AN EXAMINATION OF THE NORMAL VALUE CONCEPT AS APPLIED TO FEDERAL LAND BANK APPRAISALS

by

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TABLE OF CONTENTS

LIST OF TABLES

I. INTRODUCTION

The principal institutional lenders in the field of farm mortgage credit are the life insurance companies, the commercial banks, and the Federal land banks. Federal land banks under the supervision of the Farm Credit Administration provide lending funds to Federal land bank associations. These associations are cooperative credit organizations that make and service the Federal land bank loans.

At present, the amount of a land bank loan may not exceed 65 percent of the appraised "normal agricultural value" of the farm plus the amount of the Federal land bank association stock which is paid for out of the loan. This report is focused on the concept of "normal value" that underlies all Federal land bank loan appraisals. The procedure followed has been (1) to show how the land banks are directed by law as well as by policy to base their loans on normal agricultural value, (2) to search out the theoretical basis for such a value, (3) to cite present and arising conditions in the market for farm mortgage loans and in the farm real estate market that make it difficult to apply the normal concept, and (4) to show the effect of these actual economic conditions on the development of normal value appraisal practice.

By means of the above scheme an attempt is made to establish that important differences exist between appraisal theory and current practice in regard to the doctrine of normal value. This distinction especially comes into view in the appraisal process employed by the Farm Credit Administration. That appraisal process forges the link between the theory of normal value and the practical problem of establishing loan values.

Appraisal literature apparently identifies the concept of normal value with the capitalization of income method of farm valuation. But to arrive at realistic normal agricultural values the land banks have found it necessary to rely upon the land market as a source for part of their valuation data--a practice that is likely to receive increasing emphasis in future appraisals. This practice tends to result in the inclusion of elements of value that appear to be too instable to fit into a strict definition of normal value. Nevertheless, as we shall see, this seemingly contradictory appraisal practice can be reconciled by the fact that loan levels would be unnecessarily low for many properties if only income from land, as measured by physical production, were included in the normal appraisal process.

II. LOANS BASED ON NORMAL VALUE

All land bank appraisals have as their basis the normal agricultural value of the farm to be mortgaged. This is defined as "the amount a typical purchaser would, under usual conditions, be willing to pay and be justified in paying for the property for customary agricultural uses, including farm home advantages, with the expectation of receiving normal net earnings from the farm and from other dependable sources."[1]

The policy of basing farm mortgage loan amounts on normal values rather than on current values has developed as the result of a long-continued effort to provide a lending system that would help stabilize farm credit. The Federal Farm Loan Act of 1916, which created the Federal land banks, provided that no loan should exceed 50 percent of the value of the land mortgaged and 20 percent of the value of the permanent insured improvements, these values to be ascertained by appraisal. The basis for establishing the appraised value was the value of the land for agricultural purposes, with the earning power of the land as the principal factor. Until 1933, the term "value" in the statutory phrase "value of land for

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[1] Agricultural Research Service, Farm-Mortgage Loans of the Federal Land Banks, United States Department of Agriculture, ARS 43-86 (Washington: Government Printing Office, 1958), pp. 7 f.

agricultural purposes," had been interpreted by the banks as a modified sales-value concept. Appraised values were influenced too greatly by current farm earnings and current sale prices of farm properties. During the speculative period that developed in the autumn of 1919, many loans were made that proved to be too large for the borrowers to repay in less prosperous times. It soon became apparent that earning power should be given more weight and that this earning power should be based on average prices rather than on current prices.

In an effort to check to some extent the 1919-20 land boom, the Federal Farm Loan Board set a loan limit of $100 an acre on land used for general farming purposes. Although generally effective, this policy resulted in the tendency of including too many farms in the top $100 an acre loan group. Appraisals at this time, therefore, did not properly measure the productivity differences between farms.

The reverse situation of distressed values along with many foreclosures and delinquent mortgages during the emergency period of the early 1930's brought about a demand for higher loans and a modification of the appraised value concept to that designated as

normal value.[2] The Emergency Farm Mortgage Act of 1933 limited Land Bank Commissioner loans with all prior liens to not more than 75 percent of the normal value of the property as determined upon an appraisal made pursuant to the Federal Farm Loan Act. Gaddis expressed the new policy in 1935:

> The emergency act /Emergency Farm Mortgage Act of 1933/ made two notable changes with respect to appraisals. It placed them on the basis of normal values rather than current values which might be either distressed or inflated. It also provided that in making loans on groves and orchards the Federal land banks and all government agencies making such loans may in appraising the security give a reasonable and fair valuation to the fruit trees growing on the property and forming a substantial part of its value. . . .
>
> Prior to the passage of the emergency act an effort had been made to get a long time viewpoint of farm values but there had not been the persistent effort which has since been made to attain throughout the country, a uniformity of appraisals based on normal price conditions.[3]

The parity price level of 1909-1914, with certain adjustments, was selected as the basis for determining average product prices

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[2]For further discussions of early Farm Credit Administration appraisal standards, see Donald Horton, Harald Larsen, and Norman Wall, Farm-Mortgage Credit Facilities in the United States, Bureau of Agricultural Economics, United States Department of Agriculture, Misc. Publication No. 478 (Washington: Government Printing Office, 1942), pp. 88 f.

[3]P. L. Gaddis, "Appraisal Methods of Federal Land Banks," Journal of Farm Economics, XVII (August, 1935), pp. 469 f.

to be used in appraisals. As a result, the 1933 normal values of the Farm Credit Administration were roughly 15 to 20 percent higher than the prevailing sale values of farm land.[4]

The Emergency Farm Mortgage Act of 1933 also provided that land bank loans secured by first mortgages on farm lands could be made up to 50 percent of the normal value of the land and 20 percent of the value of the permanent insured improvements. This policy was revised in 1945 by an amendment to the Federal Farm Loan Act which changed the loan limit to 65 percent of the normal value of the farm, including the improvements. The term "normal value" in this amendment was interpreted by the Farm Credit Administration to mean the "normal agricultural value."[5]

The Farm Credit Act of 1955 contained an important provision permitting recognition of earnings from dependable sources outside the farm in making appraisals. This amendment reads in part:

> No such loan shall exceed 65 per centum of the normal value of the farm mortgaged, said value to be ascertained by appraisal, . . . In making said appraisal the value of the farm for agricultural purposes shall be the basis of appraisal and the normal earning power of said farm shall be a principal factor; and, consistent with community standards, the appraisal may also reflect home

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[4] William G. Murray and Aaron G. Nelson, Agricultural Finance (fourth edition; Ames, Iowa: The Iowa State University Press, 1960), pp. 155 f.

[5] Annual Report of the Farm Credit Administration 1949-50 (Washington: Government Printing Office, 1950), p. 90.

> advantages, and the availability to a typical operator of the property of earnings from other dependable sources to supplement the normal earning power of the farm. [6]

The Farm Credit Act of 1959 added the statutory provision that the amount of a land bank loan may exceed 65 percent of the appraised normal agricultural value of the farm by the amount of local association stock which is paid for out of the loan. Since each borrower is required to purchase capital stock equal to 5 percent of the loan, this provision has the effect of setting a loan limit of 68.25 percent of the appraised normal agricultural value of the security.[7] This latest amendment marks the last legal change affecting the percentage that may be loaned on the appraised value of land bank security.

The great emphasis placed upon the idea of "normalcy" or "typicalness" in the laws guiding land bank appraisal practice is also reflected in the rules and regulations for the Federal Land Bank System. An illustration of this fact is shown in the following outline of security standards taken from a section of the operations manual of a local Federal land bank association:

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[6] Farm Credit Administration, Laws Administered by the Farm Credit Administration, Circular 20 Revised (Washington: Government Printing Office, 1957), p. 50.

[7] United States Congress, Senate, Committee on Agriculture and Forestry, Farm Credit Administration, Hearings before Subcommittee, 86th Congress, 1st Session, on S. 1512 and on S. 1513, April 8 and 20, 1959 (Washington: Government Printing Office, 1959), p. 79.

To be acceptable security for a loan, a property must meet each of the following minimum standards:

(1) It must be sufficiently desirable to be readily salable or rentable under normal agricultural conditions.

(2) It must be sufficiently durable to maintain satisfactory production during the loan term specified.

(3) It must have sufficient stability of value to assure that, on a loan that would be proper to a typical owner of the property, the Bank could recover its investment if unforeseen difficulties should result in acquirement of the property.

(4) It must be capable of producing, under typical operation, sufficient normal agricultural earnings to pay farm operating expenses, including taxes and other fixed charges, maintain the property, and meet family living expenses and installments on a loan that would be proper to a typical operator; provided that, where income from dependable sources, other than farm earnings is available to a typical operator, such income may be relied upon to meet loan installments and family living expenses including that part of the taxes, insurance and maintenance costs chargeable to the dwelling.[8]

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[8] Words are not underlined in the original. Federal Land Bank of Wichita, NFLA Operations Manual (n. p. : n. n., 1957), Sec. 12, pp. 4 f.

III. THE THEORY OF NORMAL VALUE

Information contained in the official publications describing normal agricultural value for land bank loan security indicates that its meaning depends not only on the concept of "normal net earnings from the farm" but also on the undefined meaning of the following factors: "typical owner"; "usual conditions"; "customary agricultural uses"; "normal net earnings from dependable off-farm sources"; and "typical operator." We must look elsewhere for a clearer and deeper meaning of normal value rather than to define it with such terms as those listed above. Not to do so would find us falling into a tautology similar to that discussed by Giuseppe Medici, a noted appraisal authority in Italy, of defining an ordinary farm as that operated by a farmer who employs ordinary means of cultivation.[9]

As has already been noted, statutory provision dictates that the value of the farm for agricultural purposes must be the basis of appraised normal value and the normal earning power of the farm must be a principal factor. Long-term agricultural earning capacity then must be the primary determinant of normal value in the case of land bank loans. Therefore, to arrive at this normal value figure,

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[9] Giuseppe Medici, Principles of Appraisal (Ames, Iowa: The Iowa State College Press, 1953), p. 91.

one must rely heavily upon the income-capitalization approach or sometimes termed the "productivity method" of farm valuation.

Lenders of funds on the security of farm real estate attach particular emphasis to long-run earning power of the enterprise because this determines its ability to meet interest and principal charges and to avoid default. The income-capitalization method of appraisal involves an estimate of capitalized earning power and seeks to obtain the going-concern or investment value of the farm. Barlowe states that "theoretically, the market value of a property should always equal the present worth of all its future incomes. It should equal the sum of its future flow of economic rents discounted back to the present."[10] On the long-run theoretical level, it is a common belief that differences in farm land values depend on farm earning power--except for deviations due to amenities. Supposedly, the earnings potentials of the various grades of land are constantly taken into account in a highly competitive land market, the final result being that the more productive properties are bid up and the less productive are bid down until the rates of return are equalized.

To begin the process of arriving at normal agricultural value, a typical cropping system is set up and average yields of a typical

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[10]Raleigh Barlowe, Land Resource Economics (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1958), p. 188.

operator are assumed. Next, normal prices and costs are applied to determine the expected normal net income. Lastly, the expected normal net income is capitalized into normal value by use of this formula:

$$V = \frac{a}{r}$$

The above formula is largely based on a static framework where it is assumed that (1) knowledge of the future approaches perfection, (2) capital is unlimited, and (3) profit maximization is the sole motive of the firm.[11] Under these assumptions a refers to the annual net income which supposedly is known with certainty into perpetuity, r refers to the market interest rate (usually in actual practice the going farm mortgage interest rate), and V represents the present value of the property. Using this formula, farm land which is expected to produce a yearly net income of $1,000 is worth $20,000 when this income is capitalized at 5 percent ($1,000 ÷ .05 = $20,000). In other words, farm real estate which provides an annual income of $1,000 in perpetuity has a value equivalent to a cash fund of $20,000 which might be loaned at 5 percent interest compounded annually.

The use of the capitalization process to arrive at normal agricultural value is, of course, based upon the assumption that

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[11] Earl O. Heady, Economics of Agricultural Production and Resource Use (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1952), p. 394.

there is such a thing as normal rental value and that normal rental value can be determined with some degree of accuracy. When a farm is leased on a long-term basis at a mutually satisfactory rental rate to a tenant who is using it for its current highest and best use, it is obvious that there exists a normal rent that can be discovered quite easily. But the absence of rental agreements in certain areas and the frequency of properties that are owner-operated usually result in rental value having to be ascertained on the basis of the results of the farm's production.

Medici has observed that the concept of a normal rental value used in farm appraisal practice owes its origin to static economic analysis.[12] In a static, perfectly competitive market situation if several enterprises are producing the same goods, if they purchase the raw materials and the personal services they require and sell the finished products on the market, then they will tend towards that size and system of production that will allow them to produce at the lowest cost. Competition will cause some firms to be eliminated. As a result of this competition, those enterprises remaining may be termed "average," or "ordinary," or "typical" in that the sum of their expenses will be equal to the value of the products obtained. Profit and loss will tend to be zero. If conditions remain static, that is, if production and demand functions

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[12]Medici, op. cit., pp. 77 ff.

remain unchanged, there will be no uncertainty, and no pure profits.

The theory of normal value as stated by Ricardo was that the price of an economic object tends to be on a level with its cost; namely, the sum total of the prices that have had to be paid to obtain it.

If we use P to express price of the produce

C to express cost of the product

T to express profit (+) or loss(-)

we may write the equation:

$$P = C \pm T$$

Under normal conditions, according to Ricardo, $P = C$.[13]

Medici has developed the Ricardian formula into the following form:

$$P_g = R_v + I + S + W + T + S_e,$$

in which: P_g = gross production

R_v = rental value

I = interest on the working capital

S = salaries

W = wages

T = taxes

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[13] Ibid., p. 79.

S_e = sundry expenses

If we suppose that the total value of the farm's production is equal to the total expenses met for that production, then the rental value can be obtained from the above equation if the other terms are known.[14] In the income-capitalization method of farm valuation this rental value arrived at is assumed to be steady and perpetual.

The notion of an "ordinary" farm or a farm that produces a "normal" return implied in land bank appraisal literature reflects the view of a representative firm found in this passage from Marshall's Principles of Economics:

> On the one hand we shall not want to select some new producer just struggling into business, who works under many disadvantages, and has to be content for a time with little or no profits, but who is satisfied with the fact that he is establishing a connection and taking the first steps towards building up a successful business; nor on the other hand shall we want to take a firm which by exceptionally long-sustained ability and good fortune has got together a vast business, and huge well-ordered workshops that give it a superiority over almost all its rivals. But our representative firm must be one which has had a fairly long life, and fair success, which is managed with normal ability, and which has normal access to the economies, external and internal, which belong to that aggregate volume of production, account being taken of the class of goods produced, the conditions of marketing them and the economic environment generally.[15]

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[14] Ibid., p. 81.

[15] Alfred Marshall, Principles of Economics (ninth edition, Vol. I; New York: The Macmillan Company, 1961), p. 317.

Evidently it is impossible to assign a precise meaning to an expression such as the "typical purchaser" included within the Farm Credit Administration's well-known definition of normal agricultural value. An attempt to reduce such a term to an exact expression could only be made if we had greater powers than those we actually have. The complex conditions of the real world make it extremely difficult to form a practical idea of "typical" or "normal." According to Medici, "the ordinary farmer does not lend himself to a definition that can be called scientific in the sense we have given to that expression, because it is not possible to give an objective definition of him."[16] It follows, therefore, that for the purposes of appraisal, the farmer's actions (as purchaser, owner, or operator) must be identified with the farm's production, the only reality that can be objectively known. This further supports the theory that the normal value concept must essentially involve a "productivity" method of valuation. The normal value theory, supposedly, seeks the normal rental value under the assumption that profits or losses cancel each other thus making it possible to obtain the rental value by calculating the difference.[17] The farm is initially appraised as if it were being operated by an ordinary farmer, taking afterwards into account the special conditions of the particular farm.

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[16]Medici, op. cit., p. 91.

[17]Ibid., p. 83.

In conclusion, the theory of normal agricultural value appears to involve essentially the capitalization of expected farm returns into present value. Expected farm return here may be thought of as a forecast of farm income accepted with certainty by general opinion in the industry. Unusual or unexpected farm profits are not included in this capitalization process and examples of sources of these are: (a) methods of cultivation and production that represent innovations undertaken by outstanding management, (b) favorable weather changes, (c) increases in benefits from farm programs and other governmental expenditures, and (d) unusual changes in the cost, price, or yield situation. Unexpected or pure profits can be traced to uncertainty in the economy and cannot be capitalized because they are not predictable with any degree of certainty and do not continue indefinitely. Responsible institutional farm mortgage lenders such as the Federal land banks and insurance companies are careful not to base interest and principal payments on these innovational and windfall returns.

IV. GENERAL DIFFICULTY IN APPLYING THE NORMAL VALUE CONCEPT

Although the normal value concept has many followers on the long-run theoretical level, it is also widely recognized that there are numerous and real problems involved when applying the normal concept on the practical level. Several writers have seriously questioned the applicability of the normal value method of farm real estate valuation in an uncertain economy. Murray has maintained that there is no objective basis for a normal land price in terms of the techniques and knowledge now in existence:

> The concept of normal as it is commonly used implies a level to which land prices will return if they deviate in either direction. But we are not able to isolate measurable forces which act in this way. In addition to such swings as we have from prosperity to depression and back to prosperity, there are also a variety of forces which are shaping the general price level and the income which the farm owner receives as a return on his land investment. [18]

In discussing farm product prices, Norton reasoned along similar lines when he argued that any normal price based on a historical average is likely to be misleading because of structural changes. He has pointed out that such a normal price can be

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[18] William G. Murray, "Land Valuation and Credit in the United States," Proceedings of the Seventh International Conference of Agricultural Economists (London: Oxford University Press, 1950), p. 271.

successful in averaging the booms and depressions of a cycle. But the selection of a normal product price on a historical base usually does not take into account structural changes, major changes or trends involving a new price level situation.[19]

Earl Heady also has similar convictions. He says, "For prediction of future prices there is ordinarily no historic or quantitative basis upon which expectations can be established. The structural variables which relate to or determine prices are themselves subject to change and a single economic environment is not repeated often enough (if at all) to establish an outcome."[20]

Paarlberg has taken an even stronger position. He declared in 1951 that "there is no 'normal' for the price level."[21] After charting the price of land and the price level of the United States for the previous 130 years, Paarlberg concluded:

> There is a normal for the hog-corn ratio--about 12 or 13. If the ratio rises higher than this it will return. If it falls below this level, it will come back to it. . . . But for the price level itself there is no such normal. What goes up may stay up. If prices go up now we have no assurance that

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[19]Norton's views are contained in William G. Murray, Farm Appraisal (third edition; Ames, Iowa: The Iowa State College Press, 1954), pp. 178 f.

[20]Heady's quote taken from J. B. Cunningham, "Adjusting Appraisals to Changing Conditions," Journal of the American Society of Farm Managers and Rural Appraisers, XX (October, 1956), p. 48.

[21]Don Paarlberg, "Normal Value Concept in Appraisal Work," Journal of the American Society of Farm Managers and Rural Appraisers, XV (October, 1951), p. 159.

they will fall later; if we held them down now we have no assurance that they won't go up later. [22]

The "normal price" concept is essentially based upon the assumption that the price level goes up and down in fairly regular cycles. However, if a general inflationary trend takes place over a long period of years, a "normal price" concept runs into difficulties. Then, Cavert has noted, ". . . the problem is to forecast the trend of the general price level during the period for which the loan is to be made and to make a loan that in view of all the factors appears to provide an adequate safety factor. "[23]

From 1933 to 1947, the Farm Credit Administration and the Federal land banks employed the price level of 1909-14 with certain modifications as representing normalcy. This normal enabled the Farm Credit Administration to make loans in 1933 as high as the relatively low selling price of the land at that time. But by 1939 land prices had risen to the normal set in 1933. By 1949 land prices were double those of 1939, and the fixed base normal had to be abandoned by the land banks to reflect properly changes in agriculture and in the economic outlook.[24] Since about 1948 the Farm

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[22] Ibid., pp. 159 f.

[23] William L. Cavert, "Some Appraisal Problems, " Journal of the American Society of Farm Managers and Rural Appraisers, XV (October, 1951), p. 157.

[24] William G. Murray, "Land Valuation and Credit in the United States, " Proceedings of the Seventh International Conference of Agricultural Economists, p. 270.

Credit Administration has found it necessary to carry on continuous studies of farm commodity prices and farm operating costs and to make frequent upward adjustments in the prices and costs used in arriving at normal agricultural value.

As a result of this practice it appears that land bank loan appraisals have recently been tied to a rapidly shifting base period. In December, 1955, Engberg of the Farm Credit Administration announced that during the winter of 1954-55, new and generally higher standards for normal agricultural values were put into effect. This new policy had the effect of generally basing appraisals on farm commodity prices equivalent to 79 percent of the 1947-49 average prices and on farm operating costs equivalent to 104 percent of the 1947-49 average.[25] Engberg further added that "for the nation as a whole, appraised normal values per acre tend to average about 85 percent of average market values during 1947-49."[26] A Farm Credit Administration circular published in January, 1957, states that appraisers were then using prices for farm products and costs that resulted in normal values averaging close to the average market values which prevailed during the fifteen-year period 1939-53.[27]

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[25] R. C. Engberg, "Reorientation of Policies in Agricultural Financing," Journal of Farm Economics, XXXVII (December, 1955), p. 930.

[26] Ibid.

[27] Farm Credit Administration, Years of Progress with the Cooperative Land Bank System, Circular E-43 (Washington: Farm Credit Administration, 1957), p. 39.

However, the annual report of the Farm Credit Administration for 1958-59 reported that in April, 1958, an upward adjustment was made in the estimated level of normal prices of farm products and normal operating costs used by appraisers in determining normal agricultural values.[28] With this revision in effect, normal valuations would, of course, no longer be tied to the average market values in the 1939-53 period.

The present use of the concept of normal agricultural value may be described, in one sense, as an attempt at forecasting and is, therefore, subject to some of the same limitations involved in forecasting. Upward adjustment in national levels of normal farm values are made by the Farm Credit Administration if there appear to be permanent changes in the long-term outlook for the various types of agriculture. Adjustments are made only after a study of trends and such factors as earnings, unit size of farms, and farm sale prices.

The normal prices of farm products and normal farm operating costs used in land bank appraisals are forecasts of what prices and costs are going to average during the period of the land bank loans. Since these are forecasts and since personal judgment is an integral

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[28] 26th Annual Report of the Farm Credit Administration 1958-59 (Washington: Government Printing Office, 1960), p. 18.

part of the forecasting process, normal prices and costs are not infallible. The nature of the forecasting problem is to assess the future impact of both economic and noneconomic forces. This requires selective use of data in analysis and the use of judgment to interpret the results obtained.[29] Other lenders have found in the past that a s[illegible]ormula or a moving average forecast, applied without the element of human judgment, will not give satisfactory estimates of prices and costs over a period of years. For example, those lenders using a fifteen-year moving average of corn prices were embarrassed to find the average to be used in 1949 was higher than the one for 1948 even though corn prices in 1949 were lower than in 1948. The 1934 price which was dropped at the end of the moving average was lower than the 1949 price that was added.[30]

Lee states the main difficulty presented in this section in reference to forecasts based upon the principle of departures from normal:

> Perhaps the principal difficulty involved in this method is the problem of determining "normal." No one ever actually saw a 'normal' in the fields of the

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[29]For additional information concerning the role of judgment in economic forecasting, see Edward J. Chambers, Economic Fluctuations and Forecasting (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1961), pp. 344-346.

[30]William G. Murray, "Land Valuation and Credit in the United States," Proceedings of the Seventh International Conference of Agricultural Economists, p. 271.

> social sciences. The norms we get are statistical norms based upon projections out of the past. These may involve quite different institutional arrangements than those currently present or in prospect for the future. . . . Knowledge concerning departures from normal may be a very useful guide for those using other methods of forecasting. But the technique, used alone, assumes too mechanistic a relation among elements in a dynamic economy.[31]

If we assume that a normal or long-range view of net return and value can be obtained with sufficient accuracy to overcome the dangers involved in using current prices, costs, and values, then it still must be recognized that there are other, more specific obstacles to be encountered in applying the normal concept. Most of these obstacles can be found in the current market for farm real estate.

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[31] Maurice W. Lee, Economic Fluctuations (Homewood, Illinois: Richard D. Irwin, Inc., 1955), p. 547.

V. NATURE OF THE DEMAND FOR AGRICULTURAL LAND

It has so far been emphasized in this report that the Federal Land Bank System is directed by law as well as by policy to appraise farms on the basis of their agricultural value with the normal agricultural income of the property a principal factor of value. In other words, Federal land bank appraisal policy emphasizes the importance of land as a factor of agricultural production. But there is strong evidence that farm real estate value may now be less affected by the demand for land as a factor of production than it was formerly.

Although total food requirements have increased with population increase, the product per unit of land has increased. Land area is of less relative importance as a factor in agricultural production as a result of the applied technologies in the farming industry. The increase in product per land unit has more than offset the competition for farm land from nonfarm uses and the increasing amount of food needed for the growing population. This probably will continue to be true for some years to come. The technological gains that have been discovered or can be reasonably foreseen are likely to minimize, in the future, the effect of increasing food requirements on land values.

In addition to the use of land as a factor of production, Barlowe notes that land may be thought of as (1) space, (2) nature, (3) a consumption good, (4) situation, (5) property, and (6) capital.[32] The market for farm land apparently is now placing greater importance upon some of these other concepts of land. This especially has been brought to light since 1954 by the fact that farm income has provided no apparent support for the further increases in land values. To illustrate, Scofield made the following observation in February, 1960:

> Beginning in 1950, market forces capitalized the still favorable earnings into progressively higher capital values for both land and stocks. This trend continued into 1959 and has resulted in an unusual situation with respect to recent valuations for land. Returns on market values have been below the interest rate on farm mortgage loans in 4 of the last 5 years, and in 1959, the return of 3.0 percent was the lowest in more than 20 years.[33]

On the local scene, Crouse reported in April, 1960, that an analysis of the improved farms which had recently sold in Champaign County in Central Illinois indicated that the current earnings of the farms were in the range of 2 to 3 percent. Close to the Champaign-Urbana area the rate ran as low as 1.5 percent. He also noted that

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[32]Raleigh Barlowe, Land Resource Economics, p. 8.

[33]William H. Scofield, "Returns to Productive Capital in Agriculture," Current Developments in the Farm Real Estate Market, Agricultural Research Service, United States Department of Agriculture, (February, 1960), p. 24.

even bare land close to town often would not earn 3 percent for the owner. At that time farther out bare land would earn about 4 percent.[34]

The low return situation just described agrees roughly with the results of a 1959 study which included a group of 165 productive rented farms in Northern Illinois. Average net income to the landlords on these farms was $16.25 an acre; capitalized at 5 percent the resulting income value was $325 an acre. Market value for these same farms was estimated at $485 an acre, which when divided into the net income of $16.25 an acre gave a net return on market value of only 3.3 percent.[35]

The demand elements for farm land that are unrelated or only weakly related to the productivity of the land in agricultural use fall into two general groups:

1. Demand forces within the farm but not based upon the capitalized net earnings of the specific piece of land being considered.

2. Demand forces that are outside the farm and that reflect estimates of present or future land values in uses other than agricultural.

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[34]Earl F. Crouse, "Technical Tools of the Appraiser," Journal of the American Society of Farm Managers and Rural Appraisers; XXIV (April, 1960), pp. 14 f.

[35]William G. Murray, Farm Appraisal and Valuation (fourth edition; Ames, Iowa: Iowa State University Press, 1961), p. 247.

Within the first group above, the strongest single factor has been the demand for land for farm enlargement. In the six months preceding March 1, 1962, 46 percent of all transfers, nationally, were for farm enlargement. In contrast, only a quarter of all 1950 purchases were for farm enlargement.[36] Farmers want these additional acres so as to increase income by spreading the cost of existing and new equipment and other technologies over larger acreages. This "internal economies of scale" element reflects the fact that some farm units are too small for the effective utilization of modern agricultural technology and skills of management. In this situation, the price of an additional tract of land that will allow for more efficient operations will be bid out of proportion to the price that would be justified for that particular tract by a capitalization of its specific net earnings (in this case, the tract's net earnings are total revenue less only variable costs). Market forces tend to capitalize much of the increase in income realized from factors other than land into the price of land. Raup and Learn have stated: "In areas where an internal economies-of-scale problem exists, current levels of farm land values reflect a substantial element of value that is rooted in this tendency to capitalize all of the advantages of achieving an efficient organizational

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[36]Economic Research Service, Farm Real Estate Market Developments, United States Department of Agriculture, (December, 1962), p. 8.

unit into the price that will be offered for the additional land needed."[37] In many farm enlargement purchases, the distance to the present farm, and the extent to which the tract complements present farming operations are more important in determining market values than productive value alone.

Until farms on the whole more closely attain an economic size, those operators desiring to remain in farming will be willing to pay above the normal earning-capacity price for farm real estate. This process may be felt in the farm land market over a long period in the future. Blase found that in the north-central grain areas and in the southern pasture region of Iowa, market prices of land were below the estimated value for farm enlargement purposes. He further found that for farms around 160 acres in size having non-land resources that can be used to operate additional land, considerable economic incentive remains for buying land at current prices to enlarge the farm businesses.[38]

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[37] Philip M. Raup and Elmer Learn, "Effects of Alternative Programs of Supply Control Upon Land Withdrawal," Dynamics of Land Use: Needed Adjustment, Iowa State University Center for Agricultural and Economic Adjustment (Ames, Iowa: Iowa State University Press, 1961), p. 242.

[38] Melvin G. Blase, "Farm Enlargement and Entry Factors in the Land Market," Current Developments in the Farm Real Estate Market, Agricultural Research Service, United States Department of Agriculture, (October, 1960), pp. 24 f.

Theoretically, if prices and costs did not change, normal values might remain the same over the years. Actually, however, this is not the case. In April, 1952, Thomas, chief of appraisals for the Farm Credit Administration, pointed out that "changes in local conditions, both of the farm and of the community, changes in type of agriculture, changes in method of operation of the farms, yields, etc., affect values and, whenever they can be considered permanent, must be reflected."[39] The relations between levels of loan value on farm real estate and the lower unit costs that usually accompany farm enlargement and technological change are important, but they obviously are difficult for the lender to evaluate. Farm mortgage lenders like the Federal land banks need to know more about the long-term effects of mechanized farming--the extent the greatly increased investment in farm machinery and the higher operating costs will affect the value of farm lands. The land banks have made many local area studies in an effort to determine whether the increased earning from applied technologies over the long-run will be required for machinery replacement, better living for the farm family or will result in increasing or lowering the value of the farm firm.[40]

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[39]William G. Murray, "A Preview of the Farm Appraisal Panel Meeting, Appraisal Section," Journal of the American Society of Farm Managers and Rural Appraisers, XVI (April, 1952), p. 48.

[40]Ibid.

A second demand element that is internal to the farm itself but only weakly related to productivity value arises from a subjective preference on the part of farm people for farming over other employments. Farm families may choose to remain in farming even though the wage rates available in alternative employment opportunities would offer more favorable returns to family labor. Under this condition, land values will be higher than those justified by capitalized net earnings attributed to land when farm labor is valued at opportunity-cost wage rates.

The demand forces for farm land that are outside the farm are numerous and widely varied. These include the use of rural land for airports, highway improvement and expansion, water reservoirs, public parks, recreational areas, factories, and suburbanization. The aggregate demand for farm land for nonfarm uses is exerting an increasingly strong upward pressure on land prices. A detailed discussion of each of these nonfarm uses is beyond the scope of this paper and would carry us far afield. But one of these elements--the nonfarm demand for rural residential sites--is served to some extent by the mortgage credit of the Land Bank System and presents, as will be shown later, some interesting problems with respect to traditional appraisal theory. This nonfarm use of farm land is, therefore, singled out for special attention.

Specifically, we are here discussing the demand for farm land on the part of nonfarm people seeking rural residences beyond the boundaries of organized urban areas. Part-time farms, for purposes of this discussion, are included under this nonfarm demand for farm land since sales of only fifty dollars of farm products qualifies a property for designation as a part-time farm under the Census definition.[41]

Land serves as the basic capital good for agricultural production, but it also provides living space for a growing population. Evidence of this may be found in the dispersal of the urban population into rural areas. This movement is particularly apparent in the eastern third of the country, along the Pacific and Gulf coasts, and around the Great Lakes in a broad band extending north of the Ohio and west to Minnesota. One indication of the magnitude of this shift of rural lands from agricultural to residential uses is afforded by the following estimates showing part-time and residential farms as a percent of the total number of farms for the census years 1929-1954:[42]

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[41] The Bureau of the Census defines a part-time farm as follows: "Operator under 65 years of age, and working off farm 100 or more days or with income from other sources greater than farm products sold, and sales of farm products $50 to $2,499." See United States Bureau of the Census, 1959 Census of Agriculture--Preliminary (Washington: Government Printing Office, 1960).

[42] Philip M. Raup, "Economic Development and Competition for Land Use in the United States," Journal of Farm Economics, XXXIX (December, 1957), p. 1516.

1929	1939	1944	1949	1954
(percent of total farms)				
14.9	19.8	23.7	31.0	31.5

Improved transportation facilities, the desire for home ownership, the emphasis on informal outdoor living, and our traditional lavish use of space and mobility all contribute in making this a major element in competition for land use.

The effect of this desire for land is to build into farm land values in certain areas a demand element that is unrelated to the productivity of the land in agricultural uses. Residents seeking rural housing sites are relatively uninterested in the agricultural value of the land. Some of these are farm families who have shifted to nonfarm employment but continue to own or operate farm lands; others are urban families who have "moved to the country." The properties they occupy include rural residences, retirement places, and part-time farms. In most cases, the earning capacity of nonfarm jobs is available to be drawn upon in paying for farm land purchases. Thus, these people are justified in bidding high prices for buildings, shade, or for scenery, with little or no regard to the agricultural productivity of the accompanying land. The physical products of land are de-emphasized to give way to the other intangible services and satisfactions to be derived from land. Often the demand for rural housing sites comes in conflict with the demand

for farm enlargement from local farmers and disturbs traditional bases of value. When even a few properties are sold for nonfarm uses, there is a "rippling" effect on prices for farm land throughout a farming community. Consequently, many farms are priced at a higher level than can be supported by prospective farm income.[43]

Frequently rural residences are situated on tracts of farm land or small farms that are uneconomic for full-time farming operations but that can be converted into part-time farms. Besides the amenities of country living these tracts, in some instances, provide employment for otherwise unemployed family labor.

The prevalence of the nonagricultural productivity demand forces in the farm real estate market that have just been examined have led various authorities to emphasize more strongly the alternative concepts of land. The Agricultural Research Service in October, 1959, reported that "it is becoming apparent that present demands for land for production and for land for space are two separate functions of the market."[44] Held wrote in 1961 that ". . . farm land is as much a consumption good as a production good in some areas. Production for the market may well be of

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[43]Agricultural Research Service, "The Farm Real Estate Market in Mid-1959," Current Developments in the Farm Real Estate Market, United States Department of Agriculture, (October, 1959), p. 7.

[44]Ibid., pp. 6 f.

minor importance compared with the other satisfactions the farm produces for its operator."[45] Recent remarks made by Becker of Pennsylvania State University indicate that he believes the various concepts of land shift in relative importance as to their effect on farm real estate value. For instance, he has observed: ". . . the basis of value of farm real estate may be shifting more to expectations of future profits, and to the growing status of land as a commodity."[46] This leads us to the conclusion that land values are dynamic.

To support his observation that the role of land as a commodity is more important now than previously, Becker plotted the relations between (1) the index of United States farm real estate values for the years 1930 through 1956, and the following three indices: (2) the index of consumers prices, 1930 through 1956, (3) the index of total farm product value, 1930 through 1956, and (4) the index of farm prices received, 1930 through 1956. The coefficient of correlation (r) between farm real estate value and consumers prices was found to be .9868. The coefficient of correlation (r) between farm

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[45]R. Burnell Held, "Can Other Use Be Made of Agriculture's Excess Acres?" Dynamics of Land Use: Needed Adjustment, Iowa State University Center for Agricultural and Economic Adjustment (Ames, Iowa: Iowa State University Press, 1961), p. 216.

[46]R. J. Becker, "Land Valued as a Commodity," Journal of the American Society of Farm Managers and Rural Appraisers, XXII (October, 1958), p. 37.

real estate value and farm-product prices received was found to be .8639.[47] These observations do not necessarily mean that the lender can advance more on land than its earning capacity justifies. Nevertheless, they surely cannot be fully ignored when appraising the security for farm mortgage loans.

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[47] Ibid., p. 36. Correlation between (1) and (3) not given in this reference.

VI. PROBLEMS IN REFLECTING RESIDENTIAL VALUE

One effect of the nonfarm demand for rural residential sites, already discussed, is to "export" a demand for urban housing into the rural countryside, and to convert it into a demand for farm land. This demand element is especially noticeable in areas surrounding the larger urban centers, and extending out for distances of thirty to fifty miles.

The Federal land banks are now able to finance, to some extent, the long-term credit needs associated with the demand for residential and part-time farms. This was first made possible by a provision of the Farm Credit Act of 1955. Before this Act, the law provided, in regard to land bank appraisals, that "in making said appraisal the value of the farm for agricultural purposes shall be the basis of appraisal and the normal earning power of said farm shall be a principal factor."[48] The amendment made the following addition to the above sentence: "and, consistent with community standards, the appraisal may also reflect home advantages, and the availability to a typical operator of the property

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[48]United States Congress, Senate, Committee on Agriculture and Forestry, Farm Credit Act of 1955, Hearings before Subcommittee, 84th Congress, 1st Session, on S. 1286, May 19 and 20, 1955 (Washington: Government Printing Office, 1955), p. 45.

of earnings from other dependable sources to supplement the normal earning power of the farm."[49]

Prior to the Farm Credit Act of 1955, land bank appraisals had reflected somewhat the home advantages of the farm offered as security, as well as the availability of earnings from other dependable sources. However, under previous standards, these factors were not sufficiently reflected in the appraisals for most part-time farms to be accepted as security for land bank loans. In a statement submitted at the Senate hearings on this bill, Maxwell, Director of the Land Bank Service, pointed out that there were numerous institutions available for financing urban homes, but part-time farmers as a group were not adequately served with long-term credit.[50] Evidently, the "exported" demand for urban housing into the rural countryside or the demand for part-time farms of various types was looked upon as an unfilled gap in the credit market. This represented a sort of "hybrid" lending area with loan security containing some of the characteristics of both urban homes and commercial farms.

To enter this "hybrid" lending area, the Farm Credit Administration had to place greater emphasis on the concept of land as a

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[49] Ibid.

[50] Ibid., p. 92.

commodity or consumption good and on the concept of land as situation. At the same time the concept of land as a factor of production was de-emphasized. Appraisals began to reflect to a greater degree home advantages (consumption good) and the availability to a typical operator of dependable sources of off-farm income (situation).

It is apparent that this shift in appraisal standards carries with it significant implications for the concept of normal value. The normal or productivity method of valuation assumes that the property will produce an even flow of net returns year after year into the distant future. Actually, very few resources provide a constant income stream in perpetuity. According to Heady, only a 'pure sand' lends itself to unqualified use of the perpetuity method of valuation.[51] Strictly speaking, the normal value method of appraisal would only apply to a factor that embodied only continuous flow services. Heady tells us that services are of a pure flow nature "when only a limited quantity of services is given off in one period and the use of the flow in this period does not affect the services forthcoming in another period."[52] Examples of these are sunshine, rain, and the location and spatial characteristics of land.

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[51] Earl O. Heady, Economics of Agricultural Production and Resource Use, pp. 396 f.

[52] Ibid., p. 396.

The normal value method of appraisal best applies to the land resource since it is about the only factor which embodies continuous flow services. The phosphate, potash, nitrogen, and organic stocks in soils altogether represent a stock of services which, under certain conditions, may be entirely "used up" in the production process. However, with the normal agricultural value appraisal process it is assumed that a "typical" operator will maintain a reasonable level of soil productivity and will not exploit the land resource. With this assumption, the value of the products from farm land can logically be capitalized into normal agricultural value.

On the other hand, farm buildings attached to land cannot be as readily valued in the manner of continuous flow service because of depreciation and obsolescence. Most farm buildings give off services and income at different yearly rates over a limited time period. From the above analysis it follows that the concept of normal value is somewhat less applicable under those conditions where the Farm Credit Administration finds it necessary to give relatively less emphasis to agricultural productivity and relatively more emphasis to nonagricultural productivity in its appraisals. This would especially be true in appraisals of part-time and residential farms and of other tracts of farm land where a relatively high proportion of the value is made up of actual or potential residential value.

One might argue that in the normal value appraisal we could assume that a "typical" owner would maintain indefinitely, just like the soil fertility, a rural residence similar to that now present. This would assume that an annual allowance, like a tax on the land, would be provided out of gross income for maintenance. A family residence, under this condition, would tend to exist in perpetuity. But age is not the only form of depreciation that applies to residences. Arthur A. May subdivides residential depreciation into these three classifications: (1) physical deterioration; (2) functional obsolescence; and (3) economic obsolescence.[53]

Physical deterioration is a type of depreciation that arises from the wearing out of the parts of the structure and a lack of proper maintenance.

Functional obsolescence is defined as loss in value arising from:

1. Superadequacy and inadequacy.
2. Antique design.
3. Eccentric design.
4. Outmoded equipment.
5. Lack of utilitarian convenience compared to an up-to-date building.

Economic obsolescence is that loss in value arising from lack of demand and usually attributed to:

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[53]Arthur A. May, The Valuation of Residential Real Estate (second edition; Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1953), pp. 135-144.

1. Oversupply
2. Changes in the character of use.
3. Legislative enactments.
4. Proximity to nuisances.
5. Infiltration of inharmonious people.
6. Underimprovement or overimprovement of land.

Economic obsolescence arises from forces outside of the property. May provides us with the following summary description of this factor:

> Economic obsolescence is a ravaging force. It is the most ravaging of all the forces of depreciation. It is the basis of the axiom that 'more houses are torn down than fall down.' Physical deterioration can in part be cured by proper maintenance and replacements. Functional obsolescence can be cured at least to the extent of modernizing the design and equipment within the building from time to time. But there is no cure for economic obsolescence, because it has its origin in social rather than in physical sources.[54]

Admittedly, some of these elements of depreciation would not be so important for residences located on part-time farms as they would in a city where residence and industrial districts may change rapidly. Murray states that "the farm house and service buildings being tied to a given tract of soil gain a permanence from this association."[55] Nevertheless, farm real estate values that reflect a demand for urban housing are certainly not immune from some of the same forces that depress residential values within the city limits.

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[54] Ibid., p. 144.

[55] William G. Murray, Farm Appraisal and Valuation, p. 285.

The basic contention presented here is that it is hardly feasible to apply the normal agricultural value concept to property that is highly subject to economic obsolescence such as that defined by May. How, for example, can the normal value concept as defined by the Farm Credit Administration logically take into account the loss in value to a residential farm that could possibly arise from a transition of uses in a neighborhood? Zoning legislation or a lack of it that would allow the location of a factory or an outdoor theater to reduce the desirability of an area to home purchasers would be only one instance of this threat.

Directly related to this aspect of depreciation and obsolescence, rural properties with high home site value have an outstanding characteristic which reduces the applicability of the normal concept. This is the high proportion of land value that is made up of the so-called amenities. The amenities can be broken down into locational factors such as distance from town and road type; home attractions such as view and landscaping; and community factors such as nationality groups, schools, and churches. On a farm in connection with a suburban area where other employment may be had the intangible elements in the value may be more important than farm income from

the property.[56] Thus the risks to the mortgage lender in this instance would lie principally in the factors surrounding the property, rather than within the physical agricultural productivity of the farm itself. The land bank mortgage loan appraiser who has the responsibility for analyzing these factors in forecasting their long-run effects on value has a difficult task. The normal concept becomes very elusive in this situation.

It is interesting to note at this point the experiences of two other government agencies along these same lines. The Home Owners' Loan Corporation was created by an act of Congress in 1933 during the crisis facing home owners and lenders. The act was originally designed to limit loans to home owners up to 50 percent of "normal value." According to testimony of Russell, general counsel for the Federal Home Loan Bank Board, the loan limit was soon changed to 80 percent of "present-day value" because of the impossibility of determining "normal value."[57]

The Federal Housing Administration, through its mortgage insuring operations, has had an important influence upon the use of value concepts in the residential field. During the depression of

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[56] Ibid., p. 340. Certain amenities may also affect net income from land, e. g., in regard to road type, see Wilfred H. Pine and William H. Scofield, The Farm Real Estate Market in Kansas, Kansas Agr. Exp. Sta. Bul. 428 (Manhattan, 1961), p. 11.

[57] C. Lowell Harriss, History and Policies of the Home Owners' Loan Corporation (New York: National Bureau of Economic Research, Inc., 1951), pp. 9 f.

the thirties, the difficulties of estimating and capitalizing incomes for amenity-type dwellings, forced the FHA to place strong reliance upon stabilized replacement cost as a measure of "long-term warranted value." Likewise, during the post-World War II period, the FHA relied almost completely upon replacement cost in its valuation policies for amenity-type single-family homes. The FHA has consistently, however, relied heavily upon income capitalization in the valuation of income properties.[58]

The Home Owners' Loan Corporation and the Federal Housing Administration have both experienced, as must the Federal land banks when reflecting home advantages in their appraisals, that the profit derivable from the ownership of a single-family home is less susceptible to accurate analysis than that profit from an income property. An owner-occupied home has no actual rental income in the money sense until the home passes from the status of owner occupancy to tenant occupancy. It does have a theoretical rental income based on a comparison with other similar properties that are in actual rental status. But there exists what May describes as "another kind of income to the homeowner, evanescent in character and elusive of estimation."[59] Appraisal practice refers to this as

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[58]Paul F. Wendt, Real Estate Appraisal (New York: Henry Holt and Company, 1956), pp. 41 f.

[59]May, op. cit., p. 23.

the "amenity income" arising out of the conditions of agreeable living. Amenities are difficult to measure in terms of dollars because they involve psychological satisfactions and oftentimes, in respect to the same property, individuals will vary as to the values they assign to the amenities.

VII. TRENDS IN NORMAL VALUE APPRAISAL PRACTICE

Besides the income-capitalization method of farm appraisal that has so far been identified in this report with normal value appraisal, there is another general method of estimating the value of a farm. This is the market-data or sales price method of appraisal. With this approach, the appraiser values the property in terms of the price he feels it would bring in the current market. To do this, he studies the conditions and prices associated with the sale of comparable properties. The current real estate market is used for some indication of the actual going market values of the properties being appraised.

The market-data method provides a logical and direct approach to the determination of property values. Barlowe says that "this method provides a definite bridge between the theory of economic value and the actual exchange values of the market."[60] Consequently, this method is given considerable weight in most appraisals made for purchase or sale reasons. On the other hand, the market price of land as a forecast has not been regarded with favor by farm mortgage lenders since the depression of the thirties. The reasonableness

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[60] Raleigh Barlowe, Land Resource Economics, p. 201.

of sale price as a forecast of future value is based on the assumption that buyers on the whole are buying in anticipation of a certain pattern of income from the farm in the years ahead. Except for certain noneconomic forces that affect sale prices, market prices are an accurate balancing of present funds against future income from land. The market price forecast thus reflects the estimate of the future made by the land-selling and land-buying public. But due mainly to shifts in business and group psychology, prices of land may go too high during periods of prosperity and too low during periods of depression. For this reason, the public is usually considered to be somewhat unreliable in its forecast of future land values.[61]

Despite the wide fluctuations associated with sale values, the market-data method is a useful check on the income-capitalization method in appraisals for mortgage-lending purposes. The Farm Credit Administration itself attempts to utilize the best features of the market-data approach by combining them with parts of the income-capitalization approach. The result is a unified approach and is referred to by Murray as the "comparative method of appraisal."[62] The Appendix to this report outlines the general appraisal process

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[61] William G. Murray, "Land Valuation and Credit in the United States," Proceedings of the Seventh International Conference of Agricultural Economists, pp. 268-270.

[62] William G. Murray and Aaron G. Nelson, Agricultural Finance, pp. 248 f.

followed in this approach. In the land bank appraisal process, the actual sale prices of farms whose productivity is known play an important role in establishing values for bench mark or key farms in each lending area. Values for bench mark farms are first estimated by comparing the productivity and other features possessed by these farms with the features of farms that have actually been sold. After this has been done, the capitalization process is used as a check in determining the soundness of those values. Gaddis describes this overall appraisal process as one "which employs analysis, comparison, and capitalization, in the order mentioned."[63]

The degree of emphasis that will be placed upon actual farm sales in future land bank appraisals will depend on the extent to which the nonagricultural productivity value of farm land (already discussed earlier in Section V) is reflected in Federal land bank loan levels. This, of course, represents a major policy decision. In the past the land banks have made their facilities available to all farmers who could fulfill their equity requirements. But the portion of the market that the Federal land banks actually serve together with other institutional lenders is, and traditionally has been, restricted to relatively low-risk real-estate mortgages. This is

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[63]P. L. Gaddis, "The Appraisal of Farm Lands," Journal of Farm Economics, XIX (May, 1937), p. 415.

mainly a result of their appraisal and lending policies based on normal agricultural value. Normal value appraisal has restricted their lending to a considerably smaller percentage of the market value of the farm than for most other lenders. Brinegar has recently stated that, "in terms of the current purchase prices of the properties, it has been unusual for the farmer to close a loan with less than a 50 percent equity."[64]

To have some actual data for a brief check on Brinegar's statement, information was obtained for the last ten loans made by both the Federal Land Bank Association of Lawrence, Kansas, and by the Federal Land Bank Association of Ottawa, Kansas, prior to July 9, 1963. The results of this investigation are presented in Tables 1, 2, and 3. Table 3 shows that both associations had made their loans for under 45 percent of the current market value of the security shown in the appraiser's report. Normal agricultural value was set at a level of 68.2 percent of present market value in the ten land bank loans from Lawrence and at 65.7 percent of present market value in the Ottawa loans. Only extremely limited conclusions can, of course, be drawn from such a small sample; but, since all Federal land bank associations follow an essentially standardized lending policy,

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[64]George K. Brinegar, "Structure of the Capital Market and an Evaluation of Its Components," Capital and Credit Needs in a Changing Agriculture, ed. E. L. Baum, Howard G. Diesslin, and Earl O. Heady (Ames, Iowa: The Iowa State University Press, 1961), p. 46.

TABLE 1.--Analysis of last ten loans made by the Federal Land Bank Association of Lawrence, Kansas, prior to July 9, 1963

Amount of Each Loan	Present Market Value of Security	Normal Agricultural Value of Security
$ 6,000	$ 20,000	$ 13,200
27,400	61,000	40,300
19,100	40,600	28,000
5,300	16,600	10,500
11,500	30,500	21,300
7,900	22,000	16,000
4,000	11,400	7,200
45,000	95,000	66,000
6,300	14,000	9,600
4,000	9,800	6,800
Totals $136,500	$320,900	$218,900

TABLE 2. --Analysis of last ten loans made by the Federal Land Bank Association of Ottawa, Kansas, prior to July 9, 1963

Amount of Each Loan	Present Market Value of Security	Normal Agricultural Value of Security
$ 17,400	$ 45,000	$ 27,000
6,200	14,000	9,200
6,400	15,400	9,400
16,300	38,400	24,000
46,300	100,000	68,000
12,700	27,200	18,700
22,500	47,000	33,000
20,400	45,000	30,000
6,000	15,000	9,250
8,000	20,000	12,600
Totals $162,200	$367,000	$241,150

TABLE 3. --Financial characteristics of the last ten loans made by both the FLBA of Lawrence, Kansas, and by the FLBA of Ottawa, Kansas, prior to July 9, 1963

Factors	Lawrence Land Bank Loans	Ottawa Land Bank Loans
Total amount of loans	$136,500	$162,200
Total present market value of security	$320,900	$367,000
Total normal agricultural value of security	$218,900	$241,150
Loan amount/present market value	42.5%	44.2%
Loan amount/normal agricultural value	62.4%	67.3%
Normal agricultural value/present market value	68.2%	65.7%

the conservative lending practice revealed here is likely to be roughly typical of the situation in other land bank associations.

It is hardly conceivable that these mortgage loans of such a small percentage of the current market price of the security could result in any loss to the lender. At the same time if the percentage loaned was any lower, it would make the purchase of farm real estate more difficult for potential farm owners. Furthermore, an even more conservative lending ratio would lessen the ability of the land banks to operate successfully in a competitive market with other commercial farm mortgage lenders. In 1961, Tootell, Governor of the Farm Credit Administration, declared in reference to land bank loan levels: "The constant problem is to maintain a balanced position. That is, the extension of loans which are sufficiently large to be helpful, but which will not unduly contribute to land market inflation."[65]

Future land bank loan levels no doubt will reflect the long lasting and increasingly important demand elements for farm land that are unrelated or only weakly related to the productivity of the land in agricultural use. Not to do so would make lending ratios even more conservative and less realistic. This does not mean that earning

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[65] R. B. Tootell, "Adequacy of Our Agricultural Credit Structure," Capital and Credit Needs in a Changing Agriculture, ed. E. L. Baum, Howard G. Diesslin, and Earl O. Heady (Ames, Iowa: The Iowa State University Press, 1961), p. 260.

power per se will be de-emphasized but instead there will be a shift in emphasis as to type of earnings. In many cases earnings from the total enterprise will receive increasing emphasis as opposed to just the earnings of the specific tract of land offered as security. The trend is to place more reliance on the increases in income resulting from changes in technology, from cost economies realized through farm-enlargement, and from opportunities to obtain income from off-farm employment. Sources of net income such as these allow the appraiser to give more weight to the current market value of the property being appraised and at the same time decrease the relative importance of the capitalized value of the products from the land.

In October 1960, Hurlburt made the following observation which is especially relevant here:

> If income per farm in an area increases from a change in farming practice, can lenders increase their loan values per acre on real estate mortgages? As a question of operating policy, the answer is yes--within the several year period in which not all benefits have been passed to consumers in the form of lower product prices. Individually, borrowers can make larger payments on loans from greater farm incomes, regardless of the source of the additional income. . . . Also, from the lender viewpoint, operating policy may require an increase in loan values per acre, if the lending agency is to compete with other lenders. Risk for the lender may be no greater and earnings on investments in

> mortgages may well be higher under the new schedule of loan rates per acre, for a period of several years.[66]

Since World War II the Farm Credit Administration has been faced with the dilemma of whether to rigidly follow the normal value basis of appraisal and lose loan volume to less "scientific" lenders or to "relax" their appraisal standards somewhat so as to retain their competitive position. This dilemma has been partially resolved by frequent upward adjustments in the farm commodity prices used in arriving at normal agricultural value. Behind these adjustments lies the assumption that fluctuations in land values will continue to be associated with fluctuations in the prices of farm commodities and farm income. There is a relationship between farm product prices and land values, but as indicated earlier in this report, this relationship is not fixed and apparently is becoming less and less reliable as a forecast of future land values. Scofield, in December 1957, reported: ". . . a much closer association can be observed between the gross national product and the price of land since 1940 than between land prices and net farm income, the various commodity price indexes, or most other economic indicators."[67]

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[66] Virgil L. Hurlburt, "Technology and Farmland Values," Journal of the American Society of Farm Managers and Rural Appraisers, XXIV (October, 1960), p. 82.

[67] William H. Scofield, "Prevailing Land Market Forces," Journal of Farm Economics, XXXIX (December, 1957), p. 1500.

Even though the best information available is utilized in the construction of normal price and cost tables this, in itself, will not insure realistic loan levels. The intangible and nonincome features largely account for the recent general rise in the expected long-term market value of many farm properties. Attention can be given to these features only by taking account of actual sale prices. In April 1963, Buzzard of the Northwestern Mutual Life Insurance Company stated that most of the loans then being made by commercial lenders on part-time farms were more closely related to the market price than to the normal value of the unit.[68] This observation undoubtedly reflects the fact that the land banks have recently been able to give increasing emphasis to market price in their appraisals of part-time farms by reflecting to a greater degree home advantages and the availability of off-farm income. Through this practice another means has been found to meet the dilemma of how to remain competitive while basing loans on a form of normal value.

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[68]Glenn W. Buzzard, "Trends in Appraising Farms for Loans," Journal of the American Society of Farm Managers and Rural Appraisers, XXVII (April, 1963), p. 79.

VIII. SUMMARY AND CONCLUSIONS

The most significant observation is the sharp contrast that exists between the concept of normal value on the theoretical level and the concept of normal value as it has evolved in Federal land bank appraisal practice.

The normal agricultural value concept upon which all land bank appraisals are based has its roots in the theoretical relationship between market value and capitalized income under the income-capitalization or "productivity method" of farm valuation. This valuation approach involves the simple formula $V = a/r$ in which the expected normal net income (a) is divided by the expected rate of interest (r) to arrive at the normal value of the property (V). This process best applies to earnings from the soil because of their relatively perpetual nature.

In actual practice, however, the land banks do not directly capitalize earnings into value. The Farm Credit Administration has adopted the comparative method of appraisal under which values are first estimated on the basis of the comparative productivity and other factors of actual farms sold. Then the income-capitalization method is used as a check in determining the soundness of those values. The appraisal process followed

by the land banks is therefore designed to take account of current market values of farm land.

There are indications in the land market that the net earnings of the land in agricultural use are becoming relatively less important in the determination of long-term market value of farm land. If the land banks are to maintain their competitive position in the market for farm mortgage loans and if they are to be helpful to farmers in the future, actual farm sales are likely to receive increasing emphasis in future land bank appraisals in order that loan levels can reflect important non-agricultural productivity values of farm land.

But because of problems of measurement and because of their constantly changing nature, the non-agricultural productivity demand elements for farm land are not well suited for normal value appraisal. In fact, these intangible and nonincome features are so elusive that the normal method of appraisal, in its limited sense as described by Heady, can not deal with them at all.[69] Theoretically, only continuous flow services lend themselves to unqualified use of the normal appraisal process.

But to realistically reflect the market conditions in the real world affecting long-term land values, the normal agricultural

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[69]Earl O. Heady, Economics of Agricultural Production and Resource Use, pp. 396 f.

value concept of the Farm Credit Administration necessarily includes services and satisfactions that are far less stable in character. Trends in the land market indicate that this practical concept of normal value may depart even further from its theoretical counterpart. The practical and workable idea of normal value is not static. Rather it must be somewhat dynamic in order to stay in line with the changing conditions in the land market.

The above analysis suggests that the term "normal agricultural value" somewhat inaccurately describes the value estimate found with the land bank appraisal process. All land bank appraisals are based on a compromise value taken from both the income-capitalization and the market value appraisal methods. The end result can better be described as an "estimated long-term average loan value" or simply a "loan value."

To change from the term "normal agricultural value" to "loan value" would undoubtedly meet with some objections because of the long use of the term and also because of the fact that it is written into the laws applicable to the Federal land banks. However, such a change would properly emphasize the purpose of the valuation and would not falsely imply that the appraised value now being used by the land banks contains only agricultural elements of demand for land or is a normal value in the strict sense of the term.

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APPENDIX

THE COMPARATIVE METHOD OF APPRAISAL[a]

The comparative method of appraisal attempts to take the best parts of the other two appraisal methods /income-capitalization method and market-data method/ and combine them into a unified approach. Three general steps must be taken to place this method into operation:

1. Policy determination. --The lender first takes a broad look at long-term trends in farm commodity prices, farm costs, farm living expenses, and farm real estate values on a national basis. Past trends are examined and probable future levels are considered. An attempt is made to discount any unusual factors that may have affected recent trends and relationships. On the basis of this study, the lender determines on a policy basis what levels of farm commodity prices, production costs, living expenses and real estate values reasonably may be assumed for the foreseeable future.

2. Values for bench mark farms. --Policy determinations made under (1) are then applied in the appraisal of carefully selected and representative bench mark or key farms in each lending area. Values for these key farms are carefully estimated

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[a]From William G. Murray and Aaron G. Nelson, Agricultural Finance, pp. 248 f.

by comparisons with actual sales of similar farms. It is then determined whether the net income, based on the policy assumptions, represents a reasonable rate of return on that amount of investment. This method of appraisal differs from the capitalization method in that the rate of return is used as a check on appraised value rather than allowing a predetermined rate of return to be a determining factor.

3. Appraising the individual farm. --When the appraiser appraises an individual farm, he uses the same general standards in estimating income as were applied to the bench mark farms in the area. The farm being appraised is related to the most comparable bench mark farm with respect to income and value characteristics. No two farms are exactly alike, so it requires considerable judgment, born of experience in appraising many farms, to make valid comparisons of this type. The appraiser attempts to set his final estimate of the value at a level which reflects the capabilities of the individual farm and is consistent with the values on the bench mark farms. The resulting value not only indicates the income-producing and debt-paying capacity of the individual farm but also is geared to values established for other farms in the area and across the country.

AN EXAMINATION OF THE NORMAL VALUE CONCEPT AS APPLIED TO FEDERAL LAND BANK APPRAISALS

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Insurance companies, Federal land banks, commercial banks, and the Farmers Home Administration are the principal real estate mortgage lenders on agricultural land. Federal land banks provide lending funds to Federal land bank associations. These associations are cooperative credit organizations that make and service the Federal land bank loans. At present, the amount of a land bank loan may not exceed 65 percent of the appraised "normal value" of the farm to be mortgaged plus the amount of the Federal land bank association stock which is paid for out of the loan.

All land bank appraisals are based on the concept of "normal agricultural value" and it is upon this concept that this report centers its attention. This topic was investigated with the view that the appraisal of property is an adventure in economic research and as such may achieve inexact results. We might well expect this to be particularly true of the normal value appraisal process because of its necessarily highly abstract and theoretical nature. Library reference material along with actual data gathered from twenty Federal land bank loans revealed that several problems arise when the normal value concept is applied to real land market conditions.

The procedure followed in this report has been (1) to show how the land banks are directed by law as well as by policy to base their

loans on normal agricultural value, (2) to trace the theoretical basis for such a value, (3) to cite present and arising conditions in the market for farm mortgage loans and in the farm real estate market that make it difficult to apply the normal concept, and (4) to show the effect of these actual economic conditions on the development of normal value appraisal practice.

The above outline is designed to point out an underlying paradox that surrounds the normal value concept. Literature discussing the theoretical basis for the normal method of farm real estate valuation appears to identify it with the income-capitalization approach to property valuation. Furthermore, the literature stresses that this process best applies to earnings from the soil because of their relatively perpetual nature.

However, under the idea of normal valuation as developed by the Farm Credit Administration and as used by the Federal land banks, the market-data approach to valuation plays an important role in the determination of normal values. This practice is significant because it gives attention to certain nonagricultural demand elements influencing the current market prices for farm land that are difficult to "fit into" the theoretical framework that supports the notion of normal value. Examples of these include (1) the demand for land to raise existing farm units to more efficient size, and (2) the demand for farm land for residential sites for families whose primary source

of income is outside of agriculture. The second of these is especially troublesome in regard to normal value appraisal because here the amenities (intangible and nonincome features) make up a high proportion of the land value. In this situation the future return seems to be less stable in character and more elusive of estimation than, for instance, crop income from the soil that is heavily dependent upon prospective yields forthcoming from some level of fertility assumed to be maintained through ordinary management practices.

Nevertheless, despite this relative instability, the land banks have found it necessary to reflect in their appraisals the demand elements for farm land that are unrelated or only weakly related to the productivity of the land in agricultural use. If this were not done, loan ratios would become unduly conservative thus jeopardizing the ability of the land banks to operate successfully in a competitive farm-mortgage market. The concept of normal value operating under real market conditions consequently tends to include elements of demand for land that, apparently, from a theoretical viewpoint, should not be valued with the normal value method of property valuation.