THE NEW REAL ESTATE MATH: 1 + 1 = 1½

by Samuel Zell

The prospects for the U.S. real estate market in the 1980s will be greatly affected by major changes in the use and application of real estate assets. An impending crisis in the ability to pay will result in a fundamental alteration in the overall economics of real estate ownership.

Over the past 25 years, the underlying considerations in real estate ownership and occupancy have been colored by expectations of continued inflation. In contrast, the '80s are perceived as a time of slow growth, high interest rates and deflation in the real estate markets, which will have profound consequences throughout the economy. Success and economic survival in the real estate business will require us to make major modifications in underlying assumptions and to charter new courses reflecting these rapidly changing circumstances.

Occupancy Costs To Increase

The demise of long-term, fixed-rate debt as an integral part of the industry is just beginning to affect the real estate economy. Conventional wisdom foretold the disappearance of this form of financing, but failure to analyze the dramatic impact that this would have on occupancy costs will prove to be an expensive error. Costs of occupancy will rise significantly because of the volatility of underlying interest rates, the higher risks of variable rates, and the more rapid amortization of debt. These rising occupancy costs, in absolute terms and as a percentage of all expenses, will force lessees to reexamine patterns of usage and adjust accordingly.

Real estate feasibility has historically been determined by evaluation of prevailing rates, absorption, costs of production and the cost of dollars. This method of analysis, however, fails to evaluate the impact on the user's ability to pay. Market depth consideration at varying occupancy cost levels has been omitted at the level of entrepreneurship, which can result in overbuilding despite statistical support for increased demand.

An example of this occurred in 1972 and 1973 when apartment construction averaged over 1,000,000 units per year. The majority of this construction was directed at the upper end or luxury segment of the market. Development decisions were related to the costs of production and financing, not to the depth of the population able to afford the product. The massive amount of new luxury housing decimated occupancy rates nationwide and led to the demise of the apartment development community. Its ripple effect contributed to massive losses by REITs, their lenders and stockholders. If inflation had not accelerated significantly, to revise renter income levels, those units would still be vacant today. The current scenario in luxury office development is a repetition of this disaster. Developers assume in their feasibility that users continually upgrade facilities as they become available. They focus on the viability of the development, not its affordability.

Mass discount retailers such as K-Mart implemented market strategy that was based on the availability of cheap financing. Low occupancy costs as a percentage of sales encouraged use of multiple stores as the vehicle for market penetration. Just six years ago net leased retail at a gross rental of two dollars per square foot per year was commonplace. In 1982, a similar space required a minimum of six dollars net per square foot per year, which altered the costs of occupancy by four and five times the inflation rate during that period. The consequences are now visible.

Occupancy costs in the '80s are likely to be as disruptive for business planning and development as OPEC and oil price costs of the '70s. Energy costs rose dramatically as demand began to outstrip the supply. As the price of

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energy rose, elasticity of demand led to conservation and reduction of consumption. Real estate is no different but the focus is not on the availability of brick and mortar, but the availability and cost of capital. As capital goes from surplus to shortage, it is having an exponential impact on the costs of occupancy. Major business strategy will require drastic adjustments and major users of space need to alter long-term strategic goals and methods.

Tenants To Reconsider Space Needs

The impact of occupancy costs also affects the individual. As the cost of shelter requires a greater percentage of the disposable income, he/she is reevaluating previous ideas on the amount and quality of space required. Tenants will look at rent costs as a percentage of their disposable income and decide whether or not they are willing to give up leisure activities, transportation and/or a vacation for larger or more elaborate living quarters.

Between 1977 and 1982, the number of nonsubsidized rental units built totalled under 1,000,000 units, compared to an average of 800,000 units per year in the first half of the '70s. Despite an 80 percent drop in production, the overall occupancy factor increased by only about 2 percent. Concurrent with the reduction in supply, the average rental increased between 60 and 80 percent.

Based on the production of the last five years, the overall rental occupancy factor should be close to 100 percent. Instead, occupancy is 95 percent and units are readily available in most markets. The population's adjustment to these circumstances is seen in the type of units that are now vacant (one bedroom and efficiency units) versus those that were vacant in 1977 (two and three bedroom units). Even in the weaker markets of 1973 and 1974, the occupancy proportion of one bedroom and efficiency units was always significantly greater than the larger units. The current vacancy shows that tenants are more willing to double up and accept less space and less privacy rather than forego or lessen their living standards. In the rental housing market, the consumer is making radical adjustments. Doubling up and even tripling up is endemic to compensate for the higher occupancy costs.

Household formations—the generating engine for occupancy of rental housing—have been propelled not only by population growth but also by the '70s phenomenon referred to as the "unbundling" process, that is, children leaving home at an earlier age, retired people maintaining single-purpose households and, of course, the rampant growth in the divorce rate that has led to a multiplication of households. Over the last five years, a new process of "rebundling" has appeared: multiple occupancy of rental units by two, three and four unrelated people; a greater number of young people who enter the job market but continue to live at home; and a return to the tradition of single retired parents who live with children rather than maintain a distinct dwelling unit. These factors are already having a significant impact on the housing market. The current availability or oversupply of one-bedroom apartments as compared to those with two and three bedrooms reflects this change.

In the next five years as the cost of rental housing continues to rise, this process will probably accelerate and more units will be released in the market. Units previously occupied by unbundled users will maintain a continuing supply of vacant units. From 1970 to 1978, the unbundled population in the housing market grew at a 5 to 5.5 percent rate. Since 1978, this rate has dropped to 3 percent. This adjustment by the population to a more intense use of dwelling units versus living alone has not been enough to overcome increasing costs. Consequently, new developments during this period have attempted to achieve affordability by a significant reduction in the size of these units. Within the next 10 years, the unit sizes probably will be further reduced to reflect the costs of occupancy, which serves to demonstrate that when the price of the space rises exponentially, the population will make whatever adjustments necessary to maintain its living standards.

Impact On Single-Family Market

The single-family market is similarly affected. In an inflationary atmosphere, decisions to buy single-family homes were influenced by the feeling that the single-family home not only provided shelter but was also a good investment. For these reasons, buyers were willing to overextend themselves.

This scenario has changed radically in the '80s. The Bureau of the Census listed the average "young family" income in 1970 at $9,602; the average housing unit was selling for $31,300, which required a debt service of $2,207. The average payment as a percentage of income was 23 percent. By 1981, the average "young family" income was $21,150; the average housing unit was selling for $76,500 with debt service at $8,256. These payments required 39 percent of the income generated. The extraction of approximately 16 percent of total income for housing costs has materially impacted cash available for other consumer expenditures. The current housing depression, therefore, is not only attributed to a recessionary economy, but to a realization that the breaking point in terms of ability to pay has finally been reached.

Surplus Of Space Predicted

The results of this crisis will immediately put to rest the myth that there is a national shortage of housing, office and retail space. In fact, an oversupply in all types of real estate more accurately reflects present circumstances. American real estate users have been consuming more space than they need.

In the office space market, the average number of square feet per employee in the U.S. is approximately 225 square feet. Worldwide, the average number of square feet per employee is closer to 100. As occupancy costs rise, the employer will be forced to reduce the amount of space per employee in order to curb the unfavorable ratio between the productivity of the employee and occupancy costs. Office design will shift radically from an attempt to achieve the most suitable environment for high productivity to the reality that such an objective must produce a

sane cost-benefit relationship. The U.S. office market has four and five times the proportion of private offices that obtains in the rest of the world where workspace is limited to function and meetings are held in communal conference rooms. Costs will force U.S. employers to adopt similar configurations.

As a result, not only will there be limited growth and demand for new office space in the '80s, but as this focus on office space changes and the number of square feet per employee is reduced, major space now occupied will become surplus. Furthermore, faced with these rising costs, employers will attempt to economize by the use of back-office, satellite operations. In the era of the electronic office, it is now feasible for a company to base part of its employees in a suburban or lower-cost, older facility and connect them electronically with the high-cost, high-prestige executive office.

An example of user economics is seen in law firms today. In 1972, a first-year lawyer who was employed by a major New York law firm earned $25,000 per year; cost of occupancy for this lawyer was $2,700 per year, at $12 per square foot. By 1982, the first-year lawyer was being paid $43,000 per year, but the cost of occupancy was $9,000, at $40 per square foot. Cost of occupancy represented approximately 11 percent of the base salary of the 1972 employee. In 10 years, the cost of occupancy increased over 350 percent, while salary rose only 80 percent. This comparison demonstrates the tremendous squeeze that increased occupancy costs have put on profitability. The user is forced to employ whatever means are necessary—less prestige, less square feet per employee, satellite operations, etc.—to bring down the overall occupancy costs.

Similar patterns exist in the retail sector. As the cost of energy, salaries and inventory financing escalate, retailers have been forced to adjust their *modus operandi* to maintain profits, altering strategic goals and downsizing occupancy requirements. A 1967 to 1970 vintage enclosed mall of 700,000 square feet would typically include 160,000 square feet of mall shops, representing 30 different retailers and averaging approximately 4,000 square feet per store. In 1982, a regional mall with 160,000 square feet of mall shops would be occupied by 50 retailers who occupied an average of only 2,500 square feet per store. The 1967 mall grossed approximately two dollars per square foot; the 1982 mall netted approximately $16 per square foot. As the cost of occupancy escalated rapidly over this period, the retailers adjusted by downsizing the amount of space required and increasing sales per square foot. This strategy made it possible to generate similar profits in 25 percent of the space.

The corollary benefits accruing to the retailer were less employees, less pilferage, and significantly less inventory accumulation. The smaller stores also reduced capital required for initial fixturization. In addition, retail chains recognized that their days of being on every street corner are over. Instead, they demand greater advertising and promotional efforts to attract a higher volume to fewer locations.

In the single-family "For Sale" housing business, major developers are beginning to construct "U" shaped single-family houses that potentially could be used by two separate, unrelated families who share a common kitchen, living room and dining room. While not uncommon in the rest of the world, this type of multiple occupancy is quite foreign in the U.S. and will require major social adjustments if it becomes widespread. It seems clear, though, that the population is willing to make major adjustments in shelter lifestyle in return for maintenance of its current standard of living. Adaptability suggests that shelter is not as high a priority as overall standard of living. Being "house poor" is rapidly going out of fashion in a disinflationary atmosphere.

The average number of square feet in new single-family homes has been declining dramatically over the past five years. Additional adjustments will be necessary in order to maintain any form of single-family housing construction in the U.S. Builders will be required to evaluate fundamental changes including carports instead of garages, slab construction instead of basements, zero lot line and townhouses rather than single-family detached, smaller and less numerous appliances, the elimination of subdivision amenities such as tennis courts, swimming pools and other leisure centers.

Focus To Shift To Protection Of Occupancy

The real estate survivor of the '80s will need to totally readjust his/her thought patterns. Paramount in planning and development will be the soon-to-be availability of real estate that is currently occupied. Affordability and depth of the user's ability to pay will replace the grandiose and often wasteful projects developed in the '60s and '70s. The real estate investor will focus more on current yield as an investment objective, and less on future increased revenues. The internal rate of return methodology, so prevalent in the real estate community today, will lose its appeal. The achievement and maintenance of occupancy will be the foremost concern.

Leasing strategies will change radically as concern for the protection of occupancy supersedes the desire for future rental increases. In the '60s and early '70s, office leases were negotiated for long terms in order to protect the owner from any fluctuations in occupancy. By the late '70s, a period of high inflation, leases were shortened, as landlords became more interested in gains in the short term without concern for future occupancy demand at expiration.

The attractiveness of office buildings, predicated on the amount of new term tenant lease expirations, will diminish, reversing the pattern of the last five years. Buildings that are well tenanted with long-term leases will become more attractive as concern for demand overcomes concern for future ability to increase income. This altered focus is likely to result in a system similar to the European system, in which a tenant executes a long-term

lease with rental reviews every three to five years. The system maintains occupancy without the destruction of purchasing power. Long-term leases will further accelerate the movement from gross to net, thereby putting the burden of adjustments and taxes and operating costs directly on the tenant, reducing the landlord to the role of a collection agent.

Further concentration of retail in growing regional centers will reduce the viability of the neighborhood center. Retailers will reject multiple locations, even when neighborhood locations provide lower costs of occupancy, in order to avoid other costs of operation. Thus, major regional shopping centers will grow in value and in volume as they slowly take over the market from smaller centers; successful retailers will achieve greater volume and a higher margin per sale from fewer locations.

Emphasis On Regentrification Opportunities

Most major elements of real estate will develop two-tier markets. In the past, new construction occupancy has been achieved by renting space to tenants in less modern facilities, which is an effective system when the spread in cost between new and old is no greater than 20 percent. Today, however, the spread between old and new buildings is as much as 200 percent. Office developers are thus no longer able to offer moderate concessions in order to move tenants from the old to the new buildings. Tenants who can afford to occupy old buildings will no longer be candidates for the new buildings. This situation will create ample opportunities for the acquisition of old, well-maintained buildings, which should outperform the new, more expensive ones over the next ten years.

In residential and industrial real estate, also, tenants will become more conscious of occupancy costs and accept older, somewhat less prestigious buildings. In similar fashion, more and more users will put their prestige or executive offices in a new building and their back-office operations in an older building connected electronically with headquarters.

Escalating occupancy costs will reduce corporate and personal mobility. A slowdown in the growth rate of the Sunbelt cities is expected. Rising costs of relocation will help preserve the service-based economies of the Midwest and Northeast, which were previously suffering from an erosion of population and industry. The significant amount of new space created in the Sunbelt, in anticipation of the continued demographic changes of the late '60s and early '70s, will serve to weaken these markets; return on investment in these fashionable parts of the country will be lower in the next 10 years.

A new series of criteria for analyzing location will be developed by real estate investors. Rising costs of occupancy increase the desirability of major multi-use concepts or areas where high density and multiple uses will cause the concentration of these facilities. In-place infrastructure will command a premium over infrastructure yet to be built.

Increased occupancy costs will also encourage conversion of uses. Embryonic efforts are underway to acquire and convert industrial tilt-up buildings in good locations to office space. Tilt-up industrial buildings, often constructed for between $10 to $20 per square foot, can be converted to rough office space for an additional expenditure of approximately $10 per square foot. For a total investment of $25 to $40 per square foot, converted office space can provide a back-office operation or incubator office space at rental rates of about $10 per square foot, approximately one-third the cost of new, first-class office space.

Similar opportunities in major cities exist in converting industrial buildings close to the central business district to residential units. New York City is leading the country in this type of conversion. Industrial space can often be converted to residential at 50 percent of the cost of new residential space. At the same time, the costs of demolition are avoided and space is provided in a semi-prime location.

Regentrification efforts are just beginning and will be a focal point of real estate development in the '80s. As the cost of new construction continues to outpace the ability to pay, more efforts will be directed toward preserving and reutilizing existing structures in major metropolitan areas, especially those cities in the Midwest and Northeast where a supply of this kind of space exists due to the exodus of the population and employers to the Sunbelt areas.

All of these factors are extremely bearish on investment in raw land—a traditional form of investment for speculators and real estate investors. The appreciation anticipated from the ownership of land, particularly on the outskirts of major metropolitan areas, has been highly touted as an inducement to investment. This appreciation, though, is predicated on anticipated growth in new buildings and, thus, its absorption. The factors affecting the real estate market in the '80s will decrease the absorption rate of land throughout the U.S. The regentrification of existing buildings combined with the crisis in the ability to pay, and the realization by municipalities that the costs of building new infrastructure do not provide an adequate rate of return, will lead to higher allowable densities. A reduction in the absorption of land and a decade of high interest rates will impact the perceived value of land, reducing its attractiveness in terms of total rate of return. Land absorption will also be affected by the high costs of new construction and the allocation of available capital for investment opportunities other than new real estate.

The assumptions that underline these changing conditions are having a major impact on real estate as a prudent investment. The next 10 years will reflect a sharp transition in the industry as affordability comes to dominate real estate decisions, resulting in a decade of much slower development as the cost of construction becomes prohibitive relative to the user's ability to pay. Real estate investment in the '80s will move away from cost creation and focus on whether or not market depth is sufficient to support the number of users at the required costs.