LAND INVESTMENT IN THE 21ST CENTURY

by James R. MacCrate, CRE, & David L. Peterson

This article examines some of the ways that U.S. land investment in the 21st century will be different from what we know today. We will look ahead five to 10 years to predict which of today's practices and patterns will have changed - and how dramatically. We will also examine how these changes could affect returns and investment strategies.

Before beginning this look into the future, we describe the basic elements of risk and related strategies that are always present in land investment. We then review recent history to see how land investment has changed over the past 10-15 years. This information provides a baseline from which we can analyze expected changes in risk elements and strategies and their effects on investment returns.

BASIC ELEMENTS OF RISK AND STRATEGY

Risks

Land investment is always subject to a number of risk factors. The character of risk changes as development moves forward. The types of risk associated with land investment include:

- Market risk - supply and demand fluctuations. As the window of development opportunity becomes smaller, timing becomes more important and market risk may increase. On the other hand, as the quality of information improves and as market data can be retrieved and analyzed more quickly – almost in real time – market risk may be reduced in some instances.
- Governmental risk – This type of risk is becoming increasingly important as more jurisdictions regulate more aspects of the development equation more closely. Regulation by its very nature limits what the owner can do with land. Simple zoning and subdivision

ABOUT THE AUTHORS

Jim MacCrate, CRE, *has an independent real estate and financial investment consulting firm in the New York metropolitan area. He was formerly a director in the Real Estate Group at PricewaterhouseCoopers LLP in New York, where he was responsible for conducting the annual National Land Investment Survey. Mr. MacCrate has supervised and performed real estate valuation and consulting assignments on all property types, real estate operating companies, family limited partnerships, allocation of shares for UPREITs, swaps and portfolios. (E-mail: JMacCrate@aol.com)*

David L. Peterson *is an independent Internet business advisor, with*

(Continued on page 24)

regulations have now been expanded in many jurisdictions to include growth impact fees, school construction contributions, affordable housing exactions, and many other potentially costly requirements.

- Financial risk – The willingness of lenders to back projects and the percentage of value and interest rates at which they are prepared to lend are always important variables. Some but not all financial risk can be hedged against. The recounting of recent land investment history, in a later section, shows how fluctuations can impact markets.

- Environmental risk – Some environmental risk events can be hedged or insured against by pre-purchase due diligence, but some so-called "Acts of God" cannot be. Accumulated pollution from past decades and even centuries is an ever-present and significant factor in development calculations.

- Operating/development risk – A land owner's investment return and profit often depend upon the expertise and reputation of the developers, builders, and contractors with whom he/she is associated. Development is a business and is thus subject to normal business risks which good management can minimize.

Strategies

As land investment moves from raw land status through the acquisition, approval, zoning, subdivision, and other regulatory approval processes, the amount and character of risk will change. The wise investor develops strategies to minimize, hedge against, and otherwise deal with these risks. At least three basic strategies can be identified, each of which presents a different risk/return profile.

The first strategy is to purchase large tracts of unsubdivided land with the intent to hold for long-term anticipated future development. Land purchases of this type are typically not conditioned on approvals. The owner who may or may not be the ultimate developer, assumes all the approval risk in the hope of increasing overall returns. Land investment surveys conducted over the past decade by Price Waterhouse LLP (now Pricewaterhouse Coopers LLP) confirm the speculative, high-risk, high-return nature of this strategy. Survey results have shown expected returns in excess of 50 percent, in contrast to developers' anticipated median returns of less than 30 percent.

The second strategy is to purchase land that is approved for development but remains unimproved. The owner assumes the risks associated with subdividing the land and installing infrastructure. In this case market risk is of greater concern. If the market shifts or weakens the landowner may be caught with obsolete layout or too many parcels. Expected pre-taxed unleveraged returns on these types of land investments have usually ranged between 15 percent and 30 percent. Market conditions, (for example, the housing affordability index), and the short-term interest rate environment can dramatically affect return levels within this range.

The third strategy involves purchase of finished approved parcels that can be developed within one to or two years. Landowners who adopt this strategy are often, but not always, the developers of the ultimate product. Market and financing risk are therefore of greatest concern to this type of investor. Historically, expected returns for such investments have ranged from nine percent for build-to-suit projects to more than 15 percent for speculative ventures.

Whichever strategy is chosen, ongoing micro-market analysis, both economic and political, is an important part of the landowner's risk management activities. This can often take the form of market analysis, with full appraisals required only when significant micro-market changes have been noted. Even though land investment may be financed globally, the factors that determine investment risk and land value – such as political decisions, economic conditions, and buyer preferences – will always remain primarily local.

In the next section of this article, we turn to the analysis of these investment risks and strategies in historical perspective, to see how the nature of risk, the levels of risk and the land investment industry itself have changed in recent times.

HISTORICAL PERSPECTIVE

The Mid to Late 1980s: Time of the Cowboy

The mid- to late-1980s will be remembered as one of the "go-go," "cowboy," boom eras of American real estate. Transactions and development took place with minimal market or regulatory discipline, especially in Texas and the Southwest, but also nationwide. Massive amounts of savings and loan-financed development took place with fees in mind rather than ultimate marketability of the end product. Land "flips," multiple sham purchases and

sales, (some even on the same day), artificially inflated land values in a number of markets. The result was a vast wave of real estate development and investment. Much of this development was ill-conceived and unjustified at the time. All U.S. markets, as well as the real estate regulatory and financing environment, were affected for many years.

Naïve buyers, most notably the temporarily wealthy Japanese, were eager buyers of American real estate. Unsophisticated Americans, many of whom were highly skilled in their own professions but unfamiliar with the ways of real estate, also found themselves trapped in investments with steadily decreasing returns in dramatically overbuilt markets.

The Early 1990s: Rationality Begins to Return

By the early 1990s, the boom of the 80s had begun to collapse. State and federal regulatory actions, such as those of the Resolution Trust Corporation, resulted in the closure of many lending institutions and the liquidation of their real estate holdings. Properties were re-valued downward approaching true market value and repackaged as portfolios to be resold to investors. Regulations governing lending institutions and the appraisal industry were tightened.

The resulting large overhang of undeveloped, developed, and subdivided land placed a lingering cloud over real estate development of all kinds. This limited the launch of new projects for many years. The demand from Japanese buyers also dried up as the Japanese economy entered a decade of contraction and weakness from which it is only now starting to emerge.

Markets shifted in a number of metropolitan areas. In many areas the luxury housing markets collapsed. Lower priced, smaller lot, higher density product came into favor. This often led to costly and time-consuming subdivision redesign with the need to deal with amenities that were appropriate for an earlier decade but represented over-improvements in the early 1990s.

The Mid- to Late-1990s: The Rise of the Public Companies

During the mid-1990s the American economy entered a period of ongoing strength. Slowly but surely the excess development of the previous decade was absorbed. Projects that had been abandoned or delayed were resurrected, often in financially stronger hands.

As land investment moves from raw land status through the acquisition, approval, zoning, subdivision, and other regulatory approval processes, the amount and character of risk will change. The wise investor develops strategies to minimize, hedge against, and otherwise deal with these risks.

At the same time, American real estate became increasingly a "public market" phenomenon. Real estate investment trusts (REITs) and publicly traded real estate companies became more important in the industry. They brought high levels of capitalization that permitted them to accept the high risks inherent in the land development process.

Smaller, often family-owned businesses and localized entrepreneurs were replaced and in some cases absorbed by large, national, well-capitalized, publicly-traded entities. This shift has affected all aspects of real estate, land development and investment among them. Traditional sources of real estate financing have been replaced by Wall Street-based capital raising techniques.

The transition to institutional dominance has not been a smooth or easy one. Even within the past two years, advances and declines in share prices of REITs and public companies significantly affected their investment strategies and their ability to raise capital. The short-term investment horizons of stock and opportunity fund investors have led to correspondingly short-term development planning horizons of REITs. They are focused on using all their assets – including land – productively.

Home building firms, many of them large publicly-traded companies, are similarly affected by short-term share price and earnings pressures. Like REITs, they are interested in maintaining minimal land inventory, using land only as they can build on it. This creates good market opportunities for those land investors who can function as land suppliers to the construction industry. It is expected that housing demand will remain strong, at least in the short-term. Therefore, investing in land for ultimate use by the builder would appear to make economic sense in many cases.

By 1997, as existing land inventories were absorbed, there was a mini-rush of investment into land that could be used immediately for REIT projects. Well-capitalized REITs allied with or purchased developers who had large land inventories and the skills to convert them quickly to profits. New institutional funding vehicles sprang up to finance these land purchases. Although some concern was expressed that this investment might lead to overbuilding, that fear turned out to be largely unwarranted. Market and regulatory controls were more in evidence than they had been in the late 1980s. Returns on land investment declined as many buyers competed for the limited supply of available holdings. In particular, demand increased for smaller, fully-entitled, build-to-suit projects which provided quick profits at reduced risk.

In late 1998, weakness in Asian, Russian, and Latin American economies resulted in short-term declines in the global markets. These market declines affected REITs and commercial mortgage-backed security (CMBS) firms, slowing the flow of investment into land. These publicly-traded firms concentrated on building projects that could be brought to market immediately. Land investment could still be financed, but usually only when significant equity was contributed and legitimate end users identified for specific projects.

Even in this time of caution, there have been occasional outbreaks of aggressive land development lending by financial institutions. These new projects are in areas where housing markets are strong, as in some Southeast U.S. metropolitan areas and Southern California. Regulators face the continuing challenge of monitoring investment flows to insure that development proceeds, but not in an overly risky manner.

Reflections on Recent History

Reflecting on the events of the past 15 years, one wonders how much has really changed. Several of the land investment projects now being financed and sponsored by Wall Street and institutional capital sources, although presented in professional looking packages, may carry as much risk to the typical investor as some of the high-flying deals of the mid-80s. The need to understand the underlying fundamentals of any real estate investment proposal, no matter how packaged, remains critical. Wall Street is just beginning to develop the expertise to understand the subtle nuances of real estate investment, including the more speculative land development process.

The "caution light" warnings and underwriting guidelines that are now being issued by regulators to lending institutions under their jurisdiction bring back memories of the 1980s. One hopes that today's lending institutions and Wall Street are paying attention and that today's regulators perform more professionally than their counterparts of 15 years ago.

The experience of the past 15 years also illustrates the importance of "deep pockets," patience, and cycle analysis in land investment. Investors who were able to hold on through the gyrations of the late 1980s and early 1990s often reaped significant rewards in the late 1990s. Investors who were able to buy into land investments at distressed prices in the early 90s were able to enjoy high returns – in that time period generally in excess of 30 percent for approved but unimproved land.

Finally, one wonders whether some of the regulatory actions of the late 80s and early 90s were perhaps too hastily undertaken - especially where land investment was concerned. Some projects that were once RTC distress properties have become successful developments of the late 90s, providing significant returns to the investors. This suggests that a more flexible and patient regulatory approach might have brought more benefit to both lending institutions and U.S. taxpayers.

Trends of the 90s Provide A Preview of the 21st Century

The late 1990s have seen the beginnings of trends and phenomena that look as though they will have staying power into the next century. These include: use of the Internet as a presentation, marketing, and transaction tool; increased political and environmental concern in the form of so-called "smart growth" initiatives; and the pervasive influence of computing and communications technology affecting the construction and operations of all types of real estate.

The successful 21st century real estate development company will employ these technological innovations to design, develop, and operate real estate projects. Finished products will include technological innovations as amenities to attract potential buyers and end users. Real estate information of all kinds is now cheaper, more readily available, and better able to be precisely analyzed.

While these trends may benefit consumers, they may prove unsettling and threatening to traditional

real estate professionals, such as developers, appraisers, brokers, management consultants, and information providers.

Looking Ahead to the 21st Century

Many of the practices of the 1990s will remain the same over the next five to 10 years. The land conversion industry will continue to perform in predictable ways: upgrading raw land to pre-development, approved, subdivided, and improved status, and moving it into production — especially in the residential sector. Large planned community holdings, such as Newhall's Valencia in southern California, Metro Dallas' Las Colinas, and the massive Del Webb resort/retirement communities across the Sun Belt will work through their development plans, phase-by-phase, to completion. The steady flow of small, localized transactions will also continue.

But at the margin, perhaps less clearly visible, important changes are underway. The social, economic, and political forces that are bringing these changes about are likely to pick up momentum, combine, and interact, becoming more significant with each passing year of the 21st century. We discuss some of these forces and changes in the next sections.

A "MEASLES" URBANIZATION PATTERN: TELECOMMUNICATIONS OPENS UP MORE LAND AT A DISTANCE

We have all read the articles about people running small businesses from their homes far from cities and suburbs and off the traditional grid. In the next five to 10 years a combination of technological advances and cultural changes will make this lifestyle more common. Freestanding scattered development will become a mainstream trend as more areas of the country gain high-speed, inexpensive access to the Internet. Reductions in cost will spur the trend. The coming of wireless connectivity to more locations will speed dispersal even further and faster.

This trend combines with the "bundling of uses" (see below) to make more land developable with less infrastructure investment per unit. Small-scale, dispersed development utilizes and creates more demand for "package plant" technology. Individualized sewer and water treatment and renewable energy facilities will combine with environmentally-conscious lifestyles that reduce generation of waste and energy demands. These trends mean that more land will become available and attractive to end-users. This can create a downward pressure on land prices.

Many of the practices of the 1990s will remain the same over the next five to 10 years. The land conversion industry will continue to perform in predictable ways: upgrading raw land to pre-development, approved, subdivided, and improved status, and moving it into production — especially in the residential sector.

CULTURAL CHANGES FREE THE WORKERS

When employees work for one employer who expects them to be in an office five days a week, they are forced to live nearby. As employers become more flexible about where and when their employees work, and as employees increasingly patch together "portfolio work lives," serving multiple employers, the bonds between home and workplace will loosen. The work force of the 21st century will have more work options and therefore more residential options. Employers will have more options as well in creating space.

LAND USE CATEGORIES MIX AND BLEND

Advances in microchip, telecommunications, and Internet technology increasingly make possible the multi-function residence or "home plus" — a place where families not only live, but also work, shop, learn, and entertain themselves. As this happens, it will affect the way facilities are developed for all non-residential land uses.

There is still demand for the traditionally located and configured office building. Some new or remodeled offices are being designed for the mobile, transient worker - with hoteling, office-sharing, communal meeting spaces, and steadily shrinking square footage per employee. Rather than one office building, an employer may now have multiple smaller locations, where employees can "plug in" for short time periods. More and more employers will invest in laptops, rather than office space, and let employees decide where and when to "office" themselves. Only time will tell whether the traditional or "new style" offices will prevail. Some flexible office experiments have been successful. Others have generated strong employee resistance. The two styles may continue to exist side by side – sometimes within the same building.

Retail spaces will increasingly be used for many things other than shopping. For the time-constrained shopper, pure shopping space will expand to become "shopping plus" - shopping plus entertainment and plus dining. Retail facilities will also increasingly include spaces for assembly, entertainment, and socializing. The bricks and mortar retailer must offer something more and different than the on-line retailer.

Another example of blending of uses is that of resort land combining with retirement communities. This combination will be more evident, especially in the Sun Belt. It will make it increasingly possible for people to "age into" a community over time, perhaps moving from section to section within it.

INTERNET AUCTIONS WILL CREATE A GLOBAL LAND MARKETPLACE

In the 1990s, land marketing has been done the traditional way - with locally-based sellers dominating localized markets. Now, the same global Internet auction capability that has created worldwide trading environments for Beanie Babies, antiques and many new kinds of products is beginning to be applied to real estate and land marketing.

The effects of these new and evolving technologies are not yet clearly visible. By looking at the Internet auction experience with other commodities on sites like EBay we can make some educated guesses about the future impact on land investment and marketing. More parcels will be offered for sale over the Internet. These offerings will be supported by information-rich web sites connected to databases that provide sophisticated price comparisons, detailed interactive maps and live "web-cam" visuals. Standards for land information will be created to reassure potential buyers. With these increased standards in place more buyers will be attracted to the ever-increasing number of offerings.

These changes could bring about a gradual reduction in the role of localized brokers and appraisers — similar to the changes currently impacting the travel-related industries. Intermediaries will have to provide value-added services to transactions in new and different ways. Publicly accessible transaction databases will soon provide the same kind of information that appraisers, brokers, and lawyers provide today. The information, however, will be cheaper, faster and more accurate in many cases.

"Personal service" in this new on-line marketing and information environment will mean user-friendly web sites that let buyers and sellers analyze and transact business quickly, smoothly, and directly. New on-line databases will include all the information that the market participants need to complete the transaction including, but not limited to topographical maps, flood maps, surveys, market information, and legal documents. These sites will cater to both U.S. and international investors. All real estate professionals will have to re-examine their roles in land development and sales. Technologically sophisticated, well capitalized firms are developing and maintaining web sites that could make many real estate professionals obsolete.

As land information becomes standardized we can expect to see the creation of worldwide investment land portfolios. These will be marketed to investors in much the same way that pools of mortgages or auto loans are sold today. This type of packaging will appeal to a larger audience of investors who want to participate in the higher returns that are offered in land investment.

This is not the first time land has been marketed at a distance. The American West is littered with "dead" mountain and desert subdivisions where lots were sold internationally and the promised infrastructure was never developed. Will Internet auctions bring a repeat of these fiascoes? We think not. Regulatory mechanisms at all levels have been strengthened in recent decades. More information is readily available. Furthermore, Internet discussion groups and message boards serve as on-line watchdogs, helping to sort out the real from the fraudulent. Some risk, however, will always remain.

MARKET OPENNESS WILL INCREASE BUYERS' COMFORT LEVELS

People shopping for real estate on the Internet begin with the simplest transactions first and then move steadily up the price and complexity scale. First explorations usually include apartment rentals, hotel room bookings, and time-share or campground vacation bookings. This has already begun.

The next step might be investigations of alternative land investments. When the buyer has chosen a site, his/her custom home can be designed on-line and the prototype viewed in three dimensions. Bidding for construction contracts can then take place on-line. Finally, both architect and owner can watch and monitor construction as it proceeds, via live

on-site cameras, even if they are at a distance from the property.

These advanced applications are not commonplace today but they are technically feasible. The rapid pace of the Internet evolution reminds us that what is experimental today can become widespread and commonplace within a year or two.

TECHNOLOGY AND POLITICAL FORCES WILL COMBINE TO SPUR REUSE

The future is not totally one of far-dispersed, decentralized, small-scale, individualized "measles" development - though there will certainly be a lot of that. At the opposite end of the spectrum, an increasing number of communities will work on public/private partnership projects, intended to reclaim once-developed land for various types of reuse.

On the positive side, improved reclamation technology is making it possible to redevelop inner-city lands that now lie unused because of hazardous waste and similar pollution issues. Communities in most states have the legal power to assemble land, where parcelization may have limited development feasibility. Some funding is being made available to encourage reclamation efforts. However, these inner city programs will be hindered - as they have always been - by the serious problems of crime, security, and social breakdown that exist in most cities.

RECYCLING THE LAND FROM THE COLD WAR ERA

More progress is likely to be made in recycling and re-using the vast acreage of land that had been devoted to military facilities during the Cold War and previous wars. Examples include Glenview Naval Air Station, IL, Pease AFB, NH; March, Norton, and George Air Force Bases in Southern California. These bases have the advantage of being located in suburban and ex-urban locations, where they can benefit from more generally positive trends and conditions. Dealing with the federal government on these re-use issues is not simple — but seems to be becoming easier with the passage of time. Some of these military and military contractor land holdings could well become the large-scale, multi-use planned communities of the early next century.

NEW LAND INVESTMENT VEHICLES AND INSTITUTIONS EMERGE

In the final years of the 1990s we saw the beginning of a new institutional environment for land investment. General and special purpose REITs, public companies, opportunity funds, and others became dominant players in the land market. Their involvement in the land market followed - and fed - their dominant position in the development of buildings.

REIT and public company dominance will likely continue. It is not clear what impact this will have on land prices and returns. The larger and more geographically diversified REITs and other real estate operating companies will be able to treat land as a "factor input" in the way that manufacturing companies treat raw materials or that retailers treat just-in-time inventories. Developers will time their purchases and structure their options to achieve a reliable flow or inventory of land at the best price.

We are also seeing the creation of more specialized land-holding or warehousing entities. For example, using a REIT format, companies have been established to hold only the land under car dealerships or movie theaters. They hold the properties and intend to reuse the sites when the existing uses no longer offer the highest returns. We can expect this specialization of function to continue. A logical next step will be entities set up to hold the land that non-real estate industrial companies have removed from their books and asset bases.

We can also expect more development companies to invest in land with the intention of creating a series of different related products on the land as demographics and demand patterns change over time.

A hospitality firm might initially develop "boomer resort" facilities, then move to more care-intensive retirement/assisted living facilities. They would retain the ability to revert to other uses on part of the property as the boomer "age wave" ebbed.

Following this example a step further, it is likely that occupancy of retirement communities could be sold globally on a time-share basis - as vacation accommodations are today. We can expect to see more use of the time-share concept for all types of real estate investments. The Internet gives buyers and sellers the ability to create global packages in new and innovative ways.

As noted above, the investors of the next century will be attracted to invest in funds that contain portfolios of land investments, as well as in individual parcels

of land. They would thus be able to enjoy the potential high returns associated with land development. Many of the financial institutions that offer other forms of securitized real estate to their global customers can be expected to add land investment offerings in the near future.

SMART GROWTH CATCHES ON: COMMUNITIES PARTICIPATE MORE ACTIVELY

In the years ahead, state and local governments will become more active partners in land development. "Smart growth" plans and strategies and the numerous regulations that follow in their wake are now mainstream phenomena. This fact requires a shift in land investment calculations. There are now fewer pure "land investment" plays and far more "land plus infrastructure" plays.

In most urban and suburban development situations, the analysis of the local regulatory environment is now as important as, often more important than, pure land economic analysis. Determining the cost impact and the timing consequences of regulation becomes critical as developers try to hit short "windows of opportunity" with their projects.

Stability of regulation is another concern. Investors must assess how rapidly and in what direction local regulations may change. Usually, regulation is likely to get tighter and more rather than less complex. Developers who master the new, more complex, and costly environment should be rewarded accordingly.

In the years ahead, we will see changes in the definition of "infrastructure." Greater emphasis will be placed on the telecommunications/Internet infrastructure, relative to transportation infrastructure.

EXPECTED CHANGES BY PROPERTY TYPE

Warehouse/Distribution – There will be a decreasing number of larger facilities. They will be accessible by many transportation modes (air, rail, truck), which can provide almost real-time (just-in-time) delivery of products. Even products purchased on-line have to be delivered from seller to buyer.

Office – We can expect to see more dispersed facilities and fewer "ego towers." There will be increased substitution of computer/network investment for bricks and mortar investment.

Retail – There will be increased attention to intensity and multi-purpose use of space. Highly efficient retailers such as Wal-Mart and 7-11 are likely to prevail over weaker competitors. The electronic commerce revolution will bring new hybrids of on-line and off-line shopping. Traditional stores will have showroom and "demo" space where customers can examine and test products before buying them on-line.

Residential – The home/condo unit will have increasingly more non-residential features included in the package, as discussed above. Technology will be pervasive in the home, first linking computers into home networks, then linking appliances and support systems to one another to create smarter homes.

Many existing structures will have to be upgraded to accommodate the new services that technology has to offer. We can expect older residential, industrial, and office properties to be demolished or retrofitted to provide for the space needs of the 21st century. Those development companies that include technology experts on their teams and develop cutting-edge products will have a competitive advantage.

EXPECTED CHANGES BY GEOGRAPHY

We can expect a continuing migration to the Sun Belt. This will be a selective migration. It will favor smaller, high amenity communities such as college towns. Those communities that combine the ability to cater to workers in the information economy, as well as to seniors and recreation seekers will be the most favored. Those communities that combine air, rail, and highway access with quality of life will be most successful. Don't be surprised to see the reconstruction of railroads to out-of-the-way places.

The Intermountain West is also likely to prosper for a variety of reasons, including climate, pace, and quality of life, and unbundling from major West Coast cities. Relocation of both jobs and residences from major California urban areas to states like Montana, Utah, Arizona, and New Mexico will increase.

FUTURE OUTLOOK FOR LAND INVESTMENT RETURNS

In this final section we examine the forces that will affect rates of return on land investments in the years ahead. We review the results of recent and pertinent PricewaterhouseCoopers land investment surveys.

PricewaterhouseCoopers and its predecessor firm have carried out National Land Investment

Surveys[1] over the past decade under the direction of Mr. MacCrate. In recent years these surveys have shown that returns on land investment move within very narrow ranges. We expect this to continue into the future. *Figure 1* shows the historical Comparison of Median Expected Land Returns, Speculative Grade Yields, and Other Investments reported by respondents to the PricewaterhouseCoopers' National Land Investment Survey, Moody's, and KDP Investment Advisors.

While returns on other investments generally declined from 1991 through 1998 the expected returns offered on land investments remained high. The expected return ranged from 20 percent to 22 percent between 1991 and 1997 and then declined as competition for sites increased and interest rates declined to an expected 17 percent.

By 1999, the expected unleveraged pre-tax returns (IRRs) ranged from nine percent to 30 percent with a sample median of 14 percent for approved land development projects. The low end of the range and the median are lower than the year-end results, indicating continued increased competition for desirable sites for development. These returns were also associated with build-to-suit and pre-leased projects. Expected returns for unapproved sites are generally 1000 basis points higher than for approved sites. Furthermore, leveraging with debt is almost non-existent for acquisition and entitlement of raw land.

Figure 2 summarizes the expected return by all respondents to the PricewaterhouseCoopers' National Land Investment Surveys[1] from 1990 through 1999. Expected returns declined from 21 percent in 1990 to 17 percent in 1999.

The median gross profit margin dropped to 14 percent in 1999 from the year-end survey. The median expected mark-up over project costs remained unchanged from 1998 to 1999 at 20 percent. The highest expected returns continue to be on larger-scale, unapproved/unentitled developments, where unleveraged expected returns can be as high as 60 percent or more. Land cost as a percentage of total project cost continued to show an upward bias for desirable sites in the 1999 survey. The median land cost as a percentage of total project cost was 16

Figure 1

*Comprised of all bonds which are rated Baa by Moody's Investor Service

**Average Discount Rate(IRR) for National Apartment Market

Source: KDP Investment Advisors, Moody's Investor Service, Korpacz Real Estate Investor Service, PricewaterhouseCoopers LLP

Figure 2

Expected Returns - All Property Types
Overall Yield Rates

	1990	1992	1994	1996	1999
Average	21%	21%	20%	21%	20%
Low	10%	10%	10%	11%	9%
High	40%	40%	40%	40%	30%
Low Quartile	13%	16%	14%	16%	15%
High Quartile	25%	26%	25%	25%	24%

Excluding extremes

Source: PricewaterhouseCoopers LLP Land Surveys

percent in 1999, with a range between five percent in speculative areas, to a high of 55 percent for approved sites in desirable residential locations.

While actual returns vary from the expected returns, value is the present worth of future benefits. The expected return drives the decision-making process and provides a basis for estimating value. Near term fluctuations in interest rates will negatively impact the actual returns on current developments.

GENERAL COMMENTS AND OBSERVATIONS

Finally, we highlight some of the variables we think will influence future investment survey results. The dominance of institutional players and the shift of more land investment activity toward shorter term, lower risk activity will result in slowly declining rates of return. The overall environment will remain one of stable returns with small fluctuations. The more open and sophisticated market information environment may lead to slowly declining rates of return as competition for desirable sites increases. The increased use of on-line information, web-based products and automated valuation models will result in more thorough, closer to real-time, value monitoring that can be quickly and precisely targeted to specific parcels.

Other factors and forces may lead to greater volatility of returns. More regulatory involvement can mean greater uncertainty concerning the approval process. This will require greater ongoing attention to the analysis of local political forces and variables. Shorter development windows of opportunity should lead land investors to pay more attention to analysis of market risk, especially micro-market trends and developments.

In summary, more, better-capitalized and better-informed investors will participate in an increasingly sophisticated and globalized land investment marketplace. Land investment can offer significant rewards to investors who understand the unique risks and holding periods that characterize this specialized product. REI

NOTES

1. Contact Katherine Erazo at PricewaterhouseCoopers LLP for copies of the survey at (212) 596-7000.

ABOUT THE AUTHORS

(continued from page 15)

extensive experience in bringing technological innovation to real estate and appraisal consulting practices. He monitors and reports on new Internet and web developments affecting the real estate industry and has taught in university and professional seminar settings in North America and Asia. (E-mail: dlp@pipeline.com)