

# Real Estate Investment Analysis and Valuation: Economic Analysis, Disclosure, and Risk

by Stephen E. Roulac

"How can one measure the good without knowing the bad?" (Kurt Seligman, *Magic, Supernaturalism and Religion*, Pantheon Books, 1948, p. 150)

Disappointing investment results should prompt those involved to examine how their bad decisions were made. Such an examination leads almost inescapably to deficiencies in the economic analysis behind the decisions:

- 1) Too little economic analysis was done.
- 2) That which was done was misfocused.
- 3) The presentation of the economic analysis was inadequate.

Much of what passes for "economic analysis" is actually a superficial presentation of a "best case" optimistic outcome, an advocate's assertion not supported by adequate evidence. Much more is grossly misfocused.

There are a number of reasons for this. The methodologies relied on by many for measuring investment performance are primitive. Their techniques for communicating financial data do not provide useful information because existing general prohibitions against projections deny the investment community the information fundamental to decision-making. Very few of those providing real estate economic analysis services have a sufficient breadth of background and expertise, combined with the multiperson, multidisciplinary organizational structure essential to superior economic analysis. Finally, many real estate participants have a false impression of their abilities as investment economists. As a consequence, they decline to commit sufficient resources to perform useful analysis of probable investment results, and some do not bother to utilize any analytic services at all.

This article is intended to underscore and examine the need for better economic analysis and the specific qualities of the analysis required. It begins with consideration of investment economics and risk-return relationships.

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This is followed by a discussion of measures of investment performance, especially as regards the interdependency of the appraisal and investment analysis processes. The importance of the economic concept of core theory to valuation, the variability of the outcomes of future economic events, and the reality of variable values and returns are then explored. The importance of future-oriented financial information is introduced with the focus of the examination directed first to the "state," or perhaps more accurately, "non-state" of the art of economic analysis and then to a review of certain deficiencies in the analysis and disclosure of economic information. Finally, the issue of the cost-effectiveness of economic analysis is addressed and the preferred content, emphasis, and environment of economic analysis are presented.

The approach advocated here represents a material departure from traditional practice. The preferred approach to economic analysis for real estate investment decisions emphasizes full life-cycle forecasts based on detailed market analysis; a probabilistic presentation of anticipated investment results; utilization of advanced economic and econometric models; and risk measures based both on realized investment experience and on a macro-economic/environmental analysis of future investment market conditions. This method embraces a commitment to investor-oriented disclosure of probable investment results and specifically encompasses an explicit presentation of the data, assumptions, and models.

## INVESTMENT ECONOMICS

An analogy often used in introductory economic texts to make clear the distinction between consumption and investment is the classic dilemma faced by the farmer: does he consume his current crop of corn or plant it to grow future crops? An investment involves the deferral of benefit today in anticipation of a greater benefit at a later date. It must be recognized that economic events occur over a time continuum; when a particular event occurs determines its significance and magnitude in today's terms. The means by which the timing implications of economic events are taken into consideration is present value analysis.

Crucial to the understanding of investment economics is a clear statement of what an investment is. As John Maynard Keynes observed, it is important to think of an investment as a series of flows: a contractual obligation to make one or more contributions and a contractual claim on one or more pay-offs.<sup>1</sup> While the obligations are known, at least at the base level, and are seldom avoidable, the future outputs are less known. While certain contractual arrangements promise fixed and non-variable investment benefits, it is more often the case that a major portion of anticipated investment benefits is risky (variable) if not uncertain (not identifiable). The more uncertain the incidence of these future pay-offs—their amount, duration, and timing—the more uncertain the investment and the greater return the investor will require to participate.

Over four decades ago, Keynes recognized that the focus on the current yield from an investment was misplaced. Investment results are realized in the future and the focus of analysis must be on the future. As Keynes put it:

"The most important confusion concerning the meaning and significance of the marginal efficiency of capital has ensued in the failure to see that it depends on the *prospective* yield of capital, and not merely on its current yield."<sup>2</sup>

Unfortunately, both lay and professional investors often confuse an assessment of current operations with an evaluation of investment quality. Insight into investment return can only be obtained by considering all economic flows over the full investment life cycle. Keynes noted that the return from an investment is equal to the marginal efficiency of capital, which he in turn defined as:

"That rate of discount which would make the present value of a series of annuities given by the returns expected from the capital-asset during its life just equal to the supply price."<sup>3</sup>

Similarly, John Burr Williams defined the value of an investment as the present worth of the future stream of benefits it is expected to provide. Williams emphasized the importance of estimating future payments, and also the necessity of adjusting for expected changes in the purchasing power of money.

Investors face a multitude of opportunities for investments. Given this wide array of investment opportunities from which to elect, there must be an investment criterion. Generally, investors seek to maximize their "utility," which in an investment context is currently thought to be best measured by the preferred combination of risk and return characteristics.<sup>4</sup>

The concept of the variability of investment outcomes is fundamental to resource allocation. This concept underlies the pathbreaking research by Harris Markowitz on portfolio theory.<sup>5</sup> Where an investor knows with full confidence what the outcome of an investment will be, he can place a certain value on that investment. Where the possibility exists that an investment's outcome may be variable rather than fixed, most investors individually, and therefore investors as a class for purposes of analysis, demand a premium for participating in a situation where they perceive they may receive less than the "safe" rate of return involving no risk.<sup>6</sup> A significant investment risk is the possibility of not attaining the required (or desired) pattern of returns.<sup>7</sup> Where the future investment results are not known, investors will seek an additional premium for this uncertainty to offset the premium they seek for the variability of possible outcomes.<sup>8</sup>

## MEASURING INVESTMENT PERFORMANCE

Economic realism is fundamental to the efficient working of real estate markets. The problems experienced on a recurring basis are the result of unrealistic investments. Too often, the deals were over-priced, over-leveraged, over-tax-gimmicked, over-gouged. While regulators have sought to respond to these problems by requiring an appraisal as part of the registration process,<sup>9</sup> by imposing limitations on the use of leverage in public programs where the

properties are unspecified,<sup>10</sup> by requiring legal opinions on the tax assumptions,<sup>11</sup> and by imposing limitations on sponsor compensation,<sup>12</sup> these efforts all address characteristics rather than the essence of the issue. Ultimately, the investor is concerned with risk and rate of return considerations which are best measured by investment analysis and investment valuation. Presently, these considerations, which are fundamental to economic realism, are assigned a lower priority than considerations which may not materially influence the investment results.

Although the subject of rate of return analysis is often viewed as separate and distinct from appraisal valuation, such a distinction is unsound. Both valuation and investment analysis involve similar analytic processes in that each is concerned with developing a current measure of future economic events surrounding a specific investment situation. A rate of return analysis reflects a relationship between the initial acquisition cost of an asset and anticipated future investment outcomes. The income capitalization appraisal derives a value reflecting the worth of anticipated future investment outcomes to an investor seeking a designated return. Both rate of return and valuation are concerned with future investment outcomes. In valuation, the initial price is the unknown; with investment analysis, the return is unknown. The two processes are interdependent; similar considerations influence both valuation and investment analysis; common analytic concepts underlie both processes.

Unfortunately, the investment community, appraisers, and securities regulators do not fully appreciate the interdependence of valuation and investment analysis. At the same time that appraisals are required for a securities registration, severe restrictions, and even flat prohibitions, are imposed on the use of investment analysis in the offering documents.<sup>13</sup> The perception of separation between appraisal and investment analysis reflects and contributes to the primitive "state of the art" of these disciplines. It may in part result from a poor understanding of both microeconomics and valuation concepts.

## CORE THEORY AND VALUATION

While the economic theory underlying value and price is addressed in the appraisal textbooks, it has been virtually ignored in terms of rigorous analytical study.<sup>14</sup> Generally, the accepted appraisal theory, that which underlies current appraisal practice, is highly deficient.<sup>15</sup> Without delving into these deficiencies in detail, it can be observed that the focus of "market value"<sup>16</sup> on a single point estimate, i.e., one specific number, is attributable to an adaptation of economic theory concerned primarily with distribution and allocation rather than price and value.<sup>17</sup> Thus, the classical economists David Ricardo and John Stuart Mill have had an excessive, unwarranted, and unfortunate influence on appraisal theory.<sup>18</sup> Most simply, the appraisal profession adopted the wrong approach, a consequence not all that surprising in view of the fact that "appraisal theory" has essentially been practitioner-generated rather than based on a disciplined effort to develop an economic explanation of the process and its objectives.<sup>19</sup>

Although it is clear that in the perfectly functioning theoretical market, as Gerard Debreu implies, price equals value,<sup>20</sup> this ideal is not achieved in practice, particularly where capital investments are considered. More useful to the question at hand is the theory of the core as developed and discussed by Eugen von Bohm-Bawerk,<sup>21</sup> John von Neumann, and Oscar Morgenstern,<sup>22</sup> Duncan Luce and Howard Raiffa,<sup>23</sup> and Lester Telser.<sup>24</sup> Most simply, core theory stipulates that competitive forces cause transactions to take place within a range of prices, consisting of an interval rather than a single point price as argued by the classicists.

In the majority of instances, the real estate market functions as the reverse of the classic auction market in that the seller starts with an asking price and reduces it until a buyer is willing to pay the desired amount and a transaction results. Thus, sellers operate within a range defined by their initial "asking" price and a "floor" of what they are willing to accept. Similarly, buyers operate within a range defined by their initial "bid" price and a "ceiling" of what they are willing to pay. In practice, the Boulware approach to labor negotiations<sup>25</sup> seldom applies in real estate markets. Each party tends to work within a range bounded by an "initial" price to start the negotiation process on the one hand and by a "final" price on the other hand. A transaction can occur where a buyer's "final" price is at least equal to the seller's "final" price.

The necessary overlapping of buyer and seller prices can be shown by considering a seller who asks \$1,000,000 for a property while being willing to accept \$900,000 and a buyer who bids \$850,000 while being willing to pay \$950,000. There is a \$50,000 overlap and a transaction can take place within this range. As with core theory, it can not be said with precision where within the range the transaction price will be. This depends on several factors including the bargaining abilities and motivation of the involved parties as well as which buyers enter into the negotiation process. The nature of investment markets is such, especially in the real property context, that not all potential buyers participate in all negotiations. Consequently, which buyers do participate will influence the price at which the transaction may occur.

Although in practice it is possible to identify a collection of "final" prices that approaches a relatively smooth demand function, the bid prices are much more varied. While there is certainly some relationship between bid and final price, the amount by which the "final" price exceeds the bid varies. The prospective buyer participates in the negotiation process if, after his initial bid, the seller determines it is possible that their respective final prices may overlap. The prospective buyer makes a bid after a determination, based on an assessment of the seller's asking price as well as other considerations, that it is possible their final prices may overlap. As noted in the discussion of core theory, a transaction will occur within a range, reflecting the common overlap of the seller's ask-final price range and the buyer's bid-final price range.

## VARIABILITY OF FUTURE OUTCOMES

Financial return above the "risk free" rate by definition involves variability and the accompanying possibility that performance may be below expecta-

tions or below the "risk free" rate. The marketplace is defined by and reflects variable and changing economic behavior. If outcomes were certain, there would be no need to await the occurrence of events before accounting for them.

The ultimate focus of management decision-making is on a flow of economic outcomes—a series of "profits" or a stream of benefits over time. Each economic outcome is the result of the interaction of multiple variables and can effectively be thought of as the result of the interactions of other economic events or decisions. A change in any component decision or event means the composite outcome will be altered. Given the interdependence of multiple factors, each individually subject to variability, it is inevitable the primary focus of analysis will be variable as well.

The inherent variability of future outcomes is reflected in different perceptions by market participants in buying, selling, and leasing space. Differences in perceptions about futures are fundamental to the efficient functioning of markets. Indeed, James Graaskamp has incisively observed that financing generally, and real estate financing specifically, ultimately turns on the credibility of the assumptions of respective parties to a transaction with the differences between assumptions and their realization being risk.<sup>26</sup>

Variances in forecast reliability are attributable to differences in models, data deficiencies, and differences in forecaster judgment. Forecasts involve different combinations of statistical method, historical data, numbers of variables, and equations, and judgment. Because there are a multitude of different forecasting techniques and forecasters, evaluating them is difficult and complex.<sup>27</sup>

Too little appreciated is the role of regulatory change in creating or destroying economic values. As a case in point, extending the limit for fishing to 200 miles has been a great stimulus to a dying industry in the United States, has encouraged investments in new boats,<sup>28</sup> and ultimately will influence the values of properties in communities heavily dependent upon fishing as a prime component of the local economic base.

Regulatory change alters property rights, as reflected either by revisions in the claims on the property's economic productivity or in the allowable uses, which in turn influence the property's productivity. Where attenuation of property rights exists, the subject property by definition is less valuable than if non-attenuated.<sup>29</sup> Because there is always the possibility of regulatory change attenuating property rights, investors will demand a premium for this risk. The different perceptions of various market participants influence the necessary risk premium and further contribute to the variability of future outcomes.

## VARIABLE VALUES AND RETURNS

As Bohm-Bawerk noted, "In the last analysis, the value of all goods is bound up with man and his purposes."<sup>30</sup> Indeed, there exists no substantive and uniformly accepted definition of "fair market value."<sup>31</sup> Certainly a contributing factor to this situation has been the general disinclination of

the accounting fraternity to address this issue forthrightly,<sup>32</sup> reflecting no doubt the traditional conservative orientation toward historical cost.<sup>33</sup>

Attempts to separate "value" from economic motives are unlikely to produce meaningful information.<sup>34</sup> Investors commit capital to properties on the basis of an expectation of earning a return on that capital,<sup>35</sup> consistent with the universally-accepted theorem that the present value of an investment is equal to the sum of its discounted anticipated future benefits.<sup>36</sup> The observation by May on this point is particularly apropos:

"What the investor or speculator is interested in is the value of the business as a whole, and that is dependent mainly on what it will produce in the future and is not determinable by any purely accounting process."<sup>37</sup>

Indeed, Henry Babcock suggests that the market value of an investment property can only be derived by investment analysis, otherwise the property is a "marketable noninvestment property" or a "service property."<sup>38</sup>

In approaching the valuation process it is important to recognize the essential multi-faceted nature of real estate investment. To this end one is well to think of each investment property as a business unto itself involving capital assets, supplies and materials, and working capital; and requiring marketing and promotion, maintenance, repair, and managerial supervision.

The complexity of the investment process as well as its sensitivity to alternative interpretations must be recognized. Investing in real estate requires numerous judgments of many items that can have a range of outcomes, and this leads to substantial dispersion of results for a common venture reviewed by different analysts, each employing his own assumptions. An investment analysis is meaningful only in the context of a specific statement of the information and relevant assumptions on which it is based.

## FINANCIAL REPORTING OBJECTIVES

Deliberations about valuation theory and the preferred approach to developing an opinion of value are inseparable from considerations of how that value opinion is to be used and communicated to the financial community. The disclosure of valuation analysis should be considered in terms of the needs of consumers of financial information.

In the context of financial reporting, the concept of the "going concern" is central to accounting theory:

"It is the task of accounting to make the most truthful and significant measures possible of the continuous flow of business activity."<sup>39</sup>

However, given a "continuous flow of business activity," accounting theoreticians observe:

"... the ultimate outcome of the activities lies in the future. But decisions cannot await the ultimate outcome; management, investors, government, all of the interested parties, need 'test readings' from time to time in order to gauge the progress made. By means of accounting we seek to provide these test readings by a periodic matching of the costs and revenues that have flowed past 'the meter in an interval of time.'"<sup>40</sup>

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Accounting, then, faces the difficult task of accurately reporting at a single point in time the status of a "continuous flow of business activity." Indeed, a major study on generally accepted accounting principles included in a list of ten basic concepts the concept that "timeliness in financial reporting requires estimates."<sup>41</sup>

The accounting fraternity is not unaware that the financial community is more interested in a company's future prospects than its past performance:

"Almost all external users of financial information reported by a profit-oriented firm are involved in efforts to predict the earnings of the firm for some future period."<sup>42</sup>

Further, an important recent study reported that: "The basic objective of the financial statement is to provide information useful for making economic decisions . . . the user's needs should be paramount in guiding the preparation of financial statements . . . all economic decisions look to the future . . . an objective of financial statements is to provide users with information for predicting, comparing, and evaluating enterprise earnings power."<sup>43</sup>

Because investment decisions are made on the basis of information about that future, the objectives of financial reporting, and therefore the communication of valuation and investment analysis, should be on disclosing relevant information on the enterprise's probable future investment performance.

#### STATE—OR "NON-STATE"—OF THE ART

The current "state of the art" of analysis of real estate investments leaves much to be desired. Such analysis as is done is too often characterized by questionable assumptions, incorrect data, conceptually illegitimate models, dubious motives, perverse ethics, and fraudulent representations. Indeed, the authors of one article cautioned that of all the parties to a deal, only the lender did any meaningful analysis and his was for a purpose different from that of the investors.<sup>44</sup> Investment analysis as applied to real estate investments suffers from questionable assumptions as to key elements of anticipated investment benefits, unsophisticated and misleading methodology, and unrealistic expectations as regards a reasonable level of investment return.

Real estate participants generally, and particularly those in new development projects, have long been noted for placing emphasis on considerations other than economic feasibility in the determination of whether to commit capital to a project. As *The Economist* observed: "The American property development system works on faith, hope and tax losses."<sup>45</sup>

Feasibility studies are often ignored: "'Tax shelter' buyers prompt some developers to go ahead without feasibility studies because they can sell the projects before construction."<sup>46</sup> Or if required, an accommodating "analyst" is found: "The market feasibility boys were having a field day. You could always find one who would agree with your opinion that the proposed deal was outstanding."<sup>47</sup>

Because many real estate participants, even in the face of problems, rely more on optimism than objective analysis,<sup>48</sup> it is not surprising that the "state of the art" of investment analysis is as behind the times as it is.

The appraisal process is regularly a source of much controversy, both on a "popular" and a professional level. Appraisers are accused of conspiring to violate fair housing laws<sup>49</sup> and of assisting and falsifying tax returns.<sup>50</sup> They are described as "surely the most maligned segment of the real estate industry"; only half of the respondents to a recent survey of pension administrators believe that an appraisal is a valid means of establishing real estate values.<sup>51</sup>

The investment community lacks confidence in the reliability of appraisals,<sup>52</sup> as indicated by the Money Market Directories, Inc.'s survey of the value relationship pension administrators believe would prevail when real properties are sold. By more than a two to one margin, pension administrators indicated they thought properties would likely sell below rather than equal to or above appraised value.<sup>53</sup>

The problem is further exacerbated where appraisers are confronted by "problem properties" or "distressed markets" and seek to use "normal" or "standard market" assumptions rather than looking to the actual market conditions. This tendency has raised the question as to whether many appraisers possess the basic ability needed to undertake a valuation based on actual market analysis as opposed to hypothetical and theoretical assumptions.<sup>54</sup> On this point, it should be noted that the problem is by no means unique to the United States. *The Economist* recently questioned:

"How long will the bankers and auditors be prepared to suspend their disbelief in an art which consists of extrapolating tenuous trends in a marginal market over the massive property now clogging up the system."

Indeed, these problems have led the Securities and Exchange Commission (SEC) to require appraisals based on actual market conditions and showing a realistic investment return, a rational and reasoned approach but one which has been poorly received by the banking fraternity because of the necessity of currently recognizing the financial reality of questionable investments by requiring immediate correction for inflated values.<sup>55</sup>

Regulatory authorities have continually expressed concern about the reliability of appraisals, particularly in the real estate securities context.<sup>56</sup> The regulatory disdain of the appraisal process is not surprising, particularly in light of the role of appraisals and the earlier problems associated with real estate securities. During the real estate securities boom of the 1920s, for example, such unprofessional practices as appraisals contingent on valuation opinions equal to or exceeding designated levels proliferated. One underwriter relied on its own appraisals for more than half of its 430 mortgage bond offerings. Because the size of the appraisal influences the size of the bond issue, the amount of bonds available for sale, and the magnitude of commissions, the practice of inflating "inhouse appraisals" was a primary reason for the subsequent problems.<sup>57</sup>

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## DEFICIENCIES IN ANALYSIS AND DISCLOSURE OF ECONOMIC INFORMATION

Investors' misperceptions of risk-reward relationships have persisted from the earliest days and are commented upon by such economists as Adam Smith, who observed:

"The overweening conceit which the greater part of men have of their own abilities is an ancient evil remarked by the philosophers and moralists of all ages. Their absurd presumption in their own good fortune has been less taken notice of. It is, however, if possible, still more universal. There is no man living who, when in tolerable health and spirits, has not some share of it. The chance of gain is by every man more or less over-valued, and the chance of loss is by most men under-valued, and by scarce any man, who is in tolerable health and spirits, valued more than it is worth . . ." <sup>58</sup>

and Keynes who stated:

". . . it is probable that the actual average results of investments, even during periods of progress and prosperity, have disappointed the hopes which prompted them. Business men play a mixed game of skill and chance, the average results of which to the players are not known by those who take a hand. If human nature felt no temptation to take a chance, no satisfaction (profit apart) in constructing a factory, a railway, a mine or a farm, there might not be much investment merely as a result of cold calculation." <sup>59</sup>

For those familiar with the real estate sector's lack of historical perspective, the lead to the recent *Business Week* cover story feature is not surprising:

"A short 18 months ago, U.S. real estate men were talking little else but disasters—distressed properties, foreclosures, forced sales, losses. The industry had just gone through its worst crunch in 40 years. . . . Today, the talk—and it is heard everywhere—is all about big deals, properties bought and sold, new projects just launched or about to be launched, and especially the unprecedented flood of investment dollars chasing U.S. real estate.

"Today prime U.S. real estate is probably the most sought-after investment target in the industrial world.

"U.S. real estate has achieved this enviable position because investors, domestic and foreign, are convinced that it can only appreciate in value." <sup>60</sup>

There are many reasons why economic analysis and the resulting decisions are deficient. Often the data are unreliable <sup>61</sup> or the models unrealistic. As Roger Kennedy, financial vice-president of the Ford Foundation, observes,

". . . it is not strange that we so often confront the forecaster as reductionist. We have masters of single-factor predicting who tell us that most complex of phenomena, the complex of complexes, emotions and artifice, our economy, is governed by one trend, 'nothing but' money supply, 'nothing but' the immediate past, 'nothing but' the ineluctable repetition of the business cycle." <sup>62</sup>

Misunderstandings as to basic economic issues are contributors to undesirable economic decisions.

The majority of appraisers look solely to the tangible real property to the exclusion of legal, behavioral, managerial, financial, tax, and related considerations that influence ultimate investment appeal. <sup>63</sup> While many appraisers qualify their valuation reports with an observation, "For an in-

vestment property, the income capitalization appraisal technique is preferred and should be given special emphasis in situations where the purchaser is buying primarily for investment motives," such qualification is redundant if not ludicrous. Real property does not exist exempt from the political, legal, and capital market systems. No party can own a property without an investment objective, for even if the property were acquired at no cost through some type of windfall, the value of that property becomes its investment, with an associated opportunity cost equivalent to what could be earned with those funds placed in the most attractive alternative use.

Appraisers sometimes demonstrate considerable confusion about the primary focus of their assignments and consequently it is not surprising that their valuation opinions, in light of subsequent events, are wide of the mark. In *Utech v. City of Milwaukee* an appraiser valued a property taken in eminent domain according to its potential use and then added to that figure the value of an existing residential structure, which happened to be some 20% of the property's value at its "highest and best use," on the grounds that developers typically pay a 20% premium to acquire desired sites.<sup>64</sup> The transparency of this methodology is readily apparent. If developers typically pay a premium price above a certain figure for a desirable property, then the price they will pay is in fact the property's value.

All too frequently the analysis is implicit rather than explicit. The implicit approach to analysis, particularly when at an aggregate as opposed to a "line-by-line level," is fraught with potential for miscalculation. It is most often the case that the deterministic approach takes a "most probable" figure for each of the relevant variables and then derives a final figure which is a composite of the individual items. While selection of "most probable" numbers certainly has advantages over using less likely numbers, by itself it does not eliminate error. The cumulative interactions of "most probable" figures can cause an end result with a material variance from the expected value figure derived by a probabilistic approach.<sup>65</sup>

Many investment analysts rely on primitive measures of return on investment.<sup>66</sup> When one relies on unsophisticated profitability measures, an investment's apparent return often can be at material variance from the economic reality.<sup>67</sup> As a case in point, one "analysis" of a proposed investment showed returns ranging as high as 46.9% when in fact utilizing generally accepted concepts of economic analysis, but taking as "given" assumptions of future economic events which were at least favorable if not optimistic, the investor would do well to break even on an after tax basis.<sup>68</sup> Many participants in real estate ventures are for various reasons reluctant to face the economic realities of projects in which they are involved. Even when the participants do affirmatively attempt to understand the underlying economics, their conclusions are often inaccurate.<sup>69</sup>

The deficiencies in economic analysis are contributed to and exacerbated by financial disclosure practices and guidelines. There are irreconcilable differences between investor needs and traditional accounting methods.<sup>70</sup>

Traditionally, the SEC has opposed the use of projections<sup>71</sup> although this policy has been somewhat modified recently.<sup>72</sup> The offering document is the product of the securities regulatory process and, presumably, is a primary source of information for investment decision making. But too often it contains all information except that which is needed to evaluate whether or not the proposed offering is an attractive investment. The information provided is difficult first to find and then to interpret. As one court observed:

"In at least some instances, what has developed in lieu of the open disclosure envisioned by the Congress is a literary art form calculated to communicate as little of the essential information as possible while exuding an air of total candor."<sup>73</sup>

### **COST EFFECTIVENESS OF ECONOMIC ANALYSIS**

The economic analysis of real estate decisions is a difficult and complicated undertaking. All too often, the budget is totally inadequate for the urgency of the task. Not surprisingly, a limited budget will frequently lead to limited analysis. The first area of "economizing" is often market analysis.<sup>74</sup> Indeed, virtually without exception, sponsors and investors budget nominal sums for work that properly should require fees comparable to those charged by professionals involved in the legal, architectural, and mortgage banking functions.<sup>75</sup>

A source of tension as regards the economic analyst's role is the desire of a number of sponsors to insure "safe" appraisals, i.e., appraised value exceeding acquisition price. Very frequently, sponsors are unwilling to allow a sufficient budget to undertake a meaningful valuation analysis. Where the appraisal fee is only \$750 to \$1,500, as is frequently the case, it is impossible for the appraiser to do substantive field research and detailed analysis. Many appraisers respond to such constraints by relying on data from their files and other unverified information whose reliability is suspect. Then, such analysis that is done is simplistic, if not naive. In the face of budget constraints, however, it is no wonder that detailed forecasts and more powerful models are ignored.

On balance, sponsors commissioning such "studies," and to a lesser degree appraisers accepting such assignments, seem to be operating with a strange, if not perverted, sense of priorities as regards the cost effectiveness of economic decision making. The total cost of a competent valuation analysis exceeds the usual budget for a "financial public relations" appraisal by only a few thousand dollars, certainly an immaterial amount in the context of a million-dollar-plus property. Most simply, the additional information provided by a competent valuation analysis will pay for its extra cost many times over. In light of the substantial losses incurred by real estate investors over the years, an investment in competent valuation analysis promises very high returns.<sup>76</sup> It must of course be recognized that a disturbing number of sponsors have no interest in the appraiser's input to the decision process beyond his endorsement of a decision already made. On this point it should be pointed out that many sponsors like to cite as evidence of their negotiations and acquisitions

ability their record of buying properties consistently at substantial discount from "fair market value" when in fact this more accurately reflects their talent in selecting appraisers.

Perhaps only in real estate is the concentration of economic resources in enterprise management, direction and implementation so misplaced. While good implementation activity is of course a necessary condition for investment success, by no means is it a sufficient condition. The expertise the financial economist brings to the real estate investment decision "adds value" by virtue of risk control, concept refinement, market targeting, finance packaging, ultimate investment objective-setting, in an amount at least in the same ballpark as other involved professionals. Those market participants who pay low-budget fees will get low-budget advice; if they cannot understand the necessity of investing substantial resources to make a substantial decision, they are beyond help and deserve all the misfortune that befalls them.

### AGENDA FOR THE FUTURE

Because the general quality of real estate economic analysis leaves much to be desired, the potential payoff for superior analysis is high. An accelerating pace of change, escalating regulatory complexity, and increasing uncertainty of economic outcomes makes distinctive investment valuation of even greater worth. The needs of the new real estate capitalists—the prominent financial institutions—require economic analysis consistent with the seriousness of their fiduciary responsibilities.

Appraisals and investment analyses based on one-year statements, simplistic methodologies, unsubstantiated data, and non-disclosed assumptions create a severe risk of legal claims and litigation on the grounds that prudence and due diligence were not adhered to in the investment decision process. Unfortunately, too many economic analyses are a potential source of legal liability for both those performing them and those placing reliance upon them.

Better investment results, particularly through the reduction of risks, will be achieved through better analysis. Potential liability will be largely reduced, and the functioning of real estate markets, the efficiency of resource allocation, and the stability of the economy will all be improved.

Economic analysis leading to an investment decision, if it is to be a superior decision, must be based on a multidisciplinary approach. The integration of disciplines beyond a narrow definition of economics is required. The early description of this branch of social science, political economy, is relevant. As Kennedy observes:

"The most important determinants of economics are political. Consequently, we must not ask economics, a numerate activity, to cope with non-numeric factors. The brain and the psyche do not function like computers—synapses are not chips. Forecasting requires that an economist use skills and perceptions he garners in foraging beyond the bounds of his profession."<sup>77</sup>

While there is no question that effective economic analysis requires unrelent-

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ing investigation, rigorous analysis, a sense of economic history, breadth of perspective, an advanced knowledge of microeconomic theory, insight into the changing demographic patterns and relationships, sensitivity to evolving legal standards, and shrewd political savvy, ultimately the process involves originating viable data and identifying crucial factors and their linkage relationships.<sup>78</sup>

There exists a sharp rift between the requisite organizational approach to implement multidisciplinary analysis and the practices of most real estate economic analysts. While a select few individual practitioners are capable of exemplary work, the business is overly-populated by sole practitioners and small firms too narrow in their approach, with few substantial firms bringing together multiple disciplines and perspectives. Significantly, real estate economic analysis is too much characterized by a craft as distinguished from an industrial approach. Such an orientation is not surprising because the technology of real estate economic analysis would likely have parallels to the technology of creating real estate properties. Buckminster Fuller has observed that the building sector has been the last of man's activities to embrace an industrial approach, using tools which "cannot be produced by any one man," as opposed to a craft approach, involving tools that can "be spontaneously fashioned and adopted by any one individual studying nakedly in the wilderness."<sup>79</sup>

Those analysts who operate alone have a limited capital base, both in terms of equipment to utilize modern analytical technology and also of investment in their own knowledge to implement such technology, and consequently are at a severe disadvantage. The preferred approach requires an organization whose decision-makers have broad general talent and the ability to integrate the contributions of specialists in the various disciplines to reach a superior investment decision.

Unfortunately, the trend of education and professional practice is towards increasing specialization. As Kennedy observed:

" . . . everything now points to worse and worse forecasting. All the crabbed forces dominating the faculties of American colleges and universities, the parochialism of our disciplines, the dessicating emphasis upon statistics, the adversion to history, psychology, and sociology, are conspiring to prepare numerate illiterates. Graduate students, diminished rather than enlarged by this process, cannot be trusted to predict anything more complicated than the pace of a print-out."<sup>80</sup>

While a full discussion of what superior real estate economic analysis ought to encompass is beyond the scope of this writing, certain broad statements can be advanced. The analysis should start with consideration of broad environmental issues that impinge upon the decision at hand. Once macro-economic analysis has been completed, attention can be directed to developing specific forecasts, built up on a line by line basis, of probable future economic results. The appropriate economic models are then selected as well as the measures of risk and return to evaluate investment quality. Here, the importance of knowledge of realized investment results together with reasonable anticipations for future investments results is crucial.

As highlighted in earlier sections of this article, economic analysis based on a deterministic rather than a probabilistic approach is destined to be relatively unreliable. The decision-maker is interested not only in the expected value outcome but also the range and associated probabilities of possible outcomes. Fundamental to assessment of the economic analysis is full disclosure of the underlying assumptions and methods by which the various data inputs were derived, the models that were used, and the points where judgments were made.

There is evidence that modern approaches to decision-making are gaining growing acceptance.<sup>81</sup> Significantly, a computer model employing econometric techniques and probability analysis was utilized in planning a recent expedition for climbing Mount Everest.<sup>82</sup> When an investor faces a financial Mount Everest, the size of the stake inevitably clouds his judgment.<sup>83</sup> Here, a third party analyst can make a particularly important contribution by bringing both objectivity and superior analytic talent.

Research into decision-making suggests that decision makers consistently underestimate the benefits of collecting and assimilating new information.<sup>84</sup> Real estate investment experience in this century is characterized by extreme miscalculations and is unarguably the most persuasive reason for a greater commitment of resources to economic analysis for decision-making purposes. For most in the business such a commitment will represent the highest return on investment expenditure they can possibly make.

## REFERENCES

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2. *Ibid.*
3. Keynes, supra note 1. According to Keynes, the *supply price* of the capital-asset is not the market price at which an asset of the type in question can actually be purchased on the market but the price which would just induce a manufacturer to produce an additional unit of such asset, i.e. what is sometimes called its *replacement cost*.
4. Much of the theory relevant to achieving this optimization objective is discussed in John von Neumann and Oscar Morgenstern, *Theory of Games and Economic Behavior* (1944).
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6. John Hirshliefer, "Risk, the Discount Rate, and Investment Decisions," *American Economic Review* (May 1961), p. 112.
7. Alexander Robichek, "Risk and the Value of Securities," *Journal of Financial and Quantitative Analysis* (December 1969), p. 513.
8. "In formal terms, at risk involves a situation about which the various possible outcomes and their respective probabilities of occurrence are *known to the decision-maker at the time he makes the decision*. Uncertainty, on the other hand, involves a situation about which the probabilities of the possible outcomes are *not known*." (Charles Ellis, *Institutional Investing*, Dow Jones-Irwin, 1971, p. 144-5.)
9. "All real property acquisitions must be supported by a competent, independent appraiser." Sec. C, "Conflicts of Interest and Investment Restriction" and Sec. M, "Requirement for Real Property Appraisal," from Midwest Securities Commissioners Association, *Statement of Policy Regarding Real Estate Programs* (February 28, 1973) cited by Stephen E. Roulac, *Real Estate Securities Regulations Source book* (Practising Law Institute, 1975), p. 488.

10. While there are no formal guidelines on the use of debt in non-specified property programs "the leveraging to be employed shall be fully set forth in the statement of investment policy." (Sec. VI, C #3, Midwest rules [*ibid.*] p. 489.) As a practical matter few if any offerings have cleared registration without a limit on maximum borrowings of 400% of invested capital, which is equivalent to an 80% loan to value ratio.
11. See Sec. VIII, C 15, of Midwest rules, p. 497, *supra* note 9.
12. See Sec. IV, "Fees-Compensation-Expenses" of Midwest rules, p. 483-485, *supra* note 9.
13. While projections generally are "permitted but not required" on the state level (Sec. VIII, D of Midwest rules, p. 499, *supra* note 9) they generally have been discouraged at the federal level by the SEC.
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17. Stewart, *supra* note 15.
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19. Paul F. Wendt, "Recent Developments in Appraisal Theory," *The Appraisal Journal* (October 1969), p. 485.
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28. Neil Ulman, "After Years of Decline, U.S. Fishing Industry is Beginning to Boom," *The Wall Street Journal* (July 25, 1977), p. 1.
29. "The term attenuation is used to signify the degree of restriction on the owner's right to exclusive use of a thing." (Pejovich, "Toward a General Theory of Property Rights," *The Economics of Property Rights*, eds. Eirik Furbotn and Svetozor Pejovich, 1974, p. 344.)
30. Bohm-Bawerk, *Positive Theory of Capital*, vol. II, p. 121.
31. Braitman, "The Eye of the Beholder: A Fresh Look at Fair Market Value," *Taxes—The Tax Magazine* (May 1974), p. 269.
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65. In one such analysis, the "most probable" deterministic approach derived an operating income figure of \$72,000, as contrasted to the expected value for the operating income as calculated by a probabilistic analysis of \$66,000. See Roulac, *supra* note 4, pp. 451-60.
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