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Editor's Statement

I can't help feeling that the consequences of the inexorable series of events which has molded our metropolitan areas into their present form are so disheartening to contemplate that it would be a grave mistake simply to accept them as inevitable and turn our attention elsewhere. The future, if we read between the lines of Counselor Roy Drachman's scenario, calls for more of the same: growing sprawl, increasing energy consumption, continuing deterioration of the inner city.

For too many Americans, these trends are so familiar as to seem irreversible and, at any case, hardly worth serious attention. Too few of the voters are fully aware of what city life can be like under reasonable conditions, and too few of our planners and politicans have grasped the social and human value of the kinds of urban amenities commonly encountered in European cities — amenities which unfortunately have largely disappeared from our own. If more of the people whose actions influence land use patterns in this country had a better idea of what they have thrown away, we could at least feel justified in having some hope of an improved future.

The measure of a civilization is its cities — not just their avenues and ceremonial structures, but their working form, their functioning, their style, their vitality. It is in the cities that the real business of civilization takes place: the inventions, the exchanges, the birth and decline of organizations and institutions, the human contacts which make a civilization live. Few great ideas have been spawned in the suburbs, and little that is culturally meaningful takes place there. The exodus of mind-workers as well as manufacturing employment to the relative isolation of suburbs and countryside, far from the face-to-face contacts that are possible only in the city and help to give it life, is working immeasurable harm that may take generations to reverse.

Productivity is falling, creativity is fading and America is losing faith in itself. More and more we find ourselves isolated in little organized pockets far from the mainstream of urban life — in exurban corporate headquarters, in dormitory communities, in special interest groups with a parochial view of our common problems. Because of this as much as anything we are growing weaker as a nation; because of this, we are throwing away some of the most important elements of our inheritance.

We simply cannot afford to allow our thinking, as well as our cities and our economy, to be strangled by the effluvia of the internal combustion engine. We must have the courage to rethink our understanding of the place of the city in American life, even if that means challenging long-held assumptions and upsetting cherished institutions. Europe offers many examples from which we can learn indispensable lessons. In my view at least, we have no choice but to make the attempt.

Editor-in-chief

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EUROPEAN AND AMERICAN CITIES: A COMPARISON

by Roy P. Drachman, C.R.E.

According to many of our country's planners, we must change the land use patterns of our metropolitan areas. They point to urban communities in Europe as models noting many features which, if they were available, would improve the quality of life in our own cities:

- Heavy concentration of families, including the more affluent, living in and around the central city
- Major community retail centers in downtown areas
- Mass transit systems which provide excellent transportation to and from central city areas and reduce the automobile population
- Shorter distances between homes, employment, medical facilities, churches, recreation places, etc.
- Lower energy consumption for transportation and residential building heating and cooling

In view of the environmental problems, the wasteful land use due to urban sprawl, and the pressing needs to conserve energy that the United States faces, it is especially important, say the planners, that we follow the European example. Yet these same planners often end up shaking their heads in frustration and disbelief.

Tracing Our Urban Roots

Before we can decide what, if anything, American cities should import from their European counterparts and how, let's look at the origins and growth of both. What has caused them to develop as they have?

Most European cities began near a port on a sea, river or lake. For centuries, growth was kept as close to the dock area as possible so that people could walk to their jobs, to school and to recreational, religious and medical facilities. Only the very wealthy could afford country estates for weekends and vacations and they were usually within ten to fifteen miles away — only a few hours by horse-drawn vehicle. This resulted in high residential and commercial (fabricating, processing and manufacturing) densities near the harbor.

Designed and built by settlers with a European heritage and with recent recollections of their former homeland, many early American towns were duplicates of European cities. New York, Boston, Baltimore, Chicago, New Orleans, San Francisco, Philadelphia and Cleveland are examples. Evidence of their European influence remains today. Dozens of midrise and, in some instances, highrise apartment buildings surround the downtowns of these urban centers.

The Automobile Arrives

With the advent of motorized transportation in the early 1900s, it was no longer necessary to live within walking distance of one's daily destinations. Still in their infancy, American cities were dramatically affected compared to the more mature European city centers. Rail service had provided some transportation in a few communities enabling their residents to commute quickly and economically. However the railroad's greatest growth period was in the early days of the automobile and it wasn't long before nearly every family owned a car.

One did not need to be wealthy anymore to enjoy country living, nor have to wait until a substantial "nest egg" was saved before realizing the fulfillment of the lifelong ambition to live in one's own home on one's own land. A family that could not afford an in-town residence or even a cooperative apartment, could now buy a small house on a low-priced suburban lot. All thanks to the automobile. However

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it also was the automobile that caused major changes in older cities and would dominate the patterns for new metropolitan areas such as Los Angeles, Houston, Miami, Phoenix, San Diego, Salt Lake City, Dallas-Fort Worth and hundreds of smaller places.

Exodus to the Suburbs

The flight which began to peripheral areas in all communities — old and new, large and small — quickly reached massive proportions. Although thwarted for a decade and a half by the depression of the thirties and the construction ban during World War II, the die had been cast. The clamor by millions of families for suburban housing began anew with the end of the war. Builders everywhere responded and constructed millions of homes. Almost ninety percent of them were on individual lots in new subdivisions on the peripheries of communities. The automobile had eliminated any physical restraints to the new suburban lifestyle and easy financing through the FHA and GI housing programs removed the monetary ones.

The families that remained in the inner city of America's growing communities were generally older families who either enjoyed a good lifestyle because they lived in luxurious residences or who felt a strong sentimental attachment to their long time homes and neighborhoods. But it was just a matter of time before many of them abandoned their old homes for a suburban residence. Only a very few moved into highrise apartments close to the downtown areas.

In almost every city in America, these large abandoned older apartment and single family buildings became the new homes for thousands of minority families leaving the rural areas. The exchange was disastrous for most communities. Loss of resident purchasing power and retail income, and increased demands on city services, occurred simultaneously. The residential flight to the suburbs was accompanied by a similar movement of most retail establishments and thousands of jobs. The resulting loss in property tax collections and revenue weighed heavy on the central city, which had not only inherited the poor minorities but hundreds of empty job centers.

To make matters worse, transportation from the inner city to jobs in suburban plants was either nonexistent or woefully inadequate. City schools suffered from both the loss of most of the better teachers and the new demands from suburban schools for huge funds to meet their growing needs. Accordingly, along with the quality of their education, the skills of inner city youths dropped which has caused them to have the highest unemployment rate in the United States year after year. Lack of training and jobs led to increases in crime, making the city centers dangerous, especially after dark. Who would want to live in such a place? The answer is obviously no one, including those who live there now and have no way to escape.

The Model of Today's European Cities

The features of European cities are very appealing. Many cities are attractive places to live and appear to function efficiently. But what can we learn from them?

Europeans have witnessed very little change in their central cities during the last 50 years. It is true that thousands of automobiles are now found on the streets and that many parking garages have been added to the scene; but their cities have not suffered the large sections of rot that have occurred in American cities and which are caused mainly by the influx of the poor minority families. Slum areas exist, but are generally located in neighborhoods which have always been home for the underprivileged. The slums are not found in the heart of European downtowns nor have they eroded the better residential areas in the inner cities.

Historically, small and midrise apartment buildings have ringed the downtown areas of such cities as London, Paris, Rome, Brussels, Madrid and many smaller ones. Many downtown buildings provide business locations on the first floor or two and have apartments above, although the better residential units are in buildings without commercial facilities. In Paris, there are hundreds of blocks of four- to six-story apartment buildings that are eighty, ninety and sometimes over one hundred years old. They have been modernized on the interior, elevators have been added, and most have been continuously occupied for generations and by many of the city's wealthiest families.

No mass exodus of families to the suburban areas has taken place and there are no large numbers of apartments for minorities to occupy in central city areas. In Paris, as in many European cities, in-town apartments have provided the community's best lifestyle for years. Contrary to the custom in most American metropolitan areas, families in Europe which can afford the very best almost invariably have chosen inner city apartments over suburban houses.

Neither have retail firms abandoned their traditional downtown locations for suburban shopping centers (although many have branch stores in outlying areas), nor have commercial firms left their offices in downtown districts to the degree they have in America. Simply stated, people in European downtowns have employment opportunities as well as goods and services available near their homes.

Many of these cities have fixed rail transportation systems which enable people to travel into and out of the downtown areas quickly and economically without cluttering the streets with automobiles. The better restaurants and hotels are located in the

downtown areas in nearly all European cities. This is the case only in older cities in the United States, such as New York, New Orleans, San Francisco and one or two others. Unfortunately, it is not safe on most streets in these cities and the hotels and restaurants rely on the heavy concentration of business offices and daytime employment and nighttime entertainment activity for their success.

Fear of violence is not a factor in most European cities. The downtown areas after dark generally are not deserted and the streets are safe places in contrast to American cities. As a result, great numbers of pedestrians can be seen out strolling for an evening walk and going to and coming from theatres, stores, libraries and educational institutions.

It should be recognized that many European countries have laws that give power to public officials and their planners enabling them to control the volume of growth of housing units and, in some cases, commercial development. They can control the location of new residences and through this control can dictate the destiny of their cities.

- In France, regional shopping center sites are chosen by the national government and are leased or sold to a developer selected from a list prepared by government agencies. Competition with the downtown retail district remains restricted.

- In Denmark and Sweden, the locations and numbers of new residential districts are completely controlled by the "state" which also has control over installation of utilities, roads and fixed-rail mass transit lines running into Copenhagen and Stockholm.

- Great Britain controls the land area occupied by its larger cities. For example, the government has established a "ring" of open space around London and has acquired all rights of development within it without compensation to the owners — an open space easement over farmland, in reality. To accommodate its growth rate, the national government has a long-term program for the development of "new towns." Well over a million Englishmen and Scotsmen now live in these government sponsored and financed new towns. This has relieved the pressure for growth in the inner areas of their larger communities. An important feature of the new town is a program to encourage large companies to locate plants and employment centers there. These incentives include money for new machinery, factory buildings, employee training and even bonuses to both the companies and employees.

- Belgium and Holland also have tight land use controls that would not be possible under our Constitution. Their cities and suburbs expand only as much as the "state" determines.

The regulations and controls existing in most European nations have had a lot to do with what has happened to both the cities and the suburbs. Most Americans would not accept such controls in any form — that's why their ancestors left the "old country" in the first place. However, no matter how they are measured, healthy downtowns are found in nearly all urban areas in Europe.

The American Cityscape and Its Stumbling Blocks

American cities are decidedly different than their European counterparts and all efforts to import old country features that would unquestionably improve our inner city areas have largely failed.

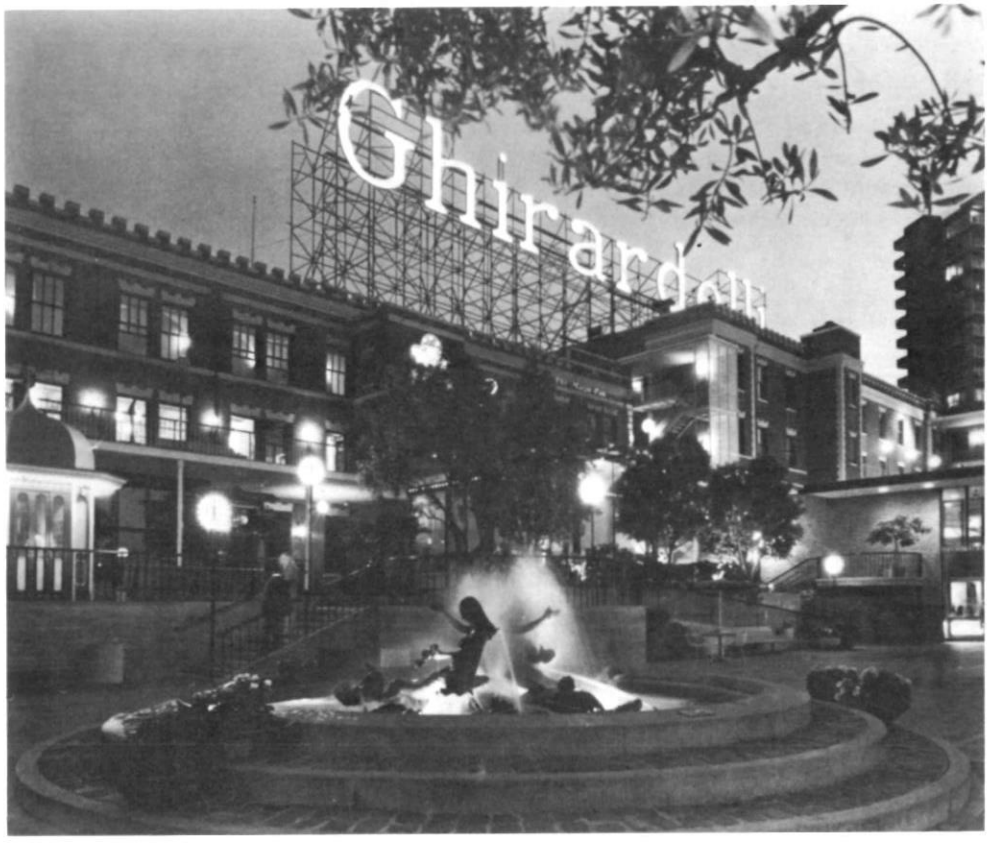
Any student of America's cities must note the recent and continuing burst of development of office space in the inner city areas. Millions of square feet of new office buildings are being constructed in almost every community in the central city areas. (This has happened to a lesser degree in European cities, some of which through architectural controls have discouraged new highrise structures and forced most new office development into peripheral areas such as La Defense outside Paris' central district.) The vitality of American cities is enabling them to absorb a new wave of highrise office space that is costing $100 or more per square foot to build and which is readily renting at $18 or more per square foot annually.

Hotels are likewise being built in the central city areas of some communities and others are planned, but these are generally part of a convention complex provided at public expense in an effort to revive a fading part of the community. And again, these hotels have not had a major impact on retail patterns. Witness the Omni Centers in Atlanta and Miami, although the latter is steadily improving. Dallas, New Orleans, Phoenix (which has been a disaster to date), Tucson, San Francisco and a few others are also examples.

So while we are seeing a revival of the central city as a place where some companies want to operate their business, it is also evident that they are strictly "nine-to-five" activity centers with practically little or no spillover benefits to retail, recreation or restaurant operations.

Retail establishments have long had problems with extremely high rates of "shrinkage" in their inventories in central city stores from shoplifting and from inside theft because of the type of person employed. It is not uncommon for shrinkage to exceed the profits of a store, making costs of security much higher in nearly all downtown department stores than in the branch stores. As a result of these problems, retail concerns are focusing all or most of their expansion plans on outlying areas.

Violence has been another factor in the loss of retail establishments in our cities' downtowns. Violence and fear of violence are an accepted way of life for



Ghirardelli Square
San Francisco, California

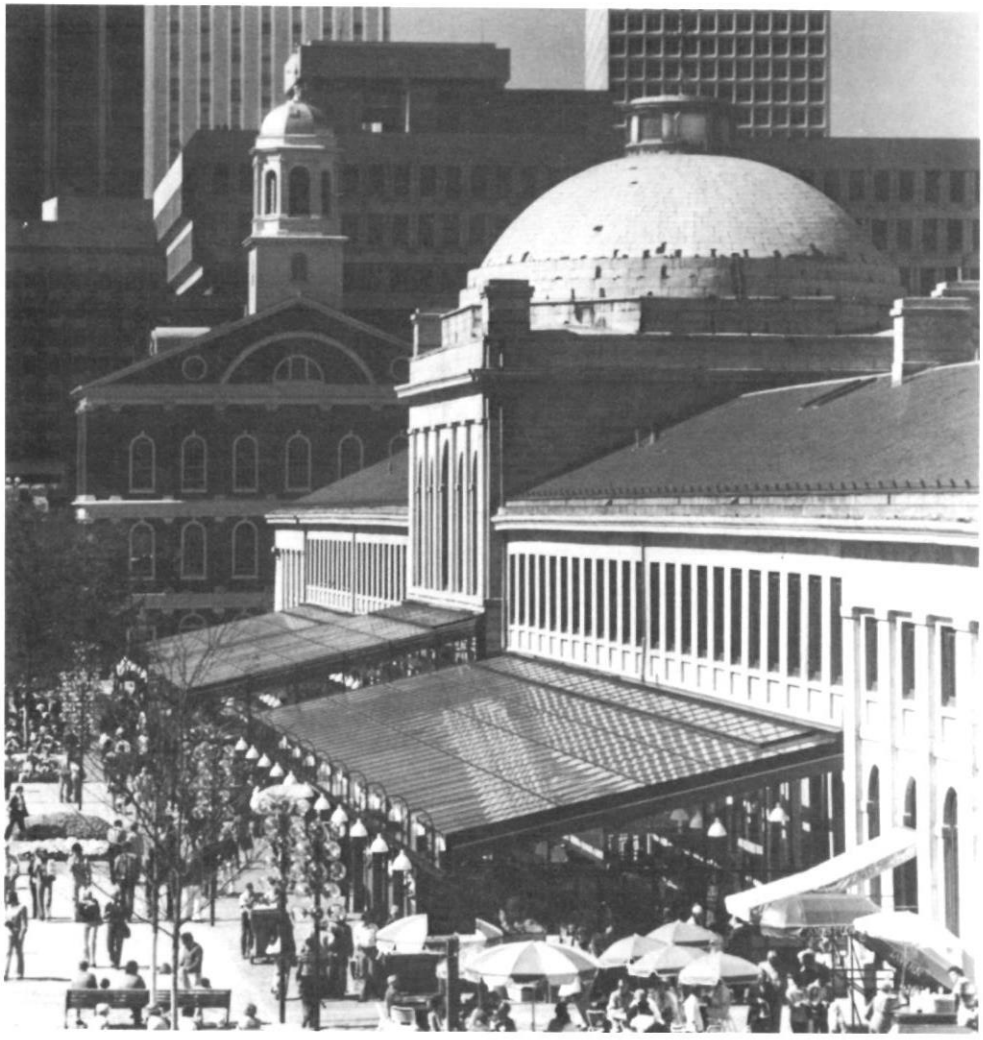
dwellers in the central cities or "war zones." They either have elaborate security systems in their luxury residences or, if their homes are in the areas long since abandoned by the affluent, they live in constant fear. In many cities, shoppers don't feel safe on the streets or in the parking garages in the daylight much less in the evening (which has become an increasingly important shopping period now that fifty percent of the country's women are employed). Those who don't have to be downtown after dark, and even during the daytime, stay away.

We hear much about the "movement back to the city," but so far moving large numbers of families back into the inner city has been a fruitless endeavor. Looking at statistics for several cities, it is apparent that the movement is a trickle at best. The figures for Chicago over the last few years show that the number of minority families that have moved into the city only slightly exceeds the number of affluent families who deserted to the suburbs. Is Chicago any better off with such a slight population increase considering the type of change that has occurred? The answer is obvious.

A recent study by the Rice Center on growth patterns in the Houston area and the effects on future growth of attempts by various government agencies to direct new residential development into the inner city, forcefully states that not more than ten percent of the residential units to be created in greater Houston during the next ten years will be located in the central city. The growth patterns established during the last two decades will prevail, which means that ninety percent of Houston's growth will be located in peripheral areas of the community.

Many American communities have been attempting to encourage and/or force homebuilders to construct new housing in the inner city with little or no success. In Tucson, such an effort, with full support and cooperation of the local association of home builders and all agencies involved, required over two years and a sizeable "money and services" contribution by the city to provide less than forty units. Unfortunately this project did not trigger other homes to be built in the inner city and is considered a failure in achieving the desired goals.

Principal problems in moving people into the inner city revolve around the availability of land in neighborhoods that are acceptable to families and at prices that will not force the cost of such housing to rise beyond the price home buyers can afford. Without exception, land for housing in the suburbs can be purchased at a fraction of the costs for land in the



Faneuil Hall
Boston, Massachusetts

central cities. The price differential for inner city land runs from two to five times the cost for land in the suburbs.

This differential could be offset to a considerable degree by increased densities in the inner city. Townhouses and condominiums with densities of up to ten units per acre would reduce the impact of higher land costs. But there is a hindrance. Residents in city after city have told their elected officials at public hearings that they are strongly opposed to increasing densities in their neighborhoods. This applies to many run-down older areas where near slum conditions exist as well as to better residential sections. The result is that it is very difficult, if not impossible, to get elected officials to bite the bullet and make the unpopular political decisions needed to move a large number of families back into the inner city.

The United States federal government, in cooperation with local public agencies, has spent billions of dollars in efforts to create suitable housing and revive the inner city areas through its urban renewal and public housing programs only to see disastrous results. Both programs have been abandoned. To make matters worse, in many cities where government sponsored rehabilitation programs were responsible for a considerable number of very old houses being remodeled for occupancy by more affluent people, those being forced out had no place to move. Furthermore, dilapidated residential units occupied by the poor are being assessed by taxing authorities in accordance with the values of nearly rehabilitated dwellings. The resulting increase in taxes causes minority residents to be priced out of the market and again with no place to go.

Moving families back to the inner city is fraught with a chain of events that only creates new problems. The lure of "a home on a piece of land of my own" has

been too strong for the majority of American families to resist, especially in view of the higher cost of land in town and the problems relating to violence, smaller-sized dwelling space, poor schools, lack of open space and, in many cases, higher taxes. Reduced driving time, reduced heating and cooling bills and better cultural facilities have not been enough to offset the negatives.

It appears that the biggest stumbling blocks to changes in our cities are, first, an inherent desire by Americans for their own home on their own property, and second, fear of violence. A psychologist might say that these are emotional issues, and to a large degree they are just that, but emotions are very powerful in causing one to do or not do a lot of things.

Looking Into the Future

It is important to acknowledge that our cities are the way they are because of the automobile. To change them materially would take decades. Americans might well opt for a war before they'll give up their automobiles, although there are compromises that no doubt will be considered before such drastic steps are taken.

Perhaps in the future some methods or programs will be developed to bring large numbers of families back to live in the inner city of American metropolitan areas, but as of now the idea is nothing more than wishful thinking by public officials and planners.

Some believe that expansion of mass transit would turn the tide, but it should be remembered that buses and trains run both ways — into and out of the city — making it easy to live in the suburbs where all of one's activity takes place except for the forty hours spent working downtown and the time to get there. Unless a very large purchasing power can be created for or moved back to the inner city, there will be no major revival of retail activity. It is true that in some cities, such as New York, Chicago, Cincinnati, Seattle and Minneapolis, old line department stores enjoy substantial sales volume, but nevertheless the downtown stores' share of total retail sales in the community is much smaller than it once was and is declining annually. It is also true that in a few cities new department stores (they can be counted on one hand!) have been built in downtown areas and others are planned in inner city shopping centers. However, generally these are part of a large program for housing and recreational facilities in efforts to revive the inner city. Their success is yet to be proven.

In downtown Boston, Faneuil Hall has achieved success as a place to shop, browse and eat and Philadelphia's Galleria is proving to be a popular place with shoppers. However, it must be recognized that these are very unusual situations and have little or no impact in reviving the old retail areas of the community. Their success and that of Ghirardelli Square in the inner city of San Francisco will doubtlessly cause others to attempt to copy the idea, but it should be noted that these three cities are among the oldest communities in America and few if any newer cities present similar opportunities. It is a shame that every city cannot have a Faneuil Hall to bring life, activity and people back into the inner city. However never in the foreseeable future will our downtowns recapture the position of being the dominant shopping area in our communities.

Abandoning the central city for a home of one's own where it feels safer may be the result of emotional thinking, but without a dramatic change American cities will continue their current growth pattern and remain permanently different from European communities with few, if any, of their interesting and attractive features.

THE IMPENDING REAL ESTATE CRASH: FACT OR FICTION?

by James R. Webb and Richard J. Curcio

1979 was the fiftieth anniversary of the stock market crash. In keeping with the occasion, numerous doomsayers have predicted a crash (or at least a substantial decline) in the prices of existing housing. Numerous reasons are offered for this impending crash but the predominant ones include:

- Because housing prices are out of historical relation to the price of gold, the stock market and the consumer price index (inflation), a downward adjustment must occur to restore balance.[1]
- With household indebtedness at an all-time high in absolute and relative terms, the economy is slowing down. Some people will lose their jobs and others will work fewer hours, reducing income and increasing defaults on debt payments, thereby causing foreclosures in the short run. Since people could not afford to continue to bid up prices or perhaps even make their mortgage payments, prices will fall.
- The cost of borrowing for mortgages, at an historical high in most states (mortgage rates are twelve percent or higher for twenty percent down, single-family owner-occupied houses in many places), stops potential purchasers, if they could obtain mortgage funds, from buying. This puts pressure on sellers to lower prices in order to sell their property.[2] Because many of these people are speculators, the effect of a downward rolling snowball would occur accelerating the price decline.[3]
- The decrease in the volume of house sales while prices have continued to rise implies a decrease in demand at the increasing price. Therefore, house prices should peak soon as sales slump and then decline until the market reaches normal sales volume again.

These scenarios may sound very logical at first reading. With closer scrutiny however, the underlying analyses reflect serious shortcomings.

The Relationship of Housing to Other Goods

The first explanation derives its strength from a hypothetical relationship between the price of real estate (single-family houses only) and the price of gold, the price of common stocks and the consumer price index (CPI). However, sponsors of this rationale never specify this theoretical price relationship nor is it apparent that it should or does exist.[4] The CPI, the nation's official measure of inflation, has come under severe criticism lately as an overstatement of true inflation largely because of the distorted manner in which house and mortgage interest costs are incorporated. The CPI reflects the average periodic changes in retail prices for a fixed basket of goods and services with housing and mortgage interest costs making up one fifth of the index's computed value. However, people are not continuously purchasing a new home and, for most existing homeowners, their mortgage interest rates are fixed at far lower than current market levels. Further, the determinants of stock prices, and the influence of inflation on stock prices in particular, remains a highly debated issue among financial theorists.[5] Certainly the performance of stock market indices over the past fifteen years in which, for example, the Dow Jones Industrial Average (DJIA) is currently trading at levels lower than those achieved in 1966, is enough to make even the most devout common

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stock investor question the age old belief that stocks are a "good hedge" against inflation. Finally, the pricing of gold in recent years has defied the arguments and rationale of the nation's leading economists and has signified the defeat of the major efforts of governments to demonetize it. More emphatically, the very dramatic rise in gold prices in recent months has taken place with little apparent relationship to the prices of common stock or real estate.

Hence, it appears fair to conclude that the pricing relationship between real estate, common stock and gold, if there is such a relationship, is unknown. Thus, attempts to forecast housing prices based on such vague associations must be regarded as scientifically unfounded.

Burden of Household Indebtedness

To be sure, excessive household indebtedness would tend to put downward pressure on housing prices. Hence the real issue is not whether high debt levels are detrimental to real estate pricing, but whether the current level of indebtedness is really excessive. The doomsayers cite consumer debt ratios (mortgage debt/personal income and installment debt/personal income measures) which are at an all-time high in both absolute and per capita terms. While such arguments are initially convincing, these computations do not reflect the extended repayment periods which currently are so common in the purchase of homes and large ticket items such as automobiles and major appliances. The standard consumer debt ratios do not reflect modern financing instruments such as graduated home mortgages which reduce the monthly payment in the early years of home purchase. It would be more relevant to measure the consumer's ability to repay his debt and not merely his total indebtedness. In this regard debt repayment/disposable household income ratio is a superior measure of the consumer's repayment ability. It would be even more appropriate to measure this debt repayment ratio for those households with debt rather than for all households. For example, whereas in 1970 the top twenty percent of the income earners had 24.9 percent of the total installment debt, in 1977 the same group was responsible for thirty-seven percent of the debt in this category.[6] Further, in 1977 over forty-three percent of households had no installment debt while all other income groups had only nominal increases or decreases in the percent of total installment debt when compared to 1970 levels.

Hence, it appears that a significant proportion of households have no debt burden and that a major portion of the increased financial indebtedness in recent years is being borne by the top twenty percent of income earners or those better able to meet their obligations. It also has been demonstrated that debt repayment as a percent of disposable income was 20.7 percent in the first quarter of 1979, only slightly higher than the 19.3 percent level registered between 1965 and 1973.[7] More emphatically, when debt levels are analyzed on the basis of repayments as a percentage of disposable income of only those households that actually hold debt, the results are quite favorable. This ratio has been less than thirty-nine percent only three times since 1961; however, in 1978, this ratio had just broken through thirty-nine percent from the underside.

Another deficiency of the standard measure of consumer indebtedness is the manner in which home refinancing is reflected in the computation of indebtedness ratio. For instance when a consumer refinances his home either through a renewal of a first mortgage or by securing a second mortgage, the numerator of the ratio (total mortgage debt/personal income) is increased while the denominator does not change. However the funds received from the refinancing, while not reportable income, are disposable and can be used to meet debt obligations.

Finally, if consumer indebtedness were indeed excessive, it would seem reasonable to expect some significant increase in mortgage delinquencies to follow. Despite the recession (believed to have begun in April 1979) the mortgage delinquencies reported for November 1979 by the United States League of Savings Associations held at 0.71 percent, the same as a year earlier and the lowest since the association began monitoring delinquencies in 1953.

Speculation Hypothesis

The "speculation" rationale for a crash in housing prices is based on the conclusion that not only are current consumer debt levels excessive, but that much of this borrowed money is going into speculation in single-family residences. The rationale further depends on the expectation that potential home buyers will significantly resist purchases due to the current record high mortgage interest levels. These conditions, it is reasoned, would cause sellers to lower prices in order for their sales to clear the market. Since many of these sellers are heavily indebted speculators adversely affected by price reduction, they may subsequently be stampeded into further selling thus accelerating the price decline.

The conclusion that consumer debt levels are excessive has already been questioned, but what about the necessary assumption regarding the extensive speculation in housing? The major proponents of this hypothesis, Cardiff and English, both appear to be victims of the old (very old) psychological neurosis known as "the central place fallacy."[9] Stated simply it means that every young person views himself or herself as the center of the world.

Cardiff and English seem to assume that the rest of the United States revolves around what happens in California. The gyrations of the California real estate market lately are familiar to almost everyone, but

hardly representative of the whole United States. They state, for example, "We have talked to many speculators of relatively modest means who own twenty-five or more houses. Due to normal expenses, some of these folks report that they are forced to sell a house or two a year just to make ends meet.... No one knows how much of the nation's housing stock is in the hands of speculators. Estimates range as high as forty percent in some areas."[10]

Is this representative of the real estate market in the United States? How many people do you know who own twenty-five or more houses? Who owns the houses in your neighborhood? Speculators or the people who live in them? A major error has been committed, that is, the results of a small biased sample have been generalized to the whole universe without aid of rigorous methodological technique.

The extent of consumer resistance to the current high interest rates should also be examined carefully. To be sure, home sales may well be slowed by these historically high mortgage rates. However, high financing costs alone do not seem sufficient to drastically impact housing demand. The availability of mortgage money has in the past appeared to be a more critical factor affecting home sales. In the 1974-75 recession, the relatively steep and abrupt decline of home sales was due more to the shortage of mortgage funds than to the high interest rates (historically high for that period) prevailing at the time. As the Federal Reserve Board imposed credit tightening actions, thus raising interest rates, the savings and loan associations and the commercial banks were unable to compete with other sectors for savers' funds. Disintermediation occurred, drastically reducing the availability of mortgage funds. Despite the adverse circumstances that prevailed in the 1974-75 period, housing prices did not decline nationally on an annual basis. To date, owing to the introduction of the competitive six-month money market certificates and other instruments permitted to banks and savings and loan associations, the impact of recent Federal Reserve Board credit tightening moves has had a less severe impact on mortgage availability. Also, mortgage bankers (who, unlike savings and loan associations, do not rely on savings deposits for mortgage money, but rather raise funds in the more competitive secondary mortgage market) are filling an increasing portion of the unfilled conventional mortgage demand of the savings and loans. Hence, as long as mortgage funds are available, the consumer may still justify purchase of a home at high mortgage interest rates in light of expectations of housing price increases.

Sales Volume Versus Prices

The last rationale comes from the sales volume analysts.[11,12] This is a form of chart reading or technical analysis somewhat subject to interpretation from the outset. In arguments for this approach, we are again forced to make comparisons with the 1929 stock market debacle.[13] The only difference is that a chart of volume is given with that for prices. A reading of volume analysis sounds like the analysis of a stock market chart reader, i.e., breadth divergence, volume and price acceleration slowed, etc.

As any real estate professional knows, housing prices by themselves are fairly meaningless in most instances. The price tells little, if anything, about the underlying asset. The mean price of housing used in the above analysis can be seriously criticized for omitting quality variables, a problem that does not generally occur and is not adjusted for often in financial asset analysis. Numerous and substantial changes in housing since 1966 have occurred.[14] Simply adjusting for number of square feet reduces the average sales price in 1977 to $50,000 instead of $54,000 — a seven percent reduction. This is not an insignificant difference. Also in 1977, 46.9 percent of the homes built had two bathrooms versus 30.7 percent in 1966 and only 25.4 percent of new homes had central air conditioning in 1966 versus 54.0 percent in 1977. In addition, more appliances, fireplaces and garages are supplied with homes than ever before. It has been estimated that over twenty percent of the rise in the price of housing since 1966 is due to improvements in quality.[15]

The "price" of housing, furthermore, is not the sales price as it is with financial assets. The price of housing is a combination of the selling price and the financial terms of purchase or the mortgage. The mortgage includes the interest rate and the term. A rise in the interest rate can be offset by lengthening the term. Many variable rate mortgages, especially in California, simply lengthen the term when the interest rate increases, thereby maintaining the same debt service. The mortgage is the means whereby the sales price is paid and interest is paid on the loan. (The down payment is excluded of course.) If interest rates on mortgages are increasing, then housing prices would tend to decrease, all other things equal. But all other things are not equal! Therefore the relevant variable for analysis is not selling price but a combination of selling price and terms of financing.

The volume/price relationship in real estate is also unusual. It does not adhere to those of financial assets. When the price of housing (selling price plus terms of financing) gets high relative to the recent past, sales volume slows due to price resistance as with all economic goods. This happens easily when interest rates are increasing since the selling price of housing does not go down as it's supposed to do. This is probably due in large part to inflation which makes the replacement cost higher if another house were to be built. The prospective sellers may just rent and keep the property or often simply take property off the market to wait for better times. So interest rate increases simply get added to prevailing prices. Housing prices rarely adjust downward. They usually

level off and then rise faster than inflation later as interest rates decrease. Demand becomes pent up during the high interest rate period and the supply of new housing is reduced. When interest rates decrease, the demand exceeds the supply and housing prices accelerate quickly.

Real Assets Versus Financial Assets

Many of the errors of current attempts to analyze the real estate markets can be traced to the analyst's lack of familiarity with real assets in general and real estate in particular. Real assets are the property itself as compared to financial assets which are proxies for property. A real asset can be and often is used to enhance the owner's existence. People live in and enjoy their homes daily. This is not true of common stocks or gold in general. When the asset is disposed of, the owner directly receives 100 percent of the benefits. Real asset owners see their property, can use their property and do not have to wait for dividends, etc. at the whim of management.

There are other major differences between financial assets and real assets. The most significant is the financing. Real estate until recently could be leveraged to ninety percent with a thirty-year debt service that never changed. At this writing, thirteen percent mortgages can be obtained for thirty-year terms while the rate for broker's funds is over eighteen percent. Also, for the common stock investor, only fifty percent leveraging is available to shelter income! Where in the financial sector can benefits comparable to those in real estate be obtained? In addition to all of this, real estate is never subject to a margin call. The initial investment and debt service are fixed for thirty years once the transaction is completed. Only minor expenses such as taxes and maintenance may increase but they will generally be offset by higher rents. Some analysts would argue that loss of rents acts as a margin call since more capital will have to be paid into the investment. However, real estate owners can cut their rent losses by renting at under market rates. Financial market investors have no control other than to sell their assets.

Necessary Conditions

If a crash in real estate were to occur, some major changes would have to transpire in American society.

A technological breakthrough that significantly reduced the cost of construction would cause a temporary reduction in the price of existing housing. If the technological improvement enabled houses to be built fifteen percent cheaper, then housing prices would drop approximately twelve percent. Since land is on the average twenty percent of the price of housing, the fifteen percent reduction would apply only to the improvements part. After this one time reduction, housing would then again resume its upward cost movement, unless the technological breakthroughs continued. However, technological improvements such as modular homes, prefabricated and pre-engineered homes have been around for many years but show little sign of making major inroads into the housing markets.

Major expansions in supply without corresponding expansion in demand would eventually cause a drop in housing prices. If the housing market were to overbuild by twenty percent, for instance, eventually prices would begin to shift significantly downward due to lack of buyers. Once sales could not be made by builders at a reasonable profit, they would cease to build thereby allowing the demand to catch up. Since in a whole year of good building activity builders add only about three percent to existing supply, the chances of a major price shift due to oversupply is extremely unlikely.

People could move in with each other thereby reducing the number of units demanded. Grandma and grandpa could move in with son or daughter or young married couples could move back with mom and dad. A major depression such as the one that occurred during the 1930s could cause such a situation but the federal government would never permit such a state of affairs to persist for long. With all the available social welfare payments and the governmental and quasigovernmental mortgage agencies, any large scale threats of foreclosure in the housing markets would be shortlived. In addition, the tax code continues to favor home ownership due to the deductibility from income of interest and real estate taxes.

Looking Ahead

Explanations have been offered on how the low number of building starts due to high level of interest rates would create over a million unit shortage of housing units by 1981. The result will be more demand pushing the existing housing stock which in turn will eventually produce rapid price increases. Some analysts have gone even further, claiming that perhaps major changes in lifestyle are upcoming due to lack of housing units.[14] A study by the Robert A. McNeil Corporation, a fast-growing California real estate management and development company, further states that 2.8 million dwelling units are needed each year up to 1990 just to break even. If this prediction is true, the shortage could be as high as four million units by 1985. The losers in the bidding competition that could develop will have to live in multiple unit dwellings.

Regardless of high interest rates and "end of the world" philosophers, the near future will hold more of the recent past. The real estate market will not crash. There will not be a general decline in the average price of housing on a year to year basis. This is not to say that minor short term or regional decreases may not occur. Monthly seasonal decreases occur each year. Special events such as a large rise in

interest rates over a short period may also cause temporary short term decreases. But on balance and quite to the contrary, using annual national comparisons, it is more likely that housing will continue to increase in price. Price increases will be more moderate but look for these increases to accelerate in 1981, particularly if interest rates are decreasing.

NOTES

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DOWNZONING IN A CHANGING URBAN ENVIRONMENT

by Roger W. Caves

As cities begin to experience varying degrees of population and economic growth, a great deal of land must be converted from less intensive uses to more intensive uses. Unfortunately, many cities have actually over-zoned their land. For example, large areas zoned industrial have been dormant for years. Today, many of these areas are being rezoned to less intensive uses.

The process of changing zoning from a higher to lower classification, such as from residential to conservation or multi-family to single-family use, is generally referred to as "downzoning."[1] In a time of growth and change, it is essential that all participants involved in the land conversion process become acquainted with the concept of downzoning, the relationship between downzoning and a city's comprehensive plan and the importance of having vested rights in a piece of property.

Zoning Restrictions

Cities have placed restrictions on the use of land for many years. It is certainly not a new phenomenon. By establishing zoning ordinances, cities are merely seeking to put some order into their land use situation. Without any zoning controls, there is an excellent chance that uncontrolled and haphazard development patterns may surface.

An important question that must be answered is what gives local governments the rights to impose restrictions on the use of private property. The answer to this question is that localities have been entrusted with the police power. Although originally vested in the states, states have delegated the power to the localities for the purpose of promoting and protecting the health, safety, welfare and morals of the citizens. This power has been used to alleviate traffic congestion, abolish nonconforming uses, prevent the overcrowding of land and to preserve the character of the land.

The dynamic nature of our cities makes it imperative that zoning be responsive to the changing needs of the cities. As change occurs, restrictions placed on a given piece of land may have to change. For instance, land once zoned industrial that is now vacant may be needed to provide housing for a growing population.

Whenever there are any restrictions placed on the use of property, there are bound to be a number of outcries from property owners. After all, the rezoning of land can be very costly for many of the land owners. The value of a newly downzoned piece of property could be less than half of what it was before the rezoning. It should therefore come as no surprise that many downzonings are challenged in the courts.

Many property owners challenge the validity of downzonings by claiming it isn't a valid exercise of the police power and doesn't conform to any plan. Although all property is subject to the police power, regulation can go too far.[2] Whether it does, in fact, go too far must be determined on a case to case basis.

Downzoning Police Power and Comprehensive Planning

According to the decision of *First Hartford Realty Corporation v. Zoning Commission of Town of Bloomfield,* two of the tests used to determine the validity of a downzoning are, first, that the zoning change must be in accord with the comprehensive plan; second, that it must be reasonably related to the normal police power policies.[3] At issue in this case was a downzoning of property from commercial to residential use. The reasons given for the land's downzoning were that it was in accordance with the comprehensive plan, it would promote the health and safety of the citizens and that it would lessen traffic congestion.[4] By meeting the above require-

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ments, the downzoning was sustained.

Some six years earlier, the case of *Samp Mortar Lake Company v. Town Planning Commission* dealt with a similar situation.[5] In this case, the property was downzoned from industrial to residential use for the following reasons: that it was in accordance with the comprehensive plan; that it would promote the health and safety of the citizens; that it was in accordance with the residential character of the neighborhood; that it would lessen traffic congestion; that it would maintain property and residential values; and that the land is suitable for residential use.[6]

One of the arguments used by the property owner was that the downzoning caused a drastic reduction in the value of his property. The total market loss was approximately $52,000.[7] After all, as cited in *Pa. Coal v. Mahon,* "Government hardly could go on if to some extent values incident to property could not be diminished without compensation for every such change in the general law."[8] The same principle was voiced in *Heram Holding Corporation v. City of Albany* where the downzoning caused a reduction from $12,000 per acre to only $6,500 per acre.[9]

Generally, two points can be made from this discussion. First, if the downzoning was done with proper motives, it will generally be upheld. As voiced in *Kavanewsky v. Zoning Board of Appeals of the Township of Warren,* "A zoning authority is endowed with a wide and liberal discretion but this discretion is to be overruled when the authority has not acted fairly with proper motives and upon valid reason."[10] Second, just because a property owner may suffer some financial loss is no reason to invalidate a restriction on the use of land. This point was noted in *State Department of Assessments, Etc. v. Clark,* "When a restriction is supportable as a proper exercise of the police power, it is not enough for the property owner to show that the restriction results in substantial loss or hardship."[11]

Burden of Proof in Downzoning Cases

When a downzoning is challenged, who has the responsibility of proving it is illegal?

If a landowner claims that a downzoning was arbitrary, unreasonable or deprives him of the use of his land, it is he who has the burden of proof. After all, there is a strong presumption in favor of correctness of zoning. This has been held time and time again in a number of court cases.

The question before the court in *Heram Holding Corporation v. City of Albany* was whether a downzoning of property from heavy industrial use to single-family residential use was reasonable.[12] Pertinent to the case was the fact that the land in question was extremely close to the greatest concentration of industrial operations in Albany. In addition, an expert witness testified the property wasn't even suited for residential use. The court indicated that the plaintiff had the burden of proof. In order for the downzoning to be unconstitutional, Heram Holding Corporation had to show it was unconstitutional beyond a reasonable doubt. The corporation complied with this requirement and the downzoning was declared unreasonable.

The same question emerged four years later in *Roberts v. Grant.*[13] In this case, the action challenged was a rezoning of land from light manufacturing to residential use. Once again, the burden of proof was on the individual challenging the downzoning. As the court indicated, "In order for an individual property owner to remove himself from comprehensive rezoning, he must show the plan will deprive him of any reasonable use of his property or that it is not in the general public interest or welfare."[14] In the end, the plaintiff failed to live up to the burden of proof.

A similar decision was reached in *Hyland v. Mayor and Township Committee of Township of Morris.*[15] This case involved a zoning ordinance amendment which downzoned land from an office and laboratory zone to a residential zone. Hyland charged that the amendment deprived him of a reasonable use of his property. The court held he didn't meet the burden of proof and that the land could be used to develop one-family homes.[16] As a result, a use did exist for the land.

A number of ideas surface in relation to the phrase "reasonable use." First, what constitutes a reasonable use in one case may be an unreasonable use in another case. Thus, a set definition of reasonable is impossible. It will vary from case to case. The issue facing the courts is well stated by John Connell, Executive Director of the Construction Industry Legislative Committee, "As far as 'reasonable economic use' after the downzoning is concerned, if you have a piece of property zoned resort and then they downzone it so all you can do is sell leis on it; I don't think that is reasonable. So, a method has to be found to define what is reasonable and from whose viewpoint."[17]

In upholding downzoning, courts must constantly decide whether the downzoning has singled out one piece of property. An example of this dilemma can be found in *Westwood Forest Estates v. Village of South Nyack.*[18] The case involved a downzoning from highrise apartments to garden apartments to no apartments at all. According to the Village of South Nyack the reason for the downzoning was to alleviate the burden on the sewage disposal system. Recognizing the power of the village to deal with sanitation problems, alleviating the problem must be done on a fair and equitable basis. In this case, Westwood Forest Estates proved it was singled out. The problem was caused by many other people. As the Court of

Appeals of New York held, "It is therefore impermissible to single out this plaintiff to bear a heavy financial burden because of the condition in the community."[19]

Although the burden of proof rests upon the individual alleging the illegality of the downzoning, is there any time where the burden shifts to the city? This was one of the issues in *Board of Supervisors of Fairfax County v. Snell Construction Company.*[20] The controversy centered around a piecemeal zoning ordinance involving two parcels. Acknowledging the fact that the burden of proof is on the one who assails the zoning ordinance,[21] the Supreme Court of Virginia held that "If aggrieved landowner makes prima facie case showing that since enactment of the prior ordinance there has been no change in circumstances substantially affecting the public health or safety, the burden of going forward with evidence of mistake, fraud, or changed circumstances shifts to the governing body. If the governing body produces evidence sufficient to make reasonableness fairly debatable, the ordinance must be sustained."[22] In this case, the action was not fairly debatable. Subsequently, the action was held to be illegal by the Supreme Court of Virginia.

Vested Rights

Another issue consistently raised in downzoning cases is that of vested rights. By definition, vested rights occur "Where an owner of land obtains a building permit based upon existing zoning laws and expends substantial sums or incurs substantial liabilities in reliance thereon, he obtains a vested right to complete construction in accordance with the terms of the permit even though the zoning ordinance is changed after the issuance of the permit."[23] Subsequently, zoning cannot be changed to his detriment. It would simply not be fair to the owner of the affected property. As Calvin Hamilton, director of planning for the City of Los Angeles, has recently observed, "If somebody in good faith has put part of the development in, put a lot of planning money in ... then he should be permitted to go ahead. There are examples that you have heard this morning which indicate that in California a developer can spend up to $2 million and still get cut off. I don't think that's correct from a moral point of view. There is to me a difference between a moral obligation that the public and citizens have to a landowner versus the legal niceties of the law cases."[24]

A number of cases have dealt with the issue of vested rights and whether or not landowners possessed them at the time of rezoning. For example, in *County Council for Montgomery County v. District Land Corporation*, the court had to decide whether having spent over $1 million in studies and plans for development and possessing a building permit amounted to the property owner having vested rights.[25] The District Land Corporation claimed that the facts did entitle them to vested interests. Unfortunately for them, the court disagreed by noting that "having a building permit creates no vested right in an existing zoning classification unless substantial construction had been undertaken in reliance thereon."[26] Thus, the downzoning was allowed in this case.

A similar decision was reached in the 1978 case of *Wincamp Partnership v. Ann Arundel County, Maryland.*[27] As a result, courts are not likely to claim foul on downzoning if the land in question has remained idle or vacant for some time. In that instance, the property owner only has the right to rely on the rule that a change will not be made unless it is required for the public good.[28]

This same issue was under consideration some 18 years earlier in *City of Ann Arbor, Michigan v. Northwest Park Construction Corporation.*[29] The case involved a downzoning from commercial use to residential use. In its argument, the Northwest Park Construction Corporation claimed it had vested rights since trees and stumps had been removed from the land in preparation of development, building permits had been secured and the land had been graded. The Sixth Circuit Court of Appeals, however, disagreed with Northwest Park by indicating they did not have vested rights.[30] A similar decision was reached in *Avco Community Developers, Inc. v. South Coastal Regional Commission.*[31]

The Changing Nature of Cities

Cities are constantly undergoing some type of change. They are not static in nature. Therefore, planning must take into consideration the changing nature of cities. Perhaps that is why planning is defined as a continuous and future-oriented process. In the same regard, although zoning is concerned with the present, it must also be prepared to meet and anticipate the future needs of a city.

Many cases have viewed the changing nature of areas necessitating a change in zoning. The United States Supreme Court in *Euclid v. Ambler* considered the evolution of cities in regard to a city's zoning by noting what is an unreasonable use today may be a reasonable use tomorrow.[32] An example of this type of reasoning can be found in *Shelbourne, Inc. v. Conner.*[33] This case involved a downzoning from neighborhood shopping to residential use. The citizens of the affected area didn't object to the downzoning because they felt there was no need for additional facilities. In regards to the changes taking place, the court noted that "Changes constantly occur. If the energy crisis continues, perhaps the public and their elected officials would be more receptive to the construction of a neighborhood shopping center."[34] This fact has since become a reality throughout the United States. However, whether the energy crisis will play a major role in shaping the zoning of a city remains to be seen.

Overall, zoning must keep pace with the changes taking place in an area. It is imperative that zoning adapt to new circumstances. As voiced by the court in *First Hartford Realty Corporation v. Planning and Zoning Commission of Town of Bloomfield*, "A zoning authority must be free to modify its regulations whenever time, experience, and responsible planning for contemporary or future conditions reasonably indicate the need for change."[35] Failure to adjust to these new conditions will result in an inadequate zoning scheme and assuredly more legal actions.

NOTES

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MARKET SEGMENTATION AND THE REAL ESTATE COUNSELOR

by William C. Weaver

Real estate counselors are frequently called upon to evaluate present or proposed amenities and make specific recommendations relative to marketing strategies. Often they are asked for a market or feasibility analysis which includes the development of target market profiles. Distressed properties must be analyzed and effective marketing strategies developed.

These are only a few examples of analysis that require a thorough working knowledge of market segmentation, a technique which has been used by marketing people for several years. Market segmentation is the process of identifying various segments or parts of a market for a property; it is the subdividing of a market into homogeneous subsets of buyers or users where any subset may conceivably be selected as a market target to be reached with a distinct marketing mix.[1,2]

Segmentation strategies, then, include starting with the consumer and then moving to the product. That is, its most efficient use in real estate would be to identify user wants and needs — the ideal amenity package for a particular segment, say swinging singles — and then design an apartment complex to satisfy those needs. This is a segmentation approach — much different than the more popular method of building first and then convincing the consumer that they "need" the product. For an existing property, segmentation strategies would include analyzing the markets and dividing them using segmentation so that the property can be more effectively marketed.

A real estate counselor is frequently asked, for example, to assist in the development of an apartment or condominium development. The market segmentation concept implies that there is not one "market" for a proposed project but "markets" — that is, several segments or groups of consumers each with its own amenity requirements. Each of these segments may best be reached by a distinct and different marketing mix. The apartment market is, of course, a classic example of a market that can benefit from segmentation strategy. "Swinging singles," "all adults," "family," etc. — are all typical segments that can be and have been tapped.

Minimum Market Requirements for Segmentation

For a consumer or user group to be considered an effective potential segment it should possess three major characteristics: accessibility, measurability, and substantiality. If an analyst chooses to segment the suburban office space market, for example, the segment selected must be accessible — that is, marketing efforts, for example, must be able to focus on that particular segment. Perhaps the chosen target market was old professionals who were leaders in their respective fields. While this group can be effectively defined, it might be difficult to design a marketing campaign that would effectively capture a majority of these people.

Each potential segment should also be measurable. It might be difficult to measure the respective number of suburban office space users who are chiefly motivated by considerations of economy rather than image or quality.

Of course, the segment should be substantial in size. It is of little benefit for a counselor to identify a target segment and analyze it only to find it too small to be of economic significance.

Variables for Segmentation

Markets can be segmented on the basis of many variables; age, sex, income and family size are familiar

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examples. A good real estate counselor is always searching for new, more effective ways to segment markets. Creative counselors can provide their clients with a very real and profitable marketing edge with the successful application of segmentation, especially new, innovative segmentation methodologies.[3,4,5,6]

FIGURE

SEGMENTATION STRATEGIES	TYPICAL VARIABLES
Geographic	Trade areas defined by travel time, neighborhoods, regions
Demographic	Age, sex, family size, family life cycle, income, occupation, education, social class, race
Psychographic	Life style, such as hedonistic, active, conservative or status seekers, personality traits
Benefit	Amenities sought such as covered parking, recreation and entertainment contained in complex, views or impressive vistas, super fast-zoned elevators, status location
Volume	Heavy users vs. light users of space per employee, apartment size required, products requiring large amounts of storage space
Market-Factor	Sensitivity to advertising, price, services provided, quality, brand or store loyalty
Product-Space	Perceived similarities and dissimilarities between competing products by users

Geographic segmentation is one of the oldest forms of segmentation and one of the most frequently used in real estate. Concentrating marketing efforts on a neighborhood or area of a city for a new apartment complex or mini-warehouse is an example of this strategy. Geographic segmentation is perhaps the most useful of all for retail location analysis when the geographic area is defined by driving time. This is one of the most popular and well used methods available.

Demographic segmentation is another popular method. Demographics are statistics about people, and, thus, any statistic (age, income, sex, etc.) can be used to form a demographic segment. Marketing apartments or condos to young singles, empty nesters or high income groups are examples.

Psychographic segmentation is one of the newer methods used successfully in the late 60s and 70s. It is based on the thought that a market segment can be based on life-styles, personality traits, attitudes, images, etc. The "swinging singles" concept is an example of psychographic segmentation. Swingers who tend to demand modern up-to-date architectural styles and a hedonistic life style, and status seekers who are extremely conscious of high status locations and high status styles, are practical markets for real estate analysts. Psychographic segmentation, then, keys in on various life styles by concentrating on that specific group with advertising, amenity packages, pricing, etc. For example, health-oriented individuals such as joggers or tennis buffs have been successfully attracted to office space designed to appeal to this segment (health clubs, jogging tracks, handball courts, etc.)

Benefit segmentation is a newer method infrequently used in the real estate business but one with great potential. Buyers or users are not divided upon demographic or psychographic variables but on the basis of what the buyers are seeking from the product. Here the counselor asks: "What does this shopper want in a store?" "Are they leasing this office space for an image, status, price, or convenience, etc.?" "What specific amenity package does this office space user want?" Some may be looking for price; some, location; and others, other amenities.[4] The correct approach is for the counselor/analyst to examine the potential market (buyers) to try to identify exactly what benefits buyers are seeking from the product whether it be housing, retail space, office space or warehouse space. While this is a little used method due to analytical difficulties, if used properly, it can provide the skccessful analyst with a strong edge in the market place.

Volume segmentation is really a continuation of several segmentation approaches. Step one is for the counselor to examine potential users to determine whether they fall into heavy, medium or light user groups. Let's use retail space in a suburban regional shopping center as an example. Perhaps retail mix is being planned. An analyst might be considering several ladies' boutiques for special leasing attention. Which is the one on which to concentrate? First, examine typical patrons in order to define "heavy users" of this type of store. Then see if they have some identifying characteristics — certain age or income group, psychographic profile, etc. When as much data as possible have been collected, then all potential boutiques can be examined to try to determine which would appeal most to the "heavy user" group of customers. This, of course, presupposes that the counselor is seeking to maximize income from a percentage lease arrangement. While this is a simple example, a little imagination and thought will result in many possible applications of this concept.

Market-factor segmentation is especially useful in retail situations. Suppose the counselor has been retained to assist a shopping center to improve their

share of the market. The researcher should begin by thinking of shopping centers as products or brands. Some shoppers are "brand loyal," that is, they always shop at a particular center. Other shoppers are of moderate loyalty and others are not loyal at all. If these groups can be identified as legitimate segments (accessible, measurable, substantial in size) then a concentrated effort can be made to attract and keep those customers most likely to remain brand loyal. Many regional shopping centers are just beginning to realize that they have strong competition from other regional shopping centers in addition to well developed strips which are growing past local status yet are not classified as regional. Transportation costs will exacerbate this problem. Encouraging "brand loyalty" on the part of shoppers to a center is possible and practical and is just beginning to be a technique available to the market place.

Product space segmentation requires sophisticated data analysis (non-metric multidimensional scaling and cluster analysis) and is a powerful technique. It is a natural segmentation method based upon the way the market perceives the product under study. Using shopping centers as an example, the counselor might examine several shopping alternatives to see how shoppers perceive similarities and differences and how each center rates when compared to shoppers' concept of an ideal shopping place. Answers to these types of questions have obvious uses for the counselor. The same analysis applies to other products such as office buildings, apartments, subdivisions, etc.

Value of Segmentation and Its Cost

Market segmentation is being used and has been used for a long time in real estate analysis. There are several methods — some quite old and used frequently, some very new and powerful — but all are practical, useful techniques available to the sophisticated counselor. The figure gives an overview of the segmentation strategies presented here. All of these segmentation methods may be "mixed and matched" as needed; that is, a market can be segmented in many different ways and each segment can usually be further segmented. For example, volume segmentation might be used to identify a heavy user group which might then be further broken down by using demographic, psychographic, geographic, or other methods.

As we all know, the finer we can target real estate products the better these products can be tailored to the market. Segmentation strategies can assist the counselor in identifying and developing target markets. Counselling with clients concerning a new development can be more useful and the quality of advice from a counselor can be improved with the segmentation concepts presented.

An ethical counselor must inform the client that while segmentation usually results in better sales at higher prices (or higher rents) it does tend to cost more as well.

Property modification costs (or higher construction costs) may be needed to make it more appealing to specific segments. Also, especially for a builder, construction costs may inch upwards because several products, designed to appeal to several groups or segments rather than one generalized floor plan for the market, are being produced! Administrative costs may trend upward due to extra dollars spent for research, management of several segments and more targeted advertising and promotion costs.

To put it bluntly, marketing segmentation is likely to result in more sales or rentals at higher prices, but it costs money! No one can say, with accuracy, whether or not the extra profits will outweigh the extra costs. Literature abounds with examples of where it has produced net gains, huge net gains, but the bottom line still remains: Can it cause sales to rise by more than its costs? [7,8,9,10]

Segmentation Strategy Selection

Four elements must be reviewed before a counselor should recommend a strategy: client resources, property homogeneity, stage in life cycle of product and competitive strategies.

Client resources must be sufficient to carry the property in question through normal real estate cycles as well as to finance the higher marketing costs associated with segmentation efforts. In real estate, fortunately, market segmentation strategies usually do not require outlays that are much higher than normal.

Property homogeneity refers to the customers' view of the property. If they see no real difference between properties (e.g., warehouse space in an industrial park), it is difficult to develop effective segmentation strategies.

Life cycle of the property refers to the existing degree of competition. If your property is the "only game in town" segmentation is wasteful because a less expensive shotgun approach will probably work as well. If you have the only available space, the only land with proper zoning, etc., you don't really need sophisticated marketing efforts if basic demand exists. However, the more heavy the competitive pressures the more a client is likely to benefit from these techniques.

Is the competition using segmentation strategies? When these powerful techniques are used it becomes extremely difficult for another firm to compete effectively without similar strategies. The other side of the coin suggests that if competitors are not using these methods a client can gain a great edge by effective segmentation strategies.

In many situations an effective market segmentation effort provided by a knowledgeable real estate counselor can provide clients with an extremely powerful tool. Counselors can provide these tools for their clients together with the skill and knowledge to design, apply and monitor their effectiveness. They should be yet another service provided by a professional real estate counselor.

NOTES

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A CLOSER LOOK AT WRAPAROUND FINANCING

by Leonard V. Zumpano, Edward R. Mansfield, and Jonathan J. Davies

In the past two years, persistent inflation and the attendant instability in the capital market are once again focusing attention on the wraparound mortgage. A financially attractive alternative for both the lender and the borrower during high interest and tight credit periods, the wraparound is also an extremely versatile financing device. It can be readily tailored to satisfy many different mortgage lending objectives. However, it has some serious limitations that must be assessed in order to minimize the risks associated with its use.

Classifying Wraparound Mortgages

The wraparound mortgage is technically a subordinate mortgage which, as the name suggests, wraps around an already existing senior mortgage. The loan amount is equal to the unamortized portion of the first mortgage and any additional funds that may be advanced by the wraparound lender. The wraparound mortgagee takes over servicing the senior mortgage from debt service payments received on the wraparound. Although the basic characteristics of wraparound mortgages are familiar, their specific structure can vary significantly.

Perhaps the best way to categorize[1] the various types of wraparound mortgages currently used is by the differences in their three basic components — term, amount, and amortization schedule. The maturity of the wraparound can be shorter than, coincident with or in excess of the term of the underlying senior mortgage. The wraparound mortgage can provide additional financing or be used to reduce the debt service and/or extend the term of a prior debt obligation (i.e., a no additional funds, extended term wraparound). Amortization on the wraparound mortgage may be complete or partial and may or may not occur concurrently with the underlying debt. Alternatively, the outstanding balance of the wraparound may increase as the senior debt obligation is amortized. The latter happens when debt service on the wraparound does not cover debt service on the prior mortgage, necessitating periodic out-of-pocket cash advances by the wraparound mortgagee.

Determining the Yield

The unique character of the wraparound mortgage also accounts for the unique nature of its yield. Because the wraparound lender services the first mortgage out of payments received from debt service on the wraparound, income for the wraparound mortgagee is equal to the interest payment differential on the two loans. The effective yield on the wrap is, therefore, equal to net interest divided by the lender's investment, which is equal to the differences between the wraparound loan balance and the unamortized portion of the senior mortgage. However, the first mortgage amortizes at a different and usually faster rate than the wraparound. Therefore the effective yield changes with each debt service payment, since an increasing portion of the income earned on the wraparound is paid to the senior mortgagee as amortization.[2] Instead of being retained, this amortization payment is added to the loan balance owed on the wraparound.

Deferred interest is best thought of as a series of

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"advances" or additional "loans" made to the wraparound mortgagor to meet the senior mortgage obligation. Consequently, since these loans advanced by the wraparound lender will increase over the term of the underlying debt, the effective yield on the wraparound falls as the lender's net investment increases and the leverage factor diminishes.

Many different mathematical formulations, yield tables, computer programs, and even hand calculators can be used to calculate the effective overall yield on wraparound mortgages.[3] However, none of these methods is completely satisfactory for comparing or ranking the yields on wraparound mortgages with the return on other more traditional investments.

Wraparound yield formulations that incorporate the effects of changes in net interest and net inestment occurring over the term of the wraparound fail to account adequately for the time value of money. Since part of the interest earned each period is not retained, the wraparound lender does not have immediate use of these funds for reinvestment as with most other types of loans. Alternative procedures that estimate the realized yield on wraparound mortgages can be used to overcome the above problem, but here also, the usefulness of these discounted cash flow techniques depends upon the validity of the reinvestment assumptions underlying their construction.

Ultimately the choice of an appropriate yield index should reflect the type of alternative investments available to the lender whether or not the investor is subject to an effective capital rationing constraint. Regardless of how the yield on a wraparound mortgage is calculated, the following factors will have an impact on the actual return:

- The smaller the initial or net investment of the lender in relation to the wraparound loan balance, the greater the leverage and the higher the yield.
- For the same reason, the greater the interest rate spread between the wraparound and the underlying debt obligation, then the greater the overall yield.
- The shorter the maturity differential between the wraparound and senior mortgage, then the greater the yield. This occurs because the shorter term wraparound will generate a larger cash flow and minimize the exposed or unlevered portion of the wraparound's term. Therefore, for a given initial inestment and interest rate spread, the yield on a coincident term wraparound will always be appreciably greater than for an extended term wraparound. However, once the term of the wraparound exceeds the maturity of the underlying debt, additional term extension will result in only nominal reductions in overall yield since the wraparound is no longer levered. (See Figure for illustrations of alternative yield calculations.)

FIGURE

Rates of Return for Wraparound Mortgage when First Loan is 20 years at 10 percent

Ratio P2/P1*	Contract rate	Mean	Internal	Mean	Internal	Mean	Internal
1.0		2.2017†		1.3694†		1.1136†	
	12%	12.2651%	12.4761%	13.6727%	14.4753%	24.4034%	27.1798%
	14%	14.5249%	15.0019%	17.2325%	19.2897%	34.1380%	43.0783%
	16%	16.7806%	17.5831%	20.7097%	24.4859%	42.1230%	59.2604%
1.5		3.3026†		2.0541†		1.6703†	
	12%	12.1501%	12.2925%	12.7213%	13.1408%	14.6675%	14.8230%
	14%	14.2975%	14.6098%	15.4047%	16.3359%	18.8748%	19.4437%
	16%	16.4428%	16.9544%	18.0592%	19.5933%	22.7895%	23.9784%
2.5		5.5043†		3.4235†		2.7839†	
	12%	12.0807%	12.1652%	12.3423%	12.5524%	13.0424%	13.0807%
	14%	14.1600%	14.3425%	14.6690%	15.1170%	15.9586%	16.1029%
	16%	16.2382%	16.5328%	16.9836%	17.6974%	18.7841%	19.0924%
		5 years**		10 years**		15 years**	

* P1 is the original principal for first loan and P2 is the original principal for wraparound loan, i.e., unpaid balance on first loan plus amount advanced.

† Numbers are the ratio of P2 to unpaid balance on Loan 1 which reflects the relative funds advanced by the wraparound lender.

** Time remaining on first loan at start of 15-year wraparound.

Note: Calculations for mean rate are based upon monthly changes in lender's net interest income and net investment over the term of the wraparound mortgage; calculations for internal rate incorporate the lender's initial net investment and monthly pre-tax cash flow over the term of the wraparound mortgage.

Using Wraparound Mortgages

Acquiring Additional Funds. Possibly the most frequent and well known reason for negotiating a wraparound mortgage is to obtain additional funds when refinancing would not be financially advisable because of high prepayment penalties or a very low interest rate on existing indebtedness. With a wraparound mortgage, the borrower can procure additional financing without having to extinguish the prior mortgage and at an interest rate that is lower than prevailing rates on new first mortgages. For the same reason, a wraparound is also more attractive than more traditional and higher cost junior mortgage financing.

The obvious appeal of the wraparound mortgage for the lender, and the reason the lender can afford to offer what are effectively below market interest rates on the loan, is the financial leverage provided by the unamortized senior mortgage debt. The wraparound mortgagee is earning interest on the full amount of the wraparound loan, but only advancing the difference between the wraparound mortgage and the outstanding balance on the senior mortgage. In return for "servicing" the smaller, lower cost first mortgage, the wraparound lender can effectively lever his own return to a level well above the nominal contract rate applicable to the wraparound mortgage. In periods of tight money, this is especially advantageous since wraparound financing makes a little money go a long way and at acceptable yields.

Increasing the Income of the Borrower. A wraparound mortgage also can be used to enhance the income producing potential of a seasoned property by restructuring its debt service. By "refinancing" the existing loan balance of a partially amortized senior mortgage over an extended term (a no-additional funds, extended-term wraparound),[4] the borrower can reduce his debt service and increase the cash flow of the property. Net or after-tax cash flow will also increase, even with lower debt service payments, because the new loan will have a reduced amortization schedule, thereby providing larger tax deductions for mortgage interest.

However, in exchange for smaller debt service payments and greater tax savings, the wraparound mortgagor will face a larger future loan balance. Because debt service on the wraparound will be less than debt service on the senior obligation, the wraparound lender will be required to make periodic cash advances over the term of the underlying mortgage. The principal incentive for the wraparound mortgagee, in this situation, is the equity build up that results from the compounding of deferred interest and the out-of-pocket advances.

Procuring Blanket Financing. When acquiring or refinancing multiple properties subject to existing mortgages, a wraparound blanket mortgage can prove more advantageous than negotiating individual mortgages for each parcel or even a blanket first mortgage. If some of the properties have large equities and low interest rate mortgages, the borrower may be able to negotiate a favorable interest rate on the entire package of properties because of the leverage provided the lender by the underlying mortgage loans.

Facilitating Installment Sales Tax Treatment. A wraparound mortgage can be used to achieve installment sales tax treatment which otherwise might not be possible. Section 453 of the Internal Revenue Code allows a seller to defer capital gains from the sale of property until the proceeds are received so long as payments in the year of sale do not exceed thirty percent of the sales price.[5]

The problem often encountered in obtaining such beneficial tax treatment for real estate sales is that the regulations define payments to include the excess of an assumed or subject to mortgage (paid by purchaser) over the seller's adjusted basis in the property. Thus, if property with a low adjusted basis and large mortgage is sold using a traditional purchase money mortgage, the excess of the existing mortgage over basis may be greater than thirty percent of the sales price, thereby precluding installment sales treatment.

The use of a wraparound mortgage, however, may allow the seller to circumvent the first-year payment test. Since the parties to the wraparound do not intend for an assumption to occur, nor is it intended that the buyer take on any direct liability for the existing mortgage, the excess of the senior mortgage balance will not be considered a payment and installment sales accounting is preserved.

Although as yet there has not been a concerted attempt to preclude the use of wraparound financing as a means of achieving installment sales treatment, caution is warranted. If the wraparound lender's payments to the senior mortgage holder are dependent upon receipt of funds from the borrower, or if the wraparound mortgagor has the right to make payments directly to the senior mortgage holder, the more likely a constructive assumption will be deemed to exist and installment sales treatment will be disallowed.

Risk and Limitation Pitfalls

Although the wraparound mortgage as a subordinate lien shares some risks common to all junior mortgages which should not be ignored, its unique character also creates additional problems not usually encountered with more traditional financing arrangements. Some of the risks or difficulties associated with wraparound financing are interrelated, the type and degree varying because of differences in institutional, regulatory and tax factors.

Default Risk. As indicated earlier, the portion of the

income earned on the wraparound that is paid as amortization on the senior mortgage is added to the amount owed on the wraparound mortgage. Consequently, the wraparound lender's net investment increases over the term of the underlying loan and is only recovered at a later date when the wraparound mortgage either amortizes or is refinanced. This not only presents some cash management problems (income earned but not received) but, in the event of default, the funds "advanced" may never be recaptured if the property's value falls or does not keep pace with the growth in the lender's net investment. The risk is even greater if debt service on the wraparound does not cover debt service on the underlying mortgage. In this case, the wraparound lender will have to make actual cash advances to cover loan payments on the first mortgage and both the outstanding balance on the wraparound mortgage as well as the lender's net investment increase over the term of the senior mortgage.

Negative Cash Flow. Even if debt service on the wraparound mortgage exceeds debt service on the senior mortgage, the lender's cash flow may be negative if the income earned on the wraparound is taxable. This will occur if tax on net interest earned exceeds the pretax cash flow to the wraparound mortgagee (equal to the difference in the two loan payments). Although the principal wraparound lenders are either tax exempt institutions or lenders who can effectively minimize taxable income, ambiguity regarding both the actual nature of the wraparound mortgage and the tax to which it may be subject can create what is, in effect, a reverse tax shelter — an asset that generates a negative cash flow and positive tax liability.

If a tax-exempt wraparound lender, such as a pension fund, assumes or is contractually obligated to make debt service payments on an underlying senior mortgage, the income earned on the wraparound can be construed to be debt financed and, therefore, according to the tax codes[6] is taxable under the corporate income tax. However, an IRS ruling applicable only to REITs seems to refute this interpretation.

Revenue Ruling 75-99[7] states that payments made by a wraparound lender on the senior mortgage (from debt service payments received from the wraparound mortgagor) are made on behalf of the borrower. Therefore, the REIT is merely serving as a conduit for the collection and disbursement of funds to the senior mortgage holder. If this is the case, then by implication the wraparound mortgagee is not really obligated to pay interest on the underlying debt and the wraparound loan is not debt financed. Instead, it would appear that it is the wraparound mortgagor who is liable for the underlying debt obligation.[8] Moreover, and for the same reasons, payments made by the wraparound lender to amortize the senior mortgage should not constitute income. At the present time, although the tax status of the wraparound mortgage is still unclear, a number of pension funds are actively engaged in wraparound lending.[9]

Lien Priority. By construction, the wraparound mortgagee makes periodic "advances" to the wraparound borrower with each debt service payment on the senior mortgage. As a result, the net loan balance on the wraparound will increase over the term of the underlying debt. If, in between these periodic advances by the wraparound lender, a new lien is placed on the property, a question arises as to which lien has priority in the event of foreclosure. Unfortunately, there is no simple answer, since priority among liens is a function of several factors including prevailing state laws, the types of liens involved, and the specific provisions in the wraparound mortgage.

Because the lender has some control of the provisions of the wraparound mortgage, the latter consideration deserves additional comment. Given the results of previous litigation, the best protection for wraparound lien priority is to make debt service payments to the senior mortgage holder obligatory.[10] However, such a provision may engender adverse tax consequences for some tax-exempt lenders if as a result the IRS deems the income from the wraparound to be debt financed and taxable. A preferred alternative, therefore, might be to make debt service payments on the senior mortgage mandatory only so long as the wraparound mortgagor continues to make timely payments on the wraparound loan.

Refinancing and Prepayment. In order to protect his investment and insure a satisfactory return on the loan, the wraparound lender must be able to limit the borrower's right to refinance and prepay the underlying mortgage debt.[11]

Since the wraparound mortgage is a subordinate lien, any increase in the loan balance on the senior mortgage will reduce the equity available to support the wraparound lender's investment. Equally important, any changes in the terms of the underlying debt obligation such as an increase in the interest rate or higher monthly payments will reduce the yield on the wrap.

Prepayment presents similar problems. Since the yield on the wraparound loan is predicated on the leverage provided by the underlying mortgage, early prepayment will result in a substantial reduction in the return to the wraparound mortgagee.

A related issue is the due-on-sale clause, now commonly found in most first mortgages. Since this clause permits a mortgage lender to call in the loan in the event of any assignment of title, this provision can effectively defeat the benefits of wraparound financing. Even if the first mortgage holder does not accelerate the mortgage note on assignment of title, the price of waiver will usually be an upward adjust-

ment in the interest rate, thereby eliminating the possibility of a levered return for the wraparound mortgagee. For the same reason, if the recently authorized roll over or renegotiated rate mortgage gains wide acceptance,[12] the future applicability of wraparound financing will be severely restricted.

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NOTES

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4. Although this type of financial arrangement usually requires term extension if the wraparound is self-liquidating, this need not be the case. A balloon note can be negotiated, requiring repayment before, with, or after the maturity of the first mortgage.

5. It should be noted that, at present, Congress is considering a bill that would amend Section 453 to eliminate the thirty percent restriction on the use of installment sales treatment.

6. I. R. C. Sections 511 and 514.

7. Revenue Ruling 75-99, 1975-1 CB 197. It should be noted that this Revenue Ruling is specifically limited to REITs that combine wraparound mortgages with nonrecourse financing.

8. At the same time, the logic of this ruling implies that a wraparound mortgage given by a seller on a property subject to an existing mortgage cannot be used to achieve installment sales treatment, since it is the buyer who effectively assumes the underlying senior mortgage debt.

9. Bigelow, op cit., 20.

10. Galowitz, op cit, 128-129.

11. Arnold Leider, "How to Wraparound a Mortgage," *Real Estate Review*, 4 (Winter 1974), 29-35, and "Wraparound Financing by a Commercial Bank," *The Journal of Commercial Bank Lending* 56 (April 1974), 2-22.

12. In April 1980, the Federal Home Loan Bank Board unanimously approved new regulations permitting federally chartered savings and loan associations to offer roll over mortgages. Interest rates on these loans can be renegotiated every three to five years, with the maximum interest rate change limited to five percentage points over the term of the mortgage. Moreover, federally chartered savings and loan associations are no longer obligated to continue to offer fixed rate mortgages as was the case under the regulations that authorized the variable rate mortgage loan.

NEW TAX INCENTIVES FOR REHABILITATED REAL ESTATE INVESTMENT

by James P. Gaines and Edward J. Schnee

For several years conditions have been developing that foster reinvestment in older, declining properties and neighborhoods, both residential and commercial. Businesses and individuals are facing higher land and construction costs. Concern is growing over higher transportation costs to commuters because of rapidly escalating gasoline prices.

Recent government policies and actions have also contributed to the new outlook in revitalization and rehabilitation of older properties in central urban areas. In addition to the housing and residential neighborhood reinvestment programs contained in the 1974 and 1977 Housing Acts, new tax laws were enacted in 1978.

In fact, the most significant tax incentive for real estate investors in many years may be a special provision written into the Revenue Act of 1978. For the first time a direct investment tax credit is available for rehabilitating qualified commercial properties. The Energy Tax Act of 1978 also contained provisions which should further encourage reinvestment in older properties. Prior to the acts, a property owner's benefit was limited to the depreciation or amortization of these expenditures.

These 1978 laws continue the swing in national real estate policy (if such a thing exists) toward encouraging the revitalization of urban areas. This shift was shown in the 1974 Housing Act created by the National Commission on Neighborhoods and particularly by the Housing and Community Development Act of 1977, including Title VIII known as the Community Reinvestment Act. Indeed, the National Commission on Neighborhoods has recently concluded an extensive study on declining neighborhoods and has strongly recommended that government policy should encourage the repair of older neighborhoods rather than new construction.

Prior to the 1978 tax legislation, revitalization was focused on residential rehabilitation. The principal tools for encouraging residential reinvestment were direct community block grants and special low interest rate rehab loans. The 1969 Tax Reform Act provided the first tax incentive by allowing rapid depreciation write-offs of rehabilitation expenses over five years rather than actual expected life. However, the 1969 tax laws applied only to rehabilitation expenses connected to low- and moderate-income housing. The 1969 TRA did nothing to encorage reinvestment in older, nonresidential real estate.

The most significant provisions of the Revenue Act of 1978 and the Energy Tax Act of 1978 for nonresidential real estate investors are the new investment tax credit allowance and the new alternate minimum tax. For residential rehabilitated properties, the new laws extend the accelerated depreciation provisions of the 1969 and 1976 Tax Reform Acts plus allowing a tax credit for energy conservation expenditures.

Investment Tax Credits

Revenue Act of 1978. This Act makes an investment tax credit of up to ten percent available for rehabilitation expenditures on qualified buildings.[1] To be a qualified building a structure must be rehabilitated after having been placed in service, and the rehabilitation process must leave at least seventy-five percent of the external walls in place as external walls.[2] In addition, the building must have been in existence for at least twenty years since construction or last re-

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habilitation.[3] Effectively, this limits the qualification of a building to once every twenty years starting twenty years after original construction.

Rehabilitation expenses are any expenditure that can be capitalized and that is incurred after October 31, 1978 on a qualified, rehabilitated building with a useful life of at least five years.[4] Rehabilitation expenses include reconstruction but do not include:

- The cost of any property which would qualify for the investment credit under the other definition of qualified property;
- The cost of acquiring the building; and
- Expenditure on certified historic structures unless it meets the rigorous tests under Section 191(d)(4).[5]

In order to maximize the investment credit on rehabilitation expenses, the expenditures are defined as new property.[6] Defining the expenditures as new property removes them from the limitation that only $100,000 per year of used property may qualify. Consequently, a taxpayer may include all of the rehabilitation expenses in his investment credit computation as well as up to $100,000 of used property purchased during the year.

The limitation on qualified buildings to ones with a useful life of at least five years means that the taxpayer can claim at least two-thirds of the ten percent on all expenditures. For buildings with a useful life of at least seven years, the full ten percent credit is available.

Although there are no other direct limitations on rehabilitation expenses, other provisions limit the qualifying properties. The first additional requirement is that the rehabilitated building may not be used to furnish lodging.[7] Hotels and motels, however, are specifically exempted from the exclusion for property used for lodging.

The second requirement deals with leased property. For the property owner to claim the investment credit, the property must be leased for less than fifty percent of the property's useful life, and the expenses deductible as ordinary and necessary business expenses must exceed fifteen percent of the rental income.[8]

The final additional requirement is that the taxpayer may not have elected the special short-term amortization under Sections 167(K) or 191.[9] These special provisions deal with accelerated depreciation write-offs for low-income residential properties and rehabilitated historical properties and are discussed under the heading of depreciation.

The Revenue Act of 1978 made another very important change in the investment credit, which, although it does not affect rehabilitation expenses directly, increases the amount of credit claimed. Prior to the Act, the maximum tax credit permitted in any year was limited to the first $25,000 of tax liability plus fifty percent of the liability above that amount. Starting in 1979 the percentage is increased by ten percent annually until 1982 when the maximum credit becomes the first $25,000 plus ninety percent of the excess liability.[10] Increasing the tax liability percentage to ninety percent, plus the fact that carryovers are used on a first-in, first-out basis (a result of the 1976 Reform Act), should eliminate any loss of the investment credit due to the limitation based on tax liability.

Energy Tax Act of 1978. An investment tax credit was included in the Energy Act which applies to expenditures that do not qualify for an investment credit under the 1978 Revenue Act. The Energy Act provides for an investment tax credit for energy property expenditures made by a property owner. It also changed part of the definition of property qualifying for the investment credit. These changes may increase or decrease the amount of the investment credit.

One important change that will decrease the amount of investment credit is that the definition of property eligible for the investment credit now excludes air conditioning and heating units.[11] Also excluded from the definition of eligible property are boilers fueled by petroleum and petroleum products such as natural gas.[12] Petroleum fueled boilers will not be exempt, however, if the burning of coal is prohibited by air pollution regulations or the boilers are used for an exempt purpose. Exempt purposes include residential facilities, farming, shopping centers, office buildings, and facilities which are not a part of the manufacturing or mining process.[13]

The Energy Act made expenditures for energy property from October 1, 1978 through December 31, 1982 eligible for the investment credit.[14] The expenditures can be for either commercial or residential property.

Energy property includes solar or wind energy property, alternate energy property and specially defined energy property.[15] Solar or wind energy property is equipment which generates electricity, heats, cools or provides hot water from solar or wind energy.[16] Alternate energy property is a boiler, burner or other equipment which produces energy from a source other than oil, natural gas or a product from oil or natural gas.[17] Specially defined energy property includes: a recuperator, a heat wheel, a regenerator, a heat exchanger, a waste heat boiler, a heat pipe, an automatic energy control system, a turbulator, a preheater, a combustible gas recovery system, an economizer, and any other property specified in the regulations to be issued.[18]

In order to implement the investment credit for energy property, the computation of the allowable tax credit was restructured. The total allowable credit is the sum of the regular percentage, the energy percentage and the Employee Stock Ownership Plan (ESOP) percentage.[19] The regular percentage is ten

percent of the property which qualifies because of applicable sections other than the energy property section. The Code states "... the regular percentage shall not apply to any energy property which but for section 48(l)(1) would not be section 38 property."[20] It appears that property that qualifies for the investment credit as energy property, and that is also eligible under another subsection, qualifies for the regular percentage. The ESOP percentage is only for corporations which have special employee ownership plans.

In addition, the law was changed so that the credit computation and the carryover rules are to be applied separately for energy property and all other investment credit property with the other property going first.[21] In applying this rule energy property is divided into solar or wind energy property and all other property. For nonsolar or wind property the computation of the credit and carryover is the same as nonenergy property except the percentage of tax which can be offset by this credit is increased to 100 percent of the tax liability.[22]

The credit for solar and wind energy property is a refundable credit.[23] This means that if the credit exceeds the tax liability the government will send the taxpayer a refund for the excess rather than requiring the excess be carried over and used to reduce the liability in an alternate year. This is the first time that any part of the investment credit is refundable and only the second time that any credit is refundable.[24]

Depreciation Allowances under 1978 Legislation

Rehabilitation expenditures must be capitalized (added to the asset basis) rather than deducted in the year incurred or paid. The taxpayer may then claim a depreciation deduction ratably over the life of the asset.

The Tax Reform Act of 1969 granted the taxpayer an option to elect to depreciate the cost of rehabilitation expenditures for low income housing over sixty months using the straight line rate.[25] Each subsequent tax act increased the date that the expenditure can be incurred. The Revenue Act of 1978 permits expenditures through December 31, 1981 to qualify for the election.

Low-income housing is defined as housing which is rented to low- and moderate-income families as defined in the Leased Housing Program under Section 8 of the United States Housing Act of 1937.[26] It does not include hotels, motels and other rental property in which more than one-half the units are used by transients.[27] Qualified rehabilitation expenditures are capitalizable and apply to a property addition or improvement which has a useful life of at least five years.[28] Qualified expenditures do not include the acquisition of the property or a partial interest in the property. The maximum amount which will qualify for the accelerated amortization is $20,000 per unit provided at least $3,000 is expended within a two-year period.[29]

The Tax Reform Act of 1976 permitted the amortization of qualified rehabilitation expenses of certified historic structures over sixty months using the straight line method.[30] The Revenue Act of 1978 expands and modifies the law to include historic districts certified by state and local governments as well as ones listed in the National Register. The Act continues the restriction on depreciation to the straight line method for demolition and substantial alterations of structures within historic districts unless they meet the tests as certified rehabilitation expenditures.[31] The Act also makes clear that the taxpayer can elect either the sixty-month amortization or accelerated depreciation, but not both.[32]

If real property is sold at a gain, then the gain, to the extent it is the result of accelerated depreciation in excess of the amount which would have been allowed under the straight line method, is ordinary income rather than capital gain. Since 1969, the election to amortize rehabilitation expenses over sixty months has caused the gain on the sale to be ordinary to the extent the amortization deduction exceeded the amount that would have been deducted if the actual useful life had been used. The Revenue Act of 1978 includes the sixty-month amortization of certified historical structure expenses under this recapture rule.[33]

As discussed earlier, the Energy Tax Act of 1978 prohibits the claiming of the investment credit on certain boilers fueled by oil and gas. In calculating the deduction for depreciation on these boilers the taxpayer is limited to the straight line method.[34] In addition, the useful life will be equal to the listed class life without the twenty percent reduction which was permitted as part of the asset depreciation range method. In other words, the taxpayer is limited to the old guideline life for the boiler.

Alternately, the Energy Act permits the taxpayer to shorten the useful life of a boiler fueled by oil, gas or other petroleum product which is already in operation.[35] If the taxpayer can establish that he is going to retire or replace a petroleum boiler before the expiration of the selected useful life, then he can determine the depreciation deduction based on this shorter life. However, if the boiler is not retired or replaced, he will be liable for interest on the tax benefit which resulted from the shortened life.

Alternate Minimum Tax

In addition to the changes in investment credit and depreciation, the Revenue Act of 1978 will cause a taxpayer to incur an increase in minimum tax as a result of rehabilitation expenses.

Included in the list of tax preferences is accelerated depreciation on real property. This is defined as the amount of depreciation claimed in excess of the amount that would have been allowed under the

straight line method. In calculating the amount of straight line depreciation, the taxpayer was not permitted the rapid write-off of rehabilitation expenses of low income housing. Therefore, if the taxpayer elected the sixty-month amortization, he or she had tax preferences equal to the difference between the amount claimed and the amount that would have been allowed if the actual useful life rather than the shorter life was used. The Revenue Act of 1978 added the sixty-month amortization of certified historical rehabilitation expenses to the list of tax preferences.[36]

The above change is the only direct one made by the 1978 Act. There is, however, a significant indirect change. The Act added a new alternate minimum tax.[37] This alternate minimum tax is payable if it is larger than the regular tax plus the old add-on minimum tax. This new minimum tax is a replacement of the regular tax plus add-on minimum and is payable instead of the old taxes.

The computation of the new alternate minimum tax starts with gross income. From gross income there is subtracted all deductions permitted in arriving at taxable income. To this is added the amount of tax preferences as a result of capital gains and itemized deductions.[38] The result of the addition and subtraction is alternate minimum taxable income.

The alternate minimum tax is calculated on a progressive rate scale. The rates are ten percent for alternate minimum taxable income from $20,000 to $60,000, plus twenty percent for the amount between $60,000 and $100,000, plus twenty-five percent on the amount above $100,000.[39] This alternate tax is reduced to the amount of the allowable foreign tax credit.[40] No other credits are permitted.

If the taxpayer is liable for this new alternate minimum tax he will not receive the benefit of the investment credit. Specifically, a taxpayer entitled to the credit as a result of rehabilitation expenditures will not have a reduced tax liability if his alternate minimum tax exceeds his regular tax minus all credits plus the old add-on investment credit.

If the taxpayer does not get to use the investment credit because of the alternate minimum tax he will be able to carry over the unused amount. The carryover period is the three years preceding the current one plus the seven succeeding years. This ten-year carryover period plus the fact that the credit is used on a first-in/first-out basis should aid in minimizing the loss of investment credits.

Future Impact

As with any new laws, particularly new tax laws, some problems exist. First, until the IRS issues its regulations clarifying and expanding the definitions of many key terms, a great deal of uncertainty will remain about eligible expenditures and qualifying properties.

A marked tendency on the part of property owners to have their properties or immediate neighborhoods registered as historical districts may also result. It remains to be seen how much pressure will be exerted to limited historical registry.

The refundable tax credit now available, together with the new alternate minimum tax, may cause a shift away from the high tax bracket investor toward middle and upper middle-income investors seeking immediate cash returns. A "secondary market" may develop from investors who initially purchase older properties, provide the rehabilitation capital, and take the immediate tax advantages and resell the property on a short term basis to a "permanent" owner seeking the longer term cash flows and depreciation allowances.

Finally, until a body of case law is developed to supplement forthcoming regulations, investors seeking to take advantage of the new tax incentives will be facing far more uncertainty and be subject to future interpretations of allowable expenditures.

NOTES

1. Section 48(a)(i)(E).
2. Section 48(g)(i)(A).
3. Section 48(g)(i)(B).
4. Section 48(g)(2)(A).
5. Section 48(g)(2)(B) and Section 48 (g)(1)(D).
6. Section 48(g)(3).
7. Section 48(a)(3).
8. Section 46(e)(3). Also permitted are leases by corporations and leases of property manufactured by the lessor.
9. Section 48(a)(8).
10. Section 46(a)(3).
11. Section 48(a)(1)(A).
12. Section 48(a)(10)(A).
13. Section 48(a)(10)(B).
14. Section 48(l)(1).
15. Section 48(l)(2).
16. Section 48(l)(4).
17. Section 48(l)(3).
18. Section 48(l)(5).
19. Section 46(a)(2)(A). ESOP refers to corporations which have established special qualified employee stock ownership plans.
20. Section 46(a)(2)(D).
21. Section 46(a)(10)(A).
22. Section 46(a)(10)(B).
23. Section 46(a)(10)(C).
24. The earned income credit was the first refundable credit.
25. Section 167(k)(1).
26. Section 167(k)(3)(B).
27. Section 167(k)(3)(C).
28. Section 167(k)(3)(A).
29. Section 167(k)(2).
30. Section 191(a).
31. Section 167(n).
32. Section 167(o).
33. Section 1250(b)(4).
34. Section 167(p).
35. Section 167(q).
36. Section 57(a)(2).
37. Section 55.
38. Section 55(b)(1). Starting in 1979, sixty percent of net long term capital gains is a tax preference item. The amount of itemized deduction except medical and casualty losses in excess of sixty percent of adjusted gross income is also a tax preference item.
39. Section 55(a)(1).
40. Section 55(c)(2).

MEASURING THE SIGNIFICANCE OF ACCOUNTING AND TAX SHELTER VARIABLES IN REAL PROPERTY

by Austin J. Jaffe

One of the most widely held assumptions in the analysis of income-producing real estate is that tax shelter benefits for equity investors are of primary importance. Accounting literature is filled with articles that review, summarize, and analyze the mechanics of tax shelter opportunities. This has been especially the case since the recent Congressional legislation designed to limit or eliminate tax shelter provisions under the guise of tax reform.

Although Congress did not further limit the basic depreciation rules contained in the Tax Reform Act of 1969 when enacting the 1976 Tax Reform Act, the recapture provisions were altered. The most recent analysis of the 1976 Act's effect dealt with the significance of depreciation method selection for real estate investment projects.[1]

Similar analysis has appeared in the accounting literature suggesting a widespread presumption of the importance of accelerated depreciation provisions for influencing returns and values in real estate. [2,3,4,5] This proposition has been underlined in typical fashion, e.g., "Looking at real estate investments after the Tax Reform Act [of 1969], it is obvious that the tax shelter in nonresidential real estate has been significantly reduced ... and that many investments which formerly were attractive will no longer be so."[6]

The importance of tax shelter in real estate has been argued for by the magnitude of projects in the market. "The significance of the real estate tax shelter as device for tax avoidance is exemplified by the fact that in the first half of 1975 alone, more than $190 million in tax-sheltered real estate investments were offered to the general public."[7] This argument has a long following in many circles. However, it fails to answer the question of how significant the tax shelter provisions are for real estate investment decision-making. The magnitude of real estate investment begs the question of the significance of tax shelter provisions. In addition, it can be argued that many, if not all, of the tax shelter benefits are capitalized into selling prices at the time of sale.[8]

Another argument avoids "the significance of tax shelter" issue as well. The presumed importance of tax shelter benefits is accepted but the ultimate benefits are considered accrued to state and local government rather than to the private investors.[9] Thus, depreciation provisions are viewed as a value source for municipalities and it is reasoned that additional tax reform would deprive localities of additional benefits to be used in public interest.

By using a well known real estate investment valuation model, which has generally been used in analyzing equity values and rates of return for real estate projects, sensitivity analysis results can be derived to determine, under some limiting conditions, the significance of the impact of changes in accounting variables on rates of return. The results indicate that the sensitivity of return to changes in the choice of depreciation method is relatively insignificant in many cases. Furthermore, the impact that changes in effective tax rates and changes in the depreciable lives of the improvements has on rates of return is generally very small relative to possible changes (or "errors in measurement") in other variables. Finally, the paper will conclude by reassessing the role of tax accountants and accounting information in real estate decision-making.

Further, in a broader context, the effect of tax shelters used to offset tax liability from other outside in-

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come may be substantial and thus lead the investor to different conclusions than those provided here. This analysis suggests that *the effect of changes in these variables on the return of real estate projects individually is surprisingly small,* and thus the marginal tax shelter benefits are significantly lower than previously presumed, based upon the project as a single investment alternative.

Measuring Tax Shelter Benefits

Modern real estate investment analysis has adopted a discounted cash flow approach to the measurement of investment value and rate of return. Its development is generally credited to Paul F. Wendt and Sui N. Wong but was also quickly adopted by many others.[10, 11, 12, 13, 14, 15, 16, 17] This approach provided a conceptual decision framework to the real estate investment problem that only a year earlier had been claimed not to exist: "The real estate field itself lacks a body of literature on investment theory. True, real estate texts touch on various attributes of real estate investment such as the indestructibility of land, and the physical and functional obsolence of improvements. But this describes only general attributes and advantages and disadvantages of real estate investment by quantifying investors' objectives, risks, and decision rules."[18] By the early 1970's the "formal body of literature" had developed into the beginning of a financial science.

Emphasis was placed upon *after-tax cash flows,* which provided a measure of *ex ante* benefits for the equity investor. This measure consisted of the following components, using Wendt's and Wong's symbols.

$$ATCF_i = R_i - I_i - A_i - T_i \qquad \textbf{Equation 1}$$

where $ATCF_i$ is the After-Tax Cash Flow per period i, R_i is the Net Operating Income per period i, I_i is the Interest Expense per period i, A_i is the Principal Repayment (amortization) term per period i, and T_i is the Tax Liability per period i.

Since the tax liability T_i is based upon taxable income and not cash flow, Equation 1 can be rewritten as follows:

$$ATCF_i = R_i - I_i - A_i - t(R_i - I_i - D_i) \qquad \textbf{Equation 2}$$

where D_i is the Depreciation Allowance per period i and t is the tax rate presumed constant for all i periods.

Rearrangement of the terms provides a more convenient measure of cash flow for the analysis of tax shelter.[19]

$$ATCF_i = (R_i - I_i)(1-t) - A_i + tD_i \qquad \textbf{Equation 3}$$

Since tax shelter occurs as a result of depreciation allowances, it is interesting that tax shelter affects after-tax cash flow only in the final term in Equation 3.[20] It is also interesting to compare this measure of after-tax cash flow with measures used in financial accounting.[21]

Another type of cash flow is called the after-tax equity reversion. It is the cash flow that occurs at the end of the holding period of the investment. Using Wendt's and Wong's notation again, this figure may be represented as follows:

$$ATER_n = P_n - GT - UM \qquad \textbf{Equation 4}$$

where $ATER_n$ is the After-Tax Equity Reversion at the end of the expected holding period n, P_n is the net sale price in period n, GT is the capital gains tax (including the tax on recapture), and UM is the unpaid mortgage balance at the end of period n.

Since depreciation affects only one term in Equation 4, GT, the impact of tax shelter in the after-tax equity reversion can be measured by isolating GT.

If the analyst wanted to evaluate the optimal depreciation method for the real estate investment, given the investor's tax rate, expected holding period, allowable depreciation methods and capital gains tax treatment, the investor would choose the method which maximized the present value of tax shelter benefits, B, when discounted by the after-tax required rate of return on equity, k_e.

$$\text{Maximize } B = \sum_{i=1}^{n} \frac{tD_i}{(1+k_e)^i} - \frac{GT}{(1+k_e)^n} \qquad \textbf{Equation 5}$$

$$= t \sum_{i=1}^{n} \frac{D_i}{(1+k_e)^i} - \frac{GT}{(1+k_e)^n} \qquad \textbf{Equation 6}$$

where B is the present value of tax shelter benefits and k_e is the required rate of return on equity.

The Equity Valuation Mode

Equations 3 and 4 can be combined to form the basis of the equity valuation model.

$$E = \sum_{i=1}^{n} \frac{(R_i - I_i)(1-t) - A_i + tD_i}{(1+k_e)^i} + \frac{P_n - GT - UM}{(1+k_e)^n} \qquad \textbf{Equation 7}$$

where E is the investment value of equity invested in the project.

The decision rules for this model are easily derived. If E is greater than or equal to the market value less the mortgage debt, the investment will be acceptable. If E is less than the difference of market value and mortgage debt, the project is unacceptable.

This model has also been used to derive the internal rate of return on equity, r. This measure is defined as the rate r which equates the present value of after-tax cash flow and after-tax equity reversion with the difference between market value and mortgage debt. Algebraically, it is r which satisfies the following equation.

$$O = \sum_{i=1}^{n} \frac{ATCF_i}{(1+r)^i} + \frac{ATER_n}{(1+r)^n} - (MV-MD) \qquad \textbf{Equation 8}$$

where MV is the market value of the property, MD is the mortgage debt used to calculate cash flows and r is the internal rate of return on equity.

If r is greater than or equal to k_e, the project would be acceptable. If r is less than k_e, the project would be rejected.

Hossein Askari has calculated internal rates of return for owner occupied housing using a similar model.[22] He presented results which suggest that large discrepancies exist in rates of return on real property between different income classes due to the impact of the progressive income tax rate system. Although this proposition is not necessarily new, the results presented here support the direction of Askari's findings but, at the same time, show that the *magnitude* of the impacts which changes in tax rates have on rates of return is considerably less than generally presumed. Furthermore, it has also been suggested that the impacts of the tax rate differentials and tax shelter benefits are incorporated into asking prices prior to the acquisition of the property.

Theory of Tax Capitalization

It has been argued that if perfect capital markets existed, there would be no advantage to tax shelter. In such a world, no favorable tax treatments would have an effect on the rate of return from real property or the investment value of property as calculated by market participants. Suppose real estate assets were treated more favorably by the taxing authority in this hypothetical world by allowing accelerated depreciation, for example. Investors would perceive such a tax break as a governmental wealth-transfer due to reduced tax liability as soon as the information was made available to the public.[23] These keen investors would no doubt quickly observe that these tax-favored real estate assets were now receiving more favorable governmental treatment than other assets of equal risk. Wise investors would move into this market and acquire these assets. This new demand for real estate would bid up its price and thereby take advantage of any temporary risk-return disequilibrium. The result would be that any profitability created by differential tax treatment would be eliminated by market forces. This is the theory of tax capitalization and tax shelter.

In a perfect market, the reevaluation of real property values (and therefore returns) would occur instantaneously. With market imperfections, the adjustment time would offer opportunities to other investors. This same story could be told for differential treatment of specific types of real estate as well. It also would apply to a system with progressive tax rates, in which all property would be held by individuals with the highest tax rate (since this would permit the greatest tax shelters, as in Equations 5 and 6). Therefore, the real question regarding tax capitalization is whether or not it exists in real world real estate investment markets and if so, to what extent. This is the same as asking to what extent imperfections exist in real estate markets which permit the tax shelter variables to influence rates of return and values of specific assets.

The questions raised above are quickly recognized as empirical ones, which require empirical studies for answers. However, there are a number of observations and possible explanations as to why it might be expected that complete tax capitalization generally *has not* occurred. First, real estate investors have employed and continue to employ accountants and real estate counselors to provide optimal depreciation method analysis and normative tax shelter analysis between alternatives. Second, it seems likely that we could find pieces of property nearly identical in many ways except depreciation treatment by different investors. Since it has been shown what import depreciation methods have on cash flow earlier in this paper, it would be evidence of market imperfections (and incomplete tax capitalization) if two investors chose to use different depreciation methods for similar property. In other words, in very competitive markets one would expect to find only the *best* depreciation method used for each type of property.

Finally, it can be observed that some market participants have acquired property and continue to do so even with low or moderate marginal income tax rates in a progressive income tax system. With perfect markets, the highest income-taxed individuals would be able to bid more for all property *with the same market information* than could all others, as shown in Equations 5 and 6. Since less than 100 percent of all investment property rests in the portfolios of our richest citizens, this provides further indication of the possible advantages to tax shelter analysis and tax planning for real estate investment. Therefore, to the extent that some tax shelter benefits have not been capitalized into property values in 1913 (or earlier!), that is the extent to which normative tax shelter analysis may provide results for investors. The results, however, provide some further doubts as to the value of such endeavors.

Methodology and Results of Study

The technique used to assess the impact on values and return of changes in tax shelter variables is a form of sensitivity analysis. "[Sensitivity analysis] . . . is quite literally an analysis of the sensitivity of the model to changes in its assumptions or the levels of its parameters. What we hope to learn through sensitivity analysis is whether a particular assumption really makes any difference with respect to the results yielded by the model, or the solutions and inferences drawn from it. . . ."[24] In order to determine

the importance of depreciation method selection, tax rate estimation, or the effects of extended depreciable lives of improvements to real property, a sensitivity analysis was performed to measure the impacts of changes in those parameters on rates of return and values. These results also could be derived by calculating the partial derivatives of the internal rate of return function with respect to each of the variables in question.[25] However, since the valuation equation is quite complex, a computerized sensitivity analysis becomes an increasingly attractive alternative approach. Thus, the results reported in this paper have been generated by a series of deterministic rate of return calculations.[26]

Using the input data reported in Figure 1, the "base case" results were found to be E equal to $62,585.12 and r equal to 9.85 percent. The values for the base case were based upon data analysis where possible, and the initial values used in the analysis were carefully selected as representative values based upon empirical and theoretical analysis.[27]

FIGURE 1

Summary of Typical Project Inputs for Sensitivity Analyses

Variables	Values
Effective Gross Income	$4,103 per month
Operating Expense Ratio	53.4%
Cost of Construction	$20 per square foot
Equity Yield	10%
Interest on Loan	7.25% per year
Loan-to-Value Ratio	74.2%
Term of Loan	25 years
Depreciation Method	Straight-Line
Tax Rate	35%
Depreciable Life	40 years
Holding Period	10 years
Constraints	**Values**
Capital Gains Tax Rate	35%
Cost of Land	$83,300
Size of Building	8,085 square feet
Depreciable Basis	75%

Figure 2 presents the results of the sensitivity analysis for the three accounting variables examined in this study: depreciation (D), average income tax rate (t), and depreciable life (L).

A number of observations are in order. Note that for depreciation, these results show that accelerated methods of depreciation have a positive impact on value and rate of return ($\partial E/\partial D > 0$ and $\partial r/\partial D > 0$) for positively leveraged investments. However, for the income tax rate, the opposite effects occur, as suggested. As the tax rate is raised, the value and return to property fall (i.e., $\partial E/\partial t < 0$ and $\partial r/\partial t < 0$). Finally, these results show that for positively leveraged projects, the desire to depreciate the improvements to the property over a short life results in increases in value and rate of return (i.e., $\partial E/\partial L < 0$ and $\partial r/\partial L < 0$).

These are well known and expected directional changes. More interesting is the analysis of the magnitude of the changes for these variables. These results indicate the relatively small impact that changes in the initial values of variables exert on values and rates of return. For example, positive fifty percent changes in the tax rate result in only 11.37 and 16.75 percent decreases in equity value and internal rate of return on equity respectively. Similar changes in depreciation method and depreciable life of the assets result in even smaller changes.

In the case of depreciation method, only double-declining balance, especially in the rate of return calculated, seems to have a large impact. For marginal changes of ten percent in the tax rate, the positive or negative effects are nearly negligible relative to the size of the input change. Further, minimizing depreciable life, contrary to the investment folklore, can only offer meager increases in value (5.18 percent) or rate of return (8.12 percent). Therefore, these results imply that E and r are relatively insensitive to changes (or "input estimation errors") in these accounting variables. Finally, it is clear from the results that *changes* in these input parameters are relatively unimportant in making real estate investment decisions.

A few qualifications are necessary to place these results in their proper perspective. First, the technique of sensitivity analysis presumes an independence of values among the parameters. This may not be true for some of the variables. For example, vacancies may vary inversely with rent levels. These results and their implications therefore hold only when the values of the parameters are assumed to be independent of each other. Second, additional investigations have shown that the absolute changes (and therefore resulting percentage changes) in E and r which result from the stimulated input change are functions of the initial set of inputs used. In other words, the results reported in Figure 2 would not remain constant if different initial inputs were used. Sensitivity results must therefore be used on a case-by-case basis. However, it has also been demonstrated that the rankings of variables according to their sensitivity impact on value and rate of return are constant for various sets of inputs.[28] In view of this finding, these results become important, i.e., changes in these variables have little impact on output, for all decision making, although the size of the percentage changes varies from case to case.

Finally, the relative impact these variables have exerted compared to the impact of others has also been investigated. Of the eleven variables tested, these accounting variables were ranked from eighth to eleventh in relative impact under various assumptions. This reinforces the results reported in Figure 2. Changes in most of the other variables had signifi-

FIGURE 2

Results of Sensitivity Analysis (E and r)
to Changes in Accounting Variables (D, t, L)

%Δ	D		t		L	
	E ($)	r (%)	E ($)	r (%)	E ($)	r (%)
- 50	———	———	69,702.70	11.51	65,823.97	10.65
	(———)	(———)	(11.37)	(16.85)	(5.18)	(8.12)
- 30	———	———	66,855.67	10.85	63.973.20	10.18
	(———)	(———)	(6.82)	(10.15)	(2.22)	(3.35)
- 10	———	———	64,008.63	10.19	62,945.00	9.96
	(———)	(———)	(2.27)	(3.45)	(0.58)	(1.12)
0	62,585.12	9.85	62,585.12	9.85	62,585.12	9.85
	(———)	(———)	(0.00)	(0.00)	(0.00)	(0.00)
+ 10	———	———	61,161.61	9.52	62,290.69	9.79
	(———)	(———)	(-2.27)	(-3.35)	(-0.47)	(-0.61)
+ 30	63,488.24*	10.04*	58,314.57	8.86	61,837.70	9.69
	(1.44)	(1.93)	(-6.82)	(-10.05)	(-1.19)	(-1.62)
+ 50	64,970.53†	10.41†	55,467.54	8.20	61,505.51	9.61
	(3.81)	(5.69)	(-11.37)	(-16.75)	(-1.73)	(-2.44)
+100	67,741.45‡	11.08‡	48,349.96	6.54	60,965.70	9.49
	(8.24)	(12.49)	(-22.75)	(-33.60)	(-2.59)	(-3.65)

D denotes depreciation method, t denotes tax rate on income, L denotes depreciable life of assets. Percentage changes are reported below each result in parenthesis.

* 125% declining balance method

† 150% declining balance method

‡ 200% (double) declining balance method

cantly greater impacts on return than did these accounting variable changes.[29]

Conclusions

Despite the history of tax shelter folklore, and doubts about complete tax capitalization and the recent tax accounting literature which assumes an importance and significance that depreciation and accounting variables and their analysts possess for real estate projects, the results presented here demonstrate the relative insensitivity of equity value and internal rate of return on equity to changes in these accounting considerations in the traditional investment valuation model. The major implication is that the emphasis on depreciation method selection, tax planning and shorter depreciable lives may have been overstated. These results support the importance and effect of the consideration of these variables in the valuation process. This does not imply that these variables are unimportant in determining value or in making rate of return calculations. But these results do suggest that changes in these variables have a relatively small impact on investment values and rates of return, and that more effective decision making would warrant consideration of more influential variables to a greater degree. It has been suggested that those professionals who have the greatest potential impact on return in terms of their abilities to influence decisions should be relied upon *at least* as much as other professionals involved in the investment process.[30] These results imply that the emphasis placed upon the accounting and taxation variables has to a considerable extent been overstated. If the ability to make effective decisions rests in the hands of those professionals who can significantly influence values and returns by making those decisions, investors, owners, developers and courts must rely upon the information and judgment of those professionals. For real estate investment analysis, this suggests a reevaluation and new direction for the field and the profession.

NOTES

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THE INSTITUTIONAL MARKET FOR REAL ESTATE ANALYSIS REPORTS

by Herman Kelting, and Don Emerson, Jr.

More and more often real estate professionals are being asked for specialized analysis services, such as appraisals, market studies, financial analyses and environmental impact statements. It is particularly important for the firms that provide these types of services to know more about the institutional market for them.

A survey was conducted of 200 randomly selected savings and loan associations, 180 randomly selected, medium-sized life insurance companies and the twenty largest life insurance companies. The research activity was coordinated by the Real Estate Research Center of the University of Florida.

Who Uses Real Estate Analysis Reports?

An important measure of the demand for analysis reports is the proportion of firms in each of the industries that provide reports internally and/or request reports from others (Figure 1). The results of the study indicated that savings and loan associations are more frequent users of these reports than life insurance companies. Ninety-nine percent of savings associations provide and/or request reports while only seventy-eight percent of life insurance companies provide and/or request analysis reports. This may be explained by the investment portfolio of the firms in the two industries. Savings and loans are required by law to invest a substantial portion of their assets in real estate mortgages, while life insurance companies have more freedom to select alternative investment media such as stocks and bonds. For example, at the end of 1975, savings and loan associations had eighty-two percent of their assets in real estate mortgages, while life insurance companies had only thirty-two percent of their assets in real estate mortgages[1]. Life insurance companies' real estate equity investment totals about ten percent of their mortgage investments,[2] for a total real estate investment of about thirty-five percent of total assets.

Savings and loan associations are also more likely to request services from outside suppliers of such services. Eighty-six percent of savings and loan respondents requested reports from outside suppliers, while only sixty-one percent of insurance companies made such requests. While most savings and loans have employees performing appraisal services for single family home loans, many request outside services when funds are available and loan demand is high. Also, development loans and other large loans may require special nonappraisal analysis reports which may be performed by outside real estate analysts.

Number of Reports in Relation to Assets

An important study objective was to find a publicly available industry statistic that would permit evaluation of the demand for real estate analysis reports by firms in the two industries studied. This would allow forecasting demand for analysis reports within the context of the perceived need for such reports and the present regulatory environment. Such a forecast would be sensitive to the size of firm and to the principal types of reports utilized. (See Figure 2.)

Three functional relationships were tested and evaluated as predictive tools for the demand for analysis reports. These included:

- The relationship between total assets (publicly available) and the number of analysis reports

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FIGURE 1

Number and Percentage of Firms Providing and Requesting at Least One Analysis Report Per Year (Including Appraisals): Life Insurance Companies and Savings and Loan Associations

Firms that	Life Insurance Number of Firms		Savings and Loan Number of Firms	
provide *and* request analysis reports	28	(42%) *.01	46	(71%) *.01
only request analysis reports	13	(19%)	10	(15%)
only provide analysis reports	11	(16%)	8	(12%)
neither provide nor request analysis reports	15	(23%) *.01	1	(2%) *.01
Total firms in sample	67	(100%)	65	(100%)
total firms that provide and/or request analysis reports (lines 1 + 2 + 3)	52	(78%) *.01	64	(99%) *.01
total firms that provide analysis services, thus employing in-house real estate analysts (lines 1 + 3)	39	(58%) *.01	54	(83%) *.01
total firms that request services from outside analysts (lines 1 + 2)	41	(61%) *.01	56	(86%) *.01

* The Chi-square (X^2) test of association indicated a statistically significant association between the services indicated (rows) and the two industries (columns) at the level of significance shown. Thus, 42% of life insurance companies both provide and request analysis reports while 71% of savings and loans provide and request analysis reports. The X^2 test indicated an association between the percentages of firms providing and requesting reports and the industry membership (i.e., there is a statistically significant difference in the percentages — 42% of life companies versus 71% of savings and loans — of respondents providing and/or requesting services at the 0.01 level of significance).

The Chi-square test was also performed to test for an association between the two industries for the system of mutually exclusive provide/request activities described by lines 1 to 4 (i.e., a 4 × 2 matrix). The test indicated a statistically significant difference between industries for the activity pattern at the 0.01 level of significance.

utilized, *i.e.*, provided internally and requested from outside suppliers

- The relationship between total loans made (not publicly available) and the number of analysis reports utilized
- The relationship between total assets and individual *types* of reports provided and requested (separately and combined)

The savings and loan industry is characterized by a very strong linear relationship between asset size and total analysis reports utilized, *i.e.*, provided and requested. For example, eighty-six percent of the variability in total analysis reports is explained by asset size. In addition, for each $1,000,000 increase in asset size, the mean number of analysis reports utilized per year increases by 7.09 reports. The small standard error associated with the regression coefficient (0.36) indicates a highly significant positive relationship. The number of loans has even more explanatory power than total assets in predicting the demand for total analysis reports — ninety-three percent of the variation in total analysis reports is explained by total loans made — but unfortunately, the total number of loans made is not publicly available and therefore is not useful for predicting aggregate demand for analysis reports by firms in either industry.

The mean number of total analysis reports utilized by the sample of sixty-four data-reporting savings and loans was 2,132 for firms having a mean asset size of $317 million (not shown). The coefficient of variation, measuring the standardized dispersion of observations about the regression line, is large at seventy percent, indicating variability in the dependent variable.

These results are consistent with *a priori* beliefs of the policies of savings and loan associations. They invest large portions of their funds in real estate, and each investment in a mortgage requires a supporting appraisal or other type real estate analysis report.

Research results from the life insurance company sample failed to exhibit the highly consistent pattern of behavior between analysis reports, total loans made and total assets that was typical of savings and loan associations. Large life insurance companies with assets greater than $3 billion showed a better pattern of behavior than medium-sized insurance companies with assets less than $3 billion, although medium-sized companies have a less regular relationship between asset size and loans made.

The relationship for large life insurance companies between number of loans and total assets is strong. The percentage of explained variation in number of loans by total assets is $r^2 = 0.93$. This relationship compares very favorably with savings and loan associations ($r^2 = 0.94$). Moreover, the regression coefficient and standard error for total assets (β = .0545, std. error = 0.0057) demonstrate a strong linear relationship for large life insurance companies.

The relationship between total analysis reports used by large life companies and total loans made is more erratic; r^2 drops to 0.72 and the estimate of the regression coefficient, 1.44, has a relatively large standard error of 0.33. The standard error for savings and loan associations is 0.04 for a regression coefficient of 1.20. The implication is that large life insurance companies exhibit more erratic behavior than savings and loan associations in their utilization of real estate analysis reports. Nonetheless, there is a somewhat greater chance that large life insurance companies use less than one report (per loan made) than savings and loan associations because of the relatively large standard error of the regression coefficient.

Finally, for large life insurance companies, total assets explained only fifty-nine percent of the variation in total analysis reports used compared to r^2 = eighty-six percent for savings and loan associations.

For each one million dollars in assets of large life insurance companies, 0.073 analysis reports are utilized (compared to 7.09 reports for savings and loans). This means that an average of one analysis report is required for each fourteen million dollars in assets. The large difference between the number of reports per million dollars in assets for large life companies versus savings and loans may be explained by the large number of single family home loans made by savings and loans versus the relatively few large commercial loans made by insurance companies.

An analysis of the entire sample of medium sized life insurance companies yielded no statistically significant linear relationship between total analysis reports and total assets, the only publicly available statistic used in the study. As a result, the sample was restricted to those firms spending fifty percent or more of their in-house analysis activity on new commercial loans. This eliminated respondents who spend more than fifty percent of their analysis time for activities such as extending funds for an existing loan, purchasing an existing loan, foreclosing a property and reviewing and updating existing loans. The sample size was reduced from sixty-seven, *i.e.*, 67-9 = 58, to thirty-one.

As a result of the fifty percent new loan requirement, a significant linear relationship was shown between all analysis reports utilized and number of loans made — but the relationship between total assets and all analysis reports and between total assets and number of loans was not statistically significant. These results suggest a more erratic investment behavior by the medium sized life insurance sample. Therefore, the marketing of real estate analysis services to the medium sized life firms would require a personal knowledge of the present investment activities of the company together with knowledge of the manner in which they utilize real estate reports. In this climate, an estimate of aggregate demand for analysis reports by all firms would be extremely difficult.

Correlating Assets With Analysis Type

The relationship between total analysis reports and assets suggests an inquiry into the importance of the different types of reports requested as components of total reports. Reports requested (versus reports provided) is important because it is the chief component of business demand for independent fee counselors and appraisers. In order to evaluate the importance of demand segments for analysis reports requested from outside consultants, total assets were correlated with the number of each type of report requested. Correlation was measured by the Pearson product-moment correlation coefficient, r, which may vary from +1 for perfect positive correlation, *i.e.*, larger firms request more analysis reports of a given type, to −1 for perfect negative correlation. (Larger firms request fewer analysis reports than smaller firms.)

An examination of analysis reports requested by the savings and loan respondents (See Figure 3) indicated that there is a statistically significant relationship between association size and single family home appraisals ($r = 0.54$ for forty-seven of sixty-five respondents), and highest and best use studies (β = 0.99 for three of sixty-five respondents). While one may *a priori* believe that larger firms tend to internalize single family and commercial appraisals, thereby requesting fewer outside reports, the sample results indicate that larger firms do request more reports of the type shown even though they may have a staff performing these activities. No other type of report in the survey of savings and loan associations was correlated with assets at the 0.10 level of significance.

The correlation of report types requested with total assets for life insurance respondents yielded some-

FIGURE 2

Results of Linear Regression for Large and Medium Sized LICs and S&Ls; All Analysis Reports with Total Assets and Number of Loans; and Number of Loans With Total Assets (Assets in $1,000,000)

Dependent variable Y	Independent variable X	Standard error of the estimate after regression	Mean Dependent variable $\bar{Y}$	Coefficient of variation (5)=(3)÷(4)	Intercept a	Regression coefficient, b, as estimator of β (Std. Error)	Coefficient of determination (r^2)	Number of cases
I. *Large life insurance companies (total assets > $3 billion) for which the new loan percentage may vary from 0 to 100 percent*								
All analysis reports provided and requested	Total assets	960	1126	85%	-8.3	0.073 (*.01) (0.023)	0.59(*.05)	9
	Number of loans	780	1126	69%	97.7	1.44 (*.01) (0.33)	0.72(*.01)	9
Number of loans[1]	Total assets[1]	236	714	33%	-130	0.0545 (*.01) (0.0057)	0.93(*.01)	9
II. *Medium sized life insurance companies (total assets < $3 billion) for which the new loan percentage may vary from 50 to 100 percent (omits cases in which the percent of new loans is less than 50 percent)*								
All analysis reports provided and requested	Total assets	259	163	159%	133	0.056 (0.074)	0.02	31
	Number of loans	153	163	94%	60	1.67 (*.01) (0.22)	0.65(*.01)	31
Number of loans[1]	Total assets[1]	121	58	209%	44	-0.028 (0.03)	0.02	34
III. *Savings and loan associations*								
All analysis reports provided and requested	Total assets	1486	2132	70%	-118	7.09 (*.01) (0.36)	0.86(*.01)	64
	Number of loans	1087	2145	51%	+112	1.20 (*.01) (0.04)	0.93(*.01)	61
Number of loans[1]	Total assets[1]	788	1667	47%	-195	5.95 (*.01) (0.19)	0.94(*.01)	62

* Reject the null hypothesis, H_0: $\beta = 0$, vs. the alternative hypothesis, H_a: $\beta > 0$, at the level of significance shown; or reject the null hypothesis, H_0: $\rho = 0$, vs. the alternative hypothesis, H_a: $\rho \neq 0$, at the level of significance shown.

[1] Regressed to indicate the degree of multicolinearity between alternative independent variables.

FIGURE 3

Correlation (r) of Total Assets with the Number of Analysis Reports Requested by Type of Report for Life Insurance Companies and Savings and Loans Requesting Reports

r	*L.S.
	n respondents in group

Type of report	Life insurance companies	Savings and loan associations
Single family appraisals	.97(*.01) 14	.74(*.01) 47
Commercial appraisals		.54(*.01) 47
Demand studies	.96(*.05) 4	
Market studies	.65(*.10) 7	
Financial analyses	.55(*.05) 10	
Highest and best use studies	.98(*.01) 5	.99(*.01) 3
Site selection studies	.95(*.01) 8	
Land use control analyses	.97(*.05) 4	

* The null hypothesis, H_0: $\rho = 0$, vs. the alternative hypothesis, H_a: $\rho \neq 0$, may be rejected at the level of significance shown.

what different results. The only appraisal report that was significantly correlated with total assets was single family home appraisals. Although life insurance companies are not presently a major factor in the single family home mortgage market, some firms appear to be active; the high correlation with assets equaling 0.97 for fourteen of sixty-seven life insurance respondents indicated that larger firms are indeed active.

Life insurance companies were also noted to request certain types of nonappraisal analysis reports.

Although relatively few of the sixty-seven life insurance respondents request these types of reports, the results are interesting because unlike savings associations, insurance companies do rely on nonappraisal reports — and the numbers requested are positively correlated with total assets. Perhaps an explanation for this difference is the greater likelihood of an insurance company investing in new commercial development. If this is an appropriate explanation for the insurance companies' greater use of nonappraisal analysis reports, the implication is that these types of reports provide more information for decision making by the institution.

Analyst Activity	p	n	Level of Significance
Demand studies	0.96	4	0.05
Market Studies	0.65	7	0.10
Financial analyses	0.55	10	0.05
Highest & best use studies	0.98	5	0.01
Site selection studies	0.95	8	0.01
Land use control analyses	0.97	4	0.05

The average time for each report type provided internally may be used for time management of the analysis function and by independent fee counselors and appraisers for comparison of the work they perform for these firms.

While there is little difference in time spent by medium sized insurance companies (Figure 4) and savings and loan associations for appraisal reports, the large life insurance companies seem to spend considerably more time on appraisal reports. For commercial appraisals, the large life companies (seven respondents) spent twenty-eight hours per report, while medium life firms (fifteen respondents) spent sixteen hours and savings and loans (forty respondents) spent twelve hours per report.

For nonappraisal analysis reports provided internally, savings and loan associations spend significantly more time than the medium sized life insurance companies. Of particular note are competitive property studies (sixteen hours for savings and loans versus six hours for medium sized life insurance companies), market studies (nineteen versus four hours) and site selection studies (eighteen versus four hours).

The type of firms from which life insurance companies and savings and loan associations request real estate analysis reports is important because:

- It indicates who a suppliers' principal competitors are, and
- It provides a basis for marketing services, e.g. if savings and loans more frequently use the services of appraisal firms, then a supplier may wish to provide appraisal services.

The survey results indicated that real estate appraisal

FIGURE 4

Average Time Per Report Provided

Average Hours	(Standard Deviation)
	Number of cases

Type of report	Life insurance companies: 100% Sample of top 20:9 respondents	Life insurance companies: Sample of next 480:58 respondents	Savings and loan associations
Single family appraisals	11 (14) 4	3 (3) 8	3 (1) 47
Farm appraisals	15 (11) 5	**	4 (2) 16
Commercial appraisals	28 (26) 7	16 (25) 15	12 (11) 40
Review of outside appraisals	12 (13) 6	3 (5) 28	2 (6) 38
Competitive property studies	12 (7) 5	6 (5)(*.05) 10	16 (16) (*.05) 18
Demand studies	17 (3) 3	**	33 (22) 3
Market studies	18 (3) 2	4 (4)(*.05) 8	19 (12) (*.05) 14
Financial analyses	2 (2) 4	5 (11) 20	4 (4) 16
Highest and best use studies	3 (3) 2	6 (8) 5	7 (12) 10
Site selection studies	**	4 (1)(*.05) 4	18 (15) (*.05) 7
Environmental impact studies	**	170 (289) 3	**
Land use control analyses	**	170 (287) 3	**
Economic base analyses	**	2 (2) 2	**
Land use analyses	2 (1) 2	6 (7) 6	**
Public sector financial impact analyses	**	2 (2)	**
Sample size	9	58	65

* Hypothesis that the mean hours per report provided by savings and loan sample and sample of 480 life insurance companies are equal may be rejected at the level of significance shown.

** Less than 2 cases reported

firms are, in fact, the most frequently sought firms from which analysis reports are requested (Figure 5). Presumably, this results from the intensity of appraisal report use by both savings and loans and life insurance companies. Life insurance companies appear to be more likely to seek analysis reports from other service industries including law, real estate brokerage, management firms and engineering firms to mention a few.

While percentage differences exist between the two industries and the firms from which they request services, the ranking of suppliers is similar. For example, appraisal firms are ranked first by both industries. The Spearman rank order correlation coefficient, which may vary from +1 to –1, was 0.803,

indicating a high degree of positive correlation in the two ranking structures.

FIGURE 5

Service Industries from which Life Insurance Companies and Savings and Loan Associations Request Real Estate Analysis Reports "Frequently or on Occasion"

	Life insurance companies requesting analysis reports		Savings and loan associations requesting analysis reports	
Real estate appraisal	40	(60%)*	52	(80%)*
Surveying	14	(21%)*	26	(40%)*
Law	25	(37%)	16	(25%)
Real estate brokerage	22	(33%)	14	(22%)
Engineering	20	(30%)	10	(15%)
Accounting	5	(8%)	9	(14%)
Architectural	16	(24%)	9	(14%)
Real estate management	21	(31%)*	9	(14%)*
Contracting	15	(22%)	8	(12%)
Advertising	0	(0%)*	6	(9%)*
Real estate consulting	5	(8%)	5	(8%)
General business consulting	9	(14%)	4	(6%)
Landscape architects	5	(8%)	3	(5%)
Planning	5	(8%)	3	(5%)
Real estate syndicators	0	(0%)	1	(2%)
Sample Size	67		65	

Spearman's rank order correlation coefficient (r_s) 0.803 (**.01)

* Statistically significant association between life insurance companies and savings and loans, and the service industry from which analysis reports are requested at the 0.05 level of significance (Chi-squared test for association between industries).

** Reject the null hypothesis, $H_0: \rho_s = 0$, vs. the alternative hypothesis, $H_a: \rho_s > 0$, at the level of significance shown.

The methods used to seek out suppliers of real estate analysis reports by savings and loans and life insurance companies are very similar (Figure 6). "Recommendations by satisfied users" was top ranked in each case (fifty-five percent and sixty-eight percent) followed by "personal contacts made at trade meeting/seminar" (twenty-seven percent and forty-nine percent) and "personal-social relationships" (twenty-eight percent and forty-two percent). Also important was the use of trade directories. Twenty-five percent of life insurance companies and twenty-two percent of savings and loans utilize trade directories in their selection of suppliers of real estate analysis reports.

The survey also indicated that twenty-eight percent of life insurance companies employed designated appraisers and eight percent employed designated real estate counselors. Forty-six percent of savings and loan associations employed designated appraisers on their staffs. The relatively large percentage of savings and loan associations employing designated appraisers may be explained by the higher mortgage intensity of those firms.

FIGURE 6

Methods Used "Frequently or on Occasion" by Respondents to Seek Real Estate Analysis Services from Outside Consultants

	Life insurance companies using method		Savings and loans using method	
Recommendations by satisfied users	37	(55%)	44	(68%)
Personal contact made at trade meetings/ seminars	18	(27)*	32	(49)*
Personal (social) relationships	19	(28%)	27	(42%)
Trade directory	17	(25%)	14	(22%)
Public address by outside consultant	4	(6%)	10	(15%)
Public display of work by outside consultant	6	(9%)	5	(8%)
Yellow pages	5	(7%)	4	(6%)
Publication in trade journal	6	(9%)	3	(5%)
Walk in	4	(6%)	1	(2%)
Public relation consultants	2	(3%)	0	(0%)
Sample size	67		65	

Spearman's rank order correlation coefficient (r_s) 0.870 (**0.01)

* Statistically significant difference between industries and the given method at the 0.05 level of significance (Chi-squared test for association between industries).

** Reject the null hypothesis, $H_0: \rho_s = 0$, vs. the alternative hypothesis, $H_a: \rho_s > 0$, at the level of significance shown.

Summary

The study of the demand for real estate analysis reports by savings and loan associations and life insurance companies reveals that proportionally more savings and loans utilize these reports than life insurance companies. Moreover, the linear relationship between asset size and savings and loan was somewhat more regular for savings and loans than for large life insurance companies and much more regular than for medium sized life insurance companies. The study also indicated that the real estate mortgage investment behavior for the large life insurance companies was better related to asset size — the medium sized insurance companies seemed to display an erratic investment policy that could not be explained by linear regression.

Savings and loan associations demonstrated a strong positive correlation between asset size and single family and commercial appraisals requested from outside suppliers of these services. This indicates that larger savings and loans request relatively more outside appraisals than smaller savings and loans, disproving *a priori* beliefs that the larger firms would have larger staffs to provide these services, avoiding outside suppliers of these services.

Life insurance companies exhibited a positive correlation between single family appraisals and six types of nonappraisal analysis reports. The utilization of nonappraisal analysis reports may be explained by the heavier investment intensity of life companies in new development where nonappraisal reports are particularly useful.

Appraisal firms are the most frequently sought firms from which real estate analysis reports are requested. Recommendation by satisfied users is the most frequently encountered reason for selection of a supplier of these services. Investigation of the mean time per report provided internally indicated that such times are generally less for savings and loan associations than for life insurance companies. About twice as many savings and loans as life insurance companies employ designated appraisers (forty-six percent *vs.* twenty-eight percent).

NOTES

1. Board of Governors of the Federal Reserve System. Flow of Fund Accounts 1946-1975. Annual Total Flows and Year-end Assets and Liabilities. (December 1976), 124, 127.
2. J. David Cummins, ed., *Investment Activities of Life Insurance Companies* (Homewood, Illinois, Richard D. Irwin, 1977), 68.

Opinion
PROFESSIONAL DESIGNATION OR MERIT BADGE—A MODEST PROPOSAL

by Lynn N. Woodward and Marcella Roberts

Tongue in cheek, author Kurt Vonnegut in his 1952 novel *Player Piano* described a fictional Dr. Pond who had "spent seven years in the Cornell Graduate School of Realty to qualify for a Doctor of Realty Degree." Undoubtedly this was the ultimate professional designation in an industry which has a merit badge syndrome.

Professional designations, noted by initials following the recipient's name, are generally recognized as an indication of competence and special achievement. The number of initialized merit badges in real estate, however, is now approaching fifty. CRE, MAI, SRA, CPM, CCIM, GRI, SIR, and CRB are just a few of the best known, and even persons familiar with the real estate field may not know what these designations stand for.

In every aspect of real estate, participants can earn a designation. In fact, twenty-four organizations in the United States and Canada offer forty-one designations in the real estate industry.[1] A summary of the designations, requirements, and organizations is given in the Figure. The particulars in the chart may not be completely accurate and the X's represent approximations of the detailed requirements to receive an organization's designation. Since the chart was completed, additional designations have become known, such as IFA, SIFA and IFAC of the National Association of Independent Fee Appraisers, St. Louis, Missouri.

The number of designations is getting out of hand.

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At present, and with more appearing every month, twenty-one designations represent the professional area of appraisal and assessment in the United States and Canada: SRA, SRPA, SREA, RM, MAI, SR/WA, ARA, CRA, AACI, RRA, R-1, CA-R, CA-S, CA-C, CAE, AAE, CPE, RES, IFA, SIFA, and IFAC. The recent increase in designations within the appraisal field has been to define different levels of specialization. It has been an outgrowth of the "extremely demanding" requirement that candidates for designation by the Society of Real Estate Appraisers and the American Institute of Real Estate Appraisers must have a college degree.

The increase in designations in brokerage has been to define levels of specialization. A residential salesman can first become licensed, then a Realtor-associate, then a GRI and then a CRS. If the salesperson "moves up" to commercial and investment brokerage, the designation is the CCIM. Other fields such as property management and corporate real estate have multiple designations representing different levels.

In other professional fields, such as medicine (MD), accounting (CPA), financial analysis (CFA), architecture (AIA), law (JD), and academia (Ph.D. or DBA), only one or two designations, as noted within parentheses, are recognized. The initials are associated in the public's mind with competence in that professional area, and the designation's purpose is to bring such professionalism to the attention of the public being served. With the nearly fifty designations in real estate, the public is confused and the designations become merely a merit badge to show accomplishment to others in their own field.

Very few designations have achieved the critical volume in numbers of designees and the dollars related to these numbers to provide promotion and public relations efforts which will gain the level of recognition comparable to that given the MD, CPA,

FIGURE

DESIGNATIONS	Has stated purpose	Has age requirement	Has experience requirement	Has Educational level req.	Offers own courses	Exams (comprehensive)	Written	Oral	Accepts course equivalents	Requires demonstration reports	Interview/Recommandation	Contribution	Requires memberships	Requires other designations	Initiation/Application Fee	Membership Dues	Time Limit on Candidacy	Other Requirements	
Real Estate Sales																			
CRB	X	X	X		X	X				X	X		X		X	X	X		Realtors Natl. Marketing Institute
CRS	X		X		X	X				X		X	X		X	X	X		Realtors Natl. Marketing Institute
GRI	X				X								X						Graduate, Realtors Institute
MIRM	X	X	X	X	X					X			X		X	X	X		Institute of Residential Marketing
Industrial, Commercial Investm't																			
CCIM	X		X		X	X				X	X		X		X	X	X		Realtors Natl. Marketing Institute
CID	X		X		X	X	X	X	X			X			X				American Industrial Development Council
CRSS	X	X	X	X	X	X			X	X	X		X		X	X	X		R. E. Securities & Syndication Institute
SIR	X	X	X		X	X			X		X		X	X	X	X		X	Society of Industrial Realtors
Management																			
CPM	X	X	X	X	X	X			X	X	X		X		X	X	X		Institute of Real Estate Management
AMO	X		X		X						X		X	X	X	X	X	X	Institute of Real Estate Management
ARM	X		X		X						X				X	X			Institute of Real Estate Management
RAM	X		X	X	X	X	X			X	X		X		X	X	X	X	National Association of Home Builders
AFM	X		X	X	X	X	X	X		X			X		X	X			Am. Soc. Farm Managers & Rural Appr'sers
AFLM	X	X	X	X	X	X	X		X		X		X		X	X	X		Farm & Land Institute
CSM	X	X	X			X	X	X	X		X	X			X		X		Internatl. Council of Shopping Centers
ASPD	X		X			X	X	X	X		X				X		X		Internatl. Council of Shopping Centers
Appraisal																			
SRA	X	X	X	X	X	X	X		X	X					X	X	X		Society of Real Estate Appraisers
SRPA	X	X	X	X	X	X	X		X	X					X	X	X		Society of Real Estate Appraisers
SREA	X		X	X	X			X	X			X				X			Society of Real Estate Appraisers
RM	X		X	X	X	X	X		X	X	X		X		X	X	X		Am. Institute of Real Estate Appraisers
MAI	X		X	X	X	X	X		X	X	X		X		X	X	X		Am. Institute of Real Estate Appraisers
SR/WA	X	X	X	X	X	X			X		X		X		X				American Right of Way Association
ARA	X		X	X	X	X	X	X		X			X		X	X			Am. Soc. Farm Managers & Rural Appr'sers
CRA	X		X	X	X	X			X	X	X	X			X				Appraisal Institute, Canada
AACI	X		X	X	X	X			X	X	X		X		X				Appraisal Institute, Canada
CRA	X	X	X		X	X									X	X			Natl. Association of Review Appraisers
RRA (Canada)	X	X	X		X	X									X	X			Natl. Association of Review Appraisers
RPA	X			X	X	X									X				Society of Real Property Administrators
CA-R			X													X			Am. Assn. of Certified Appraisers
CA-S			X													X			Am. Assn. of Certified Appraisers
CA-C			X													X			Am. Assn. of Certified Appraisers
ASA		X	X			X	X	X		X	X						X		American Society of Appraisers
Assessment																			
CAE	X		X		X		X	X		X			X		X	X	X		Internatl. Assn. of Assessing Officers
AAE	X		X		X		X	X		X			X		X	X	X		Internatl. Assn. of Assessing Officers
CPE	X		X		X		X	X		X			X		X	X	X		Internatl. Assn. of Assessing Officers
RES	X		X		X		X	X		X			X		X	X	X	X	Internatl. Assn. of Assessing Officers
Counseling																			
CRE	X		X								X		X		X	X		X	Am. Soc. of Real Estate Counselors
SRE	X		X		X						X		X	X	X		X		Society of Exchange Counselors
Financial																			
CMB	X		X		X		X	X	X	X	X	X	X	X	X		X		Mortgage Bankers Association
CREA			X		X	X													Natl. Assn. of Corporate R. E. Executives
CRES					X														Natl. Assn of Corporate R. E. Executives
DCI			X		X														Natl. Assn. of Corporate R. E. Executives
Other Fields																			
AIA	X		X	X										X	X	X			American Institute of Architects
CPA	X	X	X	X			X								X	X			Certified Public Accountant
CFA			X	X			X		X				X					X	Institute Chartered Financial Analyst
Universities																			
PH.D			X	X	X	X				X	X	X							7 universities
M.B.A./M.S.				X	X	X				X	X								37 universities

or JD. The numbers of these designees were difficult to obtain, as is shown by the summary chart, but without several thousand holders the effort for the individual to obtain a professional designation that will be known to the public will go unrewarded.

Robert O. Harvey, chairman of the Real Estate Department at Southern Methodist University in Dallas, brought the merit badge syndrome to the attention of the National Association of Realtors® in a paper in which he identified a profession. Pointing out that "simply wishing will not make it so,"[2] Dr. Harvey set out four factors which would make real estate qualify as a profession. One factor is the degree of intellectual activity required as opposed to manual tasks. Intellectual skills and the resulting performance distinguish professionals from non-professionals. A profession is an organized vocation requiring special expertise in its services that cannot be rendered by nonmembers. The second factor is a demanding code of ethics and conduct which requires a high standard for admission. A third factor is a body of specialized knowledge which can be organized and taught as a course of study. The fourth factor is an educational discipline (a major, degree, school, or college) using that organized body of knowledge. Most professions require, or soon will require, a graduate school education, i.e., medicine, architecture, accounting, law and academia.

Most of the designations in the summary chart do not meet the definition of a profession, if a profession is to be defined in these terms. Very few require a graduate education, a significant number of years of experience, a testing program, a demonstration or thesis, a review of the candidate's record by peers, contributions to the field, additional professional education, a code of ethics, license to practice, or a designation renewal requirement. They are merit badges. Some are simply paid for by a few years of experience and a fee to the trade organzation.

The point is that we need a single, recognized designation in real estate on the level of MD, CPA, JD, AIA, Ph.D. Possibly it should be REA, Real Estate Analyst. The designation would represent a broad-based professional who would still have a specialty, as do doctors, accountants, professors, lawyers, and architects.

The designation requirements must meet the same high standard of admission as the other professions.

- Graduate education in real estate. (Schools such as the Universities of Wisconsin, SMU, Georgia, Georgia State, Texas, Florida, Connecticut, UCLA, USC, Ohio State and others have graduate degree programs in real estate, and students with a graduate real estate education already have an MS or MBA degree plus a body of knowledge in real estate analysis.)
- Five years of experience in one of the major areas of real estate — risk management, mortgage administration and finance; appraisal and investment analysis; land use planning, development and construction; brokerage administration and market analysis; and private, corporate or public real estate administration and property management. The specialty would serve as a "residency" or "internship."
- Successful completion of a testing program similar to the CPA examination. Passing three major sections representing the five areas of real estate in a five-section exam taken over a period of years would qualify the practitioner as a candidate.
- Submittal of a demonstration report or research thesis to document the activity of the candidate or his contribution to his field.
- Evaluation of his record by his professional peers.
- Recognized contribution to the field through articles, research, new development or a variety of further education.
- Professional courses from a trade organization to demonstrate that learning involves the body of knowledge applied in practical situations.
- A demanding code of ethics.
- State licensing to practice real estate.
- Five-year renewal of the designation requiring continuing education, contribution or active practice.

If one examines the other professional designations in medicine — graduate school; residency in the specialty; testing, research or demonstration review by peers; contribution or continuing education; professional courses on practical applications; the Hippocratic oath; licensing; and renewal through continuing education — all are included. The professions of law and academia have comparable requirements. Accounting, through the new Schools of Accountancy, experience requirements, CPA testing, continuing education, and professional courses, is achieving professional status for the first time since the rush to professionalism began in the 1950s.

In architecture the AIA designation is similar to the designation of Realtor®. AIAs are licensed architects in their states, but the initials recognize membership in the American Institute of Architects. Realtors are licensed brokers who belong to the National Association of Realtors and subscribe to a code of ethics.

The CRE designation awarded by the American Society of Real Estate Counselors is similar to an honorary degree. The honorary degree, LLD, is universally recognized in the legal profession as

being given for outstanding service. The CRE requirement of ten years of outstanding service and its award by invitation only are similar to the requirements of the honored LLD and other honorary degrees. Although many CREs may disagree with my characterization of their designation, I believe the CRE has been and will be changing its members' perception of its standing.

If the SREA, Senior Real Estate Analyst, designation should ever disappear with an appraisal profession merger, the CRE will be the only remaining recognition of the broad-based professional, a real estate analyst comfortable in several of the major fields of real estate. Perhaps the American Society of Real Estate Counselors should adopt the standard I propose for a single recognized professional designation in real estate. Possibly the organization to adopt the designation standard should be the American Real Estate and Urban Economics Association. With its academically based membership, the AREUEA could apply the graduate education, the testing program, and several other aspects of the requirement proposed. Perhaps a consortium of trade organizations in the five major fields could join in this joint purpose. It may be time to begin to implement a Graduate School of Real Estate, similar to what the accountants are doing in setting up Schools of Accountancy on the graduate level in every state. This may be the base from which a broad-based profession will grow.

NOTES

1. Lynn N. Woodward, "Professional Designations: A Compilation of Requirements and Organizations," *The Real Estate Handbook* (Homewood, Illinois, Dow-Jones — Irwin, Inc., 1980), Appendix.
2. Robert O. Harvey, "So You Want to be a Profession," *Real Estate Today* (November/December 1973), 62.

Special Feature
TIPS FROM TYCOONS!

This is the second in a series of columns in which real estate "tycoons" answer questions asked by Editor-in-Chief Jared Shlaes. This issue's guest tycoon is Albert Reichmann, president of Olympia & York Developements, Ltd., in Toronto.

REI: How do you think the real estate market will perform during the coming decade?

AR: The performance of the real estate market is a function of the performance of the economy as a whole. Since 1974, western economies have been experiencing soaring inflation and decreasing productivity. Real rates of growth have declined and interest rates are at historically high levels. Given high costs of production and of borrowing and reduced rates of urban growth, one must choose one's market and one's timing more carefully. However, well designed and well located real estate will be successful and in great demand. The flight from paper to real assets including real estate will continue and will mean increasing prices for both revenue properties and housing.

REI: What new opportunities do you see on the horizon?

AR: In developed countries, the opportunities will be available by responding to increasing energy costs. That means choosing strong locations — we have always concentrated on center cities. And it means increased attention on design factors which produce lower energy consumption. The oil producing countries, particularly Mexico, will have booming economies and very strong urban growth.

REI: Which forms of real estate do you think will do best and where do you plan to concentrate your own investments?

AR: We operate in a number of different markets in different cities in Canada, the United States and Europe. Different types of real estate enjoy varying degrees of success in each area. I find that the choice is not so much between types of investment as between markets. We have concentrated on what we know best — commercial buildings. We try to build in those markets which are strongest. Right now for us that means Western Canada, California, Texas and Florida. We also keep expanding in stable cities where we have established bases, such as Toronto and New York.

REI: How would you advise young people thinking about real estate as a career?

AR: I cannot think of a better career! To me, every day is a challenge to which I look forward — with a large variety of problems to attack and solve.

Contributor Information to Real Estate Issues

Real Estate Issues is published for the benefit of Counselors 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 broad field of real estate. Manuscripts are invited and should be addressed to:

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1. All submitted materials, including abstract, text and notes, are to be typed double-spaced with wide margins. No page limit is imposed. Submit three copies of the manuscript, accompanied by a 50-to 100-word abstract and a brief biographical statement.

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