely that concurrency management will be invalidated. It also seems unlikely that concurrency will be eliminated because the concept has broad public support in Florida. The challenge for developers and local governments will be to work out fair and equitable methods for applying concurrency management.

## NOTES

1. Dickens, Charles, *A Tale of Two Cities* (Dodd, Meade & Co., Inc., 1942): 3.
2. Florida's rapid population growth is well known. For example, preliminary indications from the 1990 census indicate that Florida may receive four new seats in the U.S. House of Representatives.
3. Governor's Task Force on Urban Growth Patterns, Final Report (June 1989):9.
4. Florida Statutes Section 163.3184(6).
5. Florida Statutes Section 163.3177(10) (h).
6. Kobrin and Rubin, "Concurrency," *The Florida Bar Journal* (January 1990): 55.

7. Florida Statutes Section 163.3177(3) (2) 3.
8. Florida Statutes Section 163.3202 (2) (g).
9. Secretary Pelham's objectives were implemented in the Department of Community Affairs' rules, Chapter 9J-5, Florida Administrative Code *Chapter 9J-5*.
10. Florida Administrative Code Rule 9J-5.0055(2)(a).
11. Florida Administrative Code Rule 9J-5.0055(2)(b).
12. Florida Administrative Code Rule 9J-5.0055(1)(c).
13. Florida Administrative Code Rule 9J-5.0055(2)(e).
14. Florida Administrative Code Rule 9J-5.0055(2)(b).
15. Florida Administrative Code Rule 9J-5.007(2)(b).
16. Florida Department of Community Affairs. *Technical Memo* (Winter, 1989).
17. See Spikowski, *Transportation Levels of Service: Evolving State & Local Rules*, Newsletter of the Florida Chapter of the American Planning Division.
18. Florida Administrative Code Rule 9J-5.0055(2)(e).
19. Florida Administrative Code Rule 9J-5.0055(1)(c).
20. 30 N.Y. 2d 359, 334 N.Y.S. 2d 138, 285 N.E. 2d 291 (1972).
21. *Id.*
22. *Id.*
23. For a further discussion of this issue in addition to *Town of Ramapo*, see also *Construction Industry Association, Sonoma City v. City of Petaluma*, 522 F.2d 897 (9th Cir. 1975) and *Village of Arlington Heights v. Metropolitan Housing Development Corp.*, 429 U.S. 252 (1977).
24. 260 U.S. 393 (1922).
25. *Id.*
26. 447 U.S. 255 (1980).
27. 480 U.S. 470 (1987).
28. *Id.*
29. 107 S. Ct. 2378 (1987).
30. *Id.*
31. 558 So. 2nd 1030 (Fla. 1st D.C.A. 1990).
32. 519 So. 2d 629 (Fla. 3rd D.C.A. 1987).
33. *Id.* at 632.
34. *Id.*
35. *Id.* See also *Southwest Ranches Homeowners Association v. Broward County*, 502 So. 2d 931 (Fla. 4th D.C.A. 1987) for a different view of this point.
36. *Id.* at 635.
37. For a more detailed discussion of this area of the law see: Smolker and Weaver, "Implementing and Coping with Concurrency: The Legal Framework and Emerging Constitutional Issues," *The Florida Bar Journal* (May, 1990) p: 47.

# INDUSTRIAL REAL ESTATE: GO FIGURE!

*Sales prices per square foot of industrial buildings in metropolitan Detroit have decreased as the building size has increased.*

by Donald J. Hartman, CRE

**T**he use of statistical analysis in valuing real estate has become more popular as computers and sophisticated hand-held calculators have become more available. The degree to which these methods actually reflect the results of the actions of buyers and sellers in the marketplace is a topic for debate elsewhere. However, it should be noted here that predicting the future with any degree of reliability never has been accomplished on a regular basis in any field, including forecasting the weather, election results, political changes, athletic contests, economic trends, etc.

The purpose of this article is not to explore the philosophy of the futility of crystal ball gazing. Suffice it to say that all methods of forecasting by use of statistics seem to fail to consider the human element, the impact of unforeseen events and other imponderables. A reliance on statistics also raises difficulties with interpretation and numerical errors, although incorrect or inappropriate interpretation and invisible numerical errors are less the fault of the statistical system than they are the weaknesses of the application of the system. We therefore must appreciate the limitations of forecasting.

A recent article in a nationally circulated trade journal reported one researcher's review of the market for office space throughout the country. The authors of this article divided the country into regions and made estimates of office vacancy rates that seemed reasonable, including a 16% vacancy rate in the Midwest. However, the authors of the report somehow got from that estimate to the statement that it would take 38.8 years "to absorb all the vacant office space" in Detroit. Since absorption of office space in the Detroit area has been 1 million square feet, more or less, per year recently, there must be a lot of empty office buildings hidden around town somewhere. It is probably little consolation to Detroiters that the article stated Oklahoma City's supply of vacant office space would take 85.9 years to absorb, which is longer than the useful life of many buildings. This is just one prime example of the misuse of reasonable statistics to reach meaningless conclusions. What is really bothersome is that neither the authors nor the editor recognized the absurdity of these statements simply by reading the work; they did not recognize that the market figures included office space which would never be absorbed because of location, age or other factors and that inclusion of this kind of space would add to the difficulty in interpreting the statistics.

## Study Of The Past

Past statistics can be used to predict some future trends if they are applied with careful logic. For

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example, if the annual rainfall in a certain area has averaged, say, 44.37 inches per year for the past 80 years, we can forecast that the same average will prevail for the next 20 years. However, to predict that next year's rainfall will be 44.37 inches would be an error because previous statistics have produced a long-term average, not a given annual amount. Indeed, it may be that never in the recorded history of the area has the rainfall actually measured 44.37 inches in one year.

Hindsight being usually rated at "20-20," statistics are most reliable in what they can tell about the past. If one studies the tons of statistics available on the past performances of professional athletes and teams, one can acquire a keen understanding of their past accomplishments. But predict next year's performance? Forget it.

### Industrial Real Estate Market Study

Statistics of real estate markets provide insight into the ways in which past developments and development players have contributed to today's market realities. Because of our interest in the performance of the metropolitan Detroit industrial real estate market, we have accumulated statistics on the subject for a number of years. These statistics have revealed some interesting trends and some relationships that have remained fairly constant, perhaps unexpectedly. We strongly suspect that many of these trends also can be found in many other communities.

#### Limitations Of Data

For several years, the Michigan Chapter of the Society of Industrial and Office Realtors (SIOR) of the National Association of Realtors has produced a confidential market report for informational use only by its membership. This report provides minimum information on industrial transactions completed by the members. We have found these reports to be a rich source of statistical information.

Certain limitations in the data should be recognized, however. For one, not all SIOR members report in a given year. Also, a member may not include all of his transactions in his report, or he may include some non-industrial transactions. Years ago, one member submitted his listings instead of his sales and leases. (It certainly appeared to be a remarkable record of performance.)

Nothing is reported on the terms of a sale, the parties or the circumstances involved. Reports on building leases include the monthly rent but say nothing about the length of the lease or the parties involved. The gross or the net lease is not always indicated, and it is never defined. Still, the reports comprise an outstanding statistical sample.

The data has been tabulated as best as possible recognizing the above limitations. Properties recognized to be non-industrial were removed and duplications were eliminated. Because of the lack of specifics connected with rent figures, the tabulation of lease transactions is limited to building sizes only. If assemblages or other special transactions that were far from the usual definition of market value were recognized, they were omitted. The study is limited to the metropolitan Detroit area, although chapter members reported transactions throughout the state of Michigan.

The result of these tabulations is believed to be a good sample, although, statistically speaking, the extent of the population is not known.

### Discussion Of Data

Tables 1 and 2 summarize overall findings from 1982 through 1989. Table 1 shows the growth in average sales prices per square foot of building and land. Factors affecting these numbers include inflation, general market activity (supply and demand), the preference of many developers to lease and hold rather than to sell and the reduced activity in the city of Detroit (lower prices) in comparison with the suburbs (higher prices). The inflation factor involves, among other things, changes in land values and in the cost of new construction which have not been quantified here.

#### City Compared To Suburbs

The influence on the figures from transactions in the city of Detroit compared with transactions in the suburbs is illustrated by the following: In 1987, 23 sales out of the total 103 were of city buildings, and they averaged \$6.89 per square foot of building including land; three of the total 277 leases were in the city. In 1988, 44 sales out of the total 162 were of city buildings, and they averaged \$5.63 per square foot of building including land; five of the total 391

TABLE 1

Summary of Market Data Reports Michigan Chapter Society of Industrial and Office Realtors (SIOR)

	1/82-6/82	7/82-12/82	1/83-6/83	7/83-12/83	1984	1985	1986	1987	1988	1989
Sales (Dollars/sq ft)	\$13.50	\$9.08	\$13.56	\$9.58	\$10.88	\$15.30	\$20.63	\$21.10	\$20.45	\$29.19
	Percent vs Previous Year: 6.4%				-3.4%	40.6%	34.8%	2.3%	-3.1%	42.7%
Avg. Sale (sq ft)	17,522	33,035	23,196	31,767	32,548	33,144	23,162	26,648	26,713	29,402
Avg. Lease (sq ft)	14,220	13,020	11,496	10,887	14,078	13,108	14,129	19,131	15,377	12,636
Total Sales and Leases (sq ft)	2,136,096	2,697,411	2,945,190	3,490,137	6,405,606	8,379,392	7,380,109	8,043,935	10,339,986	7,986,656
Avg. Sales and Leases (sq ft)	15,258	19,546	15,666	17,990	19,236	19,160	17,203	21,168	18,698	15,784
Avg. AC/Sale	3.732	5.796	1.750	7.129	7.100	6.402	6.876	10.317	14.790	14.540
Avg. Dollar/Acre	\$27,618	\$15,428	\$70,090	\$17,631	\$23,377	\$46,822	\$40,113	\$29,457	\$32,389	\$35,682



TABLE 2

## Yearly Sales, Leases, Number of Transactions

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total Sales and Leases (sq ft)	3,898,526	5,635,899	4,833,507	6,435,327	6,405,606	8,379,392	7,380,109	8,043,935	10,339,986	7,986,656
% Change		44.6%	-14.2%	33.1%	-0.5%	30.8%	-11.9%	9.0%	28.5%	-22.8%
Total Bldg. Sales (Dollars)	\$25,903,867	\$33,520,213	\$23,910,382	\$41,151,071	\$32,937,076	\$66,929,835	\$69,776,992	\$57,907,697	\$88,505,335	\$81,544,253
% Change		29.4%	-28.7%	72.1%	-20.0%	103.2%	4.3%	-17.0%	52.8%	-7.9%
Number of Sales and Leases	259	305	278	382	333	438	429	380	553	506
% Change		17.8%	-8.9%	37.4%	-12.8%	31.5%	-2.1%	-11.4%	45.5%	-8.5%

TABLE 3

## Total Number Transactions Reported

	1982	1983	1984	1985	1986	1987	1988	1989
Building Sales	89	133	93	132	146	103	162	95
Building Leases	189	249	240	305	283	277	391	411
Total	278	382	333	437	429	380	553	506

leases were in the city. In 1989, 21 out of the total 95 sales were of city buildings, and they averaged \$7.04 per square foot of building including land; eight of the total 411 leases were of city buildings.

Unit sale prices of suburban buildings have averaged about five times those of city buildings. Obviously, obsolescence is a major factor in this trend.

An interesting relationship revealed above is that there are many more sales of buildings in the city than there are building leases. This is the reverse of the relationship that is found in the suburbs and in the total market (Table 3).

*Average Building Size*

The average size of buildings sold and leased has been consistent over the years (Table 1). Does this relate to the numbers of sales and the numbers of leases? See Table 3 and form your own conclusions.

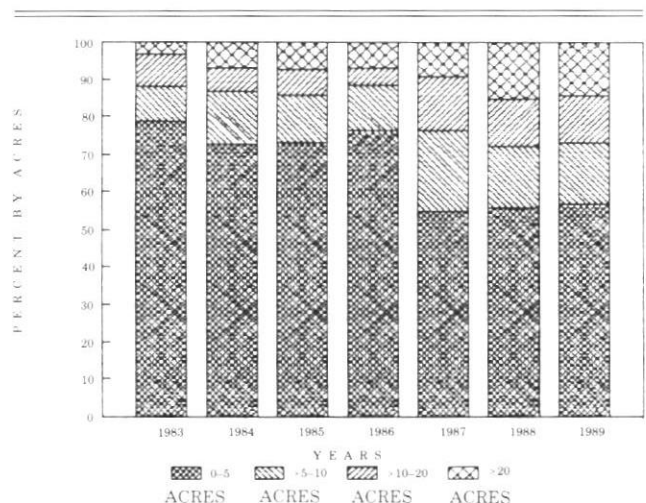
The total square feet sold and leased may be affected by the number of SIOR members who report in a given year (see Tables 1 and 2). Incidentally, total SIOR chapter membership has remained fairly constant over these years. As indicated previously, one can only wonder how much additional industrial space was covered by transactions completed by individuals who are not members of SIOR.

*Transaction Size*

Like average sale size and average lease size, the average building transaction size (sale and lease) has been relatively constant, as expected (see Table 1).

In recent years, more comparatively larger parcels have been sold, raising the average acres per sale (Table 1) and reflecting the boom in development. The average sale price per acre illustrates the continuing predominance of the smaller sales, as our studies have shown that the price per unit of vacant land tends to decrease as the parcel size increases. Too few of the vacant land sales reported were located

FIGURE 1

Michigan Chapter SIOR  
Percentage Distribution Industrial Land Sales  
by Size

in the city of Detroit to tabulate separately (only two in 1989, for example). In addition, as Figure 1 shows, the distribution of sales of vacant land of smaller size has grown. Each year since 1983, more than 70% of the sales have been for parcels of 10 acres or less; more than 55% of the sales were for parcels of 5 acres or less.

*Total And Percent Changes*

Table 2 illustrates the year-to-year changes in total building sales and leases, total dollars of building sales and total numbers of transactions, presenting year-to-year percentage changes for each. It is

important to remember one fact about percentage changes. The percent of decrease cannot exceed 100% (assuming no negative performance numbers as is the case throughout this study), but the percent of increase can exceed 100% and is, theoretically, almost unlimited. Table 3 shows the numbers of sales and leases reported each year and repeats the yearly transaction totals. The increases in sales and leases following the recession years of 1980-1982 are consistent with the recovery mode.

### Individual Building Sizes

To this writer, the more interesting statistics from this review are those that relate to the sizes of individual buildings. Figure 2 illustrates the numbers of building sale transactions, by percentage of the total, in five size categories. Figure 3 does the same with building leases, and Figure 4 shows size categories for building sales and leases. (The particular size categories used here have no special significance, but they have been convenient for this review's purpose.) Note the consistency over the years. Clearly, it is accurate to state that, in terms of numbers of transactions, more than 80% of the industrial building market in the metropolitan Detroit area has concerned buildings of 25,000 square feet or less. In fact, more than 50% of the leases have involved buildings of 10,000 square feet or less. The preponderance of leases in smaller buildings is at least partially due to the proliferation of new businesses. These typically make use of smaller spaces and prefer the flexibility of leasing as opposed to the permanence of purchasing their initial quarters. Many such leases are in multi-tenant, or incubator, buildings.

Less than 5% of the market has concerned buildings with more than 100,000 square feet. Interestingly, these ratios prevail year after year, regardless of market conditions, displaying considerable inertia

FIGURE 2

Michigan Chapter SIOR  
Percent Distribution Industrial Building Sales  
by Size

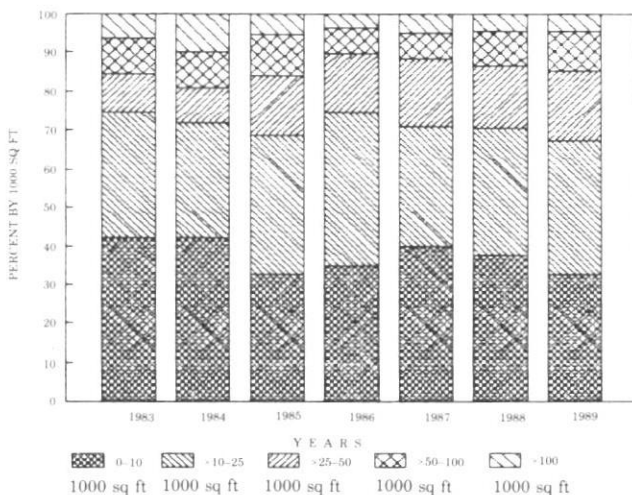


FIGURE 3

Michigan Chapter SIOR  
Percent Distribution Industrial Building Leases  
by Square Foot

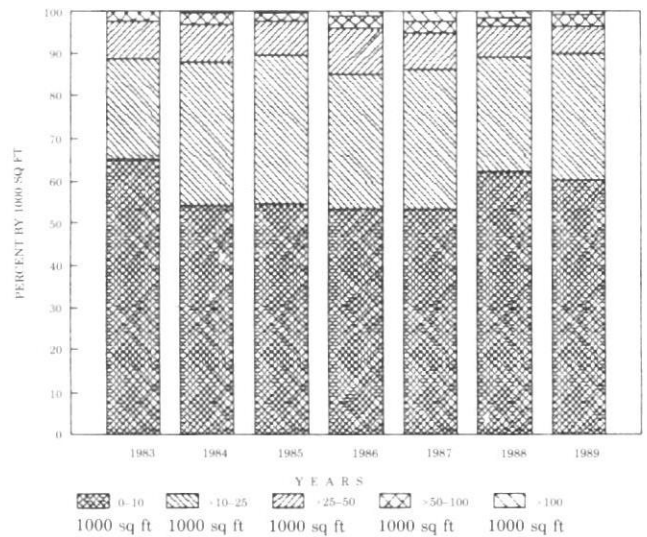
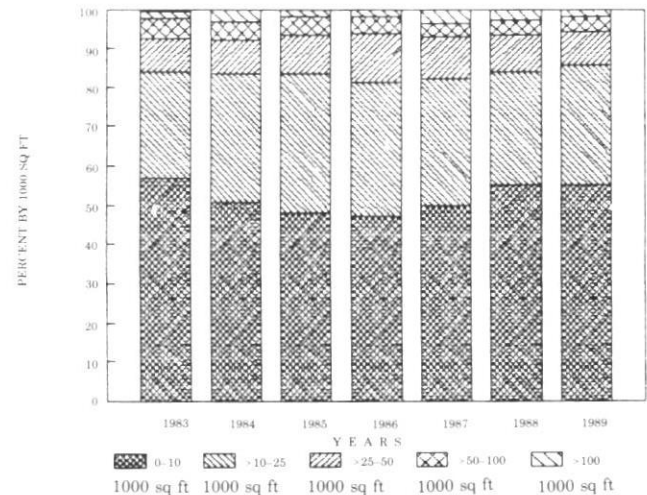


FIGURE 4

Michigan Chapter SIOR  
Percent Distribution Industrial Building  
Sales and Leases



in industrial buildings. Will these trends continue? Probably, unless the market is acted upon by some outside force that is not presently in view.

Table 4 shows the price variations in building sales as related to building size. Since only about 25% of the market (see Figure 2) has been in buildings in the three larger size categories (25,000 to 100,000 square feet), single sales have a greater impact on the averages for these categories than for categories with larger numbers of sales.

TABLE 4

Average Sales Prices in Dollars Per Sq Ft of Building Including Land

Size Range (square feet)	1982	1983	1984	1985	1986	1987	1988	1989
0-10,000	\$20.14	\$19.01	\$25.21	\$26.93	\$26.39	\$28.33	\$31.29	\$27.58
> 10-25,000	19.72	16.97	20.59	25.79	26.88	26.47	27.69	34.70
> 25-50,000	12.64	13.66	11.43	17.09	19.98	23.06	20.60	19.63
> 50-100,000	4.59	8.81	9.15	15.27	15.00	24.10	20.57	23.57
> 100,000	4.43	6.91	6.58	8.23	15.53	13.54	12.08	15.01
Annual Average	\$10.59	\$11.27	\$10.88	\$15.30	\$20.63	\$21.10	\$20.45	\$23.59

For the most part, raw numbers have been presented in all the tables and exhibits, and Detroit city transactions have been mixed in with suburban transactions. However, two unusually large dollar suburban sales were removed from the 1989 figures in Table 4 because they would have tended to cause distortion. Thus, the annual average for 1989 in Table 4 is different from that shown in Table 1.

### Trend Clearly Demonstrated

The trend is very clear: the sales price per square foot of building decreases as building size increases. Exact break points are indistinct, but the trend is there. Although this fact has been disputed by some, at least in this market during the study period, the relationship has been consistent. The increase in annual averages over the study period reflects inflation and growth in the market. The change in annual average from 1982 to 1989 is equivalent to an annual compounded increase of 12.1%.

In the metropolitan Detroit industrial building market, much speculative new construction has been concentrated in buildings of 25,000 square feet or less, including large, multi-tenant buildings aimed at small tenants. This is reasonable because that portion of the market is where most transactions occur. Therefore, many sales of buildings of more than 25,000 square feet are buildings that exhibit varying degrees of obsolescence. Virtually all of the sales reported in the largest size category (more than 100,000 square feet) are used buildings.

This partially explains the drop in unit sales prices as the building size has increased. However, there are other factors also, including reduced demand (only about 20% of the total market), greater obsolescence due to large size (related to less demand) and general economy of scale which is indicated at least partially by the lower unit costs in large buildings.

This statistical study does not include areas outside of metropolitan Detroit; however, the study's limited amount of data indicates that some of the above factors may operate even more emphatically in those areas because market activity is spread out rather than concentrated and demand appears to be less.

### Absorption

Certainly much interesting information can be gleaned from the tables and exhibits that have been

presented here or from the detailed annual summaries, the source of the tables and exhibits, that have been prepared but not reproduced here. However, information about absorption cannot be obtained from these statistics.

Absorption may be defined as the amount of property that is removed from the market over a specified period of time less the amount of property added to the market over the same period. The statistics in this study say nothing about property that has been added to the market. A buyer of a 50,000 square foot building might have moved out of a 30,000 square foot building, which would equal 20,000 square feet in absorption. Or he might have moved out of a 50,000 square foot building, which would mean no absorption. Or he might have moved out of an 80,000 square foot building which would total 30,000 square feet in negative absorption.

The numbers presented here deal with annual totals, while the amount of space available changes continuously over time. A reliable measure of total available industrial space would have to be developed in one or more points in time. That can probably be accomplished only by the use of some sort of statistical projection. Not all space is vacant. Not all of it is for sale or lease. Not all of it is listed with brokers. Not all of it is really "available." Not all of it is sufficiently free of environmental problems to be truly usable. Not all of it has market appeal.

### Summary

The material presented here has given a broad picture of the makeup of the industrial real estate market in metropolitan Detroit over the past few years. Meaningful absorption estimates cannot be produced from the numbers shown here or from the numbers behind those numbers. This is a study of transactions only, sales and leases, and the trends that these transactions reveal.

The statistics on transactions reflect the overall market variations that occurred during 1982-1989. Statistics show that the relationships between the numbers of transactions and the sizes of buildings did not change. No matter how strong the market, sales and leases of units of 25,000 square feet or less dominated by a wide margin. The relationships between building sizes and sale prices per square foot also were consistent: unit prices decreased as building size increased.

# THE EFFECT OF INTERTEMPORAL DEPENDENCE IN CASH FLOWS ON PROJECT RISK

*A simulation study of real estate investment examines complex relationships involving net cash flows.*

by Christos P. Koulamas  
and Stanley R. Stansell

Income-producing real property inherently involves an investment in a cash flow stream produced over a number of years. The value of the investment not only is affected by the size, timing and duration of the cash flow stream and by the capitalization rate, it is also affected by risk. Measurement of risk is perhaps the most challenging aspect of the investment process. Various studies have explored the portfolio attributes of real estate investments. However, because real estate investments typically are large and indivisible, the single project risk aspect also is of interest.

One widely used method of measuring single project risk uses the standard deviation of the cash flow stream. According to this method, if the standard deviation increases, income variability and risk are greater, and vice versa. In dealing with a stream of cash flows expected over time, the extent to which the cash flow in a given period depends on cash flows in prior periods (intertemporal correlation) has a significant effect on the standard deviation.

Van Horne (1989) discussed why cash flow correlation among time periods strongly affects the standard deviation of the cash flow stream. At one extreme, perfect intertemporal correlation causes significant increases in the standard deviation of the cash flows. By contrast, cash flows that are independent over time have a much smaller standard deviation. Various authors have developed procedures to deal with risk in large capital investment projects. Hillier (1963) created a model to handle a situation in which a combination of independent and perfectly correlated cash flows are involved. Salazar and Sen (1968) developed a simulation model of capital budgeting decisions under uncertainty that uses decision trees, simulation and stochastic linear programming to generate risk-return curves for various investment projects. Pellatt (1972) addressed the intertemporal correlation problem in a simulation framework, although without much discussion of the model employed. Miles and Wurtzebach (1977) employed a simulation model to investigate the risk aspects of real estate investments. Martin (1978) developed return on equity distributions using Monte Carlo techniques but ignored the intertemporal correlation problem. Wurtzebach and Kim (1979) used a stochastic Markov process to develop a model which treats the development and operating periods of an investment as an integrated system. Peiser (1984) used a simulation model to examine risk in land development projects. They focused on problems associated with intercorrelation among variables but they did not address intertemporal correlation problems. The study reported in this article explored the single project risk through the use of Monte Carlo

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simulation and specifically addressed the effect of intertemporal correlation in cash flows. The major purpose of this study was to examine the effect of intertemporal correlation on various aspects of risk and present value.

## Methodology

### *Calculation Of Net Cash Flows And Reversion*

A simulation model was developed to study the effects of intertemporal correlation of net cash flows on the present value and duration of the net cash flows and on the optimal time to sell the property. The first step in the process involved the calculation of net cash flows (NCFs) from operations for each of the  $n$  years in the planned holding period. The following procedure was used to calculate NCFs for each year:

$$\begin{aligned}
 & \text{potential gross income (PGI)} \\
 & - \text{vacancy and collection loss} \\
 & = \text{effective gross income (EGI)} \\
 & - \text{operating expenses:} \\
 & \quad \text{property taxes} \\
 & \quad \text{property insurance} \\
 & \quad \text{maintenance expense} \\
 & - \text{utilities} \\
 & = \text{net operating income (NOI)} \\
 & - \text{depreciation and amortization expense} \\
 & = \text{earnings before interest and taxes (EBIT)} \\
 & - \text{interest expense} \\
 & = \text{earnings before taxes (EBT)} \\
 & - \text{federal taxes (28\% rate)} \\
 & = \text{net income} \\
 & + \text{depreciation and amortization expense} \\
 & = \text{gross cash flow (GCF)} \\
 & - \text{principal payment on debt} \\
 & = \text{net cash flow (NCF)}
 \end{aligned}$$

Several variables in this calculation were allowed to vary randomly within predetermined ranges. The rental rate was a uniformly distributed random variable ranging from \$7.00 per square foot to \$13.40 per square foot. The vacancy rate was a uniformly distributed random variable ranging from 2% to 8-1/2% of PGI. Depreciation was projected out in a straight line over a 31-1/2 year life. Interest expense was based on an annual payment of a \$1,083,469 mortgage, with a 25-year maturity and 9% rate.

In order to forecast a net reversionary cash flow at the end of the holding period when the property would be sold, the following procedure was employed.

$$\text{sale price} = (\text{initial project value}) (1 + g)^n$$

where:  $g$  = the annual growth rate

$n$  = the number of years in the holding period

The net after-tax reversion from sale of the property was calculated as follows:

$$\begin{aligned}
 & \text{sale price} \\
 & - \text{sales costs} \\
 & = \text{net sale price} \\
 & - \text{taxes} \\
 & - \text{mortgage balance} \\
 & = \text{reversion (REV)}
 \end{aligned}$$

### *Calculation Of Standard Deviation Of Net Cash Flows*

The uncorrelated standard deviation of the NCFs was calculated based on a predetermined coefficient of variation value; then the correlated standard deviation of the NCFs was calculated as follows:

$$SD_{t,\rho}^2 = SD_{t,0}^2 + \rho^2 * SD_{t-1,\rho}^2$$

where:  $SD_{t,0}^2$  = the uncorrelated variance of the previous year (an autoregressive scheme is assumed in effect)

$\rho$  = the correlation coefficient (varying between 0 and 1)

### *Present Value Calculations*

The present value of the uncorrelated NCFs was calculated for the holding period using the formula shown below:

$$PV = \frac{NCF_1}{(1+k)} + \frac{NCF_2}{(1+k)^2} + \dots + \frac{NCF_n + REV}{(1+k)^n}$$

where:  $n$ , NCF and REV are as previously defined

$k$  = the capitalization rate

The use of present values as calculated above ignores the risk aspect of the investment decision. Net cash flows cannot be forecast with certainty. Each period's net cash flows form a distribution, and the cash flows are very likely to be correlated between time periods. This article addresses the value effects of such intertemporal correlation.

### *Calculation Of Duration*

The duration of an investment has been found to be useful in explaining investment returns. According to Bierwag, Kaufman and Latta (1988), duration is useful in capturing certain aspects of investment risk.

In the context of real estate investments, duration captures the sensitivity of an asset's value to changes in capitalization rates. In this sense, it is used as a measure of interest rate risk. A 1988 study by Hartzell, Shulman, Langetieg and Liebowitz examined the relationship between lease terms, duration and real estate values.

One of the risks to which real estate investments are vulnerable is that interest rate increases will cause present value to decrease (interest rate risk). Other things being equal, as the amount of cash flow received in distant years increases relative to the amount received in near years, the exposure to interest rate risk increases. Since many real estate investments include an expected reversion received at the end of the investment holding period, they are particularly exposed to interest rate risk.

In an attempt to capture the degree of exposure to interest rate risk, we calculated the duration of the investment using Macauley's (1938) procedure, which illustrates that, as duration increases, investment is more sensitive to interest rate changes (i.e., risk increases), and vice versa.

The relationship between the interperiod correlation coefficient of the net cash flows and the duration of the investment was examined as follows:

$$D = \frac{\frac{1(NCF)_1}{(1+k)} + \frac{2(NCF)_2}{(1+k)^2} + \dots + \frac{n(NCF)_n + REV}{(1+k)^n}}{\frac{NCF_1}{(1+k)} + \frac{NCF_2}{(1+k)^2} + \dots + \frac{NCF_n + REV}{(1+k)^n}}$$

#### Intertemporal Correlation Of Cash Flows

The present value of the correlated variances of the NCFs was calculated using Lipscomb's (1978) procedure:

$$PV(VAR) = \sum_{t=0}^T \frac{SD_t^2}{(1+k)^{2t}} + \sum_{i=1}^{T-t} 2 \rho^i \frac{SD_t^2}{(1+k)^{2t+i}}$$

where:  $SD_t^2$  = the variance of NCF in period  $t$

$i$  = time index for autocorrelation

all other variables are as previously defined

#### Present Value Equivalents

A present value equivalent was calculated using the following formula:

$$PVE = PV(NCF) - \gamma[PV(VAR)]$$

where:  $\gamma$  = a certainty equivalent coefficient constructed in such a way that values near 0 imply low risk and values near 1 imply high risk.

The present value equivalent may be thought of

as the risk-adjusted present value of the investment. Presumably, the investor would seek to maximize the present value equivalent of his set of investments.

#### Experimental Design

A full factorial experiment was run utilizing the model described in the previous section of this article. The variables considered were the certainty equivalent coefficient ( $\gamma$ ) with three different levels (0.2, 0.4 and 0.6 respectively), the cash flow correlation rate ( $\rho$ ) with four different levels (0.25, 0.5, 0.75 and 1.0 respectively), the growth rate ( $g$ ) with three different levels (0.04, 0.06 and 0.08 respectively) and the capitalization rate ( $k$ ) with seven different rates (8.5, 9.0, 9.5, 10.0, 10.5, 11.0 and 11.5, respectively).

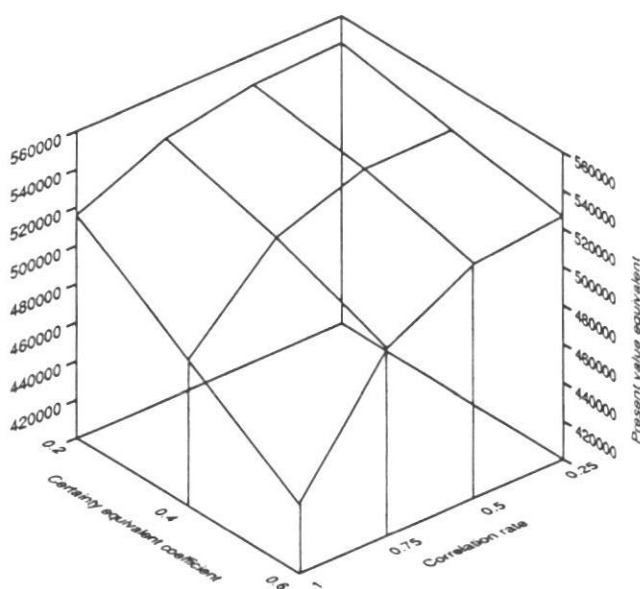
Several estimations were made based on this experimental design. The output of each estimation contains information about the optimal selling year, that is the year for which the present value equivalent (based on the net cash flows and their variances) is maximized, the corresponding certainty equivalent value and the corresponding duration.

#### The Correlation Coefficient And Present Value Equivalents

The relationship between the correlation coefficient  $\rho$  and the certainty equivalent coefficient  $\gamma$  (Figure 1)

FIGURE 1

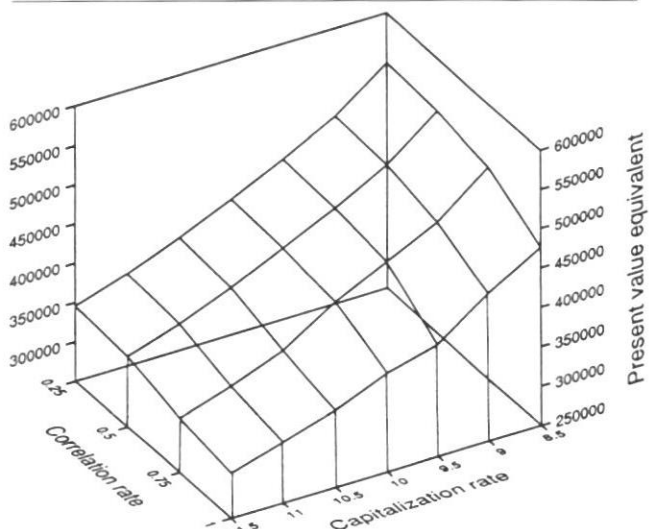
The Relationship Between The Correlation Coefficient And The Certainty Equivalent Coefficient



	0.25	0.5	0.75	1
0.2	545984	544360	536365	515912
0.4	536144	535895	519788	476001
0.6	526303	521430	497445	436087

FIGURE 2

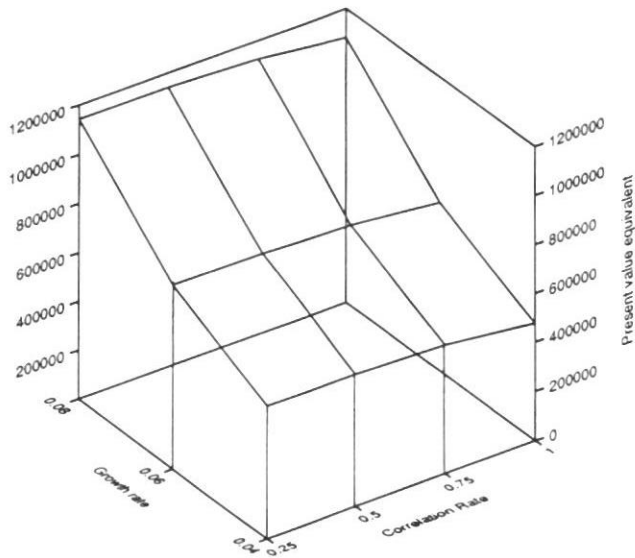
The Relationship Between The Correlation Coefficient And The Capitalization Rate



	8.5	9	9.5	10	10.5	11	11.5
0.25	536144	488150	453844	422336	393068	366870	345272
0.5	532895	484998	449566	418096	387501	361335	340003
0.75	519788	469237	439185	407899	366478	340519	319360
1	476001	436891	392056	375734	348500	327509	307523

FIGURE 3

The Relationship Between The Correlation Coefficient  
And The Growth Rate



	0.25	0.5	0.75	1
0.04	536144	532895	519788	476001
0.06	749460	746191	730222	689306
0.08	1143507	1140180	1124296	1081252

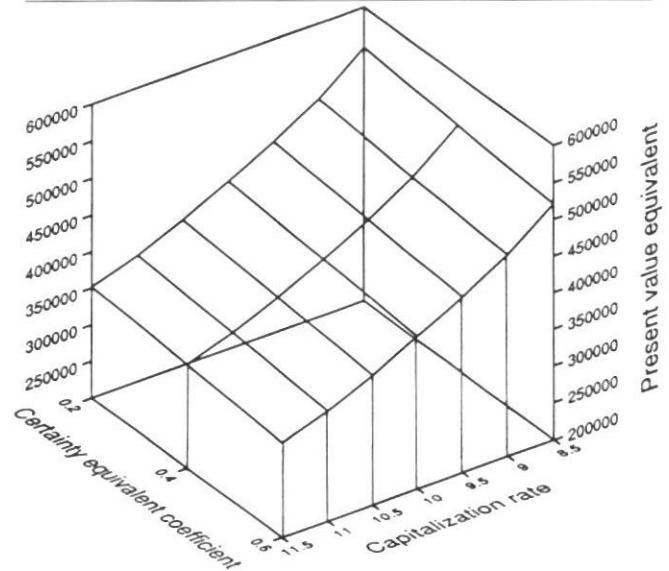
showed that, as the correlation coefficient decreased, present value equivalents increased, which was as expected since risk was declining. As the certainty equivalent coefficient increased, present value equivalents declined, which was also consistent with expectations. The relationship was nonlinear. When correlation coefficients were near 1.0, an increase in the certainty equivalence factor led to a significant decline in present value equivalents. As the correlation coefficient approached zero, the effect was much less pronounced.

The relationship between the correlation coefficient  $\rho$  and the capitalization rate  $k$  (Figure 2) showed that higher  $\rho$  values (more risk) resulted in lower present value equivalents at all  $k$  values. Higher  $k$  values resulted in lower present value equivalents at all  $\rho$  values. The relationship was nonlinear. As expected, the compounding effect of the capitalization process caused present value equivalents to fall more rapidly as  $k$  values increased.

The relationship between the correlation coefficient  $\rho$  and the growth rate  $g$  (Figure 3) indicated that, at any given level of  $g$ , as  $\rho$  increased (or as risk increased), there was a very modest decrease in present value equivalents. By holding  $\rho$  constant, as  $g$  increased, present value equivalents rose rapidly

FIGURE 4

The Relationship Between The Certainty Coefficient  
And The Capitalization Rate



	8.5	9	9.5	10	10.5	11	11.5
0.2	544360	496064	461116	429414	399323	372835	351333
0.4	532895	484998	449566	418096	387501	361335	340003
0.6	521430	473932	438016	406772	375679	349838	328673

due to the increase in reversion values resulting from  $g$ 's effect.

The optimal time to sell and the duration also decreased as the correlation rate increased (with all other variables held constant) since future cash flows contributed less toward the total present value with higher correlation value; therefore, future cash flows were less valuable.

#### *Certainty Equivalent Coefficient*

The relationship between the certainty equivalent coefficient  $\gamma$  and the capitalization rate (Figure 4) indicated that, as the capitalization rate fell, present value equivalents rose for any given level of certainty equivalent coefficients. As the certainty equivalent coefficient rose (or risk increased), present value equivalents fell.

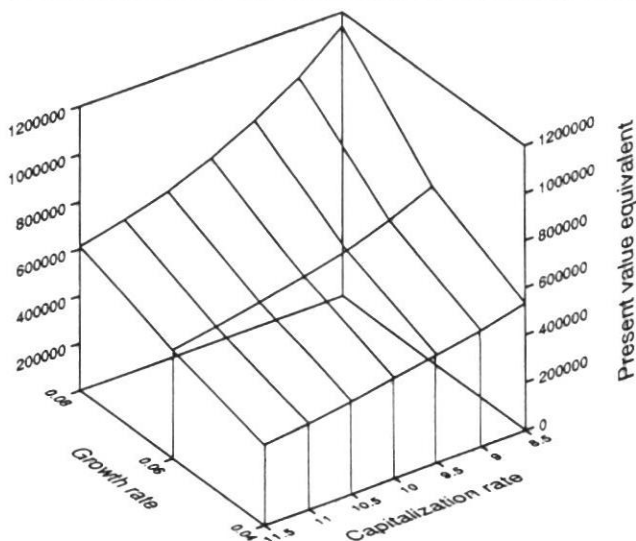
Further analysis indicated that the  $\gamma$  value did not affect either the optimal time to sell or the duration, both of which depended heavily on the time shape of the net cash flow and significantly less on its variance. Since there was no discernable effect, we do not present any graphs here.

#### *Growth Rate Relationships*

The effect of the growth rate ( $g$ ) was studied for several combinations of ( $\gamma, k$ ) values. As shown in Figure

FIGURE 5

The Relationship Between The Growth Rate And The Capitalization Rate



	8.5	9	9.5	10	10.5	11	11.5
0.04	532895	484998	449566	418096	387501	361335	340003
0.06	746191	671007	609394	565340	523203	485548	453921
0.08	1140180	987549	874323	784430	710262	657953	609712

5, a higher growth rate resulted in a higher present value equivalent. This was as expected since a higher growth rate resulted in a higher future price of the property which, in turn, increased the net present value of the cash flows. A higher capitalization rate (with all other variables held constant) resulted in a lower present value equivalent, since future cash flows contributed less to the total net present value.

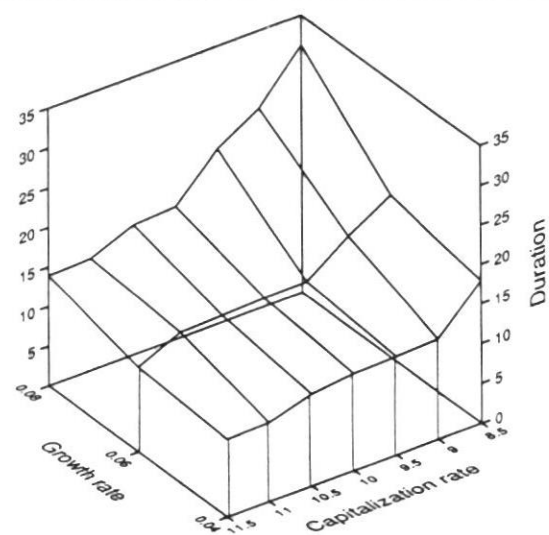
As shown in Figure 6, higher growth rates increased the investment's duration since they increased the residual value. Higher capitalization rates reduced the investment's duration since they reduced the present value of distant cash flows. For the same reason (lower value of future cash flows), the optimal time to sell and the duration decreased when the capitalization rate increased (all other variables held constant).

### Conclusions And Applications

A simulation model was developed in order to study the effects of correlation rates, growth rates, capitalization rates and certainty equivalent coefficients on present value of the net cash flow, on the duration of the net cash flows and on the optimal time to sell a commercial real estate property. It was concluded that higher growth rates resulted in higher net cash flows, higher optimal selling times and longer durations due to the higher future value of

FIGURE 6

The Relationship Of The Growth Rate And The Capitalization Rate And The Effect On Duration



	8.5	9	9.5	10	10.5	11	11.5
0.04	17.9	12.5	12.3	12.1	11.5	9.9	9.8
0.06	20.6	17.3	13.5	13.4	13.2	13	10.6
0.08	31.2	25.2	22.1	16.8	16.4	14.1	13.9

the property. Higher correlation rates resulted in lower net cash flows, lower optimal selling times and shorter durations due to the higher risk involved in this case.

It was also concluded that a higher certainty equivalent value resulted in lower values of the certainty equivalent cash flows due to the higher weights allocated to the variances of the cash flows. Finally, it was concluded that as interest rates increased, the present value of the net cash flow decreased due to lower contributions of future cash flows.

Investors in large real estate projects face a complex set of decisions. They must choose the risk and return combination which best suit their preferences. The task of weighing various combinations of growth rates, capitalization rates, holding periods and durations is so complex that a modeling approach is required.

The modeling technique employed in this study has allowed us to examine a complex set of relationships in a typical real estate investment. With the advent of powerful microcomputers and sophisticated software packages, analyses of this sort are practical for investors who are considering large projects. Given a reasonable understanding of the statistical procedures, one can gain valuable insights into the risk and return aspects of an investment through this type of analysis.



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# THE EFFECT OF POISON PILL SECURITIES ON REIT STOCK PRICES

*The announcement of a poison pill anti-takeover defense reduces the wealth of REIT stockholders.*

by Willard McIntosh

In recent years, there has been a tremendous increase in the number of hostile corporate takeovers and in the number of measures designed to stop or hinder them. Several anti-takeover measures are known as shark repellents, and they involve amendments to corporate charters that restrict changes in management control. These techniques are proposed by management supposedly to protect the interest of the shareholders by requiring that any takeover attempt be negotiated by management. A particularly potent type of shark repellent is the poison pill.

Studies by Jarrell and Pound in 1986, Maltesta and Walkling and Ryngaert in 1988 have examined the economic effects of poison pills by considering the effects on shareholder wealth when the adoption of this anti-takeover defense is announced. These studies found that such an announcement caused shareholders of the firm to receive significantly negative abnormal returns. This finding is consistent with the hypotheses that the poison pills can deter value-enhancing takeovers, discussed by Easterbrook and Fischel and Gilson in 1981, and that management is acting in its own best interest when trying to prevent any hostile takeover that would remove it from control.

Poison pills, unlike other anti-takeover measures, can be adopted without shareholder approval. This may explain why the results of poison pill studies on the effects on wealth have been consistent, while the results of similar studies of other anti-takeover activities have been conflicting and ambiguous. (see Linn and McConnell; DeAngelo and Rice; Jarrell and Poulsen)

Real estate investment trusts (REITs) also have experienced an increase in mergers in recent years. This increase has been attributed, at least in part, to the heightened demand for real estate caused by volatility in capital markets and by active Japanese investors who paid \$16.5 billion for real estate in 1988 alone. REITs are concerned that disparities between real estate asset values and stock values are creating opportunities for unfair transactions.

This article examines the effects on wealth from poison pill announcements by 16 publicly traded REITs and finds that the overall effect on wealth is a statistically significant decline in stock price of -0.86 %. The finding of a significant loss of wealth due to the poison pill announcements supports the management entrenchment hypothesis.

## Poison Pills

A poison pill, also known as a rights plan, is a dividend distribution of rights or securities with

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redemption or conversion provisions. It is activated by an unsolicited takeover bid, and it allows shareholders to increase their ownership in the firm by purchasing shares at a substantial discount. A poison pill, as a result, can significantly dilute the ownership for the bidder.

As indicated by Ryngaert, poison pill securities have several important characteristics. First, they are usually adopted without shareholder approval. Second, they significantly increase the cost of transactions that alter the control of the firm. Third, pill securities can be redeemed by the issuing firm's board of directors at a very small cost until an acquiring firm purchases or offers to purchase a large equity position in the firm. These securities therefore force acquiring firms to negotiate with the existing firm's board.

There are two major types of rights plans—flip-over plans and back-end plans. Flip-over plans are the most common. They give shareholders of the issuing firm a right to purchase stock in the surviving corporation at a discount (usually one-half of market value) in the event an acquirer takes control of the issuer. Flip-over plans do not necessarily deal with the risk that an acquirer simply will take control and leave the remaining shareholders in place. Thus, many flip-over plans have a flip-in provision, which allows shareholders of the issuing corporation to receive additional stock in their own corporation, usually at a discount, in the event the acquirer engages in certain types of self-dealing transactions with the issuer or the acquirer obtains a specified percentage of the issuer's stock.

Flip-over plans are designed to permit shareholders to retain an interest in the company, on good economic terms, if a change of control occurs under circumstances that are not approved by the board. They also are designed to discourage acquirers from proceeding unilaterally without negotiating with the board of directors of the target firm.

A smaller number of companies have adopted a form of rights plan, known as a back-end plan, that gives shareholders the right to sell their stock back to the company at a favorable price should an acquirer purchase a specified percentage of the company's stock. Back-end plans guarantee shareholders a market for their stock with favorable terms and protect them from having to remain as minority shareholders if a change of control occurs.

When management adopts a poison pill, it suggests that the anti-takeover measure is in the shareholders' best interest and that the measure will maximize shareholder wealth. This viewpoint has been upheld by the courts. The Delaware Supreme Court in 1986 upheld a ruling by the state's Chancery Court that affirmed the legality of the flip-over rights plan of Household International which contended the directors of the company were exercising their business judgement and acting in the best interest of the firm's shareholders.

However, critics contend that poison pills actually entrench management. Critics state that

conflicts of interest following a takeover may lead to a loss of management's compensation and prestige. As a result, management may use a poison pill to stop a change in the control of the firm that will increase the shareholders' wealth. Management also may use a poison pill to hinder a takeover market as a check on management's behavior. If management is afraid of a takeover, reducing the threat will have a negative impact on stock prices.

With an efficient capital market, stock prices will reflect all available information about a firm. As new information becomes available, it will be incorporated into the stock price. An efficient capital market allows us to test two competing hypotheses—the management entrenchment hypothesis and the shareholder interest hypothesis—by examining the stock prices around the announcement of a poison pill.

The management entrenchment hypothesis suggests that poison pills make it less likely that shareholders can receive takeover premiums and benefit from monitoring by the market. Therefore, stock prices should decline when a poison pill is announced.

Alternatively, the shareholder interest hypothesis contends that poison pills are adopted to maximize the price shareholders will receive in change-of-control transactions and that management is acting in the shareholders' best interest by using the poison pill to negotiate a better deal for the shareholders. Therefore, the announcement of a poison pill should increase the stock price.

REITs are a special type of corporation that may qualify as a tax-free intermediary. A REIT is run directly by a board of directors or board of trustees which is responsible for raising capital for the trust, setting investment policy and approving recommendations made by an advisor. REITs may be exposed to a greater potential for agency problems.

Among a series of requirements to maintain their tax-exempt status, REITs must distribute 95% of their annual earnings to shareholders, and they must derive at least 75% of gross income from real estate activities. These requirements place restrictions on REIT management that do not hamper the management of standard corporations. Therefore, we hypothesize that the stock price reaction to the announcement of a poison pill will be less for REITs than for standard corporations. Further, we believe that the examination of the stocks of REITs, which constitute a somewhat homogeneous industry, may provide a strong test of the management entrenchment and shareholder interest hypotheses.

## Data and Methodology

### Data

We assembled a sample of 17 REITs that, between 1985 and 1989, announced the adoption of a poison pill in the *Wall Street Journal* or over the Dow Jones News Retrieval Service. To test the economic consequences of the adoption of a poison pill, we included in our sample only those firms traded on the New York, American and Over-the-Counter Stock Exchanges. This reduced our final sample to 16

REITs. For each of these REITs, we obtained the daily stock price returns from the files created by the Center for Research in Security Prices (CRSP) at the University of Chicago. (Table 1 lists the REITs that adopted poison pills and were used in our sample; Table 2 indicates that 75% of the poison pill adoptions occurred in 1989.)

#### Methodology

The standard event study methodology was used to estimate the effects on shareholder wealth from the poison pill adoption. The following market model regression was used to adjust the stock returns for marketwide movements and to isolate the price changes due to the adoption of the pill:

$$R_{it} = a_i + b_i R_{mt} + e_{it} \quad (1)$$

The slope coefficient  $b_i$  is the stock's systematic risk and measures the relative tendency of the  $i$ th stock's return ( $R_{it}$ ) to move along with the market ( $R_{mt}$ ). The CRSP equally weighted market index is the proxy for the market. The term ( $a_i + b_i R_{mt}$ ) represents the average return of the stock  $i$  adjusted for the market and risk. Thus,  $e_{it}$  measures the abnormal return that is unrelated to the market and the stock's average return.

The coefficients of the market model in (1) were estimated for each REIT using 200 consecutive returns for the period ending 20 days prior to the date of the announcement of the poison pill. For 42 days surrounding the adoption date ( $-20$  to  $+20$ ), we estimated prediction errors returns:

$$\hat{e}_{it} = R_{it} - (\hat{a}_i + \hat{b}_i * R_{mt}) \quad (2)$$

The prediction errors (residuals or abnormal returns) are the deviations of the actual returns from their predicted or normal returns. When residuals

are averaged across all REITs, the resulting statistic, the average residual (APE) or the average prediction error, measures the average abnormal price effect of the event:

$$APE_t = 1/N \sum_{i=1}^N \hat{e}_{it} \quad (3)$$

where:  $N$  = the number of REITs

We also computed cumulative average prediction errors (CAPEs):

$$CAPE_{\tau, \tau+T} = \sum_{t=\tau}^{\tau+T} APE_t \quad (4)$$

To test for statistical significance of the average prediction errors during the event period, standardized test statistics were developed. Each prediction error was divided by the square root of its estimated forecast variance, forming a standardized prediction error:

$$SPE_{i,t} = PE_{i,t}/s_{i,t}, \quad (5)$$

where:

$$s_{i,t} = s_i [1 + 1/L_i + ((R_{m,t} - \bar{R}_m)^2 / \sum_{\tau=1}^{L_i} (R_{m,\tau} - \bar{R}_m)^2)]^{1/2} \quad (6)$$

In this calculation,  $s_i$  is the estimated residual standard deviation from REIT  $i$ 's market model regression,  $\bar{R}_m$  is the average market return over the  $L_i$  estimation period days and  $R_{m,t}$  is the return to the market index at day  $t$ .

The standardized prediction error was distributed as a Student- $t$  with  $(L_i - 2)$  degrees of freedom. Since  $L_i$  was large, the distribution was approximately unit normal in the absence of abnormal performance. A cumulative standardized prediction error

TABLE 1

REIT Poison Pill Announcement Dates for the Period 1985-1989

REIT Name	Announcement Date	Stock Exchange*
Bradley Real Estate Trust	12/06/89	OTC
BRE Properties	08/14/89	NA
Chicago Dock & Canal Trust	07/21/88	OTC
Continental Mortgage & Equity Trust	03/13/89	OTC
Federal Realty Investment Trust	04/13/89	NA
Hollywood Park Realty Enterprises	09/15/86	OTC
HRE Properties	10/28/88	NA
ICM Property Investors Inc.	07/18/89	NA
Income Opportunity Realty Trust	04/10/89	NA
MGI Properties Inc.	06/21/89	NA
Property Trust of America	03/13/89	OTC
Santa Anita Realty Enterprises	06/15/89	NA
Sizeler Property Investors	05/03/89	NA
Transcontinental Realty Investors	03/13/89	NA
Vinland Property Trust	03/13/89	OTC
Wedgestone Financial	09/11/85	NA

\*NA represents REITs that are traded on the New York or American Stock Exchanges while OTC represents REITs that are traded over-the-counter.



for testing hypotheses about T-day performance was formed as:

$$CSPE_{i,(\tau, \tau+T)} = 1/\sqrt{T} \sum_{t=\tau}^{\tau+T} SPE_{i,t}. \quad (7)$$

The cumulative standardized prediction error also was distributed unit normal for large  $L_i$ .

Invoking the assumption of cross-sectional independence, the following statistics tested whether average performance differed from zero:

TABLE 2

Number of REIT Poison Pills by Year for the Period 1985-1989

Year	Number of Poison Pills	Percent
1985	1	6.3
1986	1	6.3
1987	0	0.0
1988	2	12.5
1989	12	75.0

TABLE 3

Average and Cumulative Average Standardized Prediction Errors Surrounding the Announcement of a Poison Pill Adoption for a Sample of 16 REITs

Day Relative to Poison Pill Adoption	Average Standardized Prediction Error	t-stat	Percent Negative	Cumulative Average Standardized Prediction Error
-20	0.36306	1.4522	18.75	0.09346
-15	0.36904	1.4762	43.75	0.07979
-10	-0.23408	-0.9363	62.50	0.45954
-9	0.05801	0.2320	43.75	0.51755
-8	0.34277	1.3711	43.75	0.86032
-7	0.40700	1.6280	56.25	1.26733
-6	0.14222	0.5689	43.75	1.40955
-5	-0.13119	-0.5248	62.50	1.27836
-4	0.15079	0.6032	37.50	1.42915
-3	0.02315	0.0926	43.75	1.45230
-2	0.94468	3.7787*	37.50	2.39698
-1	-0.02829	-0.1131	56.25	2.36869
0	-0.58507	-2.3403*	43.75	1.78362
1	-0.41582	-1.6633	68.75	1.36781
2	-0.84114	-3.3646*	75.00	0.52667
3	0.75259	3.0103*	18.75	1.27925
4	0.68403	2.7361*	56.25	1.96328
5	0.08403	0.3361	56.25	2.04731
6	-0.12311	-0.4925	50.00	1.92419
7	0.60380	2.4152*	31.25	2.52799
8	-0.28770	-1.1508	50.00	2.24029
9	-0.30549	-1.2219	62.50	1.93480
10	0.16267	0.6507	43.75	2.09747
15	0.28293	1.0958	26.67	1.98231
20	0.33773	1.2637	35.71	2.31785

\*Indicates significance at the .05 level.

$$t_t = \sqrt{N}/N \sum_{i=1}^N SPE_{i,t}, \quad (8)$$

these statistics tested for cumulative performance:

$$t_{(\tau, \tau+T)} = \sqrt{N}/N \sum_{i=1}^N CSPE_{i,(\tau, \tau+T)}. \quad (9)$$

## Empirical Results

The average standardized prediction errors (ASPEs) were generally positive during the 20 days prior to the announcement of the poison pill (Table 3). The cumulative average standardized prediction errors (CASPEs) became more positive as the event period approached. However, during the event period (days -1 and 0), the ASPEs became negative. The ASPE on the event date (day 0) was negative and significant. The ASPEs remained negative for two days following the announcement of the adoption of a poison pill. Finally, on day 3 following the poison pill announcement, the ASPEs became positive, and the CASPEs began to return to the level they held prior to the poison pill announcement.

The significant negative sign of the prediction error reaction indicated that a poison pill was

detrimental to the wealth of the shareholders. This finding is consistent with the results of earlier studies by Jarrell and Pound (1986), Malatesta and Walkling (1988) and Ryngaert (1988). The finding also supports the management entrenchment hypothesis.

The average residual on the announcement date was  $-0.86\%$ , which is similar to the  $-0.93\%$  result found by Malatesta and Walkling in 1988. Thus, it appears that there is very little difference in the percentage stock price change for REITs and standard corporations when the adoption of a poison pill is announced.

## Conclusions

REIT poison pill defenses appear to reduce stockholder wealth, which provides support for the management entrenchment hypothesis. Stock prices decline upon the announcement of a poison pill defense when REITs are perceived as takeover targets. These stock price declines represent statistical rejection of the theory that, on average, these types of anti-takeover measures benefit shareholders. Further, it appears that the percentage decline in prediction errors is very similar to the declines experienced by standard corporations that announce adoption of a poison pill.

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# A PROPOSAL FOR SIMPLIFICATION OF TAX-DEFERRED EXCHANGES

*By eliminating the need for a nonsimultaneous or other type of exchange in order to defer taxes, the current U.S. tax law can be simplified, and taxpayers can concentrate on the economics of an investment decision.*

by Mark Lee Levine

*This article was based on a paper the author previously had prepared in 1988.*

**T**ax-deferred exchanges under Internal Revenue Code Section 1031 have been in the federal income tax law for many years; the basic precepts that formed its foundation were built on legislation passed prior to 1924.<sup>1</sup> Although Code section 1031<sup>2</sup> has been with us for many years, many questions continue regarding its interpretation and application. Interpretive questions under this code include whether real property qualifies as a tax-deferred exchange: Does real property meet the requirements of "like-kind" property? Does it meet requirements of an exchange, etc.?

Code section 1031, as it currently exists, eliminates the recognition of *gain or loss* from an exchange of property. The section applies only to the exchange of property (not services). To be covered by section 1031, property must be held (not acquired for resale), and it must be held for productive use in trade or business or for investment. Property that does not fit these categories, such as property acquired for resale (dealer property), is not covered by the section. However, if property is not exchanged solely for like-kind property, partial recognition of gain or loss is possible.

Problems in the interpretation of exchanges have generated substantial litigation since the inception of section 1031. The U.S. Congress has added to the broth, stirring the waters and fomenting additional litigation by making changes in the section, particularly by making the 1984 change. This allows section 1031, to be applied even to exchanges that are not simultaneous.

The focus of this article is to examine the implications that a nonsimultaneous exchange has on litigation and controversy. Stemming from a desire to simplify tax law, the article proposes modifying code section 1031 to eliminate the need for nonsimultaneous exchanges or, for that matter, any exchanges to allow deferral of tax.

Although many areas of litigation have arisen under this code, the direction of the article is on the nonsimultaneous exchange, which has been labeled by proposed regulations as a deferred exchange. The *T.J. Starker v. U.S.*<sup>3</sup> case and other court cases<sup>4</sup> have questioned whether an exchange could be nonsimultaneous and still fall within the code.

Congress saw fit to address this issue and apparently "put it at rest" by allowing nonsimultaneous exchanges within the limited language of the statutory change under the Deficit Reduction Act of 1984.<sup>5</sup> That change provided the now-famous 45/180 day rule, which holds that property will not qualify for code section 1031 if it "is not identified as property to be received in the exchange on or before the day which is 45 days after the date on which the taxpayer transfers the property relinquishing the exchange...."<sup>6</sup> In other words, when a taxpayer

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transfers his property, he must receive property in exchange within 45 days of the transfer.<sup>7</sup>

In addition to the 45-day transfer requirement, the Deficit Reduction Act also provided that property will not be considered of like-kind if it "... is received after the earlier of: (i) the day which is 180 days after the date on which the taxpayer transfers the property relinquishing the exchange, or (ii) the due date (determined with regard to extension) for the transferor's return of the tax imposed . . . (by the Tax Law)."<sup>7</sup> Thus, if an exchange is not simultaneous, the property to be received by the taxpayer must be identified within 45 days of the transfer. In fact, the taxpayer must actually receive that property within 180 days of the date on which the taxpayer transferred his property. Or the taxpayer must receive the property within 180 days of the date, including extensions, on which the taxpayer's tax return is due under the tax law that applies to the year in which the transfer of property occurred.

One might argue that the language used by Congress was intended to "eliminate" ambiguities and uncertainties concerning nonsimultaneous exchanges. It is the thesis of this article that Congress' language has fueled fires of concern regarding nonsimultaneous exchanges and has added a new dimension in "creativity" related to nonsimultaneous exchanges. It is also a contention of this article that perhaps Congress should focus its attention on whether a nonsimultaneous exchange or any other type of exchange should be required to allow deferral of taxes.

### The Theory Behind Code Section 1031

The purpose of code section 1031 has not been made clear, notwithstanding the many court cases that have referred to the theory behind the section.

In *T.J. Starker v. U.S.*, the most famous case involving non-simultaneous exchanges, the Ninth Circuit Court examined some of the reasons for an exchange.<sup>8</sup> Circuit Court Judge Goodwin acknowledged that in the *Starker* case, the government and the taxpayer presented arguments concerning the existence of a nonsimultaneous exchange based on the history and purpose of code section 1031. In response, Judge Goodwin stated: "A proper decision can be reached only by considering the purposes of the statute and analyzing its application to particular facts under existing precedent. Hereunder, the statute's purposes are somewhat cloudy, and the precedents are not easy to reconcile."<sup>8</sup>

Judge Goodwin mentioned that history reveals the provision was "... designed to avoid the imposition of a tax on those who do not 'cash in' on their investments in trade or business property." Judge Goodwin considered whether the reason for code section 1031 was to protect taxpayers who did not have the money to pay the tax.

However, he found that liquidity was not the sole reason for the section. As Judge Goodwin stated, if a taxpayer sold property for cash and reinvested the money, the taxpayer would not have money to pay taxes, but the taxpayer nevertheless could not use code section 1031 to defer taxes.

Judge Goodwin also considered the argument that it would be difficult to measure gain or loss on an exchange. However, he countered this position by citing the fact that if a taxpayer received even \$1 of boot, that money would not constitute like-kind property, and a valuation would be necessary. He therefore concluded that measurement of gain or loss could not be the sole reason for section 1031.

Judge Goodwin cited other concerns with section 1031 and concluded that the intent of the drafters of the legislation was not clear; the section could exist for many reasons.

It should be remembered that code section 1031 existed for many years without focusing on the non-simultaneous exchange. Once the *Starker* case became well known to those in exchange circles, the potential for use (and possibly for abuse) of section 1031 with the nonsimultaneous exchange became well known. Congress reacted by choosing between two positions: making it clear that a nonsimultaneous exchange would not qualify under code section 1031 or limiting the time frames in the section to cover a nonsimultaneous exchange. Congress chose the latter route.

### Form Over Substance, Tax Traps, More Litigation And a Question Of Identification

After the 1984 change in tax law that reaffirmed the posture of a nonsimultaneous exchange, numerous additional questions have arisen. Those questions include, but are not limited to, such issues as determining:

when the closing or transfer takes place

when the property is properly identified

when a trust or other security is acceptable, and when it taints the exchange

whether a constructive receipt exists

how much control is allowed to a taxpayer without violating the code section 1031 requirements

Additional questions have arisen as to proper format of transactions and direct deeding. That is, if taxpayer T transfers his property to taxpayer X and then subsequently identifies a property to be received from taxpayer Y in exchange, can taxpayer Y transfer the property to taxpayer T, or must he transfer the property to another party who, in turn, transfers it to taxpayer T? These items are beyond the scope of this examination.<sup>9</sup>

We have seen numerous companies who represent that they handle "*Starker* trusts." Such activity is questionable, given the fact that the *Starker* case did not involve a trust; consequently, there is no absolute case authority for a "*Starker* trust" position. The lack of case authority does not mean that the companies that handle a "*Starker* trust" are incorrect. It simply means that we have more activity in attempting to develop form over substance, more formality and, more costs in structuring exchanges and numerous concerns resulting from construing the statutory changes on the 45/180 day rules. Although some of these issues have been considered by the 1990 proposed regulations for code section



1031; these issues also elicit concern about the level and breadth of complexity in current tax law.

### Suggested Statutory Change

It seems that a reasonable approach for Congress in the "exchange" area would be to follow the concept of code section 1034.<sup>10</sup> Code section 1034 provides, as many practitioners know, a basic rule for allowing the sale (not limited to an exchange) of a principal residence, the taking of the monies and the reinvestment of those funds in a timely fashion to postpone a recognition of gain.

Code section 1034 is very broad; it allows for a two-year time frame in which an old residence may be sold and a new residence purchased without incurring taxes on the gain that may be generated as a result of that sale. Admittedly, there are numerous requirements under code section 1034. However, this section allows the taxpayer to rollover the gain on the sale of his principal residence into another residence within two years.

Why is it that Congress has not allowed a similar approach under code section 1031? Why has Congress placed the taxpayer in a position where mental gymnastics, form and stretched construction are necessary to formulate the transaction so he does not receive cash but has enough control or protection to secure his position until like-kind property is acquired? Why hasn't Congress simply allowed the taxpayer to undertake an exchange, receive cash and invest that money in a given time frame?

The quick historical retort to this approach is that Congress has never allowed this position and does not intend to allow it. An exchange is one thing! A sale is another! Certainly, the court cases make this point. However, as Judge Goodwin so aptly stated in the *Starker* case, there often is little difference in result if a taxpayer undertakes a simultaneous exchange or if he sells his property, takes the money and reinvests it one day later. The economic position is the same, although the tax position is substantially different: the exchange falls within code section 1031 but the cash sale does not.

Taxpayers who use the 45/180-day rule may be simply selling their property, placing the cash in trust and seeking another property. Isn't this situation similar in intent to the situation covered by code section 1034 except that it is dressed with formality and structures, such as a trust, to force the circular peg into the square hole?

Admittedly, there are substantial differences between code section 1031 and code section 1034. However, I am not advocating throwing out the baby with the bathwater. Rather, I am stating that if this code section covers property used in trade or business or held for investment, it would be less burdensome, more straightforward and more advantageous in an administrative fashion to allow taxpayers to simply sell their property and reinvest the proceeds than to develop trusts or similar vehicles in an attempt to meet the requirements of code section 1031. The proposed 1990 regulations allow more flexibility for nonsimultaneous exchanges. Why not go this next step?

Recent comments by some authors have suggested the same idea, but they have suggested a reinvestment time of 180 days. Why not simply allow the sale and the reinvestment, even with the reduced time frame? Congress does not have to have a two-year rule, similar to code section 1034, when applying code section 1031. However, if Congress allowed the sale of property and the reinvestment of the proceeds within a given time frame, the need for a trust, the concern about whether deeding is direct or not direct, the concern about the format of exchange documents, and so forth, would be eliminated or at least substantially reduced in many settings.

Taxpayers could then concentrate on the economic decisions that need to be made about whether to make an investment or a reinvestment. To constrict taxpayers by the language of code section 1031, to force the creation of some means of allowing for security whether it be a trust or a security in the form of real estate or otherwise, appears to do nothing but complicate the tax law, an objective that, at least by official pronouncement of the present legislature and administration, is not desired. If we want to simplify the tax law, as Congress so often labels its tax laws,<sup>11</sup> this may be one step in the right direction.

### Conclusion

Congress, along with the Bush Administration, have prided themselves on undertaking the simplification of the tax law to work with, not against, the taxpayer. If this is a legitimate goal, then it certainly is appealing to modify code section 1031 to allow for sale of property and reinvestment of the sale's proceeds within a given time frame and within the concepts and structure of the section.

This position will not be a panacea; however, it will go a long way toward eliminating much of the activity that has been generated by undertaking a nonsimultaneous exchange and thus forcing the transaction to allow for security and meet the 45-day and 180-day time frames rule.

Although modified, possibly by time frame and property-type restrictions, there is no reason Congress cannot modify code section 1031 to allow the same type of treatment that exists under code section 1034, thereby eliminating numerous complications in an already overburdened Internal Revenue Code and tax maze.

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1. See Levine, Mark Lee. *Real Estate Exchanges* p 2. (Realtors National Marketing Institute/Professional Publications and Education, Inc., 1981, as amended); See also Levine, Mark Lee. *Exchanging Real Estate*, vol. 1, (PP&E, 1990) Chapter 1. The Bureau of National Affairs, *Portfolio #61-3rd*, covers the historical background of Code §1031.
2. See 26 USCA (IRC 1986) Code §1031, herein referred to as the Code.
3. See *T.J. Starker v. U.S.*, 77-2 USTC ¶9512, 432 F. Supp. 864 (D.C., Ore. 1977), affirmed and remanded under 79-2 USTC ¶9541, 602 F.2d 1341 (9th Cir. 1979). See Code §1031 (a) (3) that was modified to allow nonsimultaneous exchanges. See also note 4, *infra* herein, as to proposed regulations in this area. For an in-depth discussion of this issue, see Levine, Mark Lee. *Real Estate Exchanges*, *Supra* note 1; p. 211. See also Levine, Mark Lee. "Tax-Deferred Exchanges after TRA of

- 1986," *Journal of Property Management* (November, 1987). See also Levine, Mark Lee. "Exchanging Your Property for Your Property," NACORE, *Corporate Real Estate* (1989). See also Levine, Mark Lee. "'Starker Trusts' " and Cheshire Cats: You Can't See Either for Sure," *RNMI Commercial Investment Real Estate Journal* (Spring, 1989).
4. For cases that have discussed nonsimultaneous exchanges, see discussion of these cases in Levine, Mark Lee. *Real Estate Exchanges* cited *supra* note 1. See also *Red Wing Carriers, Inc. v. Tomlinson*, 68-2 USTC ¶9540, 399 F.2d 652 (5th Cir, 1968). See also private letter rulings that have addressed the question of nonsimultaneous exchanges, namely Private Letter Rulings 7938087, 8005049 and 8046122. These are discussed in the Levine text *supra* note 1. See also Levine, Mark Lee. *Real Estate Transactions* (West Publishing Co: St. Paul, Minn, 1990): chapter 29, Section 577. See 26 C.F.R. Part 1, 1A-237-84, RIN 1545-AH43 (5/16/90) for the 1990 proposed regulations in the area of nonsimultaneous exchanges.
  5. See Public Law 98-369, 7/18/84.
  6. See Code §1031(a)(3).
  7. Code §1031(a)(3) was modified under a 1986 change to make it clear that the transfer must occur within 45 days and 180 days. See Public Law 99-514 (10/22/86).
  8. For a discussion of the *Starker* cases, see the citation *supra* note 3. For a review of some of the reasons to allow exchanges, see *Biggs, Franklin* 632 F.2d 1171 (5th Cir, 1980). See also a review of these issues in Levine, Mark Lee. *Exchanging Real Estate* (1990) and *Real Estate Exchanges* cited *supra* note 1. For background in this area, see Private Letter Rulings 7938087, 8005049 and 8046122.
  9. For a detailed discussion of these issues, see the authority cited earlier, especially the Levine texts. In particular, see the cases of *Barker v. Comm.*, 74 TC 555 (1980). See also *Biggs v. Comm.*, 81-1 USTC ¶9114 (5th Cir, 1981).
  10. See 26 USCA §1034. For a detailed discussion of this area, see also the Levine text, *Real Estate Transactions, Tax Planning*, Chapter 28, cited *supra* note 4.
  11. One need simply look at the history of recent tax legislation to see all of the "simplification" acts.

# UNDERSTANDING THE INTERNAL RATE OF RETURN USED IN COMMERCIAL REAL ESTATE TRANSACTIONS

*The IROR used by real estate developers may be confusing to those who are familiar with the IROR used to make corporate investment decisions.*

by Leonard Sliwoski

**T**he financial analysis techniques used to evaluate traditional manufacturing, distribution and retail businesses are not appropriate for evaluating commercial real estate projects. These techniques evaluate business requirements for buildings, machinery and equipment, inventory, accounts receivable, etc., on the basis of income statement and balance sheet analysis, ratio analysis and statement of cash flow analysis.

Real estate projects are either sold or leased by developers after completion; they are not used to house ongoing businesses. As a result, real estate projects are "stand alone" enterprises; each project has a particular geographic location, composition of tenants, theme, etc.

Because of the peculiarities of individual real estate projects, the analysis of commercial real estate transactions revolves around a unique financial statement called the developer's pro forma income and expense schedule, which is calculated as follows:

$$\begin{aligned} & \text{gross rent} \\ & - \text{vacancy factor} \\ & = \text{effective gross rent} \\ & - \text{operating expenses} \\ & = \text{net operating income} \\ & - \text{debt service} \\ & = \text{cash flow available for distribution} \end{aligned}$$

Based upon this financial schedule, real estate developers determine the desirability of a particular project by using one of three types of analysis: cash on cash return, cash flow rate after tax or the internal rate of return (IROR). In recent years, the IROR analysis has become the developer's predominant analytic tool because it incorporates the three benefits of investing in real estate—cash flow, taxes and appreciation—and because it also takes into account compound interest considerations.

However, one's first exposure to the IROR used in real estate transactions may be confusing, particularly for individuals who are familiar with the IROR calculations that are taught in collegiate finance classes and used in large corporate settings to evaluate potential capital investment projects. This article compares these IRORs to provide insight into the computation and use of the IRORs and to eliminate confusion.

## IROR As A Return On Investment

The IROR that is taught in college finance courses and used to make corporate investment decisions is a return on investment (ROI) versus a return on equity (ROE) computation. It employs three variables:

1. Initial project cost, which is equal to the full

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cost of the purchased assets whether they are financed with debt or equity.

2. The periodic after-tax cash flows, which are equal to the annual after-tax cash flows generated by the project. This number in any given period is determined as follows:

$$\begin{aligned} & \text{total cash revenues} \\ & - \text{total cash expenses} \\ & + \text{income tax shield} \end{aligned}$$

where:

income tax shield = the sum of depreciation and other non-cash expenses  $\times$  business marginal income tax

3. The terminal after-tax cash flow, which is determined as follows:

$$\begin{aligned} & \text{net sales price} \\ & - \text{income tax due (or + income tax savings)} \\ & = \text{terminal after-tax cash flow} \end{aligned}$$

where:

net sales price = sales price - the expenses of the sale  
income tax due = net sales price - adjusted basis (gain or loss)  $\times$  the income tax rate

The computation of this IROR involves either trial and error or use of an appropriate hand-held calculator or computer program. Once determined, this IROR is compared with the business' cost of capital. Based upon this comparison, an appropriate investment decision can be reached.

### The IROR As A Return On Equity

The IROR model utilized by developers in commercial real estate transactions is an ROE computation. This IROR also employs three variables:

1. Initial project cost, which is equal to the equity money that is contributed to the project by the real estate developer. This cost does not include any part of the debt monies that are used to finance the project.
2. The periodic after-tax cash flows, which involve the computation of the cash flow available for distribution as depicted on the developer's pro forma income and expense schedule and a separate computation of income taxes. The cash flow available for distribution is calculated as follows:

$$\begin{aligned} & \text{gross rent} \\ & - \text{all cash payments (including principal payments)} \\ & = \text{cash flow available for distribution} \end{aligned}$$

Income taxes are computed as follows:

$$\begin{aligned} & \text{cash flow available for distribution} \\ & - \text{depreciation expense} \\ & - \text{amortization of capitalized fees} \\ & + \text{amortization of principal balance on loans} \\ & = \text{earnings (loss) before tax} \\ & \times \text{income tax rate} \\ & = \text{income tax due (savings)} \end{aligned}$$

3. The terminal after-tax cash flow, which is determined as follows:

$$\begin{aligned} & \text{net sale price} \\ & - \text{income tax due (or + income tax savings)} \\ & - \text{remaining principal balance on project loans} \\ & = \text{terminal after-tax cash flow} \end{aligned}$$

where:

net sales price = sales price - the expenses of the sale

income tax due = net sales price - adjusted basis (gain or loss)

$\times$  the income tax rate

This IROR also can be solved either through trial and error or, more conveniently, with the use of an appropriate hand-held calculator or computer program. Once determined, this IROR is compared with the developer's required IROR which, in essence, is the developer's required ROE. It is based on the perceived risk of the project and the projected ROEs generated by alternative investment options available to the developer.

### Conclusion

The traditional IROR model taught in collegiate classes and utilized in corporate investment decisions is a ROI concept. As with any other type of ROI computation, this IROR determines the rate of return on the project itself independent of the project's funding sources. This calculation is appropriate for large corporations that are attempting to make capital investment decisions and that have various funding sources as components of their capital structures, including long-term debt, preferred and common stock, which must be blended and weighted to determine the true cost of corporate capital. Specific ROIs, or IRORs, from potential capital projects can be compared with the cost of capital, and investment decisions can be made. Thus, capital investment decisions involve comparing the ROI from a given project, its IROR, to the corporation's cost of capital.

The real estate developer's IROR is an ROE concept. It computes the rate of return to the developer based on the equity monies that are contributed to the project. Unlike large corporations, real estate developers rarely have excess cash, and they usually have limited funding sources. With cash being the most constraining resource, the developer is interested in a rate of return from the prospective project that considers the limited cash which is available to be invested. This return is most accurately measured by the ROE associated with the project, which is what the IROR as computed in commercial real estate transactions represents.

In summary, IROR computations differ because the capital structures and financial environments in which large corporations and real estate developers operate require different financial analysis tools to evaluate potential investment projects. Each IROR computation has its own utility. When the IROR from a potential corporate capital investment project, which represents its ROI, is compared with the corporation's cost of capital, it will lead to a sound investment decision. When the IROR from a potential real estate project, which represents its ROE, is compared with



the developer's required ROE, it also will lead to a sound decision. Although the differences in computing the two IRORs initially may be confusing, they should be understandable when considered in light of the financial environments and funding sources associated with large corporations and commercial real estate developers.

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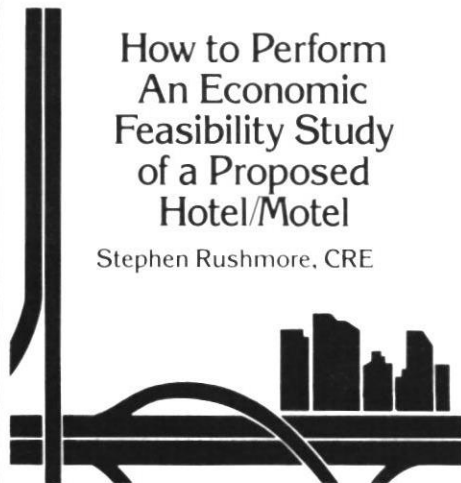
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