JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

I. MANUSCRIPTS

E. Miscellaneous Monographs, Essays, and Articles

4. Excerpts from "Annotated Bibliography for Modernization in Valuation of Investment Classed Real Estate", by McCloud B. Hodges, Jr.: Contains quotes by both James A. Graaskamp and Richard U. Ratcliff (1981)

Index

EXCERPTS

FROM

ANNOTATED BIBLIOGRAPHY

FOR

MODERNIZATION IN VALUATION OF

INVESTMENT CLASSED REAL ESTATE

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Graaskamp, in "A Practical Computer Service for the Income Approach," THE APPRAISAL JOURNAL, January, 1969:

". . . All of the scholarly concern with capitalization rate misses the point that the amount of income received by the investor is uneven and erratic and has differing investment quality because of varying degrees of income taxes on these receipts. Nonetheless, the income schedule, not the capitalization rate system, is the root of all value. . .

"Therefore, if the income approach to value is to be fully acknowledged as an appraisal tool, attention must be directed to: 1. Redefining income returns to the investor; 2. Placing returns in specific time periods; 3. Accounting for each type of return after considering income tax; 4. Reliance on simple, compound interest, reversion discounts only, rather than all-encompassing but fictional annuity factors; 5. Redirecting appraisal methodology to reflect investor logic and motivation. . .

"Year-by-year estimates of after-tax cash flow are tedious and repetitious, well suited to the capabilities of a carefully programmed computer. . .

"Simulation is a 25-cent word describing what an appraiser does to predict value, most specifically when using the income approach. However, present income approach methods are challenged because they do not accurately simulate the income stream valuations of sophisticated investors. Spendable after-tax cash flow analysis is far more representative of investment counseling techniques in real estate and, therefore, is a more precise simulation approach to value."

Farrel, in "Computer-aided Financial Risk Simulation," THE APPRAISAL JOURNAL, January, 1969:

"Without the computer we would probably prefer the traditional method of analysis, supported by our professional judgement. With the computer we can practically eliminate all calculations and still be assured that the 100,000 calculations performed are more reliable than the much less complicated traditional analysis through manual efforts . . . our time can now be spent more productively in collecting relevant economic data, in testing the effect of available information, and, in general, minimizing investor uncertainties . . .

"The discounted cash flow method of analyzing real estate investment decisions is simple in concept, yet complex in application due to the large number of computations necessary for its execution. However, the DCF method is a superior analytical tool because it permits the investor to develop a realistic, comprehensive picture of his investment yield, particularly where cash flows will be generated unevenly over a long period. The computer not only eliminates the mathematical drudgery which naturally tends to make traditional analysts avoid the DCF method, but also permits additional program sophistications which will give the investor a thorough understanding of the importance of particular income and investment variables."

Colby, Donald S., in "Mineral Resource Valuation for Public Policy", U. S. Department of the Interior, Bureau of Mines, 1969:

". . . regardless of whether public or private values are at issue, estimation of the in-ground value of mineral resources is not easy. Because the quality and quantity of valuable material in the deposit remain imperfectly known until the deposit has become depleted and valueless, special procedures have evolved to deal with valuation of mineral resources. There are two commonly ignored but very pertinent facts that such procedures must reflect; first, value is a net concept in which costs must be subtracted from returns; and second, production takes place over time so that future value must be reduced to a lower 'present value' figure. . . (p. 2)

". . . Various combinations of ownership and management, non-equity sources of capital, and different tax laws might complicate the calculations, but they would not alter the basic methodology (presented in the paper) . . . (p. 2)

"Stated most succinctly, the tangible economic value of any capital asset, regardless of whether it is a natural resource or a manufactured product, is the present value of the cash flow available from utilizing that resource in the most productive way possible . . . it is sufficient to realize simply that resource value is estimated by subtracting both capital and operating costs from the expected total revenues over the life of the deposit. The net value obtained from this subtraction must then be discounted to the present; that is, allowance must be made for the length of time between investment and return. Such discounting is accomplished by an interest rate. This basic methodology (is) known as the discounted cash flow (DCF) method . . . (p. 3)

". . . With the partial exception of land, all assets deplete with time and involve risk. Methods such as the Hoskold formula, which were devised to allow for these two 'special characteristics', are unnecessarily cumbersome and erroneous in concept. Preston discusses the Hoskold formula in detail and concludes, among other things, that it 'avoids none of the real difficulties of mineral deposit valuation. The estimates of annual net revenues and length of life remain to be made on the basis of judgement. The formula simply takes these estimates and reduces them by an arbitrary factor." . . . (p. 6)

". . . The only real effect of depreciation and depletion, so far as cash flow is concerned, is their effect on income tax liability. If the depreciation deduction can be increased for a particular year, taxable income is thereby reduced and income tax liability is reduced. Every dollar reduction in income tax means a dollar increase in cash flow. (p. 10)

"This report takes no position on the appropriate rate of discount in either public or private projects. Currently, there is much controversy on the subject. Figures currently suggested for Federal investment projects range from 4 to 12 percent. The rate of return realized by petroleum firms under normal risk conditions is approximately 12 percent after taxes. Expected returns on new investment are somewhat higher than this in petroleum, and perhaps, in mining as well. (p. 12)

"A number of general assumptions are essential to handle the mineral resource valuation problem. Most important, a full-employment economy is assumed. . . This means that the Nation suffers no gain or loss in income or employment because of what happens to a specific mineral deposit. The deposit may or may not be mined; however, if it is not, the same dollar amount of capital can be invested and earn an equivalent return and pay equivalent taxes somewhere else in the Nation. . . Second, it must be assumed that both capital and operating cost figures used to derive cash flow estimates represent the most efficient combination of inputs to obtain the given output. . . Third, investment funds are assumed to come entirely from equity financing. The same rate of return will be obtained on all capital. The cash flow occuring to the resource owner will be both a return of capital and a return on the amount of capital still invested. . . Fourth, prices for the mineral product are assumed to be constant. . . The latter assumption may not always be reasonable; in such cases appropriate adjustments in estimated potential returns should be made. . . (p. 15, 16)

"The determination of cash flow requires allowance for expected revenues, operating and capital costs, profits, and taxes. However, it is the income tax that involves the most difficulty in calculation, because it depends upon the handling of depletion and depreciation, which in turn depend on capital values. Thus, the algebra of cash flow calculation when capital value is an unknown must be different for each of the various depletion provisions." (p. 32)

Hodges, in "Computer·Progress in Valuation of Income Properties," THE APPRAISAL JOURNAL, January, 1971:

"The real estate appraiser or counselor must not be guilty of abandoning the field work so vital to the accuracy and validity of property valuation and spoiling the fruits of that laborious field work by employing mathematically inaccurate capitalization procedures . . .

"Except for our lack of abilities to solve the type of arithmetic and algebraic problems connected with complex investment property valuations, we would have progressed further by this time, and might have convinced the judiciary and numerous governmental bureaus that we can and should adhere to the same decision making processes actually employed by the real estate investor market . . .

"Through the use of computer services . . . we can determine the criteria for marketable investment properties, which many experts already believe to be dominated by after-tax yield. We can then identify the Most Probable Purchasers for particular classes and sizes of properties. This is the last step preceding the determination of the Most Probable Selling Price of any investment property."

Ken Garcia, in "Sales Prices and Cash Equivalents," January 1972 issue of THE APPRAISAL JOURNAL:

"Economic theory dealing with real estate financing techniques is almost nonexistent, although in recent years pronouncements have been made regarding how financing was to be included in the market value concept. . .

"Thorough analysis of appraisal theory leads to an indisputable conclusion: When an estimate of value is rendered in terms of money, the market value concept includes no financing at all. . . Legal support does not exist regarding the theory that the contemplated consideration may be estimated either partially or wholly in terms of a promise to pay or of any other tangible or intangible. . . The role of financing in the appraisal of property, although simple in theory, is sometimes complicated in application. The shorthand terminology commonly used to describe a real estate transaction has caused considerable misconception among appraisers regarding actual market sales. . . Even though transactions involving non-cash components constitute the vast majority of today's sales, speech habits continue to imply that dollars alone, and not dollars and paper, are paid.

"These observations do not imply that appraisers cannot validly use non-cash sales in their analysis, but every sale used should first be converted into its '*cash equivalent*'. The amount resulting from this conversion might properly be called the *cash sale price*. Prior to conversion, it is essential to refer to raw sales as *nominal sales prices*, although sometimes the nominal and cash prices will be equal.

Ratcliff, in VALUATION FOR REAL ESTATE DECISIONS, Democrat Press, 1972:

". . . Rates of return on total capital invested in the property are only of academic interest. Thus useful real estate investment analysis must be directed to the productivity of the equity contribution. Rates of return or yield are measures which are meaningful only in relationship to equity (p. 177). . .

"Most investment decisions are based on expected cash flow to equity, i.e., spendable cash remaining in the hands of the investor after necessary cash outlays. Broadly speaking, the outlays include operating expenses, mortgage payments and income taxes (p. 179 . . .

"(internal rate of return) is the most satisfactory basis for comparing alternative investment opportunities by providing a single measure of expected yeild, which can be directly compared with expected yields from other investments (p. 209) . . .

"Among sophisticated investors and analysts, the discounted after-tax cash flow is being increasingly employed as the basic investment test. Computer programs are widely available to relieve the analyst of the burden of long-hand computation. These programs are basically the same but do differ in flexibility (p. 216) . . .

". . . But the facts of the market place are that there is a great variety among investors, not only in their knowledge and sophistication, but in the analytical procedures which they use in decision-making. It is an important responsibility of the appraiser to discover that manner of investors who are active in the submarket of the subject property and to learn the nature of their calculus. . . (p. 222)

"Our conclusion in the matter of the practice of assuming a constant future productivity is that since the basis of investment in income property is the production of income, this forecast should receive careful attention and that its expression as a constant is a crude if convenient expedient. . . (p. 226)

"Although we know that an income property is purchased on the basis of investors' productivity expectations, we are unable to use the conventional capitalization models for calculating the present worth of these future returns in terms which will reliably foretell its selling price. The reason is that the conventional capitalization models are not complete market simulation models. . . (p. 249)

"As presented in text books and as used in the field by appraisers, however, the conventional Income Approach fails to meet the tests of true simulation which will produce an estimate of market value. The true significance of this model as presented in conventional literature is confused and vague; its function in contributing to the estimate of market value is unclear to many practitioners and is variously interpreted by them . . . (it) requires that the expert, the appraiser, shall make the predictions of productivity and encourages him to believe that he can 'go to the market' and extract from the income-price facts of past transactions a properly representative capitalization rate. With these inputs, he is told that he can use one of several conventional models to calculate a value figure which is market value. But the conventional Income Approach fails to fall within the definition of simulation in a number of respects: . . .

(2) The appraiser cannot extract from the usual information available on comparable sales the capitalization rate actually used by either of the parties to the transaction in his own investment calculus. There are so many variables which enter into price establishment that it is logically and mathematically impossible to extract any one of them, such as the capitalization rate, without knowing all the others.

(3) The conventional capitalization model fails to include as inputs many of the variables which actually enter into the price-establishment process.

(4) Most of the conventional capitalization models are not actually in general use in the market by investors in many types of income property." (pp. 246, 247)

David J. Morrison, in "Cash Flow Valuation and Yield Valuation", THE APPRAISAL JOURNAL, January, 1972:

"The *direct capitalization* method which involves extracting an overall capitalization rate from the market has one major shortcoming - the lack of consideration within the capitalization rate for variations in financing. In addition, a more appropriate name for the direct capitalization method might be the '*net rent divisor*' since the only difference between this capitalization method and the 'ballpark' valuation figure obtained from using a gross rent multiplier (GRM) is the minimal refinement obtained by deducting the estimated vacancy and expenses from the gross rent figure . . .

"We have criticized the techniques of profitability measurement (broker's cash-on-cash and appraiser's overall capitalization rate) because they do not furnish the investor with a measure of profitability that is accurate enough to be used in investment analysis and actual investment decisions. . . (p. 348)

"Most modern investment analysis uses either the present-value or the internal-rate-of-return concept in calculating potential profits and yields. While some experts believe strongly in the advantages of one over the other, in most cases both will lead to similar decisions. These measures allow specific inclusion of an investor's individual tax situation and the value of money to him. They can be simplified by shortcuts to the point where they are no harder to calculate than the earlier methods. Of course, the more shortcuts are used, the greater danger of missing information."(p.352)

James A. Graaskamp in REAL ESTATE COUNSELING, 1976, American Society of Real Estate Counselors, Chapter Nine:

"A Reorientation in Appraisal Concepts. . . 2. Real estate decision-makers are not interested in economic surpluses but in *cash profits* expressed as after-tax spendable dollars, in *yield* not cap rates, and in *measures of risk*, as opposed to the traditional view that 'mortgages' are preferred to 'equity' or that motels are 'riskier' than moderate rent housing. Such judgments are naive, particularly when they are converted to decision factors by adding an arbitrary .01 to the overall capitalization rate. . . 4. Many facets of the income approach to appraisal no longer serve as useful tools in feasibility analysis under a *cash concept* of real estate enterprise. Modern capital budgeting techniques treat the realities of business cash flows on an in-and-out basis, rather than accepting convenient assumptions necessary to the continued use of the income approach with a single capitalization rate."

Hanford, in "The Capitalization Process Revisited", APPRAISAL JOURNAL, July, 1976:

". . . The land and building residual techniques are not appropriate in most instances, because they employ a different rate for each agent of production. . . If one were to scoop a bucket of water from the Atlantic Ocean it would be impossible to identify the water from the Mississippi River and Missouri River in that bucket. The bucket contains ocean water. So it is with property: the income stream from property cannot be segmented, other than artificially, as to its source. Finally, the concept of split capitalization rates just does not parallel the behavior of buyers and sellers. . .

"Historically, the most popular method was to extract the capitalization rate from observed market transactions. . . If we have a large number of recent sales with reliable raw data, this method may be appropriate. . . Rarely is a sale sample homogeneous as to all of its elements. In reality, use of raw data (sales price and indicated net income) to produce a capitalization rate comparable produces a rate as 'raw' as the data input. . .

"Expenses can be researched at the source for all categories except repairs. . . In existing properties with actual operating history, results can be verified and the appraiser need only determine whether or not an increase is imminent. . . Only repairs not performed under full maintenance contract require judgmental estimating and the age and condition of the structure will be variable. In existing buildings, past history can assist greatly in narrowing the range of judgment error. . .

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