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REAL ESTATE ISSUES

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The American Society of Real Estate Counselors, a professional affiliate of the National Association of Realtors, was formed in 1953 to establish professional standards for those who provide the public with expert, independent real estate advice for compensation. Membership is by invitation only. The privilege of using the respected CRE (Counselor of Real Estate) designation obligates the Counselor to a strict Code of Ethics and Standards of Professional Practice.

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The Counselor of Real Estate Expands to Other Countries

Since its founding in 1953, the American Society of Real Estate Counselors has promoted the profession of real estate counseling. The membership has included real estate experts seeking to enhance the quality of advice available to individuals, businesses, government agencies and financial institutions. The membership, then and now, has encompassed the leaders in the North American real estate community. As the industry evolved so has the size, experience and knowledge of our membership. In particular, the institutionalization of the real estate investment and capital markets has resulted in a prolific change in the membership's profile. Still, the growth of the Society was concentrated in the United States and Canada.

More recently, the Society has entered in a new era for the real estate counseling profession. At the Society's 1988 Convention, significant strides were made toward an internationalization of the membership. In addition to Counselors from North America, we now have invited to membership outstanding real estate counselors from Great Britain, Australia and Japan. The Society always has been a leader in its vision of the real estate market. The globalization of its membership is sure to secure that leadership position. Not only will it keep our organization abreast of the real estate industry as it evolves to global proportions, but it also will provide a broader base of experience and knowledge to those who rely on the services of the Counselor of Real Estate (CRE).

We welcome our new international members and thank our existing membership for their foresight. But most important, we wish to encourage the furtherance of our international membership for the benefit of all.

R. Tarantello

Editor in chief

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LOUISE L. AND Y. T. LUM AWARD PRESENTED TO JARED SHLAES, CRE

Jared Shlaes

Jared Shlaes, CRE, director special real estate services, Arthur Andersen & Co., Chicago, was named the 1989 recipient of the Louise L. and Y. T. Lum Award. Given annually by the American Society of Real Estate Counselors, the honor recognizes Shlaes' distinguished contribution to the advancement of knowledge and education in the real estate counseling profession.

The award was established by the late Y. T. Lum, CRE, to encourage the continuing professional education of those engaged in real estate counseling through an understanding of its principles, theories, techniques and practices. Shlaes is only the third recipient of this award, preceded by John R. White, CRE (1988) and Thurston H. Ross, CRE (1987).

A member of the Society since 1967, Shlaes has made many notable contributions in the area of education. Most outstanding is his role in establishing, guiding and directing *Real Estate Issues,* the Society's journal. As editor in chief for the first 10 years of the Journal's publishing history, Shlaes set the guidelines for what is now considered a leading industry publication. *Real Estate Issues* has received many awards for consistently presenting articles representing the latest in real estate research and analysis.

Other activities with the Society have included his contribution to the current text, Real Estate Counseling and his service as first vice president, chairman of the Education and the Publications Committees and service on the Board of Governors.

A nationally recognized authority on real estate counseling and appraising, Shlaes is best known for his work on TDRs, historic preservation and the Main Street Project. He is the author of numerous articles on real estate, taxation and planning issues and often is requested to speak before professional organizations, civic groups and universities.

Shlaes' other professional affiliations include the American Institute of Real Estate Appraisers, the American Planning Association, the Chicago Board of Realtors, Lambda Alpha and the Realty Club of Chicago. He earned a BA and an MBA degree from the University of Chicago.

ENVIRONMENTAL HAZARDS AND REAL ESTATE

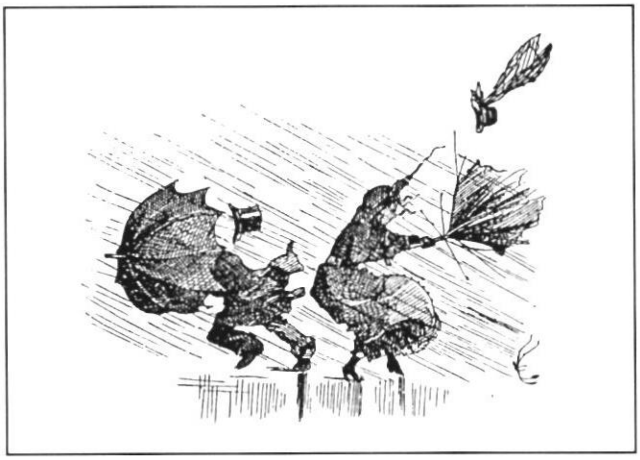
Underwriting investment risk in an increasingly stringent regulatory environment.

by John McMahan, CRE

Real estate investors and developers increasingly are confronted with having to assess the impact of environmental hazards on existing and prospective projects. This assessment usually is more than a technical evaluation, and it frequently involves balancing complex environmental, legal, political and business considerations. The process is complicated by ever-changing legislative and judicial standards where compliance in one year may not mean compliance in another.

Frustrated by the need to engage in such complicated assessments, many choose to remove themselves from the playing field simply by not getting involved with properties that are associated with environmental hazards. While this strategy may be wise in the case of investments in older buildings that contain asbestos, it severely restricts market opportunities when it is applied to more common environmental problems. Many fine buildings, often relatively new, have been built on land that had been contaminated in one form or another. To exclude these properties is to unreasonably restrict exposure to what otherwise may be good market opportunities.

A more realistic approach is to systematically determine the additional risks posed by environmental hazards and then judge whether the projected yield from the investment is commensurate with the additional risk. This article reviews the types of environmental risks the real estate investor is likely to encounter, as well as legislative efforts to define or control the problem and establish liability. It then outlines a step-by-step program for determining when a property has an environmental problem and how to assess and underwrite the risks involved.



Environmental Hazards Primarily Affecting Buildings

Asbestos

Certainly the most extensively reported environmental hazard in existing buildings is asbestos. This once-acclaimed miracle fiber was used extensively after World War II in a variety of building applications including roofs, ceiling and floor tiles and for insulating and fireproofing purposes. However, in the mid-1970s, the federal government banned its use following disclosure that inhalation of asbestos fibers could lead to cancer and other lung diseases.

According to the Environmental Protection Agency (EPA), approximately 20 percent of all public and commercial buildings in America contain asbestos in some form. Not all these buildings pose immediate danger; only 10

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percent to 20 percent have friable asbestos, meaning the asbestos crumbles easily and its fibers get into the air. Dormant asbestos can become friable, however, if it is disturbed by something as simple as a janitor's broom puncturing a ceiling tile.

PCBs

Polychlorinated biphenyls (PCBs) constitute a family of synthetic organic compounds that are nonflammable and can conduct heat without conducting electricity. As such, they have been widely used in insulating electrical capacitors and transformers in and around buildings. When discharged into air or water, the chemicals released tend to build up in the bodies of animals and humans and, over time, may cause cancer or birth defects.

The federal government banned the production of PCBs in the late 1970s. A few years later, scientists developed a system for reducing the chemicals to harmless salts. Public utility companies have been systematically removing PCBs from electrical equipment in most areas, although some electrical equipment containing PCBs still is in use.

Radon

Radon, a byproduct of decaying uranium, exists in nature and normally percolates through the soil into the atmosphere. When trapped under a building, however, radon can enter the foundation and structural elements and become concentrated in amounts that may be harmful. A colorless, odorless gas, decaying radon releases particles that, when inhaled over time, may lead to lung cancer. A recent study indicated that radon may be present in concentrated doses in as many as 4 million to 8 million homes in the United States.

Environmental Hazards Primarily Affecting Land

Radioactive Waste

Major environmental problems have been created as utilities have sought to dispose of radioactive waste from nuclear power plants. Radioactive waste disposal sites have contaminated not only the surrounding soil but often the underground water supply as well. In some cases, the soil from these sites has been used as landfill, which has spread radioactive contamination to other areas. The Department of Energy (DOE) estimates that as much as $70 billion may be required to clean up sites contaminated by radioactive waste and that the effort may take as long as 20 years.

Properties also have been contaminated by radioactive waste from the operations of industrial firms that produce nuclear fuel rods and other radioactive products as well as from nuclear plant accidents, such as Three Mile Island.

Underground Storage Tanks

Much of the land in America sits on top of honeycombs of underground tanks that store diesel fuel, waste oil, and gasoline for fueling trucks and automobiles and other chemicals for agricultural, nursery, and dry-cleaning operations. Chemicals leaked from these tanks into waterways or underground water tables usually pose formidable health hazards because they are among the most toxic and carcinogenic materials known to man.

Unlike radioactive disposal sites, the location of underground storage tanks is not always known, and it may not be discovered even after extensive test-boring. Although the federal government requires registration of all new placements of underground storage tanks, it cannot account for all existing tanks, many of which remain unknown until a site is excavated or leakage problems are discovered.

Industrial Operations

Over the years many industries have routinely used hazardous products in their operations and dumped the residue into underground disposal sites or nearby waterways. This dumping has been done by older industrial operations, such as the Hooker Electrochemical Company which dumped hazardous byproducts of its manufacturing into the Love Canal near Niagara Falls, as well as clean high-technology firms concentrated in areas such as the Silicon Valley and Orange County in California.

Underground contamination often takes years to detect. Problems at Love Canal, as an example, took almost 40 years to surface, and then only after a period of heavy rains and snow.

Underground disposal sites may be contaminated by a wide range of potentially toxic materials. Many of the 300 materials identified by the EPA as toxic are used by a diversified range of industries.

Federal Regulation

Responding to the public health problems created by environmental hazards, the U.S. Congress has passed some very tough, but often confusing, laws that may severely restrict the development and/or transferability of property. The real estate investor should be aware of several major federal laws.

Resource Conservation And Recovery Act (RCRA)

Originally passed in 1976, this legislation has been modified over the years to provide a means of regulating hazardous substances from production through transportation, use and ultimate disposal (cradle to grave regulation). The legislation has established permitting and reporting requirements, through which persons and firms that utilize hazardous materials must fully account for every stage of the process or face stiff civil and/or criminal sanctions.

A special section under RCRA established the Underground Storage Tank (UST) program, which undertakes to develop an inventory of the underground tanks that store oil, petroleum and other hazardous substances and prescribes standards for the operation of existing storage tank sites and for the construction of new tanks.

Comprehensive Environmental Response, Compensation And Liability Act (CERCLA)

Because RCRA dealt only with present and future uses of hazardous substances and did not apply to the clean up of preexisting environmental hazards, Congress passed CERCLA in 1980. Congress then extended, clarified this legislation and provided additional funding for cleanup by passing the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Together, these laws work toward the removal of hazardous wastes by authorizing the EPA to react immediately to an actual or potential release of a hazardous substance in accordance with a national contingency plan. A superfund of up to $8.5 billion pays for removing and disposing of hazardous materials, and the fund is replenished by judgments against these parties who are responsible for both cleanup costs and damages.

State Legislation

Many states also have enacted legislation regarding environmental hazards. Usually state laws supplement federal legislation; but in some cases, however, state laws have increased the level of regulation that affects the development or sale of property.

Superlien

Several states, including Arkansas, Connecticut, Maryland, Massachusetts, New Hampshire, New Jersey, Oregon and Tennessee, have created superliens to recover state funds that have been used to clean up environmental hazards. These liens take precedence over all other liens, and, due to the high cost of remedial action, may severely reduce or eliminate the value of other lien positions.

Environmental Cleanup Responsibility Act (ECRA)

New Jersey and Connecticut have enacted legislation that requires hazardous materials to be cleaned up prior to the transfer of title to a property. Because it requires a negative declaration on the part of the seller, this legislation generally has been more effective than the superlien.

Right To Know Laws

Several states require that employees of firms utilizing hazardous chemicals be notified of any potential health hazard, provisions for safe handling of chemicals, and possible antidotes if the chemicals are misused. The definition of hazardous chemicals is relatively broad and it incorporates many chemicals used in property management, such as commercial cleaning solvents, pesticides, etc. Employee right to know laws are being supplemented in some states with community right to know laws which carry much broader notification requirements. California, as an example, passed Proposition 65 in 1986 which requires businesses to notify users of their products of any chemical known to the state to cause cancer or reproductive toxicity. Over 200 chemicals, including sulfites contained in wine, are currently on the state's list of hazardous substances.

Other State Legislation

Many states have laws that closely parallel federal regulations regarding underground storage tanks, and compliance with these state laws often will satisfy federal requirements. Some states have laws that require the removal of paint or plaster containing lead from a residential unit if a child is present. The control of asbestos, radon and ureaformaldehyde foam insulation also is covered by legislation in several states.

Establishing Liability

As a result of sweeping federal and state legislation and a few key court cases, the liability associated with environmental hazards is coming into clearer focus. The tendency has been to throw a relatively broad net, catching as many potentially guilty parties as possible, and then sorting out degrees of liability, either directly or by legal action among the parties.

To the greatest extent possible, liability is attached to the responsible party who may be (1) the person or firm that generated the hazardous substance; (2) someone who transported the hazardous substance to a disposal site; or (3) an "owner or operator" of the property. The last category is particularly broad and includes not only the person who owned the property when the hazard was created but also the person who currently owns or operates the property, lessors or sublessees, secured creditors, corporate officers, shareholders, partners, joint venturers and successors in interest.

Liability is strictly defined under CERCLA, and it has very few defenses. Liability is joint and several, meaning that the government can bring action against any and all parties for the cost of the cleanup and the parties can allocate the damages (if any) through private action. Liability is also retroactive and in perpetuity.

But what of the real estate investor who has had nothing to do with the creation of the environmental hazard or may not even know of its existence? In SARA, Congress established the concept of the innocent purchaser—i.e., a party who (1) did not create or contribute to the environmental hazard and who (2) had no knowledge of the hazard after conducting a rigorous investigation into the past ownership and uses of the property. According to SARA, innocent purchasers are not liable. Interim owners of property who did not create the environmental hazard and sell before cleanup is required also may escape liability. These owners must prove that they did not contribute to the environmental hazard during the period of their ownership and that they had no knowledge of the environmental hazard at the time they transferred the property.

For sellers, disclosure is a critical element in any defense. Under both statutory and common law, sellers have a firm obligation to disclose any site contamination of which they should reasonably be aware. Also, under common law, a seller is liable for a nuisance that existed during his ownership even after the property has been sold.

It should be noted that legal defenses must be proved in court and established defenses, such as the innocent purchaser, do not prevent a person or firm from being drawn into costly litigation which can tie up the development or transfer of a property for months or years. An investor thus has a strong incentive to resolve issues involving environmental hazards before a property is purchased, in order to stay out of the chain of title and thereby reduce the chances of incurring future liability.

Due Diligence

If investors should resolve environmental issues before acquiring a property, then the due diligence process must be as rigorous as possible. This objective is constrained in the real world, however, by the time pressures of the diligence process and the costs of environmental testing. The best approach, therefore, is to undertake the environmental review process in a phased program, completing the simplest tasks first and then moving on to more time-consuming (and expensive) procedures only if there is evidence of environmental problems.

Environmental Audit

The purpose of an environmental audit is to, within a reasonable time and expense framework, detect problems that require further investigation. An environmental audit consists of a review of existing documents and interviews with knowledgeable individuals. It is usually undertaken by a qualified engineer but not necessarily a specialist in environmental hazards.

In the case of properties that are not known to have environmental hazards, an environmental audit involves a review of the chain of title to the property, looking for past uses that might have generated toxic wastes such as gas stations, nurseries, dairy farms, dry cleaning operations, etc. Historical aerial photographs are helpful in this regard. If a property was in agricultural use at one time, the audit should identify where the farm residence was located since underground storage tanks usually will be nearby.

Interviews with current or past tenants help shed light on past operations that might have produced environmental hazards. Discussions with local environmental enforcement agencies and planning departments assist in determining whether government officials have had any environmental concerns about the site or have received reports of past violations. A check with state agencies can flag any underground storage tanks that have been picked up on the UST inventory.

In the case of properties where there is a higher probability of environmental hazards, such as sites currently or previously used by industries that manufacture or dispose of chemicals or radioactive materials, specific environmental documents may be available. Usually, these documents are provided by the seller or through the local or state environmental protection agency. If such documents are not available, a review of specific reports, such as state pesticide application permits, inspection reports on oil storage systems, etc., will be necessary. The seller should be required to provide any analytical test results from such activities as test borings, air samples, material samples, etc.

The technical specialists who review other aspects of diligence, such as structural integrity, electrical and mechanical systems, zoning compliance, auditors (financial statements), lawyers (lease analysis), should be asked to keep their eyes open to possible environmental problems.

Environmental Risk Assessment

If the environmental audit encounters no problems and all other aspects of diligence are favorable, the transaction may close. However, if the environmental audit uncovers any potential problems, the investor must decide whether to proceed with additional investigation or terminate the transaction. This decision will be heavily influenced by the nature of the identified environmental problem, the allocation of cost of further investigation between buyer and seller, the additional time required for investigation and the continuing attractiveness of the investment as contrasted with alternative investment opportunities.

If the investor decides to proceed with further investigation, the work should be undertaken by an environmental specialist. In the investigation, the specialist reviews all the material developed in the environmental audit, and undertakes an on-site inspection, which, depending upon the nature of the environmental problem, may include a variety of tests. The tests most commonly utilized include material and air sampling, for asbestos and radon, test borings, for soil and ground water contamination, and equipment inspection for PCBs. These tests may take a few days or, in some cases, weeks.

Based on the results of these tests, the environmental specialist specifies the severity of the problem, the remedial work that will be required and the cost of this work. Generally, several stages of remedial work are recommended, ranging from the least costly to the most costly. Remedial recommendations usually fall into one of three categories:

- No treatment (natural remediation)
- On-site treatment (e.g., encapsulation, vapor extraction)
- Removal of the contaminated material and transport to another site

In developing the cost estimates for remedial work, the costs of ongoing monitoring activities should also be considered.

The environmental specialist's recommendations, along with the test results, are provided in the form of a written report. The investor may, at this point, wish to get a second opinion from another environmental specialist.

At the least, the investor should have the engineering report reviewed by an attorney who specializes in environmental law to be certain that the recommended remedial program will meet legal standards. In most cases, it is wise to anticipate that future legal standards will be tougher than present standards.

After learning of the cost of remedial work, the investor may wish to withdraw from the investment. In making this decision, the investor must weigh (1) the impact the environmental hazard will have on the value of the property and (2) how the impact will be recognized in the purchase transaction.

Impact On Property Value

It is difficult, if not impossible, to ascertain the total economic impact of environmental hazards on a piece of property. The impact may be much greater than the direct costs of the remedial work that is undertaken. One concern is future liability if the remedial work is ineffective or if a change in standards requires additional remedial work. Another is the possibility that a stigma may be attached to the property, even after the remedial work is completed. This stigma may reduce marketability (fewer buyers will be interested) and result in loss of value. The number of investors who have simply refused to invest in properties that have environmental problems already has reduced the market breadth for these properties. Finally, there may be a problem in securing financing, even after the remedial work is completed.

On the positive side, it is possible that the remedial work will restore a property to its full market potential. A good example is the removal of asbestos from a well-located, high-quality office building. Since tenants in most markets have been willing to lease space in buildings after asbestos is removed, the increase in value to the property from the remedial work may be greater than the cost of the work itself. Another example is the removal of contaminated soil prior to the development of a large housing development. Most buyers of houses (if they are aware at all) will be concerned only that the proper remedial treatment has been undertaken.

In attempting to quantify the impact that remedial work will have on value, the best approach is a before and after comparison that looks at the uses of the property after the remedial work is completed and the economic value these uses will create or reduce. Needless to say, a cautious investor will provide contingencies for possible corrections or additions to the remedial work and will utilize an investment hurdle rate that incorporates the additional risks.

Transaction Negotiations

Clearly, the change in value brought on by environmental hazards primarily affects the seller. The question is, how should the transaction be modified to reflect the change in value? There are several possibilities.

Reduction In Purchase Price

A common approach is to simply reduce the purchase price of the property by the cost of the remedial work (highest estimate), plus some amount for the additional risk the buyer is assuming. The problem with the price adjustment approach is that the buyer is forced to undertake the remedial work, and, if the work is not successful, he may be exposed to additional costs and liability. It is also possible that the remedial standards will change before the work is completed, changing the entire pricing calculation.

From the seller's perspective, a price adjustment based on the most expensive remedial recommendation may prove to be a windfall to the buyer if simpler, less costly solutions will be effective. Also, because the seller bears continuing liability (buyers seldom release sellers), he may be well served by assuring himself that the remedial work has been properly undertaken.

A reduction in purchase price may work, particularly in cases for which the extent of liability is well understood such as in the removal of asbestos. In most situations, however, it is best to assign the responsibility for remedial action and to change the property value in ways other than through price reduction.

Holdbacks For Remedial Costs

One alternative is to make a price adjustment that reflects the additional risk factors but holds back (in escrow or in the buyer's hands) the funds allocated to remedial action. This option is somewhat fairer to the seller who benefits from any savings from less costly remedial work. The problem is, what to do if the costs are higher than budgeted or if standards change while the work is proceeding. From the buyer's perspective, the seller should be responsible for additional costs, but this responsibility is often difficult to negotiate. A more realistic approach is to work out a formula for sharing additional costs. This option has the advantage of motivating both buyer and seller to keep remedial activities as efficient as possible. It does, however, hold one disadvantage to the buyer: CERCLA does not recognize agreements to allocate liability, meaning that the buyer will be brought into any legal action that is initiated by the federal government.

Delayed Closing

If the buyer is uneasy about closing before the remedial work is completed, closing may be delayed until the work has been completed at the seller's expense. The tradeoff is that the seller may insist on receiving the full purchase price and offer no concession for additional risk if he is to be responsible for the remedial work.

Indemnification

As with most real estate transactions, the buyer tries to get warranties, releases and indemnification, and the seller tries to avoid them. While indemnification will not help in the case of liability to the government, it may be helpful in adjudicating claims between the parties.

One of the problems with indemnification of environmental hazards is the lengthy time frame. If an indemnification is to be of any value to the buyer, it should cover not only existing environmental problems but those problems that may arise in the future, perhaps over a period of many years. It also should cover changes in the standards imposed by regulatory agencies. Even if the seller agrees to such an open-ended proposition, there is still the question of the seller's financial resources at the time of indemnification. A partial solution is to secure a bond (at the seller's expense) that insures payment of future cleanup costs if they are required by governmental agencies.

The bottom line on indemnification is that buyers should attempt to get it but should not rely on it exclusively. There is no substitute for rigorous diligence and sound underwriting. If these cannot be implemented through fair and reasoned negotiations, it may be better to pass on the transaction than to rely on a seller's indemnification.

Lenders

For the lender, diligence activities are undertaken in a similar fashion. Risk underwriting and negotiations may be somewhat different, however, due to the fact that the owner of the property remains the same. Generally, the loan should not close until the remedial action has been undertaken by the owner.

The lender must be careful to avoid being classified as an active owner and operator of the property and becoming strictly liable for the costs of remedial action under CERCLA. While the legal distinction between active and passive ownership is evolving, a lending institution that assumes title for the sole purpose of protecting its security interest is not deemed to be an active owner, provided it can prove that it had no knowledge of the environmental hazard at the time it made the loan and at the time of foreclosure. A lending institution that exercises control over a borrower's business operations (such as participating or convertible mortgages), however, may be found to be an active owner and should explore with counsel the possible exposure to liability from the use of these instruments. A lender also should consider the impact of environmental hazards on the value of its collateral even though it may not be directly liable for cleanup costs.

Conclusion

It should be clear from this article that dealing with environmental hazards is a dynamic situation and that all parties must try to anticipate future directions because change is inevitable.

It also should be clear that, while environmental hazards pose underwriting problems, there is no reason to avoid these transactions *per se*. What is required is a rigorous diligence process, a sober assessment of the costs of remedial action versus the anticipated yield from the investment, and a forthright approach to negotiations so problems will be resolved before major funds are committed. While this approach cannot remove all risks, it can substantially reduce the investor's exposure and, in most cases, lead to successful investments.

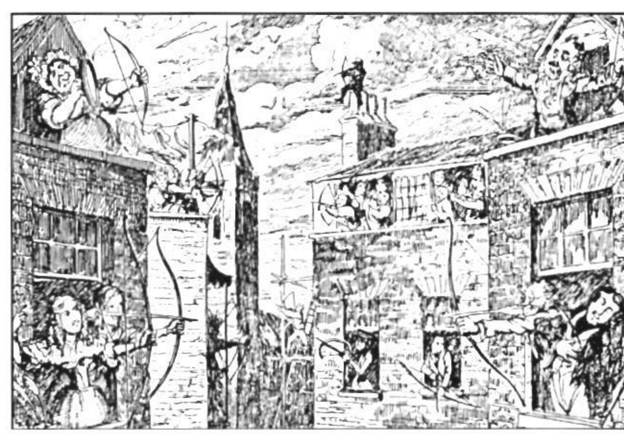
RETHINKING LARGE CITY PUBLIC HOUSING PROJECTS: THE INFLUENCE OF POLITICS OF THE '80s

Recent trends and policy initiatives in the privatization of public housing are being incorporated into public housing management and decision-making.

by Paul J. Burka, Michael W. Jones, Charles P. Kofron and Robert E. Mendelson

As an outgrowth of the Comprehensive Improvement and Assistance Program (CIAP) application planning process, the St. Louis Housing Authority (SLHA) asked consultants to respond to a request for a proposal (RFP). They were to provide an analyses and recommendations for development options applicable to a selected group of housing projects. The problem for the consultants was expressed as follows:

> Applicants should assume the role of owner, developer and manager of the project; the Housing Authority wants to utilize a "developer's perspective" in generating a rehabilitation plan and policy for dealing with the current problems of the projects. . . With the assumption that the applicant is a private real estate development-management company, approach the preparation of development options as if:



> 1. Your firm has purchased one or more of these projects for a nominal amount.
> 2. Your firm will consider the market for tenants, the changes in the neighborhood (past and projected), the physical improvements needed to get the appropriate tenant mix and the type of management practices that will insure long-term stability for the projects.
> 3. Your firm must develop practical and feasible solutions, but it is not necessary to deal with project financing or equity assemblage issues.

As role playing owners, developers and managers of one or several public housing projects, applicants were expected to bring to the development option the same attention, insight and experience they would apply to their own enterprises.

The novel aspects of this RFP were the intended uses of development options and the qualifying backgrounds of the respondents. SLHA wanted options that would facilitate long-term project stability. These options were to be incorporated into the day-to-day decisions of the

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authority's personnel. Minimally, the responding consultants were expected to analyze neighborhood conditions and the current impact of the project on the neighborhood and to evaluate the impact of existing and anticipated public and private investment on public and private housing in the neighborhood. Beyond this, they were expected to formulate a private sector perspective on the rationale, cost and time frame for implementing the development option. Also, they were to describe the implications the option would have on the neighborhood and the management of the property.

SLHA's strategy was to assemble the most experienced property developers and managers in the area to implement the options according to U.S. Department of Housing and Urban Development (HUD) regulations and requirements. Seeking and integrating private sector development perspectives on difficult properties represents a major shift in public housing policy. In retrospect, it appears that public housing policy has come full circle and now reflects the policy goals and objectives of the initial 1937 housing legislation. Standing in the way of private sector involvement, however, is a large and increasing need for low-income housing and an aging public housing stock that is becoming more difficult to maintain and operate.

Public Housing Policy Trends And Perspectives

Housing low-income households never has received wide political acceptance. Initial legislation included provisions to assuage the real estate industry and to clearly establish low-income housing as a Depression era public works program. Some of the factors designed to placate the real estate industry included income and rent requirements for tenants that were clearly below those of the lowest tenant population in the private sector. Another provision, which evidenced hostility toward public housing, was the exclusion of upwardly mobile households from public housing after they reached a certain income level. The mixture of income classes was not endorsed even though history has demonstrated that it stabilizes projects.

Thus, public housing was designed primarily for the temporary poor, or those predominately white households with intact, employed families. After passage of the 1949 Housing Act, which gave priority for tenancy in public housing to households displaced by urban renewal, the composition of large-scale urban public housing projects changed from predominately white to black households and from intact families with employed householders to female-headed, federally assisted families.

This clientele plus the elderly are essentially the occupants of most units owned and operated by large urban housing authorities. These constituencies essentially are powerless to demand standard housing. Moreover, public housing has not enjoyed wide support. This lack of support is apparent in the position of critics who hold that to provide rehabilitated and new units at costs exceeding $60,000 per unit is unfair to working households with low to moderate incomes who neither qualify for nor choose to live in environments such as those found in public housing. This group of critics, along with those who might be considered unsympathetic or unfeeling towards the poor, have combined to oppose funding which would maintain public housing for the clientele it now serves. Several other factors indicate the antipathy of the rich and powerful towards public housing. These factors include the requirement that public housing projects must meet only minimal construction standards and the need for community approval of public housing sites prior to construction approval. The next major change in public housing legislation occurred in 1969 with the passage of the Brooke Amendment which limited rents to 25 percent (now 30 percent) of a tenant's income. While the provision was not expected to be punitive, its net effect was disastrous. Supposedly, differences in rental revenues to housing authorities were to be operating subsidies from the federal government. However, the lengthy moratorium on operating subsidy payments imposed by the Nixon Administration severely impaired the financial vitality of most big city housing authorities.

Many of the projects built under the 1949 and 1954 Housing Acts were constructed in locations adjoining highly dysfunctional business districts. In fact, a convincing argument can be made that dating back to the time of passage of the original legislation of 1937, a conspiracy existed to restrict locations. Public housing typically was placed in the absolute worst sections of American communities and furthest away from wealthy and influential leaders.

However, an interesting phenomenon has occurred in recent years. Real estate locations that once encircled obsolete business districts have become valuable. Revitalization of downtowns has transformed old and abandoned warehouses and manufacturing buildings into chic residential units and modern, updated office space. Nearby public housing units, Cabrini-Green in Chicago is a classic example, now lie on land that could be developed into apartment complexes renting upward of $1,000 a month or office space renting for $35 a square foot. Many big city public housing projects are under-maintained and only partially occupied. The dilemma of local housing authorities and HUD is what to do with this supply of residential units. It is apparent that, despite long waiting lists for public housing, the units continue to be under-maintained. Because of this disinvestment, the dwellings will not be occupied and may eventually be abandoned. In St. Louis, for example, the housing authority has a 17,000 household waiting list and is no longer adding names to the list. Although the need is evident, the long-term prognosis suggests that the housing authority will not be financially able to keep the housing in standard condition and public housing units that are now occupied will be lost. Faced with that situation, the relevant question is, should public housing authorities act as if they were private entities? Should they sell high-rise, dysfunctional and under-maintained projects in areas ripe for development and use the proceeds to construct and rehabilitate units in low-rise projects in locations less ripe for intensive real estate usage?

One could argue that such a tactic would constitute further intervention in the lives of people who are powerless to compete in the private market. On the other hand, one could argue that nonintervention clearly will result in an ultimate loss of housing units for this clientele.

Faced with this reality, housing authorities are examining private market responses while concurrently attempting to save units for those households already occupying public housing. With inadequate resources to maintain its present public housing units and the increasing value of the land under some of its projects, the SLHA decided to try to formulate an answer to the question: What position or direction should the housing authority take on its properties based upon real estate market realities?

Public Housing Viability And Modernization

Funding for the consultants' studies under the SLHA RFP came from the "resources for planning" authorization in CIAP regulations. According to HUD guidelines, the purpose of CIAP is

> to promote the long-term physical and social viability of public housing by (1) improving the physical condition of existing public housing projects and (2) upgrading the management and operation of such projects to assure that the projects continue to be available to serve lower income families.[1]

This two-pronged approach involved the development of a five-year comprehensive physical needs assessment and a plan to revise, evaluate and propose management changes or alternatives that will keep the property viable for 20 years. The physical needs assessment required large public housing authorities to identify current physical conditions and physical improvements necessary to meet mandatory standards. As part of the overall needs assessment, public housing authorities were directed to conduct a viability review of all projects proposed for modernization. To prepare better CIAP applications and certify to HUD that "given the level of funding, the projects would remain viable," HUD guidelines encouraged comprehensive planning.[2]

The focus of the assessment by public housing authorities and the review of the application by HUD was project viability. A project was considered viable if less than 15 percent of available units would be vacant at any one time, if estimated modernization costs for physical improvements would be at least 40 percent less than the cost of similar unit construction, and if no serious locational or structural conditions would threaten the project over the long term.[3] If these conditions were not met, HUD assessed the extent and severity of the problems identified in the application. If any one of the problems was severe or any two were moderate, HUD determined whether the proposed modernization and/or changes in management and operation would remedy them. If the project was deemed non-viable, it was ineligible for modernization funding.

It should come as no surprise that the determination of viability rested largely on private sector investment considerations. Although federal public housing policy has traditionally been supply-side and production oriented, incorporation of private sector initiatives and investment concerns have attempted to address supply and demand problems arising from public housing needs, program goals and policy implementation. For example, the turnkey program in the late 1960s and early 1970s tried to shorten the lengthy development process of conventional public housing projects. Developers could propose sites, construct units and essentially turn the keys over to local housing authorities upon completion of the units. Operation Breakthrough was a private sector effort to reduce housing costs and development time by using public subsidies. In Section 8 of the 1974 Housing and Community Development Act, rent subsidies covering the difference between fair market rent in the neighborhood and the established rent ceiling of 30 percent of household income, were paid directly to landlords. The Section 8 program also marked a turning point in supply-side public housing economics by diverting construction financing away from the public sector to the private sector.[4]

During the Reagan Administration, the tendency toward private sector involvement was carried a step further with privatization proposals and programs. Using the British experience and example as a model, efforts were made to convert public housing units to private ownership.[5,6] The use of vouchers in the Housing Payments Program was designed to provide direct cash assistance to households to allow them access to the private rental market. Tenant management organization was yet another example of an effort to shift housing operations and management out of the public sector.

Thus, looking to the private sector for answers in the creation and maintenance of low-income housing is nothing new. It is necessary, in fact, since most low-income housing units are owned and operated by private investors. Yet questions of profitability emerged as far back as 1972 when George Sternlieb wrote:

> the private operation of low-income central city housing is dying. Consumer demand and need—yes; market, profitability, motivation for long-term holding and improvement—no.[7]

Critics are quick to point out the inconsistencies between programs and initiatives. Although the determination of viability seems appropriate and reasonable, the concept of viable public housing has never been a true and meaningful goal of public housing policy. As Robert Kolodny writes:

> There is a sense in which public housing has always been a bridesmaid and never a bride. It has been harnessed to a variety of purposes, among which the direct provision of low-cost housing services has generally been secondary.[8]

Home ownership is a mainstream social goal and is a federally subsidized policy for the middle class, but when that goal is applied to public housing, the net effect is the loss of better projects and of higher-income, rent-paying households. According to Charles E. Connerly, the elimination of the better public housing, without a replacement policy, will leave local housing authorities with properties in poorer condition, with poorer households occupying units and with an increasing inability to mix tenants of various income levels.[9] In commenting on the Section 8 program, Rochelle L. Stanfield adds, "But even here the focus has been on aid to landlords, not tenants, and on the housing unit, not the household."[10]

Vouchers or direct payments to households to subsidize their entry into the private rental market assumes that the subsidy will allow households to compete effectively for low- to moderate-income rental housing. As Joann S. Lublin explains, "The rationale for vouchers is that the basic housing problem is affordability, and not an actual shortage of rental units."[11] Yet experience has shown that the private market response to increased competition leans toward those with higher incomes in terms of who occupies existing units and what new units will be developed.[12] Jones adds that the voucher plan is really nothing more than a modified version of the Section 8 program with one important difference—no limits to rent levels. He contends that low-income rental housing is inadequate and "giving poor families vouchers to look for nonexistent housing is cruel and irresponsible."[13]

Tenant management programs have been viewed as conduits for home ownership[14] as well as ways to address public housing social problems.[15] However, the main issue of tenant management in public housing is its expense. Evidence from HUD demonstration programs shows that tenant management is more expensive than local housing authority management, and the startup and ongoing costs of these programs are high. In St. Louis, where the success of tenant management often has been cited in the literature, huge expenditures for gut rehabilitation have been necessary to make projects suitable for occupancy. In addition, as Hilary Silver, *et al.*, observe, the attribution of desirable changes to tenant management fail to consider the impact and indirect costs of contributions made by local housing authorities. The changes are less obvious than those portrayed in the success literature which tend to be ideologically biased.[16]

Notwithstanding the claims, counterclaims, and criticisms of recent public housing policies, it is becoming clear that the question of viability is intertwined with privatization initiatives and the private sector approach to investment. Viability requirements provide a market-based rationale for excluding ineffective properties from modernization planning and programming and a logic for changing the density or composition of a project through demolition. With the passage of the Housing and Urban-Rural Recovery Act of 1983, it became easier for local authorities to obtain permission to sell or demolish public housing projects. Since then, the establishment of viability requirements and the HUD review to be eligible for modernization funds provide justifications for public sector disinvestment. It is now easier to show that public housing interests are better served by selling properties in appreciating areas and channeling the proceeds into new low-rise construction or scattered site units.

A latent consequence of employing the concept of viability to public housing policy and of the privatization trend is the pressure on local housing authorities to reform management practices and to creatively maintain current fit-for-occupancy units. Larger housing authorities are being compelled to address these issues almost as if they were private real estate managers. However, their marketing approach, their development perspective and their target population remain constrained by non-market type forces. Given this situation, the challenge becomes one of recasting or inventing private sector approaches to address the circumstances and realities of public housing. In brief, the CIAP program is a way of rationalizing an unequal distribution of a limited supply of funds for modernizing low-income housing that is expensive and that heretofore has been unaffordable. Moreover, it is an attempt to bring private sector perspectives on enhancing capital investment to public housing planning.

Devising A Decision-Making Model For Development Options

As a consultant team we were responsible for reviewing, evaluating, and integrating the development options submitted to SLHA by developer consultants. The RFP encouraged innovation and recognized that the perspectives taken by the various consultant teams would include different factors or weigh similar factors differently. Freeing the teams from bureaucratic constraints and standardization requirements was an essential part of the process. However, the development options from different consultant teams had to be integrated into a coherent framework for making highly sensitive political and administrative decisions.

Our solution was to devise, from the factors and alternatives that were submitted by the development consultants, a decision-making model using an expert system. This approach was selected as a means of integrating options and, more importantly, creating a consensus on public housing decision-making. Minimally, it represented a framework for channeling public debate, comment and criticism.

Interviews and readings of the consultants' preliminary findings produced the following assumptions for our work:

1. Projects in stable and improving neighborhoods have a better chance for long-term survival than those in areas of disinvestment.
2. Private sector involvement, as contrasted with public sector expenditures, is a superior indicator of neighborhood stabilization.
3. Scattered site projects are more costly and less efficiently managed than unit-concentrated projects.
4. Difficulty of management relates more to tenant characteristics, building configuration and deferred maintenance than to the scattering or concentration of units.

5. Renovation and modernization expenditures do not ensure long-term project survival; they must be accompanied by admission requirements and management standards and practices.
6. Tenants who cause fewer problems are more desirable from management and cash flow perspectives.

These assumptions were used as the basis for establishing a relative project priority rating for a CIAP modernization application and for examining the factors or variables that enter into each step of the decision-making process. The assignment of values to neighborhood and project characteristics was a preliminary step in the development of a model for determining project modernization priorities. The characteristics involved in determining priority projects were complex and related to expediency and efficacy.

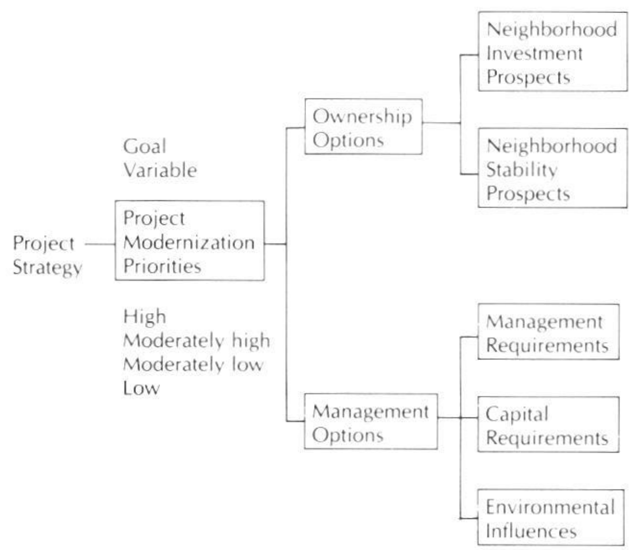
The Model For Determining SLHA Modernization Priorities

Project priority evaluation hinged on two broad sets of factors pertaining to ownership and management alternatives. Ownership decisions depended on a variety of neighborhood factors and location characteristics including the extent of redevelopment activity, the real estate market, housing density, population demographics, neighborhood stabilization costs and long-term stability prospects. Management decisions pertained more to the characteristics of the project, such as occupancy level, rent levels, condition, density and household composition. Using both sets of variables, the housing authority might decide that its interests would be served best by retaining current conditions or by turning properties over to a for-profit or not-for-profit housing group. Or the housing authority might find more low-income housing units would be provided in the long run by selling a property than by maintaining the property at current levels. Project priority for receiving modernization funds was set lower or higher depending on recommended ownership and management options. Although less desirable, ownership and management options for immediate or eventual demolition were also included. Once ownership and management decisions were made, it then was possible to determine relative project priority levels for modernization funds.

Figure 1 shows the major decisions involved in determining project priorities and planning strategies. Beginning with the outcome of the model, four priority levels were identified: high, moderately high, moderately low and low. The four priority levels were associated with 16 strategies or rationalizations for policy consideration and review. A project priority and an associated strategy were based on joint consideration of recommended ownership and management options. An ownership option was the result of an evaluation of redevelopment investment indicators and neighborhood stability prospects. Possible ownership options included selling the property and using the proceeds to replace low-income housing units, investing in the property, maintaining ownership at current commitment levels and disinvesting or reducing commitment levels. A management recommendation was the result of an analysis of tenant management requirements, building management requirements and investment management prospects. Management recommendations included retaining centralized management, instituting on-site property management, transferring management to a not-for-profit organization and transferring management to a for-profit organization.

FIGURE 1

Higher Order Variables In The SLHA Model



Figures 2 and 3 provide a more detailed breakdown of the factors and decisions involved in recommending ownership and management options, respectively. To make this a realistic model, a database containing investment indicators, demographic and housing unit estimates for the city, the surrounding neighborhoods of housing authority properties and the neighborhood containing the project was integrated into the system for the purpose of aiding user evaluations and determinations. Parenthetically, many of the same data items used by the consultants were incorporated into the model. If requested, this information would be tabulated and presented to the user in graphic form during the consultation. Figure 4 illustrates how recommended project priorities and supporting strategies would be integrated into housing authority decision-making.

Summary And Conclusions

Any model that is created for the purpose of evaluating and dispensing funds to public housing projects is constrained by several limitations: the declining political constituency for public housing and for housing the poor, generally, and the dwindling resources available to construct new units or to rehabilitate existing ones.

In this environment, the old triage notion of resource allocation seems to be a logical response. Maintaining the availability of the current number of occupied and

FIGURE 2

Ownership Option Variables

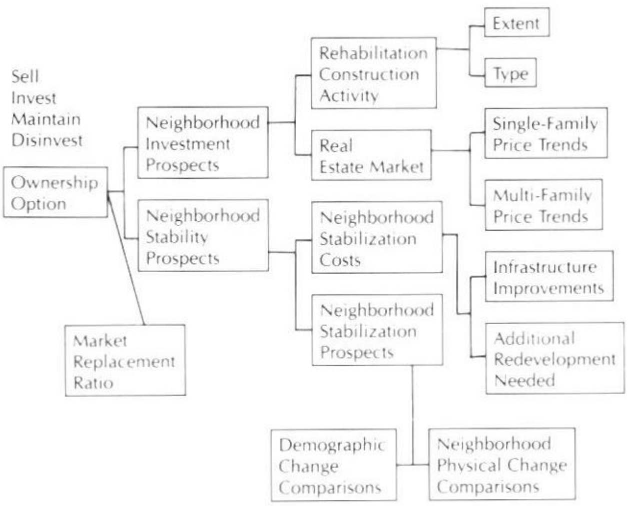


FIGURE 3

Management Option Variables

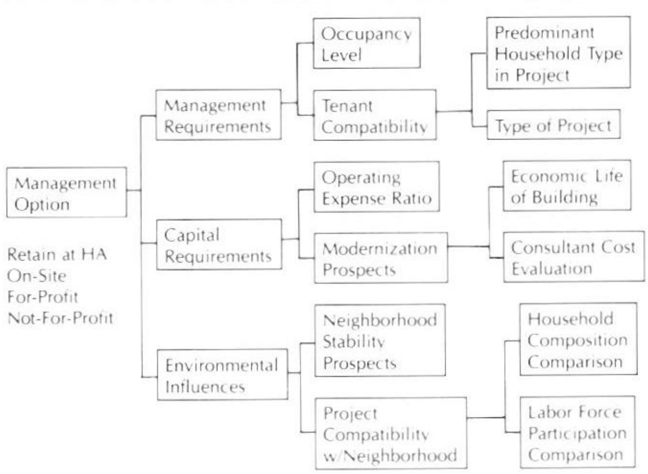
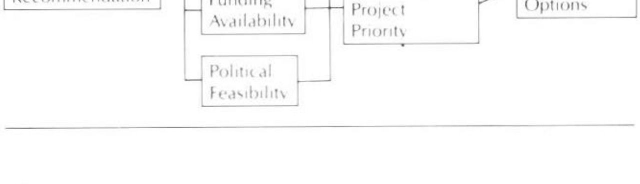


FIGURE 4

Integrating And Implementing Recommendations



standard units seems more important than vainly trying to keep every unit that is now in the current stock of housing authorities, whether the unit is occupied, vacant or unfit-for-occupancy. This means public housing authorities must choose not to invest in a number of properties or possibly sell others using the proceeds from the sale to maintain and construct units with better prospects for long-term stability.

Our tentative findings dictate that it may be wise for big city housing authorities to sell projects, especially those with large numbers of unoccupied and substandard units on sites where land values are high and use revenues from the sale to purchase and construct new units. This strategy may be especially applicable to cities whose large high-rise public housing projects have been traditionally inhabited by families. Our findings also indicate that scattered site projects in areas of substantial disinvestment may have to be abandoned because the long-term prognosis is a fate similar to the surrounding neighborhood.

These positions are heresy to public housing advocates who want more units and more funds for operating subsidies to maintain existing units. Their rationale is the extensive demand for low-income housing which has been clearly documented by every large housing authority. Public housing authorities are not being realistic because funds to carry out those goals will not be forthcoming and public housing units probably never will be located in neighborhoods that have a potential for long-term stability. If public housing is to be effective, it must be viewed as a maintainable and renewable resource. Ultimately, CIAP represents both a rationalization for making investment choices in public housing resources and an obvious consequence of the public housing privitization perspective.

NOTES

1. U.S. Department of Housing and Urban Development, *Comprehensive Improvement Assistance Program—Processing of PHA Applications for Fiscal Year 1985 Modernization Funds* (1985). Notice PIH 85-1, 3.

2. U.S. Department of Housing and Urban Development, *Comprehensive Improvement Assistance Program—Comprehensive Planning and Additional Information for Processing Fiscal Year 1985 CIAP Applications* (1985). Notice PIH 85-2, 3.

3. U.S. Department of Housing and Urban Development. Public Housing Comprehensive Improvement Assistance Handbook (1984). Washington, D.C.: U.S. Government Printing Office. 7485.1, rev. 2, change 1, 3-4.

4. Fox, Clara, "Public housing's future: A look ahead." *Journal of Housing* (November/December, 1984) 192.

5. Clark, Lindley, H., Jr., "Here's a housing idea that's surely worth a try." *Wall Street Journal* (October 9, 1984).

6. Walker, Jeffrey, "Privatization of housing programs: Policy and implications." *Journal of Housing* (November/December, 1986) 241-242.

7. Sternlieb, George, "Abandonment: Urban Housing Phenomenon." *HUD Challenges* (May 12, 1972).

8. Kolodny, Robert, *Exploring New Strategies for Improving Public Housing Management.*Washington, D.C.: U.S. Government Printing Office, HUD-PDR-561. p 8.

9. Connerly, Charles, E., "What should be done with the public housing program?" *APA Journal* (Spring, 1986) 149-150.

10. Stanfield, Rochelle, L, "Cashing out housing—A free-market approach that might also cost less." *National Journal* (September 19, 1981) 1661.

11. Lublin, Joann, S, "Declining housing aid worsens the struggle for many poor people." *Wall Street Journal* (August 31, 1984).

12. Walker, "Privatization of housing programs,"at 246.

13. Jones, Michael, "Commentary. Housing voucher plan is short-sighted." *St. Louis Post-Dispatch* (March 23, 1987).

14. Clark, "A housing idea that's worth a try."

15. Lublin, Joann, S, "In low-income public housing projects, tenants have new hope of being owners." *Wall Street Journal* (April 2, 1985).

16. Silver, Hilary, McDonald, Judith, and Ronald J. Ortiz, "Selling public housing: The methods and motivations." *Journal of Housing* (November/December, 1985) 226-227.

PROJECTING HOUSING DEMAND FROM DEMOGRAPHICS

Demographic information can provide valuable support for projections of future housing demand.

by James A. Runnels, CRE

Market studies are one of the most interesting and certainly the most challenging assignments that real estate analysts are asked to perform. The purpose of the residential market study is to aid the land planner in making recommendations on land uses and physical development that will be accepted by the largest percentage of the market. Specific land use recommendations and projected absorption rates then lay the foundation for development, master planning and economic feasibility studies.

"Every market study involves an analysis of two items. One is the present and future demand for a certain type of land use. The other is the present and future supply of competitive facilities of that type in the area."[1] The most challenging aspect of a market study is the estimation of future demand. However, previous supply and demand trends from published sources and primary research provide guidelines for projecting future trends.

The real estate analyst may use demographic information, in the form of household population projections, to estimate the demand for housing units in a given area. The basic assumption is that each new household formation requires some type of housing unit, ranging from subsidized housing to estate homes. Therefore, a projected growth in household population translates into an increased demand for housing which may be divided between owner-occupied and renter-occupied.

Further refinements in demand projections may be based on household income estimates and projections. Income levels determine the price ranges of homes and the market's ability to buy or rent. Most demographic materials quantify the number of households by income levels, which allows the analyst to estimate what a specific market can and cannot afford.

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Housing Demand

While completing a feasibility study of a proposed 500-acre residential subdivision in suburban Chicago, we utilized a method described by Barret and Blair to estimate the future demand for housing units in our subject area.[2] A market area was selected based on major traffic arteries and employment centers. A five-mile radius was selected because of the rural nature of our location.

Housing demand was projected as follows:

Projected increase in household population 1988-1993	50,145	
Vacancy Factor of 5%	× .05	
	2,507	
	+ 50,145	
Total estimated housing required by 1990		52,652

EXHIBIT I

Household Population Demographics
1980-1993

	1980 Census		1988 Estimates		1993 Projections	
Population	95,811		122,554		137,407	
In Group Quarters	801		889		926	
Households	31,850		43,247		50,145	
1 Person	4,897	(15.4%)	8,124	(18.8%)	10,237	(20.4%)
2 Person	9,511	(29.9%)	13,194	(30.5%)	15,415	(30.7%)
3-4 Person	12,640	(39.7%)	16,738	(38.7%)	19,050	(38.0%)
5+ Person	4,798	(15.1%)	5,190	(12.0%)	5,443	(10.9%)
Average Household Size	2.98		2.81		2.72	
Families	25,492		33,375		37,853	
Race: White	92,806	(96.9%)	116,298	(94.9%)	128,617	(93.6%)
Black	712	(0.7%)	3,221	(2.6%)	5,162	(3.8%)
American Indian	101	(0.1%)	134	(0.1%)	160	(0.1%)
Asian/Pacific Islander	1,871	(2.0%)	2,478	(2.0%)	2,962	(2.2%)
Other*	320	(0.3%)	423	(0.3%)	506	(0.4%)
Spanish/Hispanic	3,883	(4.1%)	6,361	(5.2%)	8,215	(6.0%)
Age: 0 - 5 years	9,671	(10.1%)	13,555	(11.1%)	15,225	(11.1%)
6 - 13	13,550	(14.1%)	15,462	(12.6%)	18,555	(13.5%)
14 - 17	7,113	(7.4%)	6,641	(5.4%)	6,604	(4.8%)
18 - 20	4,051	(4.2%)	3,717	(3.0%)	3,522	(2.6%)
21 - 24	6,982	(7.3%)	7,123	(5.8%)	6,954	(5.1%)
25 - 34	20,693	(21.6%)	27,365	(22.3%)	27,914	(20.3%)
35 - 44	14,244	(14.9%)	22,111	(18.0%)	26,906	(19.6%)
45 - 54	9,582	(10.0%)	12,629	(10.3%)	16,221	(11.8%)
55 - 64	5,861	(6.1%)	6,786	(5.5%)	6,769	(4.9%)
65 +	4,057	(4.2%)	7,164	(5.8%)	8,738	(6.4%)
Median Age	28.2		30.4		31.4	
Males (by Age)	47,705		60,612		68,080	
0 - 20	17,515	(36.7%)	19,815	(32.7%)	22,088	(32.4%)
21 - 44	20,684	(43.4%)	28,231	(46.6%)	31,029	(45.6%)
45 - 64	7,948	(16.7%)	9,783	(16.1%)	11,571	(17.0%)
65 +	1,558	(3.3%)	2,783	(4.6%)	3,392	(5.0%)
Females (by Age)	48,099		61,942		69,326	
0 - 20	16,870	(35.1%)	19,560	(31.6%)	21,819	(31.5%)
21 - 44	21,236	(44.2%)	28,368	(45.8%)	30,745	(44.3%)
45 - 64	7,494	(15.6%)	9,632	(15.5%)	11,418	(16.5%)
65 +	2,499	(5.2%)	4,381	(7.1%)	5,345	(7.7%)
Housing Units	34,599					
Owner-Occupied	23,601	(68.2%)	32,175		37,915	
Renter-Occupied	8,249	(23.8%)	11,072		12,230	

*1980 Other race was modified to encompass the current U.S. Census Bureau definition
Source: 1980 U.S. Census, July 1, 1988, Urban Decision Systems Estimates

Units presently constructed	43,247	
Units permitted but not yet constructed	+ 263	
	43,510	
Vacancy factor of 5%	× .05	
	2,176	
	+ 43,247	
Estimate of present housing supply		− 45,686
Estimated total demand for units		6,967
		÷ 12
Estimated total demand for units each year between 1988 and 1993		1,393

Assuming certain occupancy rates, the total demand for units per year between 1988 and 1993 was as follows:

Owner-Occupied Units	68.0%	947
Attached housing:	45.0%	426
Detached housing:	55.0%	520
Renter-Occupied Units	32.0%	446

Household population projection figures were available from a number of sources. Demographic information from Urban Decisions Systems, Inc., Los Angeles, CA, was used in this analysis (see Exhibits I and II).[3]

Once the household population was projected, an allowance was made for choices and movement in the market involving homes and apartment units for sale or lease. The typical 5 percent vacancy factor was used unless local market conditions dictated otherwise.

Units presently constructed included the number of housing units within our market area. This information was provided by the demographic service we used, although it also could have been obtained from the local city planning commission or updated from U.S. Census reports.

Units permitted included the housing stock that would be added to the inventory in the near future. This information was found at the county planning and permit office.

Within the existing housing stock were vacant single-family and multi-family units. Consistency required that an allowance be made for vacant units in the existing housing stock as it was made in the projected housing demand.

The estimated demand for housing units of all types for the next five years in our market area was 6,967 or 1,393 per year.

Demographic data provided historical information on the number and percentage of owner-occupied and renter-occupied units in our area. Historically speaking, the neighborhood had a high ratio of owner-occupied units. If all factors remained the same, the annual demand of 1,393 housing units would be split into 947 (68 percent) owner-occupied units and 446 (32 percent) renter-occupied units. Information from the Multiple Listing Service indicated that attached housing comprised 55 percent of the existing owner-occupied market while detached housing comprised 45 percent of the market. This resulted in an estimate of future demand in the subject area of 426 detached units and 521 attached units (e.g., condominiums, townhomes, etc.).

Capture Rate

The capture rate is that percent of the total housing market that the subject subdivision is expected to capture. In theory, each subdivision within a market area should capture its fair share of the projected housing market. For example, if there are 10 competing subdivisions within the market area, all things being equal, each subdivision can be expected to capture 10 percent of the new home sales within the area. Capture rates for competing subdivisions may be calculated by dividing the number of lots sold within the subdivision by the total number of lots sold for the area or county in which the subdivision resides.

The capture rate is based on the market penetration theory which is utilized in hotel valuation and compares the subject's market penetration, or capture rate, with that of the competition.

In our example, we surveyed all competing subdivisions regarding pricing, amenity packages, proximity to major employment centers, financing terms and transportation. Historical lot absorption was traced in all competing subdivisions (see Table 1).

TABLE 1

Comparison Of Competing Subdivisions

Subdivision Name	Total No. Developed Lots	Date Sales Began	Total No. Lots Sold	No. Lots Sold Per Month	Housing Type	Average Home Price
Villa Verde	336	6/88	235	18.08	Condo	$ 56,100
The Arbors	330	1/84	306	5.67	Condo	$ 61,750
Chatham Manor	180	5/85	161	4.24	Condo	$ 75,750
Lexington Park	220	6/87	145	11.15	Condo	$ 70,500
LeParc	180	1/88	110	22.00	Condo	$ 81,250
Hidden Lake	352	5/87	135	9.64	Condo	$ 80,000
Summerset	84	12/87	64	8.86	Duplex	$ 75,750
Highland Point	300	6/81	113	1.33	Single Family	$100,000
Terramere	400	1/84	200	3.70	Single Family	$159,000
Sunset Ridge	164	6/85	124	3.35	Single Family	$161,500

From the calculation of housing demand and the demographic information in Table 1 we projected the following:

1. New household formation for the next five years would create the demand for 6,967 housing units or 1,393 housing units per year. Each new household was expected to require some type of housing unit from subsidized housing to estate homes.

2. Approximately 947 units, or 68 percent of the total projected housing demand, would be owner-occupied units. The remaining 446 units would be renter-occupied units.

3. The subject subdivision would have at least six home builders offering a variety of homes at a variety of prices. The subject subdivision was projected to capture 15 percent of the lot sales over the projection period.

Income Categories And Housing Prices

Owner-Occupied Units

A housing income factor was derived by computing the size of the loan families at the various income levels could afford (see Table 2). The estimated household income available in each category was reduced by 10 percent for other long-term debt to arrive at the estimated income that would be available for mortgage payments. A check with mortgage lenders indicated the percent of this income that could be applied to mortgage payments. For

EXHIBIT II

Household Income Demographics
1980-1993

	1980 Census		1988 Estimates		1993 Projections	
Population	95,811		122,554		137,407	
In Group Quarters	801		889		926	
Per Capita Income	$10,871		$18,882		$23,585	
Aggregate Income ($ Mil)	1,041.5		2,314.1		3,240.8	
Households (by Income)	31,850		43,247		50,145	
Less than $ 5,000	1,088	(3.4%)	919	(2.1%)	756	(1.5%)
$ 5,000 - $ 9,999	1,485	(4.7%)	1,344	(3.1%)	1,190	(2.4%)
$ 10,000 - $ 14,999	2,704	(8.5%)	1,682	(3.7%)	1,628	(3.2%)
$ 15,000 - $ 19,999	3,319	(10.4%)	2,105	(4.9%)	1,632	(3.3%)
$ 20,000 - $ 24,999	4,247	(13.3%)	2,595	(6.0%)	2,076	(4.1%)
$ 25,000 - $ 29,999	4,270	(13.4%)	2,674	(6.2%)	2,515	(5.0%)
$ 30,000 - $ 34,999	3,823	(12.0%)	3,113	(7.2%)	2,469	(4.9%)
$ 35,000 - $ 39,999	2,955	(9.3%)	3,182	(7.4%)	2,707	(5.4%)
$ 40,000 - $ 49,999	3,679	(11.6%)	6,392	(14.8%)	5,975	(11.9%)
$ 50,000 - $ 59,999	1,740	(5.5%)	5,783	(13.4%)	6,029	(12.0%)
$ 60,000 - $ 74,999	1,198	(3.8%)	5,417	(12.5%)	8,025	(16.0%)
$ 75,000 - $ 99,999	751	(2.4%)	4,077	(9.4%)	7,204	(14.4%)
$100,000 +	586	(1.8%)	4,063	(9.4%)	7,940	(15.8%)
Median Household Income	$28,523		$46,429		$56,842	
Average Household Income	$32,552		$53,258		$64,316	
Families (by Income)	25,492		33,375		37,853	
Less than $ 5,000	538	(2.1%)	446	(1.3%)	403	(1.1%)
$ 5,000 - $ 9,999	798	(3.1%)	576	(1.7%)	486	(1.3%)
$ 10,000 - $ 14,999	1,514	(5.9%)	708	(2.1%)	633	(1.7%)
$ 15,000 - $ 19,999	2,098	(8.2%)	1,091	(3.3%)	741	(2.0%)
$ 20,000 - $ 24,999	3,333	(13.1%)	1,410	(4.2%)	1,104	(2.9%)
$ 25,000 - $ 29,999	3,620	(14.2%)	1,631	(4.9%)	1,295	(3.4%)
$ 30,000 - $ 34,999	3,369	(13.2%)	2,110	(6.3%)	1,441	(3.8%)
$ 35,000 - $ 39,999	2,756	(10.8%)	2,411	(7.2%)	1,627	(4.3%)
$ 40,000 - $ 49,999	3,478	(13.6%)	5,250	(15.7%)	4,263	(11.3%)
$ 50,000 - $ 59,999	1,624	(6.4%)	5,068	(15.2%)	4,820	(12.7%)
$ 60,000 - $ 74,999	1,117	(4.4%)	5,011	(15.0%)	6,954	(18.4%)
$ 75,000 - $ 99,999	700	(2.7%)	3,822	(11.5%)	6,613	(17.5%)
$100,000 +	546	(2.1%)	3,840	(11.5%)	7,471	(19.7%)
Median Family Income	$31,254		$52,078		$64,554	
Average Family Income	$35,609		$60,028		$74,030	

Source: 1980 U.S. Census, July 1, 1988, Urban Decision Systems Estimates

TABLE 2

Housing Income Factor Calculation

	Average Household Income									
	$17,500	$22,500	$27,500	$32,500	$37,500	$45,000	$55,000	$67,500	$75,000	$100,000
Less 10 Percent for Other Debt	$ 1,750	$ 2,250	$ 2,750	$ 3,250	$ 3,750	$ 4,500	$ 5,500	$ 6,750	$ 7,500	$ 10,000
Income Available for Mortgage Payments	$15,750	$20,250	$24,750	$29,250	$33,750	$ 40,500	$ 49,500	$ 60,750	$ 67,500	$ 90,000
Percent of Income to Debt Service	36.0%	36.0%	33.3%	33.0%	30.0%	30.0%	28.0%	28.0%	26.0%	26.0%
Housing Expenditure	$ 5,670	$ 7,290	$ 8,242	$ 9,653	$10,125	$ 12,150	$ 13,860	$ 17,010	$ 17,550	$ 23,400
Annual Constant at 10.75 Percent Interest	0.1120	0.1120	0.1120	0.1120	0.1120	0.1120	0.1120	0.1120	0.1120	0.1120
Mortgage Loan Amount	$51,000	$65,000	$74,000	$86,000	$90,000	$108,000	$124,000	$152,000	$157,000	$209,000
Add 10 Percent Downpayment	$ 5,100	$ 6,500	$ 7,400	$ 8,600	$ 9,000	$ 10,800	$ 12,400	$ 15,200	$ 15,700	$ 20,900
Purchase Price	$56,100	$71,500	$81,400	$94,600	$99,000	$118,800	$136,400	$167,200	$172,700	$229,900
Income Factor	3.2	3.2	3.0	2.9	2.6	2.6	2.5	2.5	2.3	2.3

example, within the subject market area, 36 percent of an individual's adjusted income could be applied to mortgage payments. For those households at the $22,500 income level, 36 percent of income ($7,290 per year) could be applied to mortgage payments. Dividing the income available for mortgage payments by the annual constant (.1120) provided an estimate of the total affordable mortgage amount. Allowing for a 10 percent downpayment, the total purchase price of a house for this income category was $72,000. When the purchase price was divided by the income level, the housing income factor of 3.2 was derived.

Because the income levels of a particular neighborhood determine price levels of the new homes that will be built, we estimated demand for different housing categories based on income levels for owner-occupied. This was done by calculating the housing price each income level could afford (see Table 3).

A survey of the market area indicated that, for all practical purposes, the lowest priced available home was $55,000.

TABLE 3

Demand For Single Family Units By Price Range

Representative Household Income (1988)*	Housing Income Factor	Average Purchase Price
$5,000 or Less	3.2	$ 16,000
$ 7,500 ($5,000 - $9,999)	3.2	$ 24,000
$12,500 ($10,000 - $14,000)	3.2	$ 40,000
$17,500 ($15,000 - $19,999)	3.2	$ 56,000
$22,500 ($20,000 - $24,999)	3.2	$ 72,000
$27,750 ($25,000 - $29,999)	2.9	$ 81,000
$32,500 ($30,000 - $34,999)	2.9	$ 96,000
$37,500 ($35,000 - $39,999)	2.6	$ 99,000
$45,000 ($40,000 - $49,999)	2.6	$119,000
$55,000 ($50,000 - $59,999)	2.5	$136,000
$67,500 ($60,000 - $74,999)	2.5	$167,000
$75,000 ($75,000 - $99,999)	2.3	$173,000
$100,000 and up	2.3	$230,000

*Source: Urban Decision System: 1988

This meant that any household with an income below $17,500 could not afford to purchase a new home and most likely would be forced to rent. The number of households that could afford to buy a home was calculated by multiplying the percent of each household category by the estimated total demand (see Table 4).

TABLE 4

Households That Can Afford New Housing

Average Purchase Price	Percent Of Households Within Sales Price Range	Projected Annual Number Of Units By Price
$ 16,000	2.1	20
$ 24,000	3.1	29
$ 40,000	3.7	35
$ 56,000	4.9	46
$ 72,000	6.0	57
$ 81,000	6.2	59
$ 96,000	7.2	68
$ 99,000	7.4	70
$119,000	14.8	140
$136,000	13.4	127
$167,000	12.5	118
$172,700	9.4	89
$229,900	9.4	89
Totals	100	947

As mentioned earlier, market research indicated that housing priced below $55,000 simply was not available in the area. Therefore, we determined the number of projected households that would enter the housing market above $56,000 in home value (see Table 5).

TABLE 5

Households That Can Afford New Housing
At Available $55,000+ Prices

Sales Price Range	Percent Of Households	Annual Average Number Of Units By Price
$56,000 - $ 81,000	10.9	103
$ 81,000 - $136,000	35.6	338
$136,000 - $229,900	44.7	424
Totals	91.2	865

Our calculations indicated that the total annual estimated absorption by income level (i.e., the average number of units by price) was 865, and therefore the total monthly estimated absorption by income level was 72.

Renter-Occupied Units

Our demographic analysis indicated that out of the potential demand of 1,393 households per year, 68 percent, or 947, would own their own homes. From this total, 865 could be expected to afford housing offered within our market area. The remaining 82 presumably would rent if their incomes met rent levels in the area. These households were added to the 446 households that already were projected to rent, bringing the total number of potential renters to 528.

A survey of apartments and duplexes in the neighborhood revealed that $240 per month was the lowest rent in the market. Some of our households might not be able to afford this minimum rent and would be forced to seek lower priced living arrangements (mobile home, subsidized housing, etc.) probably outside the area. As a general rule of thumb, apartment leasing agents apply 25 percent of a tenant's income to lease payments. People in higher income brackets usually apply less of their income to rental payments. Therefore, the number of households expected to rent within the subject area was calculated using a sliding scale (see Table 6).

TABLE 6

Households Expected To Rent

Representative Household Income	Percent Of Income For Rent	Average Monthly Rent
$ 5,000	25.0	$ 104
$ 7,500	25.0	$ 156
$ 12,500	23.0	$ 240
$ 17,500	23.0	$ 335
$ 22,500	21.0	$ 394
$ 27,500	21.0	$ 486
$ 32,500	19.0	$ 515
$ 37,500	18.0	$ 563
$ 45,000	18.0	$ 675
$ 55,000	14.0	$ 642
$ 67,500	14.0	$ 788
$ 75,000	13.0	$ 813
$100,000	12.0	$1,000

Potential demand for rental units was based on the estimated number of households in all income categories that would rent, plus the number of households that could not afford to buy housing. Rental units were not expected to be available below $240 per month; therefore, we determined the number of households that could afford to rent at that rental rate and above (see Table 7).

Within the subject neighborhood there appeared to be a demand for 501 rental units. It should be remembered that the subject neighborhood extended in a five-mile circle around the subject subdivision. Market research was extremely important to quantify the available supply of rental units so we could estimate our capture rate of the potential rental market.

Summary And Conclusions

Based on household population projections, a real estate analyst estimated a total demand of 6,967 housing units or 1,393 per year for the next five years in our subject area. Our market was defined within an imaginary circle around the subject property with a radius of five miles. Since the market area was a rural area of suburban Chicago, we estimated that 68 percent of the demand would be for owner-occupied housing.

The intent of the subject subdivision was to provide a variety of housing choices to the local market. At any one time, as many as six different developers would be offering housing units from condominiums to estate homes. A competitiveness analysis-based capture rate of 15 percent was estimated for the subject subdivision given the supermarket approach to development. This capture rate indicated a total demand of 208 (15 percent of 947) per year or 17 per month for owner-occupied homes and rental units.

TABLE 7

Households That Can Afford To Rent

Rental Range	Percent Of Households In That Income Range	Projected Average Number Of Rental Units
$ 240	3.7	20
$ 335	4.9	26
$ 394	6.0	32
$ 486	6.2	33
$ 515	7.2	38
$ 563	7.4	39
$ 675	14.8	78
$ 642	13.4	71
$ 788	12.5	66
$ 813	9.4	50
$1,000	9.4	50
Totals	94.9	501

Minimum housing costs were estimated at $55,000. Our demographic analysis indicated that out of a potential demand of 1,393 households per year, 68 percent or 947 would own their own homes. From this total, 865 could afford housing offered within our market area. Provided that our subdivision could capture 15 percent of the projected demand, 142 units per year or 12 units per month would be owner-occupied in the subject subdivision in the next five years. It should be kept in mind that the 12 units per month would include housing of all price ranges from estate homes to condominiums. The reasonableness of the projected absorption of 12 owner-occupied units per month for the subject subdivision was based on demographic information. It should be checked against past trends and original research.

Demographic information and market research indicated that the subject area had a relatively low percentage of renter-occupied housing. People in all income categories who would rent were delineated and accounted for. Those who could not afford to buy but could afford to rent were added to those who were projected to rent. Total rental demand equaled 501 units for the subject neighborhood. One large complex or two small complexes was all that was indicated for the area. Whether rental units should be planned for the subject subdivision is a question only primary research can answer.

NOTES

1. Downs, Anthony, "Characteristics of various economic studies," *The Appraisal Journal* (July 1966) p. 336.
2. Barret, G. Vincent, and Blair, John P., *How to Conduct and Analyze Real Estate Market Feasibility Studies*. New York: Von Nostrand Reinhold Co., Inc., 1982: p. 53.
3. Urban Decisions Systems, Inc., P.O. Box 25953, Los Angeles, California.

SUBURBAN OFFICE DEVELOPMENT AND WORK-RESIDENCE RELATIONSHIPS

The relationship of office employment and office labor force is important to the successful ongoing development of suburban office space.

by Forrest E. Huffman and Marc T. Smith

Employment has grown considerably in recent years in office-based sectors such as finance, insurance and real estate and in professional, personal and business services. Much expansion of employment in these sectors has occurred in suburban areas for several reasons.[1] Technological and transportation advances have decreased the need for central city linkages for many firms.[2] In the suburbs, firms find lower rents, more attractive sites, and less crime and congestion.[3] Also, employers have access to a more skilled suburban labor force to meet the demands created by advances in information processing technology.[4] While the expansion of suburban office space is obvious, less apparent are the components of suburban office employment—the characteristics of the workers employed in these jobs and their commuting patterns.

A 1980 U.S. Bureau of the Census journey-to-work sample is used to examine spatial distributions of office employment, commuting patterns and labor force characteristics in the city of Philadelphia and its suburbs.[5] The sample identifies a population by place of residence and place of work. The sample aggregates data at a sub-county level, which is suitable for the analysis of relatively small suburban areas. The sample therefore provides information to examine sociodemographic and commuting patterns for a significant portion (5 percent) of the office location-employment-worker spectrum within relatively small geographic loci and, as a result, determine the potential success and impact of suburban office development on its immediate environment. Sub-county is defined as a grouping of communities within counties to determine distance of commuting to work sites. Because substantial suburban office development is occurring nationally, issues similar to those identified in our study area can be expected to evolve in other suburban areas. Therefore, although the sample was collected in 1980, our findings and conclusions have relevance for current office development/employment markets.[6]

For the study area, 17 sub-county locations within the suburban counties of Bucks, Chester, Delaware, and Montgomery were specified. We identified office-based service employment using an aggregate of specified industries as denoted by the Bureau of the Census. We

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examined the nature of the jobs in this office-based group by focusing on specific occupations (see Exhibit I).

EXHIBIT I

Office-Based Service Employment Industries

Banking
Savings and loan associations
Credit agencies
Security, commodity, brokerage, investment companies
Insurance
Real estate, including real estate insurance
Advertising
Personnel supply services
Business management and consulting services
Computer and data processing services
Detective and protective services
Job training and rehabilitation services
Legal services
Membership organizations
Engineering, architectural, and surveying services
Accounting, auditing, and bookkeeping services
Noncommercial educational and scientific research services
Miscellaneous professional and related services
Public administration

Source: U.S. Bureau of the Census

TABLE 1

Office Employment By Type And Location

Occupation	Percent Of Total Office Employment	Percent Of Total Office Employment In Philadelphia
Executive, administrative, and management services	19	55
Professional specialties	8	57
Technical (except health) services	3	53
Sales, financial, business services	8	36
Supervisory, administrative support services*	3	65
Computer operation, secretarial, etc., services*	21	57
Adjustors, investigators*	2	57
Miscellaneous administrative support services*	9	56
Cleaning, building services	2	59
Mechanics, repair trades	5	67
All other	17	67

*Potential "back office" occupations

Employment Distributions In City And Suburbs

About 17 percent (5,996) of all employees surveyed in the five-county area worked in office categories. Of these 5,996 office employees, approximately 57 percent worked in Philadelphia City/County. (Table 1 shows the major occupational groups in office categories by location and percentage of total office employment.)[7] Most occupational groups, taken individually, had city-suburban distributions comparable to office employment distribution as a whole. Groups that represented a relatively small percentage of the total had the widest variation. Sales, finance and business services (8 percent of total office employment) were over-represented in the suburbs near the population they serve; only 36 percent were employed in Philadelphia. Mechanics and repair trades (5 percent of total office employment) were over-represented downtown (67 percent were employed in Philadelphia). If back office employment is defined as supervisors and administrative support, computer operators and secretaries, adjusters and investigators, and miscellaneous administrative support, then the distribution of back office employment is also comparable to that of office employment as a whole, e.g., 57 percent of computer operators, secretaries, etc., and of adjustors/investigators were employed in the city.

Commuting Patterns

Table 2 shows city-suburban commuting patterns and summarizes patterns in sub-county areas within each county for all office jobs. Only in one county did residents commute to the central city in significant numbers, that is, only in one sub-county area in Delaware County did 50 percent of the office employees commute to Philadelphia. City residents did not commute to suburban locations; 91 percent of all Philadelphia office workers lived in the city.

TABLE 2

Total Office Commuting Patterns By Place Of Residence

Place Of Residence	Place Of Work: Philadelphia (%)	Same Sub-County (%)	Other Sub-County (%)	Elsewhere (%)
Philadelphia	91	NA	7	2
Bucks County				
Highest sub-county	29	35	48	43
Lowest sub-county	6	26	21	13
Chester County				
Highest sub-county	28	39	56	29
Lowest sub-county	3	27	29	7
Delaware County				
Highest sub-county	50	34	41	6
Lowest sub-county	24	12	24	2
Montgomery County				
Highest sub-county	42	47	48	13
Lowest sub-county	6	26	21	2

To further explore commuting patterns and labor force accessibility, we determined commuting time for office workers by sub-county place of work (Table 3). Overall, fewer city residents commuting to city jobs had short (30 minutes or less) commutes than did suburban residents. According to data not shown, 5 percent of all Philadelphia residents commuted more than 60 minutes to office jobs, but less than one percent (0.82 percent) of all suburban office workers across all sub-county groups commuted more than 60 minutes to work. Within office occupations, more back office workers had short commutes. Only one suburban sub-county had more front office workers than back office workers making short commutes.

TABLE 3

Commuting Time By Place Of Work

Place Of Residence	Percentage Of Employees Traveling Less Than 30 Minutes: All	Front Office	Back Office
Philadelphia	55	57	49
Bucks County			
Highest sub-county	91	89	94
Lowest sub-county	87	84	89
Chester County			
Highest sub-county	89	91	87
Lowest sub-county	82	81	85
Delaware County			
Highest sub-county	94	92	100
Lowest sub-county	83	91	73
Montgomery County			
Highest sub-county	90	89	93
Lowest sub-county	79	78	80

Percentage of all suburban office employees commuting 30 minutes or less is 88 percent.

Labor Force Characteristics

Table 4 presents socioeconomic data on employees in Philadelphia and suburban office occupations. The rate of employment of females was slightly higher in the suburbs: Females comprised 48 percent of the city office work force and 50 percent of the suburban office work force. There were more part-time employees in all office occupations in the suburbs than in the city. Suburban locations also had a slightly higher percentage of young office workers (under age 26) than did city locations.

The rate of employment of females in back office occupations was greater than the rate of employment of females in front office occupations in both areas: females in back office jobs comprised about 30 percent of the total work force in the city and 32 percent in the suburbs, but females in front office jobs comprised only 18 percent of the total work force in the city and suburbs.

TABLE 4

Selected Demographic Characteristics Of Office Employment

Characteristic	Total City (%)	Total Suburban (%)	Front Office City (%)	Front Office Suburban (%)	Back Office City (%)	Back Office Suburban (%)
Female	48	50	18	18	30	32
Part-time employment	17	23	9	11	8	12
25 years of age or less	21	22	8	9	13	13
High school diploma or less	53	47	28	24	25	23
College or postgraduate degree	47	54	36	42	11	13
$10,000 a year or less in income	36	47	17	23	19	24
$10,000 a year or more in income	63	54	46	41	16	12

There was a greater percentage of college-educated office workers in the suburbs than in the city: fifty-four percent of all suburban workers had college experience. Within this 54 percent, 42 percent worked in front office occupations and only 13 percent worked in back office jobs. Of the 47 percent of all city office workers who had college experience, 36 percent were employed in front office jobs. Therefore, front office workers were more highly educated in both the suburbs and in Philadelphia.

Overall, back office employees in both areas were more often female, and less educated. As a result, one would expect incomes to be lower for back office employees across geographic areas. The 1980 data shows that more back office employees earned less than $10,000 a year, comparable to $17,000 today; 19 percent of city back office workers and 24 percent of suburban back office workers earned less than $10,000 per year. In contrast, only 16 percent of city back office workers and 12 percent of suburban back office workers earned more than $10,000 per year.

More front office workers earned over $10,000 per year. Of the 63 percent of all city office employees earning $10,000 or more per year, 46 percent of the total were front office workers. Similarly, of the 54 percent of suburban office employees earning $10,000 per year or more, 41 percent were in front office jobs.

Summary

Our analysis found that there were two almost completely distinct labor force groups among the individuals who worked and lived predominantly in the city or in the suburbs. The vast majority (91 percent) of all Philadelphia County residents worked in Philadelphia County. An overwhelming majority of suburban residents worked in the suburbs. Only one sub-county had significant proportions of office employees commuting to Philadelphia County.

There was no evidence that back office employment was more common in suburban areas than other office employment. Rather, all types of office jobs were found in the suburbs. Back office and front office workers commuted to work areas that were close to their place of residence. Employment differentiation was not according to job type but according to geographic location.

Back office employment in our sample, although not segmented geographically, was distinguished by greater percentages of part-time employees, higher female participation rates, less educational attainment among workers and lower salaries.

Conclusions

Until a similar sample is taken in 1990, it cannot be determined if the commuting patterns disclosed in this analysis have persisted following the rapid expansion of office space in the 1980s. Also, it is not known whether the surge in suburban office space development in the 1980s has exhausted the available suburban labor force. However, one conclusion is obvious from the analysis. Based upon findings concerning short commuting times, it seems likely that suburban employers do not draw employees from the suburbs as a whole but from suburban areas that are relatively close to the employment source. Moreover, suburban employers do not draw employees from the city. Therefore, there is not *a* suburban market, but there are employment centers that act as small magnets for their immediate areas.

The existence of two distinct labor force areas, as demonstrated in this analysis, suggests that there are complications associated with suburban office development. The findings regarding minimal commuting times suggest that office developers and tenant/employers should consider suburban locations very carefully given a potentially limited supply of labor. The findings may indicate that suburban office employers will be unable to attract workers from the city in the future unless public and/or private transportation programs are created. The low income, poorly educated inner city resident labor pool left behind in the movement to the suburbs will be at a particular disadvantage in competing for suburban jobs. Extensive recruitment programs thus may be necessary. Complications, such as transportation and recruitment programs, increase costs to employers and, if known in advance, may make suburban office developments much more difficult to market. The need for lower rent levels and increased amenities may be required to offset these added costs. However, increased costs due to higher salaries, employee training and transportation programs may result in additional taxes on office space development in the city. For instance, developers and employer/tenants may be forced to bear the imposition of development exaction fees if indirect suburban development costs make an escape to the suburbs less appealing.

Given the predominance of part-time employment, higher female participation rates, less educational background and lower salaries in back office occupations, maintaining an adequate labor force may be difficult for employers to the extent that office space developers and firms locate back office activities in low density suburban areas. Back office activities may not be the ideal type of suburban office development given the characteristics of suburban office labor force. Therefore, as was predicted, office space developers, employer/tenants and planning officials have been forced to create an urbanized suburban environment in order for that development to succeed.

NOTES

1. Indicative of this trend are the Office Network's findings that 57 percent of all office space in major metropolitan areas was in downtown areas in 1981, but only 43 percent of the office space was in central business districts five years later, as cited in Fulton, William, "Office in the dell," *Planning* (July 1986): 13-17. A recent report found that in our study area between 1960 and 1980, suburb-to-suburb commuting accounted for 58 percent of the increase in residence-to-work trips, cited by Pagano, P., "Study: Suburb-to-suburb commuting now the norm," *The Philadelphia Inquirer* (June 27, 1987) p. 10 C.

2. See Archer, Wayne R., "Determinents of location for general purpose office firms within medium size cities," *AREUEA Journal* 19 (Fall 1981): 283-297; Chinitz, Benjamin, "The influence of communications and data processing technology on urban form," *Research in Urban Economics* 4(1984): 67-77; Kutay, Aydan, "Effects of telecommunications technology on office location," *Urban Geography* 7,3(1986): 243-257; and Mills, Edwin S., "Service sector suburbanization," unpublished paper Princeton University (1987).

3. Muller, Peter O., *Contemporary Suburban America.* Englewood Cliffs, NJ: Prentice Hall, Inc., 1981.

4. Kutay, Aydan, "Optimum office location and the comparative statics of information economies," *Regional Studies* 20,6(1986): 551-564; Smith, Randy W., and Selwood, David, "Office location and the density distance relationship," *Urban Geography* (October-December 1983): 302-316.

5. U.S. Department of Commerce, Bureau of the Census, *Census of Population and Housing,* 1980. United States: Public Use Micro Data Sample (5 percent sample). Machine-readable data file.

6. For instance, the findings are currently under discussion in the study area. See Knox, Andrea, "To lure workers, suburban firms turn to busing," *The Philadelphia Inquirer* (March 15, 1989) pp. 1 A and 4 A; Warner, Susan, "Slower growth predicted in region's office market," *The Philadelphia Inquirer* (March 12, 1989) p. 11.

7. Data configurations prevent the identification of specific office employment associated with other industries such as manufacturing. Therefore, the cross-reference procedure underestimates total office employment.

COUNSELING AND EMINENT DOMAIN

More than appraisal is required when circumstances complicate the practice of eminent domain.

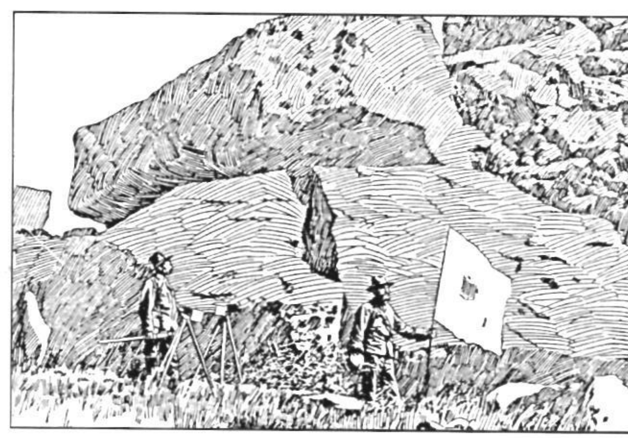
by A. C. Schwethelm, CRE

Historically, practitioners of eminent domain have been appraisers employed to estimate the compensation due the affected property owner for negotiation and subsequent testimony as required. Sometimes similar appraisers have been employed by the property owner. In an uncomplicated Taking, this is not too bad a system. In many instances, however, complicating circumstances call for more innovative thinking, to address the overall problem, going beyond appraisal and into the field of real estate counseling.

Early Project Involvement

If locational decisions are left entirely to engineers, serious problems involving environmental, historical, ownership, toxic substance, economic or legal considerations may result. Often these problems may be avoided, or at least minimized, if real estate counseling is involved early in the project.

Example 1. We were assigned to appraise small Takings (4,704.48 sq. ft. and 4,094.64 sq. ft.) from a major retail grocery and a discount store for slight realignment of a highway Off Ramp. Our investigation revealed that the Takings would result in hundreds of thousands of dollars of damage to the properties because the unloading and receiving areas of the stores would need to be relocated. The Taking eventually was abandoned and the ramp was redesigned; however, significant time, effort and cost were expended in the process.



Example 2. During the development of an electrical transmission line project, one proposed Taking, assumed by the engineers to involve an old abandoned building, was found, in fact, to involve an historically significant former school building. Subsequent relocation of the line not only required another public hearing and considerable expenditures, but also complicated negotiations with other property owners, who requested that the electrical transmission line follow existing property lines or avoid streams, homes, or in one case, a children's summer camp. Cases had to be settled at abnormally high amounts because of the fear that juries would react negatively to any perceived inconsistency.

Example 3. A highway widening assignment involved taking a small strip of land from an older service station that had recently been purchased for $29,000. According to our on-the-ground inspection, the Take line would have fallen in very close proximity to a buried fuel tank, perhaps even bisecting it. By shifting the Taking a few feet to the opposite side of the highway, initially, months of delay and many thousands of dollars (much more than

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the purchase price of the service station) could have been saved. However, by the time we were called upon, it was too late to propose alternatives.

Any major project involving eminent domain should include a real estate counselor during the early phase of locational decisions. The degree of the counselor's participation will vary from outlining the absence of locational problems to conducting a detailed study.

Negotiation

Some experienced, well-qualified negotiators are quite capable of bringing the approved value of a property to a signed deed with little or no assistance. However, when a proposed acquisition is complex or a negotiator is inexperienced, employment of a real estate counselor is desirable.

Negotiators must know what is important to the property owner; it is not always money. Sometimes the negotiator, as advised by a counselor, will need to arrange an alternative access, correct a misconception, permit the retention of certain rights, sell back Taken improvements, or allow occupancy to continue until construction is scheduled.

Negotiators who are inexperienced may need a quick course in counseling to understand the reasons behind the variation in values on a parcel by parcel basis. Usually, property owners are quick to share information among themselves, and the negotiator had better be prepared to explain why apparently similar properties are valued differently. Negotiators also need to understand why the order in which offers are made should be carefully chosen. An offer to a community leader probably should be made first. If he accepts, acceptance of offers by other property owners will be easier. If he does not, acceptance of offers by others may pressure him to do so.

Condemnation

When negotiation fails, condemnation becomes the method of implementation of eminent domain. Here, the role of the counselor is to assist the attorney in the development of theory for the case. If the role is solely that of a Counselor, the course is quite clear. If it is also that of appraiser, more care is required. The most sensitive area is that of value opinion. Advocacy of that opinion is expected, but advocacy of a contrary opinion perhaps more beneficial to the client, is verboten. Counseling, however, so long as it is applied to the client and the client's employees, consultants and agents, can be conducted simultaneously and in conjunction with valuation testimony. Naturally, it would not be proper to serve as a witness in both capacities.

Divergence

Extreme divergence in eminent domain cases is commonplace. Sometimes divergence results from rampant advocacy, a circumstance even the most competent counselor cannot cure. More frequently than is commonly acknowledged, however, divergence is the result of an honest difference of opinion between two or more qualified and competent appraisers. If the process stops there, with two contrary appraisals, resolution of the conflict will be left to a confused judge, jury or commission. A counselor, however, can bring understanding and a desirable outcome to the client.

Example 4. Two appraisers agreed on the highest and best use values as well as the contributory value of the vacant land in question to the actual proposed development. However, the projection of when demand would stimulate development and what the cost of the utility extension would be caused great divergence in the estimation of the land's present market value. A counselor will assist an attorney in the development of testimony that supported his projections.

Example 5. Examination of an opposing appraiser's report revealed that great significance had been given to loss of visual exposure by construction of an overpass. The counselor helped the attorney understand the importance of the loss of visual exposure in the opposing appraiser's value estimate, thus enabling the removal of this element of damage if it was found to be non-compensable.

The counselor helps the attorney understand the premise on which an appraisal is based and its strengths and weaknesses; the counselor also apprises the attorney of mathematical errors, unrealistic assumptions, etc. In addition, the counselor should be aware of and provide to the attorney information on local interests and peculiarities: Are local feelings for or against the project? Do local individuals view the individuals involved in the project favorably or unfavorably? Do the opposing witnesses have traits of which the attorney should be aware? Have the witnesses historically demonstrated an inclination to rely upon questionable sources of information or inappropriate techniques? Finally, a good counselor and a wise attorney should prepare their witnesses to defend vigorously their opinion and the basis for it.

Particularly with an attorney who is unfamiliar with the issues associated with eminent domain, the subject matter, or the geographical area, the counselor who has been exposed to many eminent domain cases and who stays abreast of new cases can be of valuable assistance. Participation with the attorney and other witnesses in "devil's advocate" sessions also can be quite profitable.

Example 6. In a recent case involving a sewer line easement Taking in an older neighborhood, the engineer initially said the Taking would provide sewer service to new developments. We helped him correctly report that the Taking was part of a broad, citywide initiative to upgrade utilities. streets, drainage, etc., and, more specifically, to install a new trunkline sewer that would connect existing and proposed sewer lines to a newly rebuilt sewer plant.

As An Alternative

Although cities, counties and other public entities frequently order appraisals, counseling assignments would be more appropriate on many occasions.

Example 7. After appraisals for two public entities failed to accomplish their purpose, which was to trade the properties, we prepared a counseling report that provided a logical solution and a much cheaper alternative to the impasse.

Example 8. On a city sewer project, our first step was to prepare a counseling report that outlined value ranges, positive and negative effects on involved properties and comments regarding possible negotiating techniques. After a counseling session with the negotiator, we modified offers to some property owners. Appraisal reports were required on only 11 of the total 84 parcels of land and only two required actual testimony.

Example 9. When a state agency needed a certain parcel of real estate but lacked eminent domain power for that purpose, we prepared a counseling report that outlined the problems and suggested solutions, including negotiation tips and an appraisal of the required property.

Conclusion

Real estate counseling clearly has a place in the field of eminent domain. However, many attorneys, right-of-way agents and others involved in contracting for appraisal services are not aware of the need for, or the availability of, counseling services.

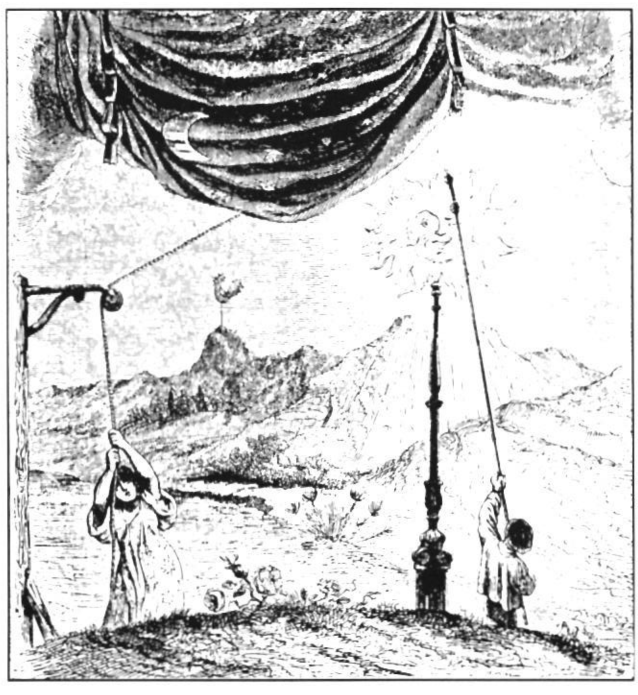
FINANCE SUBSIDIARIES: A NEW WAY TO ACCESS CAPITAL MARKETS

Captive finance subsidaries allow S&Ls to reduce their interest note risk and to control their credit risk.

by Daniel E. Page and Charles O. Kroncke

While captive finance subsidiaries have existed since the early 1900s in non-financial companies, they are relatively new in the thrift industry. The Housing and Development Act of 1968, which formed the Government National Mortgage Association (GNMA) and the Federal National Mortgage Association (FNMA), is generally recognized as the vehicle through which finance subsidiaries were introduced into the thrift industry. Although finance subsidiaries were introduced to S&Ls as early as the late 1960s, it was not until the mid-1980s that S&Ls established captive finance companies to respond to pressures in borrowing and the housing market.

The soaring interest rates and low housing starts of the 1970s were disastrous for many S&Ls. As the cost of funds rose higher than the yield on their loan portfolios, S&Ls faced the possibility of collapse. Regulations such as the Monetary Control Act of 1980 and the Garn-St. Germain Depository Institution Act of 1982 helped reduce the S&Ls' interest rate vulnerability, but the need to raise additional capital persisted. Thus, in July 1984, the Federal Home Loan Bank Board opened the door for S&Ls to create captive finance companies to raise capital by issuing securities at rates lower than the S&L ordinarily could offer.



Bank Board Guidelines

The Federal Home Loan Bank Board issues guidelines that restrict the amount of assets an S&L can transfer to the finance subsidiary, specify the type of assets and the accounting of the assets to be transferred and ensure corporate separateness.

According to these guidelines, a parent company can transfer up to 30 percent of its book value to a finance subsidiary as long as the market value of the assets does not exceed 250 percent of the securities' gross proceeds raised by the subsidiary. For accounting purposes, the Bank Board also specifies that a finance subsidiary cannot be consolidated with its parent institution except for calculating the regulatory net worth requirement of the S&L.

The assets transferred from an S&L to a finance subsidiary typically are fixed rate, long-term Federal Home Loan Mortgage Corporation Certificates and Government National Mortgage Association Certificates. Holding these

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valuable assets enables the subsidiary to gain access to capital markets at rates more favorable than the parent company can command.

Bank board regulations prohibit the finance subsidiary from issuing any security whose payment, maturity or redemption may be accelerated if the parent company becomes insolvent or is placed in receivership. This requirement for corporate separateness allows the securities issued by the subsidiary to receive a high credit rating. In fact, the credit rating of the subsidiary's securities is higher than the rating of the parent S&L's securities because, in addition to being legally separated from the parent, the subsidiary assumes no risks or liabilities.

Securities Issued By Finance Subsidiaries

The securities that an S&L finance subsidiary may issue are collateralized mortgage obligations (CMOs) and adjustable rate preferred stock (ARPs). Other securities, such as collateralized commercial paper, are currently under development.

CMOs are long-term bonds of varying maturities that are secured by mortgages; i.e., CMOs are retired by the cash flow produced by underlying mortgages. The rates paid on CMOs generally are lower than the rates earned on mortgages; therefore, the parent S&L incurs a lower cost for funds.

ARPs, first issued in 1982, are structured to maintain a prespecified spread between their dividend rate and the rates of three different U.S. Treasury securities. Dividend yields on ARPs are reset quarterly. Corporate purchasers of ARPs are entitled to exclude from taxable income 85 percent of the dividends they receive. The pretax yield on these securities is below the yield of comparable debt instruments, making them attractive vehicles for issuers in low income tax brackets—a condition of many savings and loan institutions.

Since the holding period for ARP's tax exclusion is 46 days, a quarterly resetting of the dividend rate considerably exposes the investor to interest rate risk. In an attempt to address this shortcoming, finance subsidiaries now issue ARPs whose dividend rate is reset every 49 days by a process known as the Dutch auction.

In the typical English auction, bid prices start low and are raised until the market clears. In a Dutch auction, bid prices start high and are lowered until the market clears. Potential buyers submit a sealed bid through a broker/dealer which specifies the number of shares that are desired and the dividend rate on the 49-day investment. A buyer may receive a rate higher than the one he submitted since the stock carries the same rate. He will not, however, receive a lower rate if his bid is too high; his offer will be rejected.

Dutch auctions are appropriate for the sale of fixed income securities, such as preferred stock, because of the inverse relationship between price and yield. The issuer of DARPS or CMOs hires an agent to sell the securities. For example, Dutch auctions are conducted by a designated bank or holding company, e.g., Bankers Trust Company. Expenses of issuance may be as low as 25 basis points for CMOs. However, the expense of issuing preferred stock is typically higher; underwriting fees and commissions for DARPS are in the range of 175 to 200 basis points.

The primary purchasers of Dutch auction rate preferred stock (DARPS) are corporations. One reason corporate purchasers like DARPS is because the after-tax return from this stock is generally higher than the return from comparable money market instruments. Currently, 70 percent of the dividend on DARPS is excluded from income for corporate purchasers. The rate paid on DARPS is equal to the composite rate on 60-day commercial paper which has been adjusted to reflect this exclusion. If a corporate investor is in the 34 percent maximum corporate tax bracket, the investor retains 89.8 percent of the dividend from DARPS after taxes. For example, the taxable equivalent yield on a AAA-rated DARP yielding 7 percent before taxes is:

$$.07 = \frac{.898}{(1-.34)} = .0952 \text{ or } 9.52\%$$

Thus, the low tax bracket issuer benefits by paying a lower after-tax rate, and the purchaser benefits by receiving a higher after-tax return.

A second reason corporate investors like DARPS is that, because of the 49-day maturity cycle, they provide principal stability and liquidity for a short-term investor.

Benefits Of A Finance Subsidiary

The Internal Revenue Service permits a finance subsidiary and its parent to consolidate their income if the parent owns at least 80 percent of the subsidiary's stock. Thus, a S&L that has carryover losses can structure a finance subsidiary to allow for income consolidation. Using DARPS in these circumstances allows the S&L to earn income from the money raised by the subsidiary without paying taxes on this income.

Using DARPS also allows the S&L to offer capital to a homebuyer. If a S&L is experiencing difficulty in raising new capital, it may form a finance subsidiary to issue preferred stock or CMOs in the capital market at rates that are more favorable than the parent S&L's rates. In such a case, the proceeds from the Dutch auction are used by the subsidiary to purchase eligible assets from the parent S&L. The income earned by the subsidiary is paid in the form of dividends to the parent. The parent S&L then lends money to the homebuyer. Thus, the finance subsidiary plays the role of intermediary between the S&L and the capital market so the homebuyer is able to obtain credit indirectly through the capital market. This process allows the S&L to accomplish its goal of providing capital for residential development. Figure 1 illustrates how a S&L finance subsidiary benefits the residential mortgage market by supplying credit.

The Case Of Pathway Financial

Pathway Financial is a federally insured mutual savings and loan association located in Chicago. Pathway was

FIGURE 1

Benefits Of A Finance Subsidiary To The Residential Mortgage Market

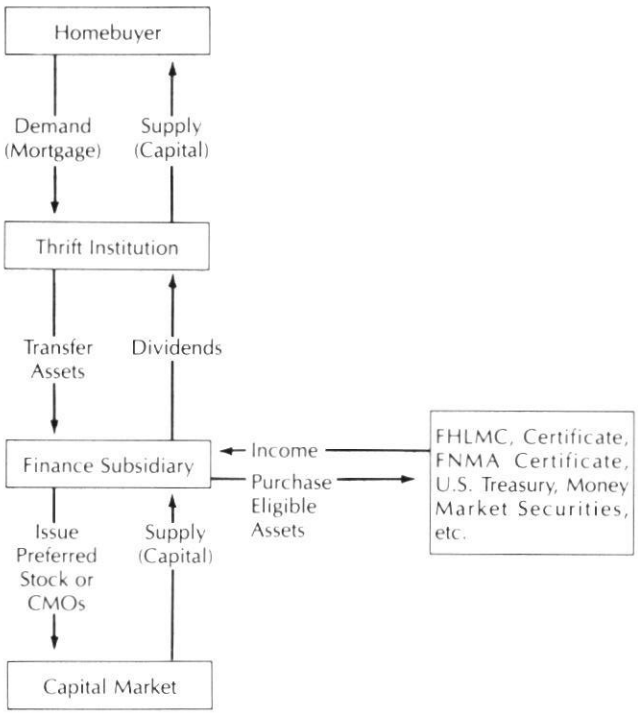

TABLE 1

Pathway Capital
Results Of STAR Preferred Auctions
(August 1985-November 1988)

Auction Date	STAR Preferred Rate	Commercial Paper Rate	STAR Rate As A percentage Of The Commercial Paper Rate
08/15/85	6.50 %	7.75 %	83.87%
10/16/85	7.00	7.975	87.77
12/04/85	7.50	8.058	93.08
01/22/86	6.19	7.872	78.63
03/12/86	5.00	7.246	69.00
04/30/86	5.23	6.643	78.73
06/18/86	4.69	6.817	68.80
08/06/86	4.351	6.316	68.89
09/24/86	4.25	5.827	72.94
11/12/86	3.75	5.857	64.03
12/29/86	5.24	6.653	78.76
02/18/87	4.56	6.337	71.96
04/08/87	4.65	6.255	74.34
05/27/87	5.15	7.011	73.46
07/15/87	4.56	6.653	68.54
09/02/87	4.80	6.971	68.86
10/21/87	5.55	7.462	74.38
12/09/87	7.951	7.708	103.15
01/27/88	5.52	6.838	80.73
03/17/88	5.701	6.684	85.29
05/04/88	5.651	7.042	80.25
06/22/88	6.21	7.585	81.87
08/10/88	6.651	8.16	81.51
09/28/88	6.79	8.232	82.48
11/16/88	7.35	8.736	84.13
		Mean	78.22%

Source: Pathway Financial

created in 1982 as a result of a merger between Crawford Savings, Prairie Federal Savings and Loan Association,and Chicago Federal Savings and Loan Association. Pathway's principal business is to attract funds in the form of deposits and invest these funds in residential mortgages and other real estate. Because of volatile interest rates during the 1970s, Pathway has $134 million of carryover operating losses. On March 31, 1985, Pathway's assets totaled approximately $1.2 billion, and its regulatory net worth was $31.4 million. Its net worth was $5.9 million less than the regulatory net worth requirement; however, the Federal Home Loan Bank Board did not impose any regulatory restrictions on Pathway because of this deficiency in its net worth.

Given these operating conditions, raising new capital was difficult and costly for Pathway Financial. As a result, in December 1984, the S&L formed a finance subsidary, Pathway Capital Corporation, for the sole purpose of issuing shares of short-term auction rate cumulative preferred stock (STAR Preferred) and managing eligible assets. All of Pathway Capital's common stock was owned by Pathway Credit Corporation, another wholly owned subsidiary of Pathway Financial. Pathway Capital, therefore, was a second-tier subsidiary that operated through the first-tier Pathway Credit Corporation subsidiary. This operating structure was established to assure that the finance subsidiary would not be subject to the Investment Company Act of 1940.

Although Pathway Capital was authorized to issue 1,000 shares of common stock, it sold only one share to Pathway Credit Corporation for $10,000. Through Pathway Credit Corporation, Pathway Financial also contributed approximately $48.1 million in cash and other assets to Pathway Capital.

Thus, Pathway Capital was authorized to issue 500 shares of STAR Preferred at a purchase price of $100,000 per share. STAR Preferred carried a AAA rating by Standard and Poor's Corporation and aaa by Moody's Investor Service. The dividend rate for STAR Preferred was reset every 49 days by Dutch auction. The rate that resulted from the auction could not be greater than 110 percent (under certain circumstances 125 percent) or lower than 58 percent of the AA composite commercial paper rate on the day of the auction. Proceeds of the auction were invested by Pathway Capital in Federal Home Loan Mortgage Company Certificates, Federal National Mortgage Association Certificates, Government National Mortgage Association Certificates, U.S. Treasury Securities and Short-Term Money Market Instruments. By investing in these securities, Pathway avoided being classified as an investment company under the Investment Act of 1940. The income generated by the eligible assets was used to pay preferred and common stock dividends. Pathway Financial used the common stock dividends it received to invest in residential mortgages and other real estate.

Pathway Capital began selling STAR Preferred in August 1985. (Table 1 shows the results of all the Dutch auctions of Pathway's STAR Preferred.) The rates paid by Pathway Capital on STAR Preferred indicate that the stock was well received by the market; the average rate on STAR Preferred was 78.22 percent of the 60-day AA composite commercial paper rate. The auction of December 9, 1987 however, resulted in a rate that was 103.15 percent of the composite commercial paper rate. This result, which was probably due to uneasiness in the credit market, caused concern among members of the board of directors of Pathway Capital because, if this trend persisted, redemption of STAR Preferred would have been necessary. Fortunately, the rate fell to 80.73 percent of the composite commercial paper rate at the January 27, 1988 auction.

Between August 1985 and November 1988, Pathway Capital earned over $23 million. It paid $9.2 million in preferred stock dividends and $13.7 million in common stock dividends. All of the common stock dividends received by Pathway Credit were tax-free because of Pathway Financial's loss carryovers.

Conclusions

The major benefit of a finance subsidiary for a S&L is the subsidiary's ability to access capital markets at rates more favorable than the parent can obtain. As the Pathway Financial case illustrates, S&Ls with substantial loss carryovers are able to reduce their interest rate risk and to control their credit risk through the formation of captive finance subsidiaries.

PROTECTING THE RIGHTS AND INTERESTS OF HOME BUYERS IN COOPERATIVELY BROKERED SALES

An Examination of Subagency, Dual Agency and Buyer's Agency

by Neil G. Waller and Theresa H. Waller

Home sellers usually are represented by a broker, a housing professional who must protect sellers' rights and interests. On the other hand, home buyers, who are about to enter into one of the most complicated purchasing agreements of their lives, usually are not represented at all. Moreover, in a cooperative sale, the buyer/cooperative broker relationship that develops over the course of the transaction often encourages buyers to believe that the broker is representing them and protecting their rights and interests in the transaction. Yet the cooperative broker normally is the subagent of the seller and therefore cannot represent the buyer without breaching the broker's fiduciary duty to his principal, the seller, and creating a conflict of interest.

The objective of this article is to evaluate alternative agency models and determine which legal model best protects the rights and interests of home buyers in the typical cooperatively brokered residential purchase. The standard legal model (subagency) will be discussed first; the discussion will define the buyer-seller-broker agency relationship and explain how the transaction's environment inherently creates conflicts of interest and fails to adequately safeguard the home buyer. Alternative agency models then will be proposed and analyzed.

Agency Law And Subagency

In the absence of specific state or federal laws, the common law of agency controls the duties and obligations of the buyer, seller and brokers in a home sale transaction. This common law, developed through case holdings, may vary slightly from state to state, but in broad terms, it is similar across the country. Common law holds

that whenever two parties mutually agree that one of them (the agent) will act on the other's (the principal's) behalf and be subject to the principal's control, an agency relationship is created.[1]

Agency relationships always will be creatures of contract law in its broadest sense, since no agency (except for court-ordered representation) can exist without a meeting of the minds, i.e., a contract. An agency relationship always will involve an agent and a principal. The purpose of the agency relationship is to permit the agent to act for the principal, third parties with whom the agent interacts on the principal's behalf.

Agent-Principal Relationship

In the majority of brokered residential real estate transactions, two brokers are involved, the "listing" broker whose original contact is with the seller and the "selling" or "cooperative" broker whose original contact is with the buyer.[2] The agency relationship between the seller and listing broker normally is created by the listing contract.[3] The contract clause that creates this agency relationship also expressly authorizes the listing broker to utilize the services of other brokers as subagents.[4] "A subagent is a person appointed by an agent empowered to do so, to perform functions undertaken by the agent for

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the principal, but for whose conduct the agent agrees with the principal to be primarily responsible."[5] Therefore, a subagent is essentially an agent of both the primary agent and the principal, but the subagent has a fiduciary duty to the principal. Like the primary agent, the subagent must act solely for the benefit of his principal. In the usual transaction and in the absence of special contractual arrangements, any cooperative broker is (by force of the listing contract, commercial tradition, and the case law) a subagent for the seller. Consequently, when the listing contract contains such a provision, as do the vast majority of residential listing contracts (and almost all Multiple Listing Service agreements),[6] the cooperative broker has the duties of agency imposed upon him as a subagent of the *listing* broker. Numerous court cases support the imposition of these duties, and many books and articles discuss the legal theories underlying, and liabilities created by, the law of agency and subagency.[7]

Agent-Buyer Relationship

Although the broker is directly responsible to the seller (as agent or subagent), he also has certain legal duties to prospective purchasers. Basically, these duties are to engage in fair and honest business dealings, to disclose property defects and to disclose the broker's interest in the real estate, if any.[8] Although the broker's duty of faithful performance runs to the seller, the broker must act in good faith with third parties and cannot be part of any fraud on behalf of the principal.

Several courts have held brokers liable to buyers for material misrepresentations and/or false advertising.[9] California recently has imposed a duty on brokers to inspect the property they will sell.[10, 11] Additionally, new services offered by real estate brokers are leading to new forms of liability. For example, the courts have held the broker liable to the buyer when he has assisted in creative financing.[12] Further, *sellers* may be liable not only for the acts of the listing broker, over whom they have some control through personal contact and contract, but also for the acts of the cooperative broker, whom they may never have met and of whose existence they may not have known until an offer to buy was made.[13]

The Issue: Buyer Representation

Subagency does not reflect the reality of the marketplace. According to a 1983 Federal Trade Commission study, 71 percent of the home buyers who dealt with a cooperative broker thought the cooperative broker was their representative.[14, 15]

This empirical finding suggests that the law of subagency and the natural working relationship that evolves between buyer and cooperative broker are in direct conflict. In practice, if the cooperative broker ever meets the seller, it is usually upon presentation of a purchase offer or, at the earliest, when the cooperative broker is showing the property to a prospective buyer. On the other hand, the cooperative broker's relationship with the buyer is quite different. Often, the broker has been in the company of the purchaser for many hours and talked with the buyer at some length about the buyer's needs, preferences, financial situation and other matters of a rather personal nature. After such extensive contact between the buyer and the cooperative broker, it is only natural for the broker to empathize with the buyer and for the buyer to feel that the broker represents his interests.

Because of such extensive contact with the broker, the buyer is justified in believing or hoping that the cooperative broker will do his best to obtain the property for the buyer at the lowest possible price and on the most advantageous terms. Of course, for the cooperative broker to attempt to do so is a violation of his fiduciary duty as the seller's subagent. Under theories of traditional agency law, it is the cooperative broker's legal duty to obtain the best terms and highest possible price for the seller. Even with disclosures, the cooperative broker is in an untenable position because conflicts of interest are practically unavoidable. More importantly, under the subagency model the buyer is not legally represented in the transaction. Regardless of seller or broker after-the-fact liability afforded under agency law, the typically unsophisticated home buyer simply is not legally represented during a highly significant transaction—the purchase of his home. For buyers who want such representation, a different agency model is clearly needed. Representation for buyers is available in one of two ways: dual agency or buyer's agency.

Dual Agency

One alternative to the subagency model is dual agency, wherein the cooperative broker simultaneously represents both the seller and the buyer. The major problem with dual agency is that the broker must fulfill a duty of loyalty to adversaries (the buyer and seller) which, of course, is impossible. The broker cannot properly assist either party in negotiations because to gain an advantage for one party is to lose the advantage for the other.[16]

"[S]tatutes and cases in many states . . . prohibit dual agency unless it is fully disclosed to all parties . . . ",[17] meaning both seller and buyer must know of, and expressly consent to, dual representation. Frequently, however, cooperative agents develop such a working relationship with the buyer that, in subsequent litigation, the brokers are held to be agents of the buyer (based on the agent's acts) *and* the seller (based on the listing contract), and, therefore, they are deemed to be dual agents. Since such brokers do not intend to be agents of the buyers, their dual agency obviously is undisclosed. The case law is harshest to the undisclosed dual agent because this type of agency is perceived to be a species of fraud against *both* buyer and seller.[18]

While undisclosed dual agency is clearly unlawful, the National Association of REALTORS® (NAR) warns real estate brokers to avoid disclosed dual agency. "The disclosures and consents necessary to make a dual agency lawful are so comprehensive and specific that a typical real estate broker cannot undertake them as a matter of routine."[19] Particularly in California, but also in other states, the courts have not hesitated to hold that an undisclosed dual agency relationship exists in order to protect the interests of either a buyer or a seller who has been damaged by the agent's actions.[20]

When an undisclosed dual agency exists, either the buyer or the seller may ask the court to rescind the transaction.[21] Thus, both parties return to their status prior to the transaction: the seller again owns the property, and the buyer gets back his money (or takes a monetary judgment for it). However, both parties have spent time and money unnecessarily in a lawsuit.

To qualify for rescission, the plaintiff does not have to show that the transaction was unfair or that the broker acted in bad faith; the plaintiff needs to show only that undisclosed dual agency existed.[22] As one commentator notes, "[Undisclosed] dual agency . . . [is] a ticking time bomb ready to explode. As long as the buyer or seller [is] happy with the transaction, then the question of [undisclosed] dual agency probably will never arise. But if either party becomes unhappy, *for whatever reason*, even months after closing, dual agency may provide the mechanism to undo the transaction . . . Buyers and sellers generally neither care nor know about the subject of [undisclosed] dual agency until one of them wants to back out of the deal and consults an attorney. Dual agency cases have a high degree of success for plaintiffs and a high value for settlement purposes."[23]

As other commentators have noted, even lawfully disclosed dual agency is undesirable because it does nothing to resolve the difficult role the cooperative broker must play and does little to protect the home buyer (or seller) during the transaction.[24] Instead, it creates yet more confusion for the broker without creating for the seller or the buyer any increase in the broker's duties or representation.

Buyer's Agency

Despite the industry's tradition of subagency, a real estate broker may represent a buyer and thus create a buyer's agency.[25] Legally, nothing prevents a home buyer from contracting directly with a broker for a personal and exclusive representation.

Establishing A Buyer's Agency

In a minority of states, courts have ruled that no subagency relationship is established in a typical MLS transaction. Instead, the cooperative broker has been ruled the agent of the buyer. The decisions of these courts were based on either: (1) the specific facts of the case, or (2) the view that the function of MLS is not a legal one. These cases see the MLS's role as simply a clearinghouse for listing information between brokers. For example, in *Mead v. Hummel*,[26] the Arizona Supreme Court thought the fact that the cooperative broker had been actively seeking properties for the buyer was critical in finding that a buyer's agency existed. The Nebraska Supreme Court pointed to the seller's lack of control over the cooperative broker's actions, among other factors, in its decision establishing a buyer's agency in *Donahoo v. Home of the Good Shepherd*.[27] In *Buffington v. Haas*,[28] the Arizona Supreme Court considered the seller's lack of contact with the cooperative broker when it established a buyer's agency. In *Wise v. Dawson*,[29] the Delaware court referred to the Local Board of REALTORS® Manual, which suggested that the MLS was merely an information service. Furthermore, the *Wise* court believed that the brokers themselves did not perceive the MLS as a vehicle for establishing subagency; the court therefore found that no agency relationship existed between the listing and cooperative brokers in this MLS transaction.

However, in the majority of states, courts have ruled that a cooperative broker, in a typical MLS transaction with fee splitting, is the subagent of the seller.[30] These courts base their holdings largely on one of two rationales. The first is the understanding of the function of the MLS as a legal one, i.e., that MLS establishes agency relationships between listing and cooperative brokers. This understanding is bolstered by the NAR's multiple listing policy, which specifically defines the MLS as a vehicle through which listing brokers make unilateral subagency offers on a blanket basis to all other MLS participants.[31] The second rationale, also quite strong, is that subagency is the "custom of the industry."[32]

Therefore, to establish a buyer's agency in an MLS transaction in majority rule states,[33] the cooperative broker must expressly renounce the MLS subagency offer by declaring his agency relationship with the buyer.[34] The seller can legally be the source of the cooperative broker's compensation.[35] But, to avoid any undisclosed dual agency allegations, the seller and listing broker should expressly agree to the fee split while recognizing that the cooperative broker is representing the buyer.[36]

Buyer Agency Practices

What little is known about buyer's agency practices is primarily based on a 1981 study of single agency practices conducted for the California State Department of Real Estate.[37] In the area of residential single agency practices, "single agency" was defined as "the practice of representing either the buyer or the seller, but never both in the same transaction".[38, 39] The focus of the study was the Menlo Park-Atherton MLS, which had eliminated subagency. The listing agreement stated—and has stated since the late 1970s—that the listing broker represents the seller and the cooperative broker represents the buyer.[40, 41] Interestingly, this change in the listing agreement was passed because the "Board strongly felt a need to eliminate subagency in order to protect the *seller*. Subagency was seen as a means to weaken the seller's position in a transaction since the cooperating broker (the subagent) was expected to represent the interest of the buyer . . . Subagency, it was felt, entailed 'pseudo representation' only. The Board recognized the realities of the marketplace where the cooperating broker is aligned with the buyer."[42, 43]

In the typical MLS subagency arrangement there is fee (commission) splitting. The seller pays a commission based on a percentage of the sale price which is then split between the listing and cooperative brokers. Among

Menlo Park-Atherton brokers, "a large majority of brokers continue to split fees. Interviewees did not identify any significant problems with the fee splitting method. Cooperating brokers don't perceive a reduction in their effectiveness in representing the buyer although they are reimbursed by the seller."[44, 45]

The study attributed the limited use of single agency to: a lack of information and enthusiasm about single agency among the local MLSs;[46] a perceived lack of consumer demand;[47] and "uncertainty, and a degree of suspicion, regarding the possible effects of the change on established [MLS] practices."[48] The California study concluded that "the major motivation for brokers to practice single agency is a commitment to a particular form of 'professionalism' of the real estate industry. This conception stresses clarity of obligations to a single client, [and] effective representation in a (potentially) adversarial situation . . . ."[49]

The study concluded that in the future "brokers may begin to practice single agency increasingly to avoid legal problems, given the confused state of case law," and "the single agency method can be expected to increase . . . due to the fact that a networking effort is currently underway . . . to promote the single agency method and give single agency brokers an organizational focus".[50, 51] The study further noted that, while only the Menlo Park-Atherton MLS had adopted single agency (as of 1981), "several [other MLSs] are currently discussing the elimination of subagency in favor of single agency understandings." In 1984, the California, Sonoma County MLS eliminated subagency from its listing agreement.[52]

Industry Response

Within the real estate industry, NAR with over 800,000 members, is the nation's largest trade and professional association. It supports affiliated state associations and local Boards of REALTORS® by participating actively and aggressively in the resolution of political issues concerning real estate.[53] Through the local boards, NAR oversees 90 percent of the nation's MLSs, and membership in MLS is essential for a broker to compete and effectively market homes in most areas.[54] Clearly, NAR and its affiliates—state associations, local boards and their MLSs—have the legal, political, and institutional power to significantly influence the advent of buyer's agency.

Of course, when agency began to emerge as an issue in the late 1970s, the brokerage industry was reluctant to change established business practices. Also, there was concern that subagency would be eliminated by mandate and buyers would be required to retain a broker. In response, the industry mixed legitimate concerns with natural resistance to change,[55] claiming such consequences as commission arrangements may be threatened[56] and transaction costs may rise.[57]

However, NAR now is addressing the agency issue and is opening the door to buyer's agency practices. The first step in this process was to educate brokers. In 1986, NAR developed a pamphlet for its members that discussed in detail the agency issue and various agency arrangements, including buyer's brokerage.[58] The booklet admonished brokers to disclose their agency relationship to the buyer and provided a sample disclosure notice form for this purpose. Its trade magazine also has educated brokers about their agency duties and alternatives.[59]

In addition, NAR has responded to the challenge of educating prospective buyers. Its 1986 *Agency Task Force Final Report*[60] developed the buyer disclosure form mentioned previously, which explains to the prospective buyer the implications of subagency and further informs buyers of their right to hire their own representative.[61] The task force, in its recommendations to the state associations, suggested the adoption of the requirement that "each licensee shall deliver the [disclosure notice] to each prospective purchaser . . . . Failure to deliver the required Notice and obtain acknowledgement . . . may be grounds for disciplinary action."[62, 63] At least one state real estate commission in Texas has adopted a disclosure requirement similar to this proposal.[64] Along with NARs push for required disclosure among its state associations, numerous state legislatures currently are considering, or have passed, laws to require agency disclosure.[65] For instance, California recently passed such a disclosure regulation.[66]

Since the education of brokers and buyers already has begun, the next step will be to educate sellers. These people are normally unaware that the cooperative broker is their subagent. According to the FTC study, at least 74 percent of sellers believe that the cooperative broker is the buyer's agent.[67] The difficulty begins with the standardized MLS contracts, which create subagency. As one commentator notes, "In all probability, sellers rarely read or understand the contents of the standard form listing agreements they sign, nor do they give much thought to the scope of their authorization of sub-agency."[68] Disclosure of agency, in plain and understandable language, should be required for prospective sellers. Such disclosure should explain that the typical listing contract creates subagency, and it should outline the legal implications of subagency.

In the future, buyer's agency probably will be commonplace in the residential brokerage industry.[69] The home buyer is not interested in industry disaster speculations nor in inconvenience to brokers who may be set in their ways. As buyers discover from disclosure that they have not been *legally* represented in cooperative sales, as barriers such as industry discrimination and standardized forms are removed, as more MLSs eliminate subagency from the listing contract, buyer's agency will inevitably emerge.

Conclusion

Of the agency alternatives discussed in this article, only one, buyer's agency, fully protects the rights and interests of home buyers in a cooperative sale. Besides client-like representation, buyer's agency produces other benefits. Buyer's agency permits the buyer to gain access to a much larger marketplace, because the buyer's broker is motivated to show the buyer *all* available properties (including, for example, properties for sale by owner), instead of the traditional broker's showing, which usually consists of properties listed in the MLS.

In a cooperative sale, a buyer's agency is advantageous to brokers and to the seller. For the cooperative broker, conflicts of interest and the risk of undisclosed dual agency are minimized. Under the subagency model, both the listing broker and the seller are liable for the acts of the cooperative broker. This is especially unfair to the seller who has little, if any, control over the cooperative broker.

The objective of this research is not to advocate the elimination of subagency. Buyer's agency is simply an alternative for home buyers, an alternative that they should know about and that should be made available to them. Some buyers may prefer to be treated as customers rather than as clients and retain the right to work with several brokers. As for home sellers, some may prefer using a subagent; others may not want to be liable for the acts of cooperative brokers or may be wary of the cooperative broker's true loyalty. Therefore, sellers should be free to list their homes but not permit the listing broker to use subagents.

Agency is a consumer issue. It concerns the consumer's right to be informed of agency relationships and his right to freely choose the agency relationship that is best. Brokers, as servants of the consumer, may serve themselves best if they make the interests of consumers the first priority, work to educate consumers and strive to protect the right of free choice.

NOTES

1. See reference 22, section 1.
2. According to a Federal Trade Commission consumer survey, 66 percent of brokered home sales involved cooperative brokers. See reference 5, volume 1, p. 182.
3. See reference 23, pp. 770-771.
4. For example, paragraph 5 of the Exclusive Listing Agreement of the Denton [Texas] Board of REALTORS®, Inc., reads as follows: "MULTIPLE LISTING SERVICE[:] . . . Owner agrees that all members of said [MLS] service and other BROKERS may cooperate with BROKER in procuring or attempting to procure a Buyer for the property."
5. See reference 22, section 5.
6. See reference 3, p. 402.
7. See references 6, 11, 12 and 23.
8. See reference 6, pp. 114-116.
9. *Ingalls v. Rice*, 511 S.W. 2d 78 (Tex. Civ. App.—Houston, 1974); *Cameron v. Terrell and Garrett*, 618 S.W. 2d 535 (Tex. 1981); *McRae v. Bolstad*, 646 P. 2d 771 (Wash. Civ. App. 1982); *Fulton v. Aszman*, 446 N.E. 2d 803 (Ohio App. 1983).
10. See reference 11, p. 634.
11. A note in the *Harvard Law Review* recommends, instead of relying on agency law to impose tort liability on brokers, to require them, without an act of the state legislatures, to inspect in some detail the homes they would sell and to disclose all such information to prospective buyers. See reference 17. A "tort" is a civil wrong, independent of contract or criminal law. For example, negligence is a frequently litigated tort.
12. See references 9 and 25.
13. See reference 18 and reference 5, volume 1, p. 191.
14. See reference 5, volume 1, pp. 183-184.
15. This finding is further confirmed by a 1984 survey by the Hawaii Real Estate Commission which found that 90 percent of the buyers who dealt with a cooperative broker, thought they were represented by the cooperative agent. See reference 13, p. 12 (citing reference 21, pp. 6-17 to 6-18).
16. In practice, those brokers who consciously choose to act as dual agents usually act merely as middlemen, bringing the parties together and performing minimal tasks for either or both parties in order to facilitate the transaction.
17. See reference 3, p. 418.
18. See reference 8, p. 390.
19. See reference 14, p. 10.
20. See reference 8, pp. 385, 389.
21. Other legal remedies are available to the plaintiff. The plaintiff also may sue for damages and return of the commission. See reference 8, p. 390.
22. See reference 8, p. 390.
23. See reference 19, p. 54.
24. See references 4 and 10.
25. See reference 19, p. 91 and reference 4, pp. 679-680.
26. 58 Ariz. 462, 467, 121 P.2d 423, 425 (1942). This approach was also used in *Menzel v. Morse*, 362 N.W.2d 465, 475 (Iowa 1985).
27. 193 Neb. 586, 596-97, 228 N.W.2d 287, 293-94 (1975).
28. 124 Ariz. 36,37,601 P.2d 1320, 1321 (1979). See also, *Menzel*, 362 N. W.2d at 475.
29. 353 A.2d 207 (Del. Super. Ct. 1975).
30. Many of the "grandfather cases," which later opinions point for their rationales, were restraint of trade cases in which the court analyzed the function of MLS. For examples, see *United States v. Realty Multi-List*, 629 F.2d 1351 (5th Cir. 1980); *Stortroen v. Beneficial Finance Co.*, 736 P.2d 391 (Colo. 1987); and *Iowa v. Cedar Rapids Board of Realtors®*, 300 N.W. 2d 127 (1981). Of special interest is *Frisell v. Newman*, 71 Wash. 2d 520, 429 P.2d 864 (1967), in which the court found subagency in spite of the local MLS policy (not written into the listing contract) that the cooperative broker was the buyer's agent. The court held that a local MLS could not change basic rules of agency by a policy or regulation outside of the listing contract.
31. See reference 24, exhibit 2, p. 23.
32. For additional discussion on both minority and majority court opinions, see reference 3, pp. 404-418.
33. Subagency may be created even though the property is not listed with MLS. See reference 1, p. 29; reference 19, p. 167; and reference 3, pp. 409 and 413-415.
34. Buyer's brokers practicing in minority rule states should also adopt these procedures to avoid any possible dual agency allegations.
35. As long as the agency relation is clear, it does not matter legally who pays the fee. See *Velten v. Robertson*, 671 P.2d 1011 (Co. 1983) and *Richardson v. DuPree*, 122 S.E. 707 (Ga. 1924). However, if the agency relationship is unclear, the courts probably will use the source of payment to establish the nature of the agency relationship.
36. According to NAR, another reason for expressly establishing the fee arrangement is, "if a cooperating broker so declares himself as an agent of the buyer, the broker has no enforceable right to be compensated as a subagent by reason of the subagency offer extended through the MLS . . . . Any compensation arrangement between the listing broker and a broker representing the buyer will have to be negotiated outside of the MLS framework." See reference 24, exhibit 2, p. 25-26.

While agency and fee split arrangements must be expressly established, this does not mean they neccessarily have to be in writing. Not all states require agency agreements (e.g., listing agreements) to be in writing. See reference 24, exhibit 2, p. 2. However, regardless of individual state laws, a prudent broker should put *all* agency and fee split agreements in writing.

While most buyer's brokers develop their own buyer's listing agreement forms, in Colorado, a buyer's broker must use a state-approved buyer's agency agreement. See reference 19, p. 89.

37. See reference 2.
38. See reference 13, p. 6.
39. The basic findings of the 1981 California study (reference 2) were that, in California, the practice of single agency was extremely limited and was oriented to commercial and investment transactions (p. 11). These commercial brokers tended to work on their own or to have a small sales staff, to belong to a local Board of REALTORS® (p. 29), and to serve an established clientele who engaged in repeated commercial transactions (p. 14). They did not always limit their practices exclusively to single agency. Most entered into both dual and subagency arrangements when necessary (p. 24). Compensation arrangements were flexible, though the three basic methods were: a percentage of sale price, a flat fee (usually contingent on sale), or an hourly wage (p. 27).

40. See reference 2, pp. 21-22.

41. It should be noted that Menlo Park-Atherton is not the typical real estate market. The acceptance of the MLS listing change is attributed to sophisticated brokers and a wealthy and sophisticated clientele. To illustrate, in 1981, the average Menlo Park-Atherton home sold for $287,000. See reference 2, pp. 22-23.

42. See reference 2, p. 21.

43. Empirical evidence tends to support the board's suspicions. In the 1983 FTC study cited earlier, 62 percent of the surveyed buyers reported that their brokers told them how low a price the seller would probably accept. See reference 5, buyer survey, question 53(d), p. 26.

44. See reference 2, pp. 27-28.

45. In the purest form of buyer's brokerage, both buyer and seller pay their respective agents. Of course, the obvious concern with fee splitting is that if the fee is tied to a percentage of the sale price, the motivation of the buyer's broker to obtain the lowest price for the buyer is dubious. Reilly (reference 19, pp. 94-95) suggests that some of the problems of fee splitting could be reduced by using a net purchase price fee arrangement. By this method, the buyer's broker is paid a flat contingent fee, and the buyer offers the seller the net purchase price (the purchase price less the buyer's broker's fee). Therefore, the buyer pays his own broker, and *the fee is not tied to the purchase price*. Yet, as noted by Reilly, the net purchase price method sometimes causes confusion among the parties and is therefore not widely used in the marketplace. Buyers, sellers, brokers and outside participants such as lenders, appraisers and insurers are accustomed to the standard fee splitting arrangement.

46. See reference 2, pp. 9-10

47. See reference 2, p. 20.

48. See reference 2, p. 20.

49. See reference 2, p. 28.

50. See reference 2, p. 31.

51. The increase in single agency awareness may be attributed largely to the efforts of Who's Who in Creative Financing, Inc., and John Reilly. Who's Who in Creative Financing, Inc., maintains a *Buyer's Broker Registry*, which identifies brokers trained to practice single agency. It also publishes a quarterly newsletter, *Agency Advocate*, and other information and tools neccessary for establishing a single agency practice. In his book *Agency Relationships in Real Estate*, John Reilly provides a "how to" guide for establishing alternative agency arrangements. Sample buyer's listing agreement forms (Exclusive Right-to-Represent contracts) are provided, along with ample practical and legal advice on the do's and don'ts of establishing a single agency practice.

52. See reference 3, p. 430.

53. See reference 5, volume 1, pp. 81-82.

54. See reference 5, volume 1, pp. 92-93.

55. Under subagency, the seller may be liable to the buyer for misrepresentations of the cooperative broker. Rescission is a remedy for such misrepresentations available to the buyer. However, if subagency is eliminated, this remedy is not available to the buyer. "In such a situation, the finding of agency between the buyer and selling [cooperative] broker may be more harmful to the buyer than beneficial, because the buyer would lose his action of rescission and restitution against the seller." See reference 23, p. 773, footnote 33.

In response, one commentator noted that the elimination of subagency does not necessarily destroy the remedy of recission (see reference 3, p. 447), and further noted, " . . . discussion of the buyer's remedies assumes litigation has commenced, ignoring the goal of stopping litigation before it starts . . . . The elimination of subagency, by avoiding confusing duties and the tendency to mislead consumers, should lead to less dissatisfaction in real estate transactions, and hence less litigation. This would undercut the harm that the buyer may suffer from the loss of the rescission remedy." See reference 3, p. 448. Even without the remedy of rescission, the buyer still has recourse against the cooperative broker. And, if the source of the misrepresentation is the listing broker, the buyer may ultimately have recourse against the seller. See reference 8, p. 400-1, footnote 116.

56. With subagency, if a seller backs out of a deal (without cause), the cooperative broker still has a right to his commission. Under single agency, and in the absence of a contractual agreement between the cooperative broker and seller, the cooperative broker may have no legal right to his commission. Therefore, it is reasoned, this threat to commissions will reduce the number of cooperative sales, thereby reducing the efficiency of the market. See reference 1, p. 72.

As already discussed in this article, there is no threat to a cooperative broker's commission. The cooperative broker may be paid by the buyer. Or, if the seller is to pay (standard fee split), the cooperative broker's commission is protected as long as the fee arrangement is part of an express agreement.

57. Under single agency, the listing and cooperative brokers are adversaries. Therefore, it is reasoned that less information on the property will be provided to buyers by the listing broker and "[a]dditional cost might accrue to the buyer in order to obtain the desired information." See reference 1, p. 73.

This argument is questionable for several reasons. First, the objective of home sellers is to market their houses, which is accomplished by providing information to potential buyers. To limit normal marketing information to a buyer's broker, such a prohibiting property inspection, will reduce the likelihood of sale and therefore is irrational. Regardless of agency relationships, relevant unfavorable information must be revealed. As already discussed, the listing broker has certain legal duties to prospective purchasers. These include the duty to engage in fair and honest business dealings and to disclose property defects. Second, the empirical evidence suggests that single agency is normally practiced in cooperative sales, even though the legal relationship is subagency. Therefore, eliminating subagency should not significantly change transaction costs or the flow of information from its present state. This is partially evidenced by the Menlo Park-Atherton MLS which eliminated subagency and used the standard fee split. See reference 2, p. 27-28.

58. See reference 14.

59. See references 7, 15 and 16.

60. See reference 24.

61. The disclosure form is entitled, "Notice to Prospective Real Estate Purchaser," and states, "As a prospective purchaser you should know that: Generally, the listing and cooperative (selling) brokers are the agents of the seller. Their fiduciary duties of loyalty and faithfulness are owed to their client (the seller)." The disclosure form further states, "If you choose to have a real estate broker represent you as your agent, you should: Enter into a written contract that clearly establishes the obligations of both parties." See reference 14, unnumbered pages which would be 22 and 23.

62. See reference 24, p. 14.

63. The Task Force further advised: The Multiple Listing Policy Committee should review existing MLS Rules and Policies to identify those changes that should be made and those new structures that should be developed to better accommodate sellers who do not wish to sell through subagents and buyers who desire independent representation.

The Professional Standards Committee should review existing articles of the Code of Ethics, Standards of Practice and case interpretations to identify those that are predicated on an assumed subagency relationship between listing and selling broker and propose clarifications and modifications that would govern REALTORS® functioning in an adversarial relationship.

The Legal Education Subcommittee and Legal Action Committee should prepare for issuance to all member boards a comprehensive "Agency Education Program" including, but not limited to, the following: preparation of materials relating to buyers' brokerage—including agency agreements and descriptions of rights and obligations as distinguished from those of listing brokerages. See reference 24, pp. 15-16.

64. Rule of the Texas Real Estate Commission, Sec. 535.162, "Disclosure of Agency-Residential," effective September 1988.

65. See reference 20.

66. Cal. Civ. Code §§2373-2382 (West Supp. 1987)(effective January 1, 1988).

67. See reference 5, volume 1, p. 191, footnote 573.

68. See reference 3, p. 420.

69. This research has focused on agency law and issues in the residential brokerage industry. The findings presented here do not necessarily apply to the commercial brokerage industry. The courts have a different perception of the private home buyer and the commercial property investor. The agency issues in the residential brokerage industry arise because the courts wish to protect home buyers and sellers. However, the authors anticipate that no such protection would be afforded to commercial investors. Therefore, the agency case law for commercial brokerage will probably be different from that of residential brokerage.

REFERENCES

1. California Technical Assistance Associates, Inc., *Dual Agency Problems in California Real Estate Transactions.* California Department of Real Estate (February 1981).

2. California Technical Assistance Associates, Inc., *The Extent and Nature of Single Agency Real Estate Practices in California.* California Department of Real Estate (December 1981).

3. Collette, Matthew M., "Sub-Agency in residential real estate brokerage: A proposal to end the struggle with reality," *Southern California Law Review* 61 (January 1988) 401-457.

4. Currier, Barry A., "Finding the broker's place in the typical residential real estate transaction," *University of Florida Law Review* XXXIII (Fall 1981) 655-681.

5. Federal Trade Commission, *The Residential Real Estate Brokerage Industry: A Staff Report by the Los Angeles Regional Offices of the Federal Trade Commission.* Washington, D.C.: U.S. Government Printing Office (1983).

6. Jacobus, Charles J., *Real Estate Law.* Englewood Cliffs, N.J.: Reston Books, Prentice-Hall, Inc. (1986) Chapter 5.

7. Keil, Matthew, et al; "The agency relationship," *Real Estate Today* (January/February, 1987) 38-42.

8. Kroll, Robert E., "Comment: Dual agency in residential real estate brokerage: Conflict of interest and interests in conflict," *Golden Gate University Law Review* 12 (Spring 1982) 379-405.

9. Levin, Murray S., "Real estate agent liability for creative financing failures," *University of Miami Law Review* 39 (May 1985) 429-470.

10. Levine, Arthur M., "The dual agency trap," *Real Estate Review* (Spring 1985) 109-112.

11. Levinson, Gary A., "California real estate—A practitioner's guide through the broker's legal duties," *Whittier Law Review* 7 (1985) 613-637.

12. McConnell, Rose, "Protecting the real estate consumer: Traditional theories of liability revisited, and a look at Nebraska's proposed real estate consumers protection act," *Nebraska Law Review* 65 (1986) 188-208.

13. Morris, G. A. "Red", et al., *Preliminary Report from the Agency/Subagency Study Committee of the National Association of Real Estate License Law Officials* (October 1984). Copies available from NARELLO, 50 South Main Street, Suite 600, Salt Lake City, Utah 84144.

14. National Association of REALTORS®, *Who Is My Client?—A Realtor's Guide to Compliance with the Law of Agency,* (1st ed.) Chicago, Illinois (November 1986).

15. National Association of REALTORS® Task Force, "Report on agency," *Real Estate Today,* (January 1986) 35-38.

16. North, William D. "Do you understand the law of agency?" *Real Estate Today* (November/December 1983) 24-28.

17. Note: "Imposing tort liability on real estate brokers selling defective housing." *Harvard Law Review* 99 (June 1986) 1861-1875.

18. Peterson, Craig A., "Tort claims by real estate purchasers against sellers and brokers: Current Illinois common law and statutory strategies," *Southern Illinois University Law Journal* (1983) 161-189.

19. Reilly, John W., *Agency Relationships in Real Estate.* Chicago, Illinois: Real Estate Education Company, a Division of Longman Financial Services Institute, Inc. (1987).

20. Reilly, John W., *Agency Update, 1985.* State of Hawaii Real Estate Commission (October 1985).

21. Research Marketing Systems, Inc., *An Evaluation of Real Estate Licensee Education Program Requirements: A Public Opinion Perspective.* Honolulu (May 1984).

22. Restatement of Agency (2d)(1957).

23. Romero, Molly Moore, "Theories of real estate broker liability: Arizona's emerging malpractice doctrine," *Arizona Law Review* 20 (1978) 767-798.

24. Spera, Pall D., et al., *Final Report of the Agency Task Force.* Chicago, Illinois: National Association of REALTORS® (May 1986).

25. Zumpano, Leonard V., and Marsh, Gene A., "Creative financing arrangements: Risks and liabilities," *Real Estate Law Journal* 12 (Fall 1983) 151-167.

MORTGAGE PREPAYMENT ANALYSIS: A COMPUTERIZED APPROACH

Although prepayment of a mortgage usually is not considered to be an investment alternative, it offers benefits to borrowers and lenders.

by Robert O. Kirby and Robert T. Nash

The purchase of a home is one of the most important financial decisions that an individual will make. After all, when the home owner obtains a mortgage, its terms will have an impact on his financial condition for most of his working life.

Financial intermediaries have developed and promoted many innovative mortgage packages in an attempt to cater to changing conditions in the mortgage market. In addition to the standard, level payment, fixed-rate mortgage, the industry has developed ARMs, GPMs, SAMs, RAMs, GEMs, and the latest, ARMLOCK mortgages. Each has unique advantages for borrowers, and each provides a degree of safety and marketability to the lender.

Due to the long-term nature of the mortgage contract, the home owner must carefully weigh many factors when selecting one mortgage over another. The proliferation of choices has complicated this decision-making process. As a result, the mortage loan market has become much more sophisticated, and increased demands have been placed on conventional analytical techniques. In more and more instances, microcomputer applications are replacing the calculator as the tools of the mortgage advisor.

Prepayment Option

Often, after several years of paying on a mortgage, the borrower, due to career advances or other reasons, finds himself in a position to seek new market investments. One alternative that is not usually considered as an investment is the prepayment of the mortgage loan.

Earlier articles have discussed the concept of mortgage loan prepayment and have pointed out how the prepayment decision is reached by the individual on the basis of liquidity, profitability and, in some instances, marketability.[1,2] However, it rarely has been made clear that mortgage prepayment possesses exceptional merit as a market investment and that prepayment may be promoted as such to home owners.

Mortgage prepayment contains the three basic elements that any investor will likely take into account when considering a market investment. Harold J. Bierman lists them as follows:

1. The time value of money; funds at different times have different values.
2. The uncertainty of outcomes; attitudes toward risk are relevant.
3. The value of the information; the uncertain flows are spread out through time and at present there is no information as to the outcome.[3]

The intriguing feature of the mortgage prepayment is that it holds advantages for borrowers and lenders alike. The intent of this article is to clearly depict those advantages

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and provide a mechanism for proving the validity of the concept of mortgage prepayment as an investment.

Lenders' Advantage

From the standpoint of the lender, there are several types of risk inherent in any lending decision. Most basic business finance textbooks categorize them as:

1. Default risk
2. Interest rate risk
3. Purchasing power risk
4. Liquidity risk[4]

Default risk is associated with the possibility that the borrower will not be able to make interest payments or to repay the principal amount on schedule. Generally, mortgage lenders are relatively free from default risk because the loans are made for less than the value of the property. Default risk has grown for mortgage lenders, however, because declining property values in some parts of the country over the past few years have forced many home mortgages to be defaulted.

Interest rate risk relates to the possibility that investors will be faced with a loss because of changing interest rates. The prices of long-term securities are much more sensitive to changes in interest rates than are the prices of short-term securities. Usually, since home loans are long-term, they are susceptible to interest rate risk, and the longer the term of the home loan, the greater the interest rate risk.

Many loans made at low interest rates are very costly to lending institutions. When interest rates are relatively low, the risk to the lender increases because the potential exists for interest rates to rise in the future. In such a case, the loan will earn a rate of interest that is lower than the current market rate.

Purchasing power risk is the risk that inflation will reduce the purchasing power of a given sum of money. During periods of stability, an anticipated inflation premium is not incorporated into a loan. The loan is made with valuable dollars, but, as inflation rises, the loan is repaid with inflated, cheaper dollars. Purchasing power risk is associated with many, or perhaps most, home loans because of their long-term maturities.

Liquidity risk (marketability risk) relates to the possibility that a financial institution's securities may not be sold in secondary markets at a reasonable price on short notice. It is not unusual for financial institutions seeking liquidity to discount or even sell part of their portfolios. For example, when an institution finds itself in a position of a reserve deficiency, it must sell or discount some of its securities in order to increase its reserves. Home loans generally are long term; so they are subject to this risk.

Obviously, the above mentioned risks can be controlled more effectively by a lending institution if its investments are in shorter term maturities. Making home loan borrowers aware of prepayment opportunities as an investment alternative may be a step in the right direction. In order for the lender to promote this idea, however, a definite advantage or gain must clearly be presented to the borrower.

Borrowers' Advantage

By increasing the monthly payment on his mortgage, the borrower:

- will receive, in almost every instance, a competitive rate of return on the prepayment
- will reduce the number of years over which he will pay the mortgage loan
- will reduce his total interest payment, perhaps by thousands of dollars
- will build up increased equity in the investment

When an individual home owner decides to invest in the market, he assumes the normal position of the lender and becomes subject to all market risks. It follows, then, that once the investment is made, the home owner/investor faces default risk, interest rate risk, purchasing power risk and liquidity risk.

The mortgage prepayment option, which negates or reduces these risks and provides a greater return than is available in the market for other low-risk securities, clearly warrants consideration. The most attractive feature of the mortgage prepayment decision as an investment is the fact that it is virtually risk free, and such investments tend to be short-term. Mortgage prepayment changes a long-term obligation into a short-term investment strategy and decreases market risks. Because the holder of the loan is prepaying his own loan, there is no default risk as long as the holder of the loan makes the monthly prepayment. Also, because the holder of the loan is paying off the mortgage at a faster rate, there is less risk from rising interest rates or inflation and less chance that the loan holder will be unable to sell securities on short notice.

In addition to being risk free, mortgage prepayment generates a more than competitive market rate of return. As the Table shows, mortgage interest rates normally are higher than the yields on market investments that are considered to be risk free (i.e., Treasury bills, U.S. Treasury notes and bonds, and short-term certificates of deposit). Mortgage interest rates are higher because lending institutions add premiums to compensate for their own risks.

Prepayment Yield

Since all the ingredients of a normal investment are present with a mortgage prepayment, conventional investment theory provides the basis for analyzing the yield from prepayment. Just as any investment alternative may be analyzed in terms of discounted cash flow theory, so may mortgage prepayment decisions be analyzed. By evaluating the savings or benefit to be gained through the reduction of the term of the loan balanced against the increase in payment needed to reduce the loan term, traditional investment analysis shows that the calculated rate of return on the mortgage prepayment is equal to the

TABLE

Relationships Between Mortgage Rates And Risk-Free Market Rates

Selected Years*	Veterans' Administration Federal Housing Authority Rates	Conventional Mortgage Loan (Effective Rate)	U.S. Treasury Bills Secondary Markets 3 mo	6 mo	1 yr	Certificates Of Deposit 1 mo	3 mo	6 mo	U.S. Treasury Notes & Bonds 1 yr	2 yr	5 yr
1975	8.0- 9.0	8.92	5.80	6.11	6.30	--	--	--	6.76	--	7.77
1977	8.0	8.82	5.27	5.53	5.75	--	--	--	6.09	6.45	6.99
1978	8.5- 9.0	9.37	7.19	7.58	7.74	--	--	--	8.34	8.34	8.29
1980	11.5-13.0	12.46	11.43	11.37	10.89	12.91	13.07	12.99	12.05	11.77	11.48
1981	13.5-17.5	14.39	14.03	13.80	13.14	15.91	15.91	15.77	14.78	14.56	14.24
1982	12.5-15.5	14.73	8.31	8.41	8.49	9.06	9.19	9.31	9.23	9.86	10.56
1986	9.5-10.5	9.87	5.98	6.03	6.08	6.61	6.52	6.51	6.46	6.87	7.31
1987**	9.0-10.5	9.28	5.17	5.93	6.30	6.96	7.42	7.50	6.73	7.60	8.38

* Different years are used to reflect times when rates were high and when they were relatively low.
** Money and capital market rates for October 30, 1987.

Sources: *Federal Reserve Bulletin*, selected issues. Washington, D.C: Board of Governors of the Federal Reserve System.
Real Estate Finance and Housing, 1988 Outlook and Factbook, Washington, D.C.: Mortgage Bankers Association of America, 1988.

mortgage interest rate and represents the risk-free yield on the investment.

Model

The mortgage prepayment decision may be analyzed easily on a microcomputer using Lotus 1-2-3 software. Even though the calculations may be made with a hand-held calculator, the process is long and tedious. It is much easier and considerably faster to analyze mortgage prepayment yields on a microcomputer using spreadsheet software, especially if such analysis will be made on a frequent basis.

The following model presents the present value dollar savings on the mortgage prepayment, the new term of the loan, and verification of the prepayment yield.

Mortgage prepayment involves either (1) an increase in the current monthly payment schedule or (2) a lump-sum payment. Since the normal procedure for amortizing a loan adheres to a monthly payment format, the model is limited to that analysis.

The adjustment in the monthly payment may be determined in either of two ways:

1. Select any affordable amount and increase the monthly payment accordingly.
2. Determine the length of time one wishes to reduce the term of the mortgage loan and the monthly payment amount that will accomplish the reduction.

Conventional analysis of an investment rate of return or prepayment yield determines the rate of return provided by the benefit stream relative to the cost required to generate the stream of benefits. The analysis of the prepayment decision is simplified as follows:

$$[Mb(1/a_{\overline{n|}\alpha}) - (MPo)]\,(a_{\overline{n|}\alpha}) = MPo(a_{\overline{n|}\hat{\alpha}})\,(V^{n}\alpha)$$

Where: Mb = Current mortgage loan balance for the appropriate interest rate and term

$1/a_{\overline{n|}}$ = Term for the partial payment factor (amortization)

α = New mortgage term for new payment

MPo = Original monthly mortgage payment

$a_{\overline{n|}}$ = Present worth of one-per period

$\hat{\alpha}$ = Current mortgage term minus the new mortgage term

V^{n} = Present worth of one

The left-hand side of the equation reflects the cost that is required to generate the benefit stream, and the right-hand side reflects the benefit that is received by shortening the loan term.

Example: The current balance on a $70,000, 30-year, 10 percent original mortgage is $67,602.02. At the end of year 5, the borrower decides to reduce the mortgage term to 15 years (180 months). As a result, the original principal and interest payment of $614.30 is increased to $736.45.

Substituting for the model:

$$[\$67{,}602.02(.010746) - (\$614.30)]\,(93.057438) = \$614.30\,(75.671163)\,(.224521)$$

Present Value Cost = Present Value Benefit $10,436

The present value costs and benefits equate at a unique discount rate of 10 percent, which verifies the yield on the prepayment investment.

When the mortgage rate is higher than alternative safe market rates, the true benefit from prepaying the mortgage is in the dollar savings. The nominal dollar savings resulting from mortgage prepayment are easily calculated. Since the term of the loan in the example is reduced by 120 months, as a result of a $112.15 increase in monthly payments, the nominal dollar savings are $73,716 ($614.30 × 120 months) less $20,187 ($112.15 × 180 months) which is $53,529.

However, the real savings are determined by comparing the results of investing the increased payment in the market or in the mortgage prepayment. Assume that the market rate is 7 percent, the next best alternative rate to the prepayment yield of 10 percent as in the example. If the $112.15 increase in monthly payments is invested in the market, it will generate $35,547.32 at the end of 180 months.

If, however, the $112.15 is used to prepay the mortgage, the mortgage will be reduced by 120 months. The mortgage reduction will be similar to an annuity, i.e., the original payment of $614.30 will accrue to the home owner for 120 months. The annuity is deferred for 180 months, the term of the new mortgage contract, but the present value of the annuity of the mortgage term is $52,907.41.

In order to calculate present value, both sums are discounted for 180 periods at the market rate of interest. Since the prepayment yield is no longer available, the market rate becomes the discount rate. The present value of the market investment is $12,477, while the present value of the mortgage prepayment is $18,570. The mortgage prepayment is clearly the better investment alternative, and the difference of $6,093 represents the present value dollar advantage of the mortgage prepayment over the market investment.

The decision to prepay a mortgage loan must be made in light of alternative investments available to the investor for the same time period. If the mortgage prepayment yield exceeds alternative yields that are available for the same time period on virtually risk-free investments, the prepayment decision will prove to be advantageous for the borrower.

Conclusion

Mortgage prepayment usually is not considered as a capital investment. However, increasing the amount by which one repays a mortgage affords advantages that normally are not found in alternative market investments. For instance, when prepayment begins early in the mortgage term, the investor receives competitive returns while he reduces the holding period of the loan, reduces interest expense and increases equity. When a loan is fully amortized before its normal maturity date, the lender's risk is lowered and equity is increased.

What must be remembered is that mortgage prepayment has a cost which, in turn, generates a benefit stream. This benefit stream may be evaluated just as any other market investment. By utilizing the model presented, an investment rate of return for a mortgage prepayment may be calculated and compared with expected returns from other market investments. The present value of the benefit stream also may be calculated to complete the traditional evaluation process. The investor simply compares the economic benefits associated with prepayment to those associated with other market alternatives to find which will be the most profitable investment. When investors consider the fact that the mortgage prepayment yield is virtually risk-free, mortgage prepayment becomes very appealing as an investment option.

NOTES

1. Friedman, Jack P., "Should you prepay your mortgage?" *Tierra Grande*, Second Quarter, 1979.

2. Kirby, Robert O., "Mortgage prepayment: An investment decision," *The Real Estate Appraiser and Analyst*, First Quarter, 1981. Volume 47, Number 1.

3. Bierman, Harold, Jr., *Financial Policy Decisions*, London: The Macmillan Company/Collier-Macmillan Limited (1970) p. 67.

4. Weston, J. Fred and Eugene F. Brigham, *Essentials of Managerial Finance*, 8th ed. Chicago: The Dryden Press, (1987) pp 380-381.

Jack of All Trades Often Requires a Team Approach

A CRE'S VIEWPOINT

by Scott C. Langley, CRE

Real estate counselors combine their powers of concentration, intelligence and imagination with a genuine desire to help people and to pursue answers for often difficult questions. The profession's future growth and integrity depends on its ability to attract and nourish people with these qualities. One is the ability to recognize professional limitations and to know when to involve another expert. Real estate offers a wide range of services, which usually calls for a team approach to problem solving.

Counseling is such a broad generic term that its direct application to the real estate business often is misunderstood, misused and misinterpreted. Everyone, in a sense, is a counselor in realty matters, including the neighbor next door. Amateur advice may have been sound in bygone days, but today's complicated real estate market dictates it is in the buyer's or seller's best interest to get the soundest professional real estate advice before making commitments.

Therefore, in an age of specialization, the real estate counselor must know his limits in offering realty advice and recognize the potential for calling in another expert. This is true whether the counselor was groomed in the profession as a specialist or as a "jack of all trades." The professional real estate counselor understands the problem solving process and can form a team of competent realty experts, either acting as a member of that team or functioning solely as the quarterback for the client in resolving the issue.

Real estate counseling or advising is more an art than a science, and this fact is lost on many practitioners in their effort to systematically analyze market behavior. Success can be measured in two ways: the counselor's ability to properly define the problem and the degree to which the counselor solves the problem. Some practitioners are too inexperienced to recognize their limitations. Thus the question arises, "Practitioner advising—where do you stop?" The answer results from an awareness developed through years of empirical experience which defines the fundamental qualities of real estate counseling as judgment, knowledge and integrity.

Fundamental Qualities Of A Real Estate Counselor

The American Society of Real Estate Counselors defines counseling as "providing competent disinterested and unbiased advice, professional guidance and sound judgment in diversified problems in the broad field of real estate involving any or all segments of the business, such as merchandising, leasing, management, planning, financing, appraising, court testimony and other similar services. Counseling may involve the utilization of any or all of these functions." The CRE (Counselor of Real Estate) designation is awarded to the counselor by his peers, members of the American Society of Real Estate Counselors. A counselor must possess the qualities of judgment, knowledge and integrity that are expected of a professional real estate consultant. The Society's founders felt that a written examination for membership which covered real estate knowledge left out two major prerequisites for a counselor: judgment and integrity. These could only be measured by the respect that the consultant held in his own community and by his performance in actually serving his clients.

What are these qualities known as judgment, knowledge and integrity, and how are they quantified as qualities of a competent and professional real estate counselor?

Judgment

Judgment is the power or ability to decide on the basis of evidence, and some say it is the highest of the human faculties. Good judgment is a rather subjective term that connotes a trial and error process for which the consensus of professional colleagues often is most favorable.

Some say that to judge rightly of the present, the present must be opposed to the past, for all judgment is comparative. Real estate counselors try to remain objective with each client, but it is only natural to apply previous findings when solving new problems. There is no substitute for experience in understanding realty issues, but relying on the past can become a pitfall for consultants too spontaneous in their judgment. Real estate counseling is a perilous profession, because many problems await even the most seasoned practitioner. Providing sound advice consistently as business pressures build up is a constant challenge.

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This commentary was adapted from a paper presented at the 14th Pan Pacific Congress, Christchurch, New Zealand, in March 1988.

Judgments are required in real estate counseling that cannot be supported by quantitative data or proven scientifically. Disguising these judgments, without analysis, behind the intricate structure of statistics is deceiving and signals a lack of competency.

Solving real estate issues is not an easy assignment, partly because completely objective and absolute answers are seldom the result. Good consultants must draw upon many resources, not the least of which are their senses, in order to approach the level of comfort presented by a systematic mathematical approach. All of these conclusions are still judgments; but they are the best possible.

Of particular importance is the judgment needed to structure the primary problem solving technique, defining the problem, identifying the critical issues and formulating a research strategy. Unfortunately, these essential problem solving elements often are quickly looked over in the rush to get started.

Knowledge

It has been said that if a little knowledge is dangerous, where is the man who has so much as to be out of danger? Knowledge is the fact or condition of possessing through instruction, study, research or experience one or more truths, facts, principles or other objects of perception.

A real estate counselor should be thought of as a trained, competent practitioner who brings stability and security to the marketplace through an ability to gather and analyze relevant facts, and evaluate whether these facts, coupled with anticipated trends or conditions, form an acceptable basis for a proposed course of action.

As one moves the analytical process further into the future, it deals less with facts and more with anticipation, interpretation and prediction. Some practitioners think there are no objective facts and that every report based on facts is only somebody's opinion. It can, therefore, be useless to render advice based on facts, unless the opinions expressed are the consensus of a team of competent experts.

Our world continues to grow smaller and smaller because of advancements in communication and specialization. The latter is perhaps one of the most critical changes we have experienced in the last 40 years. Gone are the days of the general practitioner. Because of the complexities of the business world, we have been forced to develop specialized expertise. One of the major problems, however, is that many specialists have had improper training as generalists.

The real estate counselor must provide his client with a total service which can and should reflect direct or indirect profits or savings. But, in this responsibility to the client, the real estate consultant must provide diversified expertise. The practitioner who is totally familiar with real estate values might have little knowledge of investment brokerage techniques or the application of financial analysis or marketability analysis. For the same reason that a law firm has the full spectrum of specialists, a real estate consulting firm also needs to offer the same type of full service. Although each of these professionals specialize in a certain area, they contribute their joint talents to solve problems which can involve two or three or more of the areas previously mentioned. A real estate consulting firm must offer this array of service. The service should begin by helping the client to define his goals and objectives in any particular endeavor that involves real estate.

Integrity

Integrity is honesty, and an honest person is respected. Today, the public seems to believe that throughout the business world shrewd practice is admired and deliberate misrepresentation is the norm. The only crime involved is getting caught. To think that such a standard is expected and that you cannot succeed in business without it is ludicrous.

Integrity is an uncompromising adherence to a code of moral, artistic, or other values which are utterly sincere, honest and candid. Integrity is the avoidance of deception, expediency, artificiality or shallowness of any kind.

Our society is motivated by a blind desire for success often gauged primarily in pecuniary terms. Frequently, the dollar becomes the only measure of success, but it needs to be balanced with self respect, pride in one's work and the esteem of others. Mastery of professional skills, knowledge and experience are admirable goals replete with their own rewards.

In this world, there are temptations, pressures and moral gray areas. One always has to make choices, exercise judgment and make personal decisions. Integrity is a personal matter for each to wrestle with, and how one does this is demonstrated by what is done, not by what is said.

Judgment and knowledge are secondary to the intrinsic qualities that shape a person's work ethic, aptitude and character. The three fundamental qualities of a competent and professional real estate counselor are simply the fundamental qualities sought in retaining any professional to conduct one's personal business.

Real Estate Counseling As A Profession

The need and demand for unbiased professional real estate advice is increasing with the growing complexity and value of today's transactions. Individuals, estates, corporations, government offices and institutions now recognize the value of objective counsel. Traditionally, these same investors consulted with attorneys, tax accountants and other specialists who may or may not have been informed concerning the real estate industry.

Real estate counseling is a confidential relationship with a client that requires the counselor's best judgment based on research, experience and knowledge to recommend a course of action and a professional solution to a real estate-related problem.

Often, however, the public is generally unfamiliar with this group of real estate professionals, and a plethora of questions frequently arise regarding the counselor's service, expertise and means of compensation.

For the investor or builder, a counselor provides expert assistance in acquisition and disposition, land use and marketability studies, financing, leasing and asset management, to name a few. Individual owners, users, banks, savings and loan associations, insurance, finance and trust companies need the CRE's service for all types of advice on real estate investments and other matters related to real estate. Frequently, a counselor performs the function of a real estate department within a corporation, municipality or government agency.

Belonging to the Society, members profit from the advantages of networking and referral opportunity. Members can confer with each other within their local geographical areas, as well as correspond with members in any part of the country or abroad when completing a counseling assignment. Those in the real estate consulting field cannot, of necessity, specialize in only one aspect of real estate without considering the implications of all factors affecting the final decision to acquire, dispose or develop a piece or property. A consultant must not only be an expert in all of the necessary specialties but must also have the ability to focus on local market problems and to align himself with other experts.

The focus today is on the firms that have qualified professionals in the various classifications of real estate and within the various geographic regions of the country or world. However, the old master type of real estate consultant is still preferred, but only with the proper support group of practitioners with diverse specialties and market expertise.

The real estate practitioner should strive for professionalism and know his limitations when offering advice. Resolving real estate issues today requires diversified expertise and consequently a team approach. The question, "Practitioner advising—where do you stop?" is one each practitioner must answer for himself based on his professional judgment, knowledge and integrity.

REAL ESTATE ISSUES

Index

Volumes 12-13
1987-1988

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TOPICAL INDEX

Subjects:

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LEASES

MORTGAGE FINANCING

PROPERTY MANAGEMENT/VALUE

REAL ESTATE COUNSELING

REAL ESTATE HISTORY

The United States Real Estate Capital Market: Historical Perspectives, Emerging Trends and Future Directions. John McMahan, CRE. Vol.12, no.2 (Fall/Winter 1987), pp.11-20.

REAL ESTATE VALUATION

Market Discounts for Undivided Minority Interests in Real Estate. Peter J. Patchin, CRE. Vol.13, no.2 (Fall/Winter 1988), pp.14-16.

REVITALIZATION

Investment Risk in Older Buildings with Zoning Nonconformities. Dudley S. Hinds. Vol.12, no.1 (Spring/Summer 1987), pp.36-41.

Maximum Returns Using Low-Income and Rehabilitation Housing Credits. Donald E. Bennett and Douglas S. Bible. Vol.13, no.2 (Fall/Winter 1988), pp.41-48.

SHOPPING CENTERS

Restrictive Clauses in Shopping Center Leases: A Review. Gene C. Wunder. Vol.13, no.1 (Spring/Summer 1988), pp.29-34.

Sequential Innovations in American Shopping Centers. S. Alexander Bül and Nicholas Ordway. Vol.12, no.2 (Fall/Winter 1987), pp.5-10.

SITE SELECTION

Site Selection vs. Site Evaluation: Techniques for Locating Retail Outlets. Terry G. Meyer. Vol.13, no.1 (Spring/Summer 1988), pp.25-28.

TAX REFORM

Returns Using Low-Income and Rehabilitation Housing Credits. Donald E. Bennett and Douglas S. Bible. Vol.13, no.2 (Fall/Winter 1988), pp.41-48.

The Demise and Resurrection of Installment Sales. Mark Lee Levine. Vol.13, no.2 (Fall/Winter 1988), pp.21-25.

The Three Boxes of Real Estate Life in the New Age of Taxspeak. Gaylon Greer. Vol.13, no.2 (Fall/Winter 1988), pp.17-20.

Authors:

Balogh, Colin; Corgel, John and Logan, Gregg T. Financial Planning for Real Estate Production Decisions. Vol.12, no.1 (Spring/Summer 1987), pp.1-5.

Barkan, Irwin, J., CRE. The Counselor Also Listens. Vol.12, no.2 (Fall/Winter 1987), pp.21-24.

Bennett, Donald E. and Bible, Douglas S. Maximum Returns Using Low-Income and Rehabilitation Housing Credits. Vol.13, no.2 (Fall/Winter 1988), pp.41-48.

Bible, Douglas S. and Bennett, Donald E. Maximum Returns Using Low-Income and Rehabilitation Housing Credits. Vol.13, no.2 (Fall/Winter 1988), pp.41-48.

Bond, Michael T. Housing Demand, Real Mortgage Rates and the Tilt Problem. Vol.13, no.1 (Spring/Summer 1988), pp.18-24.

Bond, Michael T. and Stillabower, Linda M. Renting, Home Ownership and the Accumulation of Wealth. Vol.12, no.2 (Fall/Winter 1987), pp.29-35.

Bouillon, Marvin L.; Newberry, C. David and Ockree, Kanalis A. Should Points be Paid for a Lower Home Mortgage Rate? Vol.12, no.2 (Fall/Winter 1987), pp.25-28.

Bül, A. Alexander and Ordway, Nicholas. Sequential Innovations in American Shopping Centers. Vol.12, no.2 (Fall/Winter 1987), pp.5-10.

Corgel, John B.; Balogh, Colin and Logan, Gregg T. Financial Planning for Real Estate Production Decisions. Vol.12, no.1 (Spring/Summer 1987), pp.1-5.

Corgel, John B. and Rogers, Ronald C. Corporate Real Estate Joint Ventures and Security Price Performance. Vol.12, no.2 (Fall/Winter 1987), pp.1-4.

Crean, Michael J. and Farber, Joseph, CRE. The Transition to Counseling: A Growth Model for Appraisal Firms. Vol.12, no.2 (Fall/Winter 1987), pp.36-40.

Crellin, Glenn. Another Viewpoint: Housing Affordability Index—What It Is and Isn't. Vol.13, no.2 (Fall/Winter 1988), pp.50-51.

Curth, J. Christopher, CRE. Divestiture Counseling for Mortgages in Possession. Vol.12, no.1 (Spring/Summer 1987), pp.29-31.

Ebert, Larry P. Lease vs. Buy: The Corporate Perspective. Vol.12, no.1 (Spring/Summer 1987), pp.15-20.

Farber, Joseph, CRE and Crean, Michael J. The Transition to Counseling: A Growth Model for Appraisal Firms. Vol.12, no.2 (Fall/Winter 1987), pp.36-40.

Farrell, L.M. Easy Access Computing Capacity Means Increased Liability for Real Estate Appraisers. Vol.12, no.2 (Fall/Winter 1987), pp.41-48.

Farrell, Michael. Speculation in Canadian Housing Markets. Vol.13, no.2 (Fall/Winter 1988), pp.1-10.

Greer, Gaylon, E. The Three Boxes of Real Estate Life in the New Age of Taxspeak. Vol.13, no.2 (Fall/Winter 1988), pp.17-20.

Hinds, Dudley S. Investment Risk in Older Buildings with Zoning Nonconformities. Vol.12, no.1 (Spring/Summer 1987), pp.36-41.

Hulley, Robert B., CRE. Canada-U.S. Free Trade Pact May Benefit Counselors. Vol.13, no.2 (Fall/Winter 1988), pp.49-50.

Jones, Robert W., CRE. How Real Estate Stabilized a Small, Black College in Mississippi. Vol.12, no.1 (Spring/Summer 1987), pp.32-35.

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