AN ANALYSIS OF THE FACTORS THAT HAVE CONTRIBUTED TO THE USE OF LEVERAGED FINANCING WITH NON-RECOURSE LOANS IN TAX SHELTERS

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CHAPTER I

NATURE OF THE PROBLEM

Introduction

The use of leverage financing is not a new phenomenon. Tax leveraging occurs whenever a person's tax basis in an asset is reduced below the principal of the indebtedness against the property, by depreciation or deductible expenses which have provided a tax benefit. When this occurs, the total amount of depreciation and other expenses deducted exceeds the investor's investment in the property. This is not unusual because most loan amortization schedules provide for level monthly payments. Most of the early payments apply on the interest portion of the note. Therefore, just using straight-line depreciation combined with a small original equity could result in tax leveraging.

Tax leveraging with non-recourse loans makes possible both tax deferral and tax avoidance, enabling some investors to derive an adequate return on their investment even though there is no cash flow from the investment, and the original investment is completely lost.[1]

Investors may be able to decrease their tax liabilities in the first year in an amount greater than their original investment.[2] Through the use of non-recourse loans, the investors limit their loss to their original investment. If a creditor makes a non-recourse loan, the creditor can only look to the underlying property for repayment.

The non-recourse loan allows investors to deduct expenses in an amount greater than their original investment without any additional risk.

An example of how tax leveraging occurs is as follows. Assume that a group of investors leases a plot of land for fifty years and builds an apartment building for $1,000,000 which is 100 per cent financed by a 30-year loan at 10 per cent interest. Further, assume that they are able to obtain a private ruling from the Internal Revenue Service (IRS) to depreciate the building over a 30-year period using straight-line depreciation with zero salvage. The principle of the loan will exceed the undepreciated basis in the building by $306,842 at the end of the 15th year. After the 15th year, the difference between the adjusted bases of the building and the unpaid principal will begin to decrease. If double declining balance depreciation was used instead of the straight-line method, the difference between the adjusted bases of the property and the unpaid principal would have been $451,579 or $144,737 greater. Ignoring the time value of money, one might say that leveraging in the above example had about twice the impact of accelerated depreciation.

By using a life shorter than the repayment schedule or an accelerated depreciation method or both, one can increase the amount of deductions that are financed with borrowed money.

An example of the distortion that results from leveraging was described by Kenneth A. Goldman, formerly Attorney-Adviser in the Office of Tax Legislative Counsel, United States Treasury, during the panel discussions of the House Ways and Means Committee on general tax reform.[3] The tax shelter program mentioned had a prospectus which offered a taxpayer who would invest $32,000 in the project, $110,000

in tax deductions plus an investment credit in excess of $10,000, all in the first year. The offering described above was an underground movie. The most the investor could lose was $32,000, since the rest of the funds are from non-recourse loans; and if the project didn't fold for several years, he would have an interest-free loan on the taxes initially saved. If the venture had been an oil fund or an apartment syndicate and had been terminated, only a part of the interest-free loan would have had to be repaid because of the long-term capital gain tax benefits. The Tax Reform Act of 1976 has substantially limited the amount of tax avoidance and deferral by the motion picture industry. The real estate industry has not been affected quite as severely, however.[4]

Syndication of Tax Shelters

Leverage financing is usually seen in combination with other methods commonly used for postponing or avoiding taxes, such as accelerated depreciation methods, cash basis accounting for expenditures that would be capitalized under accrual basis accounting, deducting construction period interest and taxes, capital gain treatment upon disposition, and installment sale reporting. In combination, the above tax avoidance methods can provide substantial benefits to persons who have a large taxable income. The higher the tax bracket a person is in, the more valuable the benefits will be.

If the tax losses generated are greater than what one person can use advantageously, the losses can be sold to other high bracket taxpayers.

Tax shelters have been the topic of discussion whenever tax reform is considered by Congress. A tax shelter offers the right to offset various sources of income--doctors' fees, lawyers' fees, executive compensation, interest, dividends and rents--with deductions from drilling for oil, real estate buildings, feeding cattle, growing rose bushes, leasing airplanes and locomotives, and distributing or showing movies. The list of tax shelters is far from exhausted.

The Tax Reform Act of 1976 limits an investor's deductible losses to the investor's original investment plus any liabilities the investor is personally liable to repay in the following activities:

1. Holding, producing, or distributing motion picture films.
2. Farming (with several exceptions).
3. Leasing of any Section 1245 property.
4. Exploring for or exploiting oil and gas resources.[5]

Congress has sought to limit the marketing of tax shelters in the form of interest in syndicates or partnerships. The deduction of losses from the above activities is limited to "the aggregate amount with respect to which the taxpayer is at risk."[6] Generally, farming corporations and partnerships are now required to use the accrual method of accounting and must capitalize "preproductive period expenses."[7] It is still possible for an individual and even in some selected cases for a syndicate to achieve some tax avoidance or tax deferral.

Real Estate Tax Shelters

The real estate industry was exempted from most of the restrictions on tax shelters imposed by the Tax Reform Act of 1976. Construction period interest and taxes can be amortized over a period of four to ten years.[8] Investors are still able to take either 200 per cent or 150 per cent declining balance depreciation, depending on whether or

not the buildings are classified as residential or nonresidential. Under special IRS rulings and the Asset Depreciation Range system, investors may be able to use a depreciable life substantially shorter than the project's economic life. Upon liquidation of the partnership holdings, the investors may be able to have all or a part of the gain taxed at favorable capital gain rates.

Real estate tax sheltered investments can take many different forms. As will be shown in this study, residential property receives the most favorable treatment under the federal tax law. An investor can use 200 per cent declining balance depreciation on residential property and only 150 per cent depreciation on nonresidential real estate. The guideline life for depreciation purposes is shorter for residential property than for warehouses, store buildings and offices. Residential property, in some cases, still receives special tax treatment upon disposition.

The type of real estate tax shelters that have received the most attention from investors are those that create large losses in the first five to ten years of operation and do not create any additional risk for the investors other than their original investment. Apartment buildings often meet the above criteria. Insurance companies and commercial banks occasionally will make non-recourse loans on apartment buildings. Interest expense and depreciation will often cause apartment buildings to show a tax loss during the first ten years of operation. Housing projects that have mortgage guarantees by the Federal Housing Administration are usually financed by non-recourse loans, and because of the low return on investment, often show large losses during the first ten years of operation.

Nonresidential real estate that is leased to a reputable national organization can also qualify for non-recourse financing. Warehouses, discount stores, and fast food restaurants can be leased for periods of 20 to 30 years and therefore can be financed with non-recourse loans.

Significance of This Study

Information pertaining to real estate tax shelters is scattered throughout the literature on taxation and finance. Few authors address themselves to more than some narrow aspect of the tax law affecting real estate tax shelters. The discussion devoted to real estate tax shelters in texts on taxation is usually too superficial to be of much use to someone needing to evaluate adequately the tax avoidance features of real estate investment. The treatment given tax leveraging in the literature is even more sparse. This study will provide an organized, comprehensive approach to the task of explaining what tax leveraging is, how it occurs, and why it is possible.

The tax law that affects tax leveraging is complex and difficult to comprehend. Congress has not, until recently, directed its attention to tax leveraging. Prior to 1976, Congress did not directly attack tax shelters financed with non-recourse financing. Instead, Congress passed legislation that partially restricted tax avoidance by reducing the deductibility of depreciation and investment interest, increasing the amount of tax on disposition and enacting a minimum tax on tax preferences. In 1976, Congress directly restricted the deductibility of tax losses that are financed with non-recourse loans. The Internal Revenue Service has sought to restrict the proliferation of tax shelters administratively. The tax practitioner and the real estate investor

must understand how to circumvent the restrictions in the tax law in order to maximize the benefits to be derived from tax leveraging. It is hoped that this study will provide a guide for safe passage around the hazards that are in the tax law.

It should be of historical importance to describe how individuals are able to avoid a substantial amount of income taxes through the use of tax leveraging. Congress has not until recently directly tried to reduce tax avoidance by other means. This study will provide a method for determining the critical elements necessary for the existence of tax leveraging. If Congress does pass legislation restricting the benefits of tax leveraging for real estate tax shelters, this study will provide a basis for evaluating the extent of this legislation.

Objectives of the Study

The primary objectives of this study are to identify and analyze the factors that have contributed to the use of leveraged financing with non-recourse loans in real estate tax shelters. The specific objectives of the study are as follows:

1. To study those aspects of the federal tax system that affect the use of leveraging with non-recourse loans in tax shelters.
2. To determine the conditions under which tax leveraging occurs.
3. To determine the importance of tax leveraging in relation to other tax avoidance methods.

Method of Study

The research was divided into three parts:

1. A survey of the literature.
2. Development of a capital budgeting model.
3. Collection and analysis of examples of real estate tax shelters.

First, an intensive survey of the literature concerning non-recourse financing and leveraging was completed to determine what historically have been the major contributing factors to the use of leveraging with non-recourse financing in tax shelters. The study took an historical look at the Congressional, administrative, and judicial policies concerning non-recourse financing as a part of tax shelters. The Crane Doctrine formalized what was the conventional treatment of non-recourse debt. The Internal Revenue Service has placed some restrictions on the Crane Doctrine by questioning whether the non-recourse debt is equity financing instead of a loan.[9] In some cases the Internal Revenue Service has attacked non-recourse financing indirectly by questioning whether a limited partnership might have more corporate characteristics than partnership characteristics, disallowing the losses to the partners altogether.[10]

Following the survey of the literature, the research was centered on the development of a capital budgeting model for determining the influence of tax leveraging on the net present value of an investment, using discounted cash flows under various assumptions. The model is based on real estate investments such as apartment buildings, office buildings, and special purpose buildings. Various assumptions concerning

cash inflows and outflows have been made. For example, if rental receipts assumed are equal to cash expenditures for maintenance, management fees, property taxes, insurance and the annual payment for principal and interest on the indebtedness, the annual profit or loss depends on the difference between the deduction for depreciation and the payment on principal and on which of the two is larger. The difference between the present value of the annual tax savings or tax liability and the present value of any tax liability incurred upon abandonment of the project and the initial investment represents the net present value of the project. Assumptions were made concerning the following:

1. Interest and discount rates.
2. Reinvestment rate of tax savings or discount rates.
3. Amount of original investment.
4. Investor tax rates.
5. Loan repayment period.
6. Depreciation methods.
7. Depreciation period.
8. Termination date.
9. Selling price.
10. Cash flows.

Given the above assumptions and others, the model indicates such information as the value of leveraging as compared with the use of accelerated depreciation and over what periods the relationship holds, the net present value of the project, length of time for paying back the original investment, and effects of changing variables such as interest rates, equity investment, loan period, useful life, tax rates, and

cash flow.

The third stage of the study involved finding and analyzing examples of real estate tax shelters that utilize non-recourse financing. The purpose of this third stage was to obtain information about the size of the parameters in order to incorporate them into the capital budgeting model developed in stage two.

The Tulsa County District Court Clerk's office maintains a register for partnerships operating under fictitious names. The register has been maintained since 1947. This offered a direct method to locate the existence of limited partnerships in Tulsa County. All limited partnerships are required to file certificates with the Secretary of State, and this office provides a secondary source of information on limited partnerships in Tulsa County. It is possible to determine the type of operation that is being conducted by the limited partnership from three sources. A property transfer record is maintained in alphabetical order by year for Tulsa County. Secondly, the Tulsa County Assessor's office maintains a property ownership list by owner's name. Third, the certificate of limited partnership provides, in addition to other data, information as to its type of operation and amount of financing by limited partners.

The Yellow Pages Directory in the Tulsa Telephone Directory was used to help locate the existence of limited partnerships. A criss-cross index is maintained by the County Clerk's office so that a person can find a legal description from a street address. From the legal description, other information such as property deeds, mortgages, and lease contracts are found. From these records, it was determined how the property was held (i.e., by a limited partnership) and the type

of financing used.

Interviews were conducted with several persons who are participating in the marketing of real estate tax shelters to determine how non-recourse financing is obtained.

Limitations of the Study

The field work phase of this study was limited to apartment buildings in Tulsa County. Therefore, no statistically valid inferences can be made about the use of non-recourse financing in what can be termed the tax shelter industry.

In the course of this study, information was found concerning the use of non-recourse financing by entities other than limited partnerships. However, it was not the purpose of this study to determine the extent that non-recourse financing is used by corporations, individuals, or general partnetships in financing real estate.

Empirical data was not obtained concerning the use of non-recourse financing by non-real estate tax shelters such as oil drilling funds, feed lot operations, cattle breeding, orchard development, movie production and equipment leasing. The frequency of the use of non-recourse financing in real estate ventures cannot be generalized to the above non-real estate ventures. Some indications as to the use of non-recourse financing in non-real estate ventures, however, was ontained from the literature.

FOOTNOTES

[1]Prepared Statement of Milton A. Dauber, Panel Discussion Before the Committee on Ways and Means, House of Representatives, Ninety-Third Congress, Part 6 of 11, p. 706.

[2]Prepared Statement of Paul R. McDaniel, Panel Discussion Before the Committee on Ways and Means, House of Representives, Ninety-Third Congress, Part 6 of 11, p. 706.

[3]Prepared Statement of Kenneth A. Goldman, Panel Discussion Before the Committee on Ways and Means, House of Representatives, Ninety-Third Congress, Part 6 of 11, p. 865.

[4]The Tax Reform Act of 1976.

[5]Act Section 204, Tax Reform Act of 1976, adding Section 465 of the Internal Revenue Code of 1954.

[6]Ibid.

[7]Act Section 207, Tax Reform Act of 1976, adding Section 447 of the Internal Revenue Code of 1954.

[8]Act Section 201, Tax Reform Act of 1976, adding Section 189 of the Internal Revenue Code of 1954.

[9]Revenue Ruling 72-135, 1972-1 C.B. 100.

[10]Section 301.7701-2(h) (3), Income Tax Regulations.

CHAPTER II

HISTORICAL DEVELOPMENT OF THE FACTORS AFFECTING TAX LEVERAGING

The purpose of this chapter is to describe the factors that make possible the use of non-recourse financing for purposes of tax deferral and tax avoidance caused by tax leveraging. An attempt will be made to identify and describe those aspects of our federal tax system that affect tax leveraging with non-recourse loans in real estate tax shelters. The discussion of tax leveraging will be primarily limited to real estate tax shelters, although some parts may be pertinent to personal property.

A brief discussion in this chapter of the nature of tax leveraging will enable the reader to more fully understand what tax leveraging is and to appreciate the explanation that follows concerning those aspects of the federal tax system that affect the use of tax leveraging. A more detailed analysis of the conditions under which tax leveraging occurs will be described in Chapter III. The discussion will then focus upon the concept of basis determination under federal tax laws. A detailed explanation of the conditions necessary for liabilities to be treated as part of the tax basis of property will be made.

Since this chapter is basically an historical analysis of the evolution of federal tax policy concerning tax leveraging, an effort will be made to identify the source of the policy, i.e., legislative,

judicial, or administrative. The reader may gain some insight as to how Congress, the Internal Revenue Service or the courts may place further limitations on tax leveraging.

The Nature of Tax Leveraging

Tax leveraging can be distinguished from two other closely related concepts: (a) financial leveraging and (b) artificial losses.

Financing an investment with debt may provide an advantage to the equity interest in the form of a higher rate of return on investment.[1] The higher rate of return on the equity investment occurs provided the rate of return on the project's total investment from all sources exceeds the rate of return paid to the creditors. The increase in the rate of return to the equity investors due to financial leveraging is not without problems. The investor's risk of insolvency and variability of earnings is also increased.[2]

Financial leveraging may or may not result in tax leveraging. Tax avoidance is only a secondary purpose of financial leveraging whereas it is the primary purpose of tax leveraging. Both financial leveraging and tax leveraging require debt financing; however, tax leveraging, as the term is used in this paper, only occurs when the deductible losses from a project exceed the equity investment, resulting in deductions being taken which are paid with borrowed funds.

Artificial Losses

Tax leveraging with non-recourse debt creates an articifial loss for the taxpayer, but not all artificial losses are caused by tax leveraging.

The United States Treasury Department submitted its Proposals for Tax Change, which included "Limitations on Artificial Accounting Losses," to the House Ways and Means Committee on April 30, 1973.[3] The proposed legislation dealt directly with tax shelters caused by "accelerated deductions" such as intangible drilling and development expense, accelerated depreciation, construction period interest and taxes, deductions from farm operations and investment interest deductions.[4] Each of the above accelerated deductions is included in this classification as a result of the timing of the deductible amount. The Treasury's proposal would classify these accelerated deductions as "artificial losses" only if the accelerated deductions exceed "associated net related income" for the year.[5]

If an "artificial loss" is defined as a loss for which a deduction is available in a situation where the taxpayer has not suffered an "economic detriment," then an artificial loss can be caused merely by taking a deduction for straight-line depreciation when the property is appreciating in value; ignoring unstable general price levels. Accelerated deductions are not dependent upon debt financing, and the Treasury's proposal makes no reference to how the above accelerated deductions are financed.[6] Tax leveraging can, however, obtain for the taxpayer deductions, in excess of amounts invested, which are financed by debt.

The Concept of Basis Determination

It is necessary to understand the tax concept of "basis determination" in order to understand how or why tax leveraging is possible. Tax leveraging is not possible unless liabilities incurred in

acquiring property are added to the equity investment in computing the "cost" of the property for purposes of computing depreciation.

Cost Basis of Property

The Internal Revenue Code from its inception to the present time has not addressed itself directly to the problem of computing "cost" when part of the purchase price of property is borrowed.[8] Section 167 (g) of the Internal Revenue Code of 1954 states that the "basis" of property on which depreciation is allowed shall be the "adjusted basis" provided in Section 1011 for purposes of determining gain or loss. Section 1011 merely defines "basis" as it is defined in Section 1012, which is "cost."

It wasn't until 1945, 33 years after the passage of the Revenue Act of 1913, that certiorari were requested of the United States Supreme Court to determine whether the basis of the property includes the amount of the mortgage for which the property is collateral.[9]

The Crane Doctrine

The United States Supreme Court, in Crane v. Commissioner, formalized the treatment of liabilities for purposes of computing the basis of property when acquired by inheritance and for determining the amount realized when the property is sold "even though the taxpayer assumes no liability for the mortgage."[10] In the above two situations, the liabilities to which the property is subject will become part of the basis for depreciation purposes and the amount realized when the property is disposed of.

Beulah Crane inherited an apartment building from her husband in

1932.[11] The building and lot were subject to unassumed liabilities of $262,052.50.[12] The property was appraised for estate tax purposes at the above amount.[13] In 1938, with the mortgagee threatening foreclosure, Beulah Crane sold the building and lot to a third party for $2,500 cash, with the buyer taking the property subject to the mortgage in the principal amount of $255,000.[14] The taxpayer reported a taxable gain of $1,250. on the reasoning that what she acquired in 1932 was only the equity, which was zero in 1932, and this was all that she sold.[15] The Commissioner, however, determined that the taxpayer realized a gain of $23,767.03 on the theory that what she sold was not the equity, but rather the physical property itself, and that the adjusted basis in the property was the original fair market value of $262,052.50 less allowable depreciation.[16] The Tax Court held for the Petitioner, Beulah Crane, on the issue of whether the taxpayer had a depreciable basis greater than zero.[17] The Circuit Court of Appeals reversed the Tax Court.[18] The taxpayer requested certiorari before the United States Supreme Court.[19]

The Court looked at the definition of "property" as it is used in Article 113(a)(5) of the 1938 Revenue Act.[20]

> . . . in section 113(b) the "adjusted basis for determining the gain or loss from the sale or other disposition of property" is declared to be "the basis under subsection (a), adjusted . . . [(1)(b)] . . . for exhaustion, wear and tear, obsolescence, amortization . . . to the extent allowed (but not less than the amount allowable) . . ." The basis under subsection (a) "if the property was acquired by . . . devise . . . or by the decedents' estate from the decedent." Section 113(a)(5), is "the fair market value of such property at the time of such acquisition."[21]

The Court held that the term "property" meant the "physical property" rather than the taxpayer's "equity" in the property for the following reasons.[22] First, the standard dictionary meaning of

"property" refers to the "physical thing" and does not use "equity" as a synonym.[23] Second, Regulation 101, interpreting Article 113(a)(5), which provides that the value of property as of the date of the death of the decedent as appraised for the purpose of the federal estate tax ". . . shall be deemed to be its fair market value . . .," has been in effect since 1918 and Congress has re-enacted the relevant provision for determining adjusted basis where the property has been acquired from a decedent without substantial chance.[24] Third, Congress, has not used the terms "property" and "equity" interchangeably, but instead has made it clear as to which was meant.[25] Fourth, if Congress intended "property" to mean "equity," the adjusted basis for determining depreciation would be so small in those instances where the property acquired was subject to a liability, that the depreciation computed would represent only a fraction of the actual physical exhaustion of the property.[26] Fifth, the Treasury has not provided any guidelines for solving the many problems that would be present if depreciation were to be taken on an "equity" basis, and Congress has accepted this interpretation due to the absence of any corrective legislation.[27]

The taxpayer in the Crane case was not personally obligated to repay the loan but held the property subject to the indebtedness. The court's reasoning in Crane, however, is applicable whether or not the taxpayer is personally liable.

Bona Fide Indebtedness

The United States Supreme Court in Crane did not find that an unassumed loan should be treated differently from an assumed loan.[28] Beulah Crane argued that the depreciation deductions should go to the

person who bears the economic risk of loss.[29] It should be noted that Beulah Crane had claimed depreciation deductions on her return for the six years she held the property, which indicates some inconsistency on her part and may have indirectly influenced the Court's finding. The Court found her argument to be without merit because there was no indication that the value of the property fell below the amount of the mortgage lien. The Court reasoned that an owner of property which has a value greater than the unassumed liens against it will treat the indebtedness the same as though he were personally liable on the indebtedness.[30] In either case, the mortgage represents an economic cost to the property owner which will eventually have to be paid in order to keep the property.

The courts are often reluctant to disregard a mortgage in determining the basis in property for purposes of computing depreciation, even though the owner of the property is not personally liable on the indebtedness.[31] (Mayerson) An owner of the property should be able to claim the same amount of depreciation on property that is subject to a mortgage as he would be able to deduct if he were personally liable on the indebtedness. The Tax Court in Mayerson 47 TC 340 (1966) disregarded the lack of personal liability and stated:

> The element of the lack of personal liability has little real significance due to common business practices. As we have indicated in our findings it is not at all unusual in current mortgage financing of income producing properties to limit liability to the property involved. Taxpayers who are not personally liable for encumbrances on property should be allowed depreciation deductions affording competitive equality with taxpayers who are personally liable for encumbrances or taxpayers who own unencumbered property. The effect of such a policy is to give the taxpayer an advance credit for the amount of his mortgage. This appears to be reasonable since it can be assumed that a capital investment in the amount of the

> mortgage will eventually occur despite the absence of personal liability. [32]

It appears that the crux of the problem of allowing unassumed debt as part of the basis of property depends upon whether there is a reasonable expectation that the owner will make a capital investment equal to the mortgage; or, in other words, the mortgage must represent a bona fide obligation.

Mayerson is discussed here because the case represents an extreme position. The borrower is not required to make any principal payments on a loan for 99 years and is still able to claim depreciation financed by this 99 year note.

In Mayerson, the taxpayer, a real estate broker and developer, paid $10,000 down to acquire property that was held by an estate. The property was not modern and had 72 building code violations against it. The taxpayer signed a purchase-money note, which did not mature for 99 years in the face amount of $442,500 secured by a long term mortgage. If the purchase-money note were to be paid off in the first or second year the price would be reduced to $275,000 or $298,750, respectively. The taxpayer made extensive repairs to the building. Five years later the taxpayer was able to lease the entire property and, using the lease as collateral, obtain conventional financing for the property. The taxpayer then negotiated with the estate to accept $200,000 in full payment of the indebtedness. [33]

The Court in Mayerson considered the argument that the obligation, on which principal payments were not due for 99 years, was "contingent and indefinite in nature." [34] The Court distinguished the above case from those cases where it was held that the obligations could not be part of the basis because the obligation to pay was "contingent or

indefinite in nature."[35] The Court in Mayerson held that there were only two variables in the overall purchase price of the property: (1) whether the purchase-money mortgage was paid in the first year or the second year, and (2) whether or not the price reduction should be treated as a "bonus discount."[35] The Tax Court held:

> The presence of such optional discount does not make the purchase price indefinite. It merely provides an incentive for very early retirement of the mortgage which did not occur. The cost basis at the time of purchase should be the nondiscount price; the entire principal of the note and mortgage was due unless the discounted sums were paid in the first two years. It was not prepaid so as to provide for the application of the discount provisions and hence no adjustment in the basis is required during the years before. It is evident from the record that if the lien on the property provided by the mortgage were to be discharged at any time prior to its due date, the then fixed amount would necessarily have to be paid. There was nothing contingent or indefinite about the obligation here.[36]

If the rationale for inclusion of an unassumed liability in the basis is predicated upon the fact that eventaully a capital investment will be made, an unassumed liability differs from a contingent obligation only by the degree of contingency of repayment.[37] Amortization of an unassumed obligation is contingent upon several factors. Repayment might not occur if the value of the property declines below the principal of the mortgage. Also, repayment is contingent upon there being a positive cash flow from the investment, or that it will not be a financial drain on the investor's other assets. The possibility is often remote that the mortgage will be amortized before the property is sold. It should be re-emphasized that often the amount of depreciation taken on the "cost basis" of a property will exceed the payments of principal on the indebtedness. The probability of repayment of an "assumed" indebtedness is also contingent on the above factors, on

whether the mortgager has sufficient personal assets, and on the foreclosure policy of the mortgagee. In the event of foreclosure, the mortgagee will sometimes bid on the property in an amount equal to the unpaid principal in order to protect the mortgagee's investment.

Financing Arrangement v. Lease

An ideal tax shelter requires no cash investment and is financed with a large non-recourse debt. Leased real estate will often supply the above ingredients. The real estate lease may be originated several ways.

A firm needing additional liquidity may sell a property to an investor and lease it back. The investor will use the property as collateral to obtain a loan from a lending institution and agree to assign the rental payment to the creditor to amortise the debt. The lease may be a "net lease" requiring the lessee to pay the taxes, insurance, cost of repairs and any other contingency that might occur over the term of the lease. If the lease is for a period longer than the time needed to repay the loan and the lessee is a well known and respected company, the lending institutions may agree to loan 100 per cent of the purchase price.

The lease may be originated by a firm needing to lease a building not yet built. An investor will agree to build the structure to the firm's specifications and obtain financing with an institutional lender with an assignment of the rental payments payable pursuant to the net lease.

57 TC 760 (1973)

The Bolger case illustrates how tax leaveraging can be obtained without incurring any economic risk.[38] David F. Bolger was actively

engaged in real estate investment and finance. During the years 1963 through 1966 Bolger acquired, in similar fashion, interest in ten separate properties. The properties had improvements consisting of bank buildings, factory buildings, stores, a warehouse, and a silk processing plant. A financing corporation was organized for each property, capitalized for $1,000 with Bolger either being the sole shareholder or having a partial interest. Bolger then arranged for the corporation to acquire a building for a manufacturing or commercial concern that wanted to lease the property. Often within one day the financing corporation would acquire the property, enter into a lease with the user and sell its own negotiable interest bearing corporate notes in an amount equal to the purchase price, which would be secured either by a first mortgage or a deed of trust. The mortgage note amortization period was for a period equal to or less than the primary term of the lease. The mortgage specified, among other things, that the lease payments would be made directly to the mortgagee (or trustee). Also, the financing corporation was not to engage in any other activity and was to maintain its legal existence. The mortgage also provided that the corporation could transfer or sell the property with the transferee assuming all obligations under the lease and mortgage. The transferee would have no personal obligation to pay the principal, interest, or any other monetary judgment. Upon completion of the above, the financing corporation would convey the property for "one dollar and other valuable consideration" subject to the lease and mortgage. During the years 1963, 1964, 1965, and 1966, Bolger deducted net losses from the rental properties of $295,793.

This is a classic example of a tax shelter. Without any personal risk and little or no capital investment, Bolger was able to avoid tax on $295,793 of income from other sources. As pointed out by Lurie, Bolger was only the middleman between the lessee and the mortgagee. For his part in bringing the user of the building together with the institutional leader, he received a substantial tax benefit. In addition to the tax benefits and possible finance commissions, upon termination of the leases, Bolger might receive a property of considerable value without having to make any significant capital investment.

The Tax Court explored the two issues raised by the Commissioner: (1) should the financing corporations be recognized as "separate viable entities," and (2) if they should be so recognized, are they or is Bolger entitled to an allowance for depreciation and for the other related items of expense?

The Court held that the financing corporations were active, separate legal entities not acting as agents for Bolger. The corporations were formed for the purpose of pursuing a business activity and the parties agreed that the corporations would remain in existence. With the disposition of the first issue, the Court considered the second question of who had beneficial interest in the buildings.

The Commissioner argued as follows: (1) since the commitment to assign the lease payments occurred before the conveyance, and (2) the length of the long-term lease was equal to or exceeded the period necessary to repay the loan, Bolger did not receive a "present interest" in the depreciable properties, but instead received a reversionary interest in the properties. The Court cited World Publishing Co. v. Commissioner, 299 F.2d 614 (C.A. 8,1962) reversing 35 T.C.7 (1960) and

Albert L. Rowan, 22 T. C. 865 (1954), which held that the beneficial ownership of the property vested in the lessee and that technical vesting of legal title in the lessor of the land by inheritance was not sufficient for the lessor to have a depreciable interest. The Bolger case was distinguished from the above cases in that both the respondent and the petitioner agreed that either the financing corporations or Bolger were entitled to the depreciation. The Commissioner did not raise the issue of whether or not the lessee was entitled to depreciation. In the World Publishing Co. and the Rowan cases, both the lessor and the lessee were claiming depreciation on the same depreciable properties.

Thus, even though Bolger made no capital investment when he acquired the property, the Crane Doctrine applies in the Bolger case as it did in the Mayerson case. The Crane Doctrine permits the taxpayer to recover his investment in the property before he has actually made any cash investment, since it can be assumed that a capital investment in the amount of the mortgage will eventually occur despite the absence of personal liability.[40] Bolger offered expert testimony to prove that there would be a significant residual value in the properties.[41] Lurie, in his analysis of Bolger, states that the Commissioner lost the case because he didn't raise the proper issues of whether the ultimate goal was to finance the acquisition of the buildings by the user by a conditional sales agreement in the form of a lease or whether the buildings were acquired for the sole purpose of avoiding taxes without any intent of making a profit.[42]

In response to the abuse of lease transactions designed primarily to avoid taxes, the I.R.S. issued Revenue Ruling 55-540, which set out

criteria the I.R.S. would follow in determining whether a lease was in fact an installment purchase.[43] This determination depends upon the facts and circumstances in each case, which generally hinges upon whether the lessee will acquire an equity interest in the property.[44] It is generally desirable to obtain an advance ruling from the I.R.S. as to the treatment of a transaction as a lease. The I.R.S. has made several stipulations as a requirement for obtaining a ruling in the case of equipment leases. Most of the agreements between the I.R.S. and the lessor have to do with the residual value of the property upon the termination of the lease or the lease renewal rate.[45]

Sham Transactions

The Knetsch Doctrine

364 US 361 (1960)

The I.R.S. has a powerful weapon in its arsenal that may be used to prevent a taxpayer from deducting losses attributable to leveraged investments which were acquired for the purpose of avoiding taxes. Section 183 of the Internal Revenue Code disallows certain expenses which are not otherwise deductible, which pertain to an activity in which one is not engaged for profit.[46] The Supreme Court in Knetsch restated its often quoted phrase: "The legal right of a taxpayer to decrease the amount of what otherwise would be his taxes or altogether avoid them, by means which the law permits, cannot be doubted . . . ."[47] But the Court went on to say that there was nothing of substance to be realized by Knetsch . . . beyond a tax deduction.[48] The Knetsch Doctrine is partially reflected in Section 183.[49]

The substance of the above is that the taxpayer must have the potential of receiving some other economic reward besides tax benefits.

Therefore, in a leveraged lease transaction, the lessor may be able to show that he expects to receive a valuable residual interest upon termination of the lease. Or, at the end of the primary lease, if the lessee has an option to renew the lease at its "fair rental value," the lessor may be able to show he has the potential of receiving substantial cash flow during the option period.

In situations similar to the facts in the Bolger case where the investor is totally without personal liability and the investments are 100 per cent financed, the investor has no risk if the property depreciates in value. The owner or lessor will have to wait to enjoy any increase in value until the lease is terminated or renewed with a more favorable lease or the property is refinanced or sold. If the residual value of the property cannot be enjoyed for a substantial number of years, the present value of this terminal interest may be minute in comparison to the present value of the net tax benefits that are due to artificial tax losses. Thus far, however, the Commissioner has not used present value concepts for the measurement of terminal interests, even though present value concepts are used for valuing limited interest in estates.[50]

The Court in Goldstein, decided prior to the enactment of Section 183, held that no deduction was allowed for interest paid where the taxpayer was without any realistic expectation of economic profit and the transaction was entered into solely for tax avoidance purposes.[51] The taxpayer in Goldstein had won $140,218.75 in the Irish Sweepstakes in 1958. An attempt was made to spread the income out over several years by borrowing in excess of $900,000 from two banks, prepaying the interest, and purchasing United States Treasury notes, which were pledged as

collateral. The Court could not find any profit motive in the transaction other than to gain an interest deduction to affect the taxpayer's winnings. The Court stated that Congress, in enacting Section 163(a) ". . . could not have intended to permit a taxpayer to reduce his taxes by means of an interest deduction that arose from a transaction that had no substance, utility or purpose beyond the tax deduction."[52] The Court did not state that the non-tax motive must be primary in order for the interest to be deductible. The interest deduction must be only one of many mixed motives that cause the taxpayer to borrow funds.[53]

It appears that the Knetsch Doctrine will apply only to those leveraged leases where the taxpayer has no possibility of recovering more than his investment either through positive cash flow or an interest in the residual value of the leased property. The Commissioner may contend that a leveraged lease is a sham where the cash flow to the investor is minimal and the lessee has an option to purchase the property for an amount equal to the remaining unpaid balance of the mortgage.

Inflated Purchase Price

It is interesting to note at this point that the tax law actually encourages an investor to pay more for a property than it is worth if the project can be financed with non-recourse loans.[54] The taxpayer will obtain a deduction against income for depreciation dollar for dollar. Disregarding depreciation recapture under Section 1250, at some optimum time in the future the taxpayer may default on the loan, which triggers a taxable event. The taxpayer has a gain to the extent

that the unpaid principal exceeds the taxpayer's adjusted basis in the property. This difference is due to taking depreciation at a faster rate than the mortgage principal is amortized. If the property is real estate, the gain generally will be given capital gain treatment, which means that only half of the gain is ultimately taxed. If the taxpayer is in the 50 per cent bracket, a dollar of depreciation will reduce the taxpayer's tax liability by 50 cents. The dollar of depreciation reduced the adjusted basis in the property by a dollar. Since the dollar of depreciation was financed with borrowed funds which were not paid back, the discharge of the indebtedness is treated as a benefit received upon defaulting of the loan. But since only 50 per cent of the dollar gain is taxable, the tax liability is 25 cents. The taxpayer received an interest free loan of 50 cents from the Federal Government and only had to pay back 25 cents. Therefore, the taxpayer investor has an incentive to pay an excessive price for the depreciable property in order to increase the amount of tax deferral.

The Commissioner and the Courts have had little difficulty in seeing through schemes that involve inflated purchase prices.[55] It may be difficult, however, for the Commissoner to monitor the fairness of the purchase price on real estate transactions due to the lack of comparable sales, especially during periods of rapid inflation. If the Commissioner questions the substance of a leveraged lease from which the taxpayer has an expectation of making a profit, it appears that, based on Bolger and Knetsch, the taxpayer merely has to show that the transaction will be economically profitable ignoring income taxes. In a leveraged lease transaction, the lessor need only point to the potential terminal value of the leased property, which may be from

20 to 50 years into the future.

Internal Revenue Service Response to Tax Leveraging

It has been only in recent years that the I.R.S. has taken significant steps to retard the proliferation of tax shelters using non-recourse financing. The methods used by the I.R.S. have, at best, been piecemeal. Ironically, it was the Commissioner in Crane that insisted that the taxpayer must include the mortgage to which the property was subject in determining the basis for depreciation and in determining the amount realized upon its sale. The United States Supereme Court upheld the Commissioner's findings.[56]

Perhaps the I.R.S. is correct in not directly attacking non-recourse leveraging or the Crane Doctrine. One of the factors that affected the Court's decision in Crane was the complexity of computing depreciation where the depreciable basis would vary from year to year depending upon the amount of amortization of the mortgage.[57] It would seem that because of the pervasiveness of the Crane Doctrine throughout the economy, only Congress could effectively deal with the problem of depreciation and the distinction between borrowing and equity.

Withholding of Advance Rulings

There are several ways of attacking a tax shelter financed heavily with non-recourse debt that the I.R.S. could use to reduce or eliminate the tax losses going to participants that have little or no equitable interest in a project. The arguments the Commissioner used to question the substance of the transaction itself have already been mentioned in

the discussion of Bolger and Mayerson: (1) there is no reasonable expectation for the investor to make a capital investment by paying off the non-recourse loan which is a contingent obligation;[58] (2) the transaction is a sham since the investor has no expectation of making an economic profit;[59] and (3) the lessee or the lender is the equitable owner of the property. The I.R.S. has probably been more effective in reducing the incentive to invest in tax shelters by exercising its discretionary authority to issue rulings and determination letters. Section 3.021 of Revenue Procedure 72-9, 1972-1 C.B. 719 indicates that the I.R.S. "will not rule where the transaction has as its principal purpose the reduction of Federal Taxes." Without the blessings of the I.R.S., many investors will be hesitant to risk the chance of losing the tax benefits of a project, especially if the project is otherwise highly risky.

The syndication or marketing of a limited partnership interest will be discussed in more detail later. It is important, however, for the syndicators to receive a favorable determination letter stating that the limited partnership will not be classified as an association taxable as a corporation.[60] If it were to be considered a corporation, the operating losses would not pass through to the limited-partner/shareholders.

Elements of a Lease

The I.R.S. issued in 1955 Revenue Ruling 55-540, which provides guidelines for determining the existence of a conditional sales contract to be a lease of equipment.[61] The I.R.S. has not issued Revenue Procedure 75-21 for the purpose of setting out guidelines it will

follow in issuing advance rulings and determination letters for determining the existence of a lease.[62]

It is not uncommon for investors to arrange for a company to acquire equipment such as airplanes, locomotives, box cars, computers, and pollution control equipment by leasing it with the investors as lessors. The lessors may have financed the purchase of the leased property without any personal risk with a non-recourse loan. The lending institution would be adequately protected by the lessee guaranteeing payment. The investors would benefit from a transaction such as this from the tax deferral caused by taking depreciation in excess of the amount of debt amortization and the investment credit.

Revenue Procedure 75-21 has, in effect, described the factors necessary in a leasing transaction for the transaction to be obviously a lease. It is not clear whether Revenue Procedure 75-21 is to apply only to equipment or will apply to real estate leases as well. Revenue Ruling 55-540 specifically states that it applies to equipment leases. Neither Revenue Procedure 75-21 or Revenue Ruling 55-540 mentions real estate transactions. Revenue Procedure 75-21 does, however, indicate the conservative attitude the I.R.S. is taking toward leveraged equipment leases and leveraged leases in general.

Revenue Procedure 75-21 requires the lessor to have a minimum "at risk" investment in the property of at least 20 per cent of the cost of the property throughout the entire period of the lease. The property must have a residual value of at least 20 per cent at the termination of the lease and must have a remaining useful life of at least one year or 20 per cent of the original estimated useful life, whichever is longer. The lessee must not have the right to purchase the property at

a price less than its fair market value. The lessee must not have any investment in the leased property nor may the lessee provide any of the funds used to acquire the property or guarantee any indebtedness pertaining to the leased property. The lessor must demonstrate that it expects to make a profit disregarding any tax benefits.

Revenue Procedure 75-21 states that the above " . . . guidelines do not define, as a matter of law, whether a transaction is or is not a lease for Federal Income Tax purposes and are not intended to be used for audit purposes."[63]

Revenue Procedures 75-21 and 72-9 do not have the force and effect of law, but only indicate the circumstances under whith the I.R.S. will not issue advance rulings or determination letters. Investors may continue to form highly leveraged investments the principal purpose of which is tax avoidance, but they run the risk of litigation if an examination by the I.R.S. disallows or substantially reduces the tax benefits. It is yet to be determined what the effect of the I.R.S. policy not to issue advance ruling or determination letters will be on investors. They may avoid those projects that have a low probability of earning a before tax profit or have a high degree of loss. This could have a substantial effect on the construction of low and moderate income housing projects (Section 236 and 221(d) of the National Housing Act) which offer the investor mainly tax benefits for his investment. As Calkins and Updegraft point out, the actual operating cost almost invariably exceeds projected operating cost, with the result that the investor realizes very little cash flow and no economic recovery on the disposition of the project.[64] In order for an investor to at least break even in a situation described above, the project must stay out of

default or not be disposed of for a period of 5 to 10 years, depending on the return received on the invested taxes originally avoided.

The advance ruling policy will not affect leveraged tax shelters, such as apartment buildings, where the investors can expect substantial cash flow and the projects do not involve long-term leases.

Limited Partnerships and the Syndication of Tax Shelters

Selecting a Legal Entity

The limited partnership has turned out to be a very flexible legal entity capable of passing through to the limited partners almost limitless tax benefits while at the same time limiting the risk of loss to the amount of capital invested or required to be invested in the partnership. The limited partnership offers many advantages that other legal entities (i.e., corporations, Subchapter S corporations, general partnerships, and proprietorship) cannot completely provide but is not without some pitfalls.[65]

Many tax shelters such as apartment buildings, office buildings, motels, etc., require substantial amounts of equity capital that a single investor would not normally be able to provide. A large project may provide tax losses in excess of what a single investor could absorb. Also, many investors would rather be passive owners. Therefore, even though individual ownership may provide the investor with the fewest problems, it is usually only suitable for smaller projects.

Corporations are not the favored vehicle for holding tax shelters, because the corporation's tax losses cannot generally be passed on to

the stockholder. If the corporation and the shareholders elect Sub-chapter 8 treatment, losses generated by a tax shelter can only be deducted by the shareholders to the extent of their direct investment in the corporation attributable to capital and loans.[66] Any loss exceeding the above limitation cannot be used later where additional investment is made.[67] A sub-chapter S election cannot be made if more than 20 per cent of its gross receipts come from passive income such as rents which is not compatible to leveraged leases.[68] The most important disadvantage of all is the fact that the shareholder cannot add to the tax basis in his stock any of the corporation's indebtedness.

Packman states that partnerships are the most frequently utilized entities for tax shelters in which individuals are the investors.[69] Partnership income, deductions and credits flow through to the partners.[70] Partnership losses are deductible to the extent of the partner's basis in his partnership interest[71] which includes a partner's ratable share of the partnership borrowings.[72] A partnership loss in excess of the partner's basis may be carried forward indefinitely for use when the partners' basis increases sufficiently to absorb the loss.[73]

There are two forms for operating as a partnership, i.e., the general partnership and the limited partnership. The disadvantage of a general partnership is that each partner is jointly and severally liable for the partnership debts.[74] Even if the partners are not personally liable for the mortgage on the partnership property, there are other contingencies the partners may wish to avoid such as general operating liabilities and damage suits or tort actions in conjunction with partnership activities. Close supervision and adequate liability insurance may reduce this type risk to a minimum, however.

Operating in the form of a limited partnership provides the same tax advantages as a general partnership discussed above but limits the risk of loss to any one limited partner to the amount he is required to invest or has invested in the limited partnership. Limited partnerships are legal entities created under state statutes which are usually variations of the Uniform Limited Partnership Act.

Limitations on Use of Limited Partnership

A limited partnership is not without its problems, however. The I.R.S. has sought to limit the usefulness of a limited partnership by two methods: (1) classifying limited partnerships as associations taxable as corporations,[75] (2) reducing the amount of non-recourse debt a limited partner can use in computing the amount of his basis in his partnership interest.[76]

Again, the I.R.S. is using the advance ruling policy to reduce the proliferation of limited partnerships organized as tax shelters. Revenue Procedure 72-13 specifies the conditions under which it will issue an advance ruling on whether or not a limited partnership is an association where the general partner is a corporation.[77] Basically the I.R.S. requires that corporate general partners have economic substance. The I.R.S. has published Regulation 301.7701-2 which describes the corporate characteristics and the conditions necessary for a non-corporate organization to be classified as an association taxable as a corporation.

> The term 'association' refers to an organization whose characteristics require it to be classified for purposes of taxation as a corporation rather than as another type of organization such as a partnership or a trust. There are a number of major characteristics ordinarily found in a pure corporation, which, taken together, distinguish

> it from other organizations. These are: (i) associates, (ii) an objective to carry on business and to divide the gains therefrom, (iii) continuity of life, (iv) centralization of management, (v) liability for corporate debts limited to corporate property, and (vi) free transferability of interest.
>
> An organization will be treated as an association if the corporate characteristics are such that the organization more clearly resembles a corporation than a partnership or trust.[78]

Since a corporation and a limited partnership have associates and have the objective to carry on a business and divide the gains therefrom, these characteristics are not considered because they are common to both types of organization.[79] If any member has the power under local law to dissolve the organization, the organization lacks continuity of life.

> Limited partnerships subject to a statute corresponding to the Uniform Limited Partnership Act . . . lack continuity of life. . . .[80] An organization has the corporate characteristic of limited liability if under local law there is no member who is personally liable for the debts of or claims against the partnership.[81]

The regulations state that a limited partnership will have the characteristic of limited liability if the general partner has no substantial assets and is acting merely as an agent or "dummy" of the limited partners.[82] Limited partnerships usually lack the corporate characteristic of free transferability of interest if a partner must have the approval of the general partner and/or the other limited partners.[83]

The I.R.S. issued Revenue Procedure 72-13, the essence of which is to require the corporate general partner to have economic substance in the form of an adequate net worth. Otherwise the organization would be considered to have the corporate characteristic of limited liability.

> The limited partners will not own, directly or indirectly, individually or in the aggregate, more than 20 per cent of the stock of the corporate general partner or of any affiliates as defined in Section 1504(a) of the Internal Revenue Code of 1954.
>
> If the corporate general partner has an interest in only one limited partnership and total contributions to that partnership are less than $2,500,000, the net worth of the corporate general partner at all times will be 15 per cent of such total contributions or $250,000, whichever is the lesser; if the total contributions to that partnership are $2,500,000 or more, the net worth of the corporate general partner at all times will be at least 10 per cent of such total contributions.[84]

On May 3, 1974, the I.R.S. issued Revenue Procedure 74-17, which announced the conditions under which the I.R.S. would not issue advance rulings or determination letters concerning the classification of organizations "which raise factual questions as to whether their principal purpose is the reduction of Federal Taxes."[85] The I.R.S. had already established a policy of not ruling on a prospective transaction if the principal purpose of the transaction was the reduction of Federal taxes.[86] The operating rules of Revenue Procedure 74-17 are as follows:

> The interest of all the general partners, taken together, in each material item of partnership income, gain, loss, deduction or credit is equal to at least one per cent of each such item at all times during the existence of the partnership. In determining the general partners' interests in such items, limited partnership interests owned by the general partners shall not be taken into account.
>
> The aggregate deductions to be claimed by the partners as their distributive shares of partnership losses for the first two years of operation of the limited partnership will not exceed the amount of equity capital invested in the limited partnership.
>
> A creditor who makes a non-recourse loan to the limited partnership must not have to acquire, at any time as a result of making the loan, any direct or indirect interest in the profits, capital, or property of the limited partnership other than as a secured creditor.[87]

Revenue Procedure 74-17, unlike Revenue Procedure 72-13, states that the prescribed operating rules are only for purpose of delineating the circumstances under which the I.R.S. will issue ruling or determination letters "and are not intended as substantive rules for the determination of partnership status and are not to be applied as criteria for the audit of taxpayers' returns."[88]

Revenue Procedure 74-17 appears to be more of a constraint for limited partnerships engaged in exploration and development of oil properties and cattle feeding operations where the tax losses generated by intangible drilling cost and the expense of feed purchased often will exceed the equity investment in the first year.[89] It must be stressed that Revenue Procedure 74-17 doesn't automatically tax limited partnerships as corporations if they don't meet the requirements expressed therein. The I.R.S. merely has increased the risk of such action by refusing to give an advance ruling. The investor must weigh the probability of being taxed as a corporation against the potential benefits from a highly leveraged investment.

Because of the high risk involved in oil and gas ventures, it is difficult to obtain non-recourse loans from institutional lenders such as banks and insurance companies. Often, the general partner would finance the major portion of an oil and gas venture and would sell off the usable portion of the tax benefits to investors in the form of limited partnership interests with a large portion of their share of the investment financed by the general partner through non-recourse loans. The I.R.S. announced in Revenue Rule 72-135 that "any such purported 'loan' by a general partner would be treated as a contribution to the capital of the partnership" by the general partner which

would effectively reduce the amount of operating loss a limited partner could take.[90]

The I.R.S. is closely scrutinizing non-recourse debt as evidenced by Revenue Ruling 72-350, which classifies non-recourse debt as capital investment of the creditor where he has a right to convert the loan into a partnership interest.[91] The I.R.S. in the above two rulings is applying corporate debt-equity concepts to partnerships.

Tannenbaum reports that some drilling funds have side-stepped Revenue Ruling 72-350 by avoiding loans by the general partner to the partnership or limited partners, making third party loans convertible into a specific property (rather than a partnership interest) and allowing the lenders to pay the tangible completion cost of the well and receive an interest in the well in the same ratio that the tangible costs bear to the total cost.[92]

The crux of Revenue Rulings 72-135 and 72-350 is to reduce the limited partner's basis in their partnership interest, which reduces the amount of operating loss that the individual limited partners can deduct.

Tax Basis for Limited Partnership Interest

Section 704(d) of the Internal Revenue Code of 1954 limits the deduction of partnership losses to the partner's adjusted basis in the partnership interest. The computation of the limited partner's basis is explained in Sections 722 and 752 of the Internal Revenue Code of 1954 and Section 1.752-1(e) of the Regulations. Section 722 states:

> The basis of an interest in a partnership acquired by a contribution of property, including money, to the partnership shall be the amount of such money, and the adjusted basis of such property to the contributing partner at the time of the contribution.[93]

Just as individuals add to their capital investment any liabilities to which the property is subject (whether or not personal liability exists) general partners also add to their capital investment the partnership liabilities. This action is crucial to the availability of tax losses for the partners.[94]

The Code treats a partner's share of the partnership liabilities as a contribution of money by him to the partnership:

> Any increase in a partner's share of the liabilities of a partnership, or any increase in a partner's individual liabilities by reason of the assumption by such partner of partnership liabilities, shall be considered as a contribution of money by such partner to the partnership.[95]

Non-recourse liabilities of the partnership increase the individual partner's basis in the same way as liabilities on which the partner is personally liable:

> For purposes of this section, a liability to which property is subject shall, to the extent of the fair market value of such property be considered as a liability of the owner of the property.[96]

The partnership is the transferee owner of the property and the partners are therefore considered to have made a contribution of money to the partnership to the extent of the loan or the fair market value of the property, whichever is the lesser.

A limited partnership has a slightly different set of rules for the treatment of liabilities by the limited partners as described in the Income Tax Regulations:

> A partner's share of partnership liabilities shall be determined in accordance with his ratio for sharing losses under the partnership agreement. In the case of a limited partnership, a limited partner's share of the partnership liabilities shall not exceed the difference between his actual contributions which he is obligated to make under the limited partnership agreement. However, where none of the partners have any personal liability (as in the case of a mortgage on real estate acquired by the partnership without the assumption by the partnership or one of the partners of any liability on the mortgage) then all partners, including limited partners, shall be considered as sharing such liability under Section 752(c) in the same proportion as they share profits.[97]

The I.R.S. almost 20 years ago in Treasury Decision 6175, dated May 23, 1956, set the stage for the marketing of tax losses to investors. Income Tax Regulation 1.752-1(e) allows persons to add to their basis, in a partnership interest, non-recourse liabilities, which they cannot do if they are organized as a Sub-chapter-S Corporation under Section 1371 of the Internal Revenue Code of 1954 which took effect in 1958.[98] Income Tax Regulations 1.752-1(e) is consistent with the Crane Doctrine discussed earlier which assumes that the limited partners will eventually make a capital investment equal to the non-recourse indebtedness through principal payments by the partnership if the property is held until the mortgage is fully amortized. It is interesting to note that the limited partner determines his share of the non-recourse debt based on his profit sharing ratio rather than his loss sharing ratio which may be different.[99] The limited partners will have taxable income in those years that the principal payments exceed depreciation deductions if the partnership revenue just equals out of pocket expenses plus the mortgage payments. However, an actual cash investment is contingent upon the limited partner continuing in the partnership until the mortgage is paid off.

The Tax Reform Act of 1976 has restricted the deductibility of partnership losses to a partner's "at risk" investment.[100] Section 704(d) has been amended by adding that the adjusted basis of any partner's interest shall not include any portion of the partnership liability for which the partner does not have any personal liability. The above limitation does not apply to any partnerships that have the principal purpose of investing in real estate.[101]

The Senate version of the 1976 tax bill originally did not exempt partnerships involved in real estate from the "at risk" limitations for partnership losses. The exception for real estate partnerships was written into law by the Joint Conference Committee.

Effect of Present Value Concepts and Capital Gains Taxation on Real Estate Tax Shelters

Thus far, the emphasis has been on explaining the historical development of tax leveraging under Federal tax law as influenced by the Congressional, administrative, and judicial system. We have seen how Federal tax law makes it possible for an investor to obtain tax deductions which exceed the revenue generated by an investment and the investor's own capital investment through the use of funds borrowed without personal risk.

Tax Leveraging and Tax Deferral

The following may be described as "How to obtain an interest free loan from the government in the form of a tax deferral and how to cancel one-half of what is owed through the use of the capital gain provisions."

Ultimately, the investor will have to repay the non-recourse debt either with the cash flow generated through normal operations, by selling the property and paying off the debt, or by foreclosure where the creditor takes the property in satisfaction of the outstanding principal. As discussed earlier, the courts justified the use of non-recourse debt in computing the investor's depreciable basis, because the investor will ultimately make a capital investment equal to the non-recourse debt as the principal is repaid during normal operations.[102]

The main advantage of tax leveraging is the deferral of one's tax liability and the present value concept of money.[103]

If the investor repays the non-recourse debt from the cash flow derived from normal operations and the investor's marginal tax rate remains constant over the period of time the debt is amortized, the investor will receive a tax advantage from two sources. First, the investor benefits from taking a tax deduction for depreciation that exceeds the actual economic depreciation; i.e., ignoring general price level changes, the amount that accumulated depreciation exceeds the decrease in the fair market value of the investment. Second, the investor benefits to the extent that the depreciation deductions exceed the investor's capital investment plus the amortization of indebtedness.

In the first instance, the investor will be able to defer the tax decrease due to taking depreciation until the property is disposed of and the gain realized which is attributable to depreciating the property faster than the property decreases in fair market value. The value of this tax deferral to the investor depends upon the marginal tax rate the investor is in when the depreciation deductions are taken and when

the gain is realized, the length of time that elapses between the above two events, and the after tax yield the investor can earn on the postponed taxes. The investor receives, in effect, an interest free loan from the federal government that will have to be paid back only if the property is sold and the gain realized.[104] The investor may have acquired the property late in life with the thought of passing it on to his heirs without realizing any gain.[105] The value of this type of deferral will be developed further in Chapter III.

The second type of tax deferral mentioned above is a result of tax leveraging or financing a substantial portion of the cost of the investment with borrowed funds. At such time as the adjusted basis of the property is below the mortgage principal, the accumulated depreciation deductions exceed the investor's capital investment in the property. At some point in time the payments on principal will exceed current depreciation and the investor will begin repaying the postponed tax or the interest free loan from the Federal Government. On a 30-year loan with a 10 per cent interest rate, principal payments will not exceed depreciation deductions until the 16th year using straight-line depreciation.[106] The present value of one dollar due at the end of 16 years discounted at five per cent is 46 cents.[107] If the investor deposits 46 per cent of the first year's tax savings in a tax exempt investment earning five per cent with the earnings left to compound annually, the investor will have accumulated sufficient funds to pay the taxes due at the end of the 16th year caused by tax leveraging in the first year. In effect, the investor has received an indirect tax credit in an amount equal to at least 54 per cent of the first year's tax savings. The higher the investor's marginal tax bracket, the

greater the amount of indirect credit, though the per cent of tax avoided remains the same. However, an indirect tax credit of 54 per cent of one's tax liability for a person in the 70 per cent tax bracket is equivalent to excluding 54 per cent of his income, while a person in the 20 per cent bracket would have to exclude 190 per cent of his income to receive the same dollar reduction in taxes as the taxpayer in the 70 per cent bracket.[108] The high bracket taxpayer has a competitive advantage over the lower bracket taxpayer in acquiring fixed assets that provide tax leveraging. If both the 70 per cent and the 20 per cent investor paid the same amount down on an investment, the 70 per cent investor will have a smaller amount of after tax risk capital invested.

An analysis of the value of tax deferral caused by leveraging under various conditions will be discussed in Chapter III.

Capital Gains Tax on Disposting of Real Estate

If the investor makes a disposition of the property that results in a taxable sale or exchange, the tax on the gain realized may be substantially less than the tax deferred. A taxable disposition could occur due to selling the property, a taxable exchange, or due to abandonment or foreclosure, either voluntary or involuntary. The tax consequence is the same for each. The amount of tax owed on the gain realized depends upon several factors such as the length of time the property was held, the depreciation method used, data the property was acquired, the amount of excess investment interest carryover, the taxpayer's marginal tax rate and the amount of his other Section 1231 gains and losses and capital gains and losses. Each of the above

factors will be taken up later in the discussion on "Legislative Response to Tax Leveraging." For now, the discussion will be limited to the capital gains provision.

A building much as an office building, warehouse, shopping center or apartment either is a capital asset under Section 1221 if it is held for investment or qualifies for capital gain treatment under Section 1231 if it is used in a trade or business, though by definition under Section 1221 it is not a capital asset. One way or another, if the property qualifies for capital gain treatment, the taxpayer will receive a capital gain deduction equal to 50 per cent of the excess of net long-term capital gains over net short-term capital losses under Section 1202. The essence of this 50 per cent long-term capital gain deduction is that only one-half of the gain from the sale of the property is taxable if there are not any net short-term losses. If the investor is in the same tax bracket when the property is disposed of as when he claimed the deductions for depreciation, the investor has only to repay one-half of the taxes originally avoided. The investor is receiving two tax benefits from a tax shelter: (1) an interest free loan from deferring his taxes, and (2) the repayment of only one-half of the loan when the property is disposed of in a taxable transaction. The gain, to the extent that it is caused by taking depreciation in excess of the actual decline in economic value, is not an economic gain but is instead a "tax gain" caused by an earlier tax loss.[109] Ignoring the deferral benefit, if an investor such as Bolger, described earlier, claimed tax losses over a period of years of $100,000 which offset income that would have been taxed in the 50 per cent bracket, his tax saving would amount to $50,000.[110] Since Bolger made no

capital investment in many of the projects, the full $100,000 deduction for tax losses was financed with non-recourse loans. If there was not adequate revenue to pay operating expenses plus the mortgage installments and the creditor foreclosed on the mortgage, Bolger would have a "tax gain" of $100,000, equal to the difference between the adjusted basis of the investment to Bolger and the unpaid principal of the mortgate. The unpaid principal on the mortgage is considered part of the sales price as if the taxpayer had sold the property for an amount equal to the principal and the funds received used to discharge the indebtedness.[111] Since the property qualifies for capital gain treatment, only one-half of the gain of $100,000 or $50,000 is taxable. If Bolger is in the 50 per cent bracket, there would be a tax liability due to the disposition of the $25,000. Thus, if Bolger merely receives back his original investment, namely nothing, he is ahead $25,000, plus the value of the interest free loan of $25,000. If the foreclosure doesn't occur for several years, the after tax yield on the $50,000 in taxes avoided by deducting "tax losses" may equal or exceed the amount of taxes that have to be "repaid."

It can be seen through the interaction of the depreciation and capital gain provisions of the Internal Revenue Code of 1954 that a taxpayer may have an after tax gain which without these provisions might have been an economic loss.

Legislative Response to Tax Leveraging

Congress has been slow to react to tax avoidance caused by real estate tax shelters and tax leveraging. Its efforts have mainly been in the form of piece-meal legislation from 1964 through 1969. It has

failed to substantially reform the tax laws pertaining to depreciation as it affects real estate tax shelters, which is a major element.

Recapture of Depreciation of Ordinary Rates

In 1962, Congress enacted Section 1245 of the Internal Revenue Code of 1954 which provides for the recapture of all depreciation taken after December 31, 1961 on personal property and other property, not including buildings, not to exceed the gain realized.[112] The gain realized, to the extent of the recaptured depreciation will not qualify for capital gain treatment and will be subject to ordinary income rates. United States Treasury Secretary Dillon in his 1962 appearance before the Senate Committee on Finance proposed that the recapture provisions apply to both personal property and real estate.[113] Provisions were made in the Treasury proposal to decrease the amount of depreciation that would be recaptured on real estate the longer the property was held to take into consideration the general rise in prices.[114] Congress passed legislation relative to personal property only.[115] In 1963 the Treasury went back to Congress with the same basic proposal that it had presented in 1962.[116]

Congress, in Section 1250 of the Internal Revenue Code of 1954, provided for the recapture of depreciation on real estate only to the extent that accelerated depreciation exceeded straight-line depreciation and also provided for the gradual reduction of the recapture over a ten-year period after which there would be no recapture. The Treasury proposed in 1962 and again in 1963, as an alternative to Section 1250, the repeal of the use of accelerated depreciation on real property, but Section 167 concerning depreciation was not sub-

stantially amended to restrict the use of accelerated depreciation until the 1969 Tax Reform Act. It is interesting to note that it was reported by Don Throop Smith that there was no conscious decision to adopt accelerated depreciation methods in 1954 to stimulate building of residential housing.[117] The primary concern of Congress then was the production of machinery and equipment.[118] It is somewhat ironic that contractors and real estate investors have used as an argument for the retention of accelerated depreciation, the effect of its removal on the housing and construction industry.[119]

The Tax Reform Act of 1969

It wasn't until 1969 that Congress focused its attention on the ingredient of tax deferral in tax shelters. Congress, in one broad stroke, strengthened Section 1250, reduced the rate of depreciation on apartments and commercial buildings, and reduced the amount of investment interest an individual could deduct. It also applied a new minimum tax to tax preference items including accelerated depreciation in excess of straight-line depreciation, the excluded one-half of capital gains and excess investment and increased the tax on net long-term capital gains.[120]

The Tax Reform Act of 1976

Congress again in 1976 made a special effort to reduce the amount of tax avoidance caused by tax shelters.[121] Section 1250 was strengthened by eliminating the gradual reduction of Section 1250 gain for residential real estate except for government subsidized housing.[122] The deduction for investment interest was further limited.[123] The

minimum tax rate and the minimum tax base were increased.[124]

Congress, in addition to strengthening the Tax Reform Act of 1969, enacted some provisions to curb the growth of tax shelters, which represents new strategy. Tax avoidance due to "tax leveraging" with non-recourse loans has been eliminated for many types of tax shelters except for real estate investments by limiting deductible losses to an investor's "at risk" investment.[125] Construction period interest and taxes must now be spread out over several years rather than the amount being deducted in the year paid.[126] Farm syndicates and large farm corporations are now required to use the accrual method of accounting.[127]

Section 1250

Section 1250 was amended by the Tax Reform Act of 1969 to lengthen the period of time residential real estate must be held in order to avoid the recapture of the excess of accelerated depreciation over straight-line depreciation at ordinary tax rates.[128] Prior to 1970, the Section 1250 gain was reduced one per cent for each month the property was held past 20 months. For years subsequent to 1969 and prior to 1976 the property must be held at least 100 months before the reduction begins, or held for 16 years and 8 months for all gain to be taxed at capital gain rates. The arbitrage between ordinary tax rates and capital gain rates is still possible since Section 1250 comes into play only if accelerated depreciation is used and the property is held for less than 16 and two-thirds years.

Congress was not so lenient towards non-residential property. Originally, when Section 1250 was first enacted, residential and non-residential property were treated alike. The Tax Reform Act of 1969

eliminated the gradual reduction of Section 1250 gain for non-residential properyy. The Tax Reform Act of 1976 reduced the disparity between residential real estate and non-residential real estate by eliminating the gradual reduction of Section 1250 gain for residential property except for government subsidized housing. For government subsidized housing, there will be full recapture the first 100 months and a gradual reduction over the next 100 months.[129]

Depreciation Methods

Congress also made a distinction between residential and non-residential property as to the use of accelerated depreciation methods. Prior to 1970, both types of new real estate could be depreciated using the 200 per cent declining balance method and used real estate could be depreciated using 150 per cent declining balance. For years subsequent to 1960, only new residential rental property qualifies for the 200 per cent declining balance.[130] Used residential rental property having a life 20 years or more will qualify for 125 per cent declining balance.[131] New commercial buildings can now only be depreciated using 150 per cent declining balance or a lesser method while used commercial buildings qualify only for straight-line depreciation.[132]

The impact of the above changes on tax deferral will be analyzed in Chapter III.

Investment Interest

Congress substantially reduced the ability of some taxpayers to defer taxes due to leveraged tax shelters when it reduced the amount of interest on investment indebtedness that could be deducted by non-

corporate taxpayers. A non-corporate taxpayer is allowed to deduct annually investment interest in an amount not to exceed the sum of $10,000 plus net investment income.[133] "Net investment income" is defined as the excess of investment income over investment expense.[134] The term investment income includes gross income from interest, dividends, rents, royalties, net short-term capital gain, and Section 1245 and 1250 gain to the extent the amounts are not derived from the conduct of a trade or business.[135] Investment expenses are defined to include real and personal property taxes, bad debts, straight-line depreciation, amortizable bond premiums, expenses for the production of income and depletion, to the extent these expenses are directly connected with the production of investment income.[136] The disallowed investment interest is carried forward and deducted in subsequent years to a limited extent.[137]

Section 163(d) of the Internal Revenue Code of 1954 strikes at the heart of certain types of tac deferral for some individuals. It applies only to non-corporate taxpayers who have only limited amounts of investment income such as interest, dividends, rents and royalties. The limitation for investment interest applies only in those years when the investment interest exceeds $10,000. Therefore, even executives and professional individuals, whose main source of income is earned income from services, can deduct tax losses attributable to investment interest in an amount equal to $10,000 plus any net investment income. The tax advantages of the "Bolger" type of arrangement have not been eliminated, but the amount of tax deferral has been reduced for certain types of tax shelters.

Those individuals who already have substantial investment income will probably not be affected by the restriction on the deduction of investment interest. For this type of taxpayer, real estate tax shelters can have an important impact on their personal tax liability. It is ironic that much of the impetus for tax reform was caused by 154 individuals with $200,000 or more income who had avoided the payment of all income taxes, of whom 72 mastered this trick through the use of tax shelters that produced large amounts of investment interest.[138]

Section 163(d) does not apply to "business interest." Thus, investors need not be concerned with Section 163(d) if their tax shelters involve conducting a trade or business such as feeding cattle, raising breeding stock, growing rose bushes and fruit trees, and drilling for oil and gas.[139]

Section 163(d)(4) specifically states that property subject to a net lease shall be treated as property held for investment. The draftsmen of this code section no doubt must have realized the difficulty in trying to distinguish property held for investment from property used in a trade or business and eliminated the controversy, as this question pertains to property rented out under a net lease. As indicated by the House Report on excess investment interest, Congress was not specifically concerned with tax shelters that were financed with non-recourse debt, but addressed itself to those taxpayers who were purchasing growth properties heavily financed by indebtedness, often not making principal payments until the property was sold years later, with the gain being taxed at capital gain rates.[140] It appears that the type of "growth properties" referred to consists of items that are classified as capital assets such as securities and undeveloped land.

If an investor merely recovered his investment plus out of pocket expenditures such as interest, he would still have a tax advantage due to the difference between ordinary rates and capital gain rates.

The renting of real estate is generally treated as a "trade or business," which places this type of property or tax shelter outside the reach of Section 163(d). The phrase "trade or business" appears in at least 60 different code sections, but does not have a precise definition.[141] The renting of real estate is not deemed a "trade or business" for purposes of computing self employment tax as provided by Section 1.402(a)(4) of the Income Tax Regulation. The above regulation appears to be contrary to Section 1402(c) of the Internal Revenue Code, which states that the term "trade or business" when used with reference to self-employment income "shall have the same meaning as when used in Section 162 . . . ." Before the enactment of Section 1231, gains and losses from the sale of real estate used in a trade or business were taxed as ordinary gains and losses. In Fackler v. Commissioner, decided in 1943, it was held that an attorney was engaged in the trade or business of leasing an office building and therefore the gain on the sale of the leasehold was an ordinary gain.[142] With the advent of Section 1231, the gain on the sale of property "used in a trade or business" is treated as a capital gain and if Section 1231 losses exceed Section 1231 gains, all of the gains and losses are treated as ordinary gains and losses. Congress may not have intended for the renting of real estate to be treated as a "trade or business" in defining "adjusted gross income" under Section 62. Adjusted gross income under Section 62 is defined as gross income less trade or business expenses under Section 62(1) and deductions attributable to

rents and royalties under Section 62(5). If the renting of real estate is a trade or business it would not be necessary to specifically mention "deductions attributable to rents and royalties."

Congress must have intended Section 163(d) to apply only to real estate subject to a net lease as Section 163(d) applies to improved real estate. Section 163(d)(4) treats property as subject to a net lease if it is leased and the sum of the deductions under Section 162 is less than 15 per cent of the rental income produced by the property or else the lessee or a person related to the lessee guarantees the lessor a specific return on investment or against loss.

The "net lease" provisions of Section 163(d) will affect those tax shelters that are owned by individuals who are personally liable to third parties. In an effort to limit their losses or guarantee an adequate return on investment, an investor will seek a net lease or will ask for specific guarantees from a person related to the lessee. Real estate tax shelters organized as limited partnerships will probably not have much difficulty in aboiding the net lease provisions of Section 163(d)(4) since the limited partners already have limited liability in case of loss. They just will not have a guaranteed return on their investment.

Minimum Tax on Tax Preference

Congress has attempted to partially prevent certain taxpayers from avoiding all or a major part of their tax liability due to "tax preference items" commonly associated with tax shelters. Basically what Congress has done is to apply a tax of 15 per cent of the sum of tax preference items to the extent they exceed one-half of the person's net tax liability or $10,000, whichever is greater.[143] Tax preference

items as defined in Section 57 are as follows:

1. Itemized deductions in excess of 60 per cent of adjusted gross income.

2. Accelerated depreciation on real estate in excess of straight-line depreciation.

3. Accelerated depreciation on Section 1245 property subject to a lease in excess of straight-line depreciation.

4. Amortization of certified pollution control facilities to the extent it exceeds depreciation allowable.

5. Amortization of railroad rolling stock to the extent it exceeds depreciation allowable.

6. Stock options to the extent the fair market value exceeds the option price at the time the option is exercised.

7. Reserves for losses on bad debts of financial institutions to the extent the deduction allowable exceeds the deductions that would have been allowable had the deduction been based on actual experience.

8. Depletion to the extent the amount deducted exceeds the adjusted basis of the property.

9. Capital gains to the extent of the long-term capital gains deduction in the case of individuals and in the case of corporations an amount equal to the excess of net long-term capital gains in excess of net short-term capital losses times the ratio of the normal tax rate plus the surtax rate minus the alternative tax over the normal tax rate plus the surtax rate.

10. Amortization of on-the-job training and child care facilities in excess of straight-line depreciation.

11. Intangible drilling cost expense if in excess of the amount allowable had the amount been capitalized and depleted using straight-line depletion.[144]

The minimum tax was first enacted in 1969 and was modified in 1976. Originally the minimum tax was 10 per cent of the tax preference items in excess of $30,000 plus the current tax liability. The Tax Reform Act of 1976 increased the tax rate to 15 per cent and eliminated

the $30,000 exemption.

Rather than eliminate the tax preference items which might cause substantial inequities for persons not utilizing them primarily for tax avoidance purposes, Congress sought to enact a penalty tax from those entities that substantially reduced their tax liability or received an abnormal tax advantage because one or more of the eleven tax preference items. The Senate Report for the Tax Reform Act of 1964 stated:

> . . . in 1964, the 1,100 returns with adjusted gross income over $200,000 paid an average tax of 22 per cent of economic income. These 1,100 returns paid tax on about 32 per cent of income after various exclusions and personal deductions. In recent years there have been a significant number of cases where taxpayers with economic incomes of $1 million or more paid little or no tax.[145]

The minimum tax will apply only to those persons who have a substantial amount of tax preferences as defined above. For instance, a married couple filing a joint return having a taxable income of $100,000 will not be subject to the minimum tax unless the sum of the tax preference items exceed one-half of their tax liability or $22,590, basically.

Persons that are engaged in real estate tax shelters will be concerned with only two of the tax preference items: accelerated depreciation on real estate and the long-term capital gain deduction for individuals or its equivalent for corporations. The excess of accelerated depreciation over straight-line depreciations will probably not be significant enough to cause concern, either. If a person owned a $3 million apartment complex that has a useful life of 40 years, the excess of accelerated depreciation over straight-line depreciation would be only $75,000 in the first year of operation and would decline

thereafter. The excluded portions of net long-term capital gains in excess of net short-term losses will apply only if the person disposes of the property (which may be several years in the future). Until this event happens, the person will receive the benefits of tax deferral.

If the above property is sold for exactly $3 million eight years later, and straight-line depreciation is used, the gain would equal $600,000, the amount of past depreciation. Assuming the person had a taxable income of $100,000 before the above gain and does not average his income, the minimum tax would be $26,409. Before the Tax Reform Act of 1976 the minimum tax would have been $2,212. The tax attributable to the net long-term gain is $202,700, and when this is added to the person's regular tax of $45,180, the tax preferences have to exceed one-half of $247,880 or $123,740 in order for the minimum tax to apply. The net long-term capital gain deduction is one-half of the $600,000 or $300,000 which leaves taxable preference items of $176,060.

Reduction of the Alternative Capital Gains Tax Benefits

The Tax Reform Act of 1969 made a major change in the capital gain provisions that narrows the gap between the taxation of capital gains and other income. For years prior to 1970, the maximum tax on the excess of net long-term capital gain in excess of net short-term capital losses was 25 per cent. For 1973 and subsequent years the 25 per cent alternative tax applies only to the first $50,000 of the excess of net long-term capital gains over net short-term capital losses.[146] Therefore, if an individual in the 70 per cent bracket has

net long-term capital gains in excess of net short-term capital losses exceeding $50,000, the effective tax rate on the excess if 35 per cent, after deducting the 50 per cent long-term capital gain deduction for the amount of gain exceeding $50,000.

The value of tax deferral is still important because only one-half of the gain is taxed and then only if the property is to be disposed of sometime in the future.

Summary

Tax leveraging is specified to exist whenever deductible losses exceed one's investment in a project. Tax leveraging has been possible since 1913 when the Federal Tax Law was first enacted. The question of whether the basis of property includes indebtedness for which there is not any personal liability was not formally dealt with until 1947, when the United States Supreme Court in Crane ruled that the basis of property includes non-recourse indebtedness.

Congress enacted Section 752 of the Internal Revenue Code of 1954, which allows general partners to include in their partnership basis liabilities for which none of the partners are personally liable. The Internal Revenue Service then issued Section 1.752-1(e) of the Income Tax Regulations, which allows limited partners to include in their partnership basis liabilities for which none of the partners are personally liable.

The Internal Revenue Service has sought to restrict the use of non-recourse financing to create tax losses by attacking the substance of some loan arrangements. When the repayment of the loan is indefinite and the amount of the liability is uncertain, the Internal Revenue

Service has questioned whether a valid indebtedness exists. In other situations the Internal Revenue Service has questioned whether certain transactions are actually leases rather than loans. If a transaction does not have some economic substance, it may be determined to be a sham transaction. The federal tax laws are such that in some situations an investor may prefer to inflate the purchase price of a project in order to increase the tax benefits.

The Internal Revenue Service has also tried to limit the proliferation of tax shelters by withholding advance ruling as to whether a limited partnership would be taxed as a corporation or whether a transaction would be treated as a lease or a purchase.

The limited partnership is the type of entity most often used to operate a tax shelter. The limited partnership can pass losses on to the partners in excess of the partner's original investment. The partners are able to include the partnership liabilities in computing the basis in their partnership's interest.

Congress, since 1963, has gradually reduced the tax benefits of holding and selling real estate. Congress has converted capital gains to ordinary income by Section 1250 of the Internal Revenue Code of 1954. Congress has also reduced the amount of depreciation that can be taken on improved real estate. There is now a special minimum tax on the excess of accelerated depreciation over straight-line depreciation. Also, the interest incurred on certain types of investments has only limited deductibility. Congress finally in 1976 limited the deductible losses in certain non-real estate projects to amounts for which the investor is "at risk."

FOOTNOTES

[1]Harold Bierman, Jr., and Seymour Smidt, The Capital Budgeting Decision, 2nd edition (New York, 1966), pp. 165-172.

[2]Ibid., p. 167.

[3]Department of the Treasury, Proposal for Tax Change (April 30, 1973), pp. 94-104.

[4]Ibid., p. 96.

[5]Ibid., p. 101.

[6]Ibid., p. 95.

[7]Section 1012, Internal Revenue Code of 1954.

[8]Section 752, IRS (1954) does not pertain to the purchase of property. Section 752 is related to the discussion because it allows a partner to use his share of the partnership liabilities for determining his basis in his partnership interest.

[9]Crane v. Commissioner, 331 U. S. 1, (1947).

[10]D. Nelson Adams, "Exploring the Outer Boundaries of the Crane Doctrine: An Imaginary Supreme Court Opinion," Tax Law Review, Vol. 21 (1966), p. 159.

[11]Crane, 331 U. S. 3.

[12]Ibid., p. 4.

[13]Ibid., p. 4.

[14]Ibid., p. 3.

[15]Ibid., p. 3.

[16]Ibid., p. 4.

[17]Ibid., p. 5.

[18]Ibid., p. 5.

[19]Ibid., p. 5.

[20]Ibid., p. 6.

[21]Ibid., p. 6.

[22]Ibid., p. 6.

[23]Ibid., p. 6.

[24]Ibid., p. 7.

[25]Ibid., p. 8.

[26]Ibid., p. 9.

[27]Ibid., p. 10.

[28]Crane, 331 U. S. 1.

[29]Ibid.

[30]Ibid.

[31]Manuel D. Mayerson, 47 T.C. 349 (1966).

[32]Ibid., 47 T.C. pp. 351-352.

[33]Ibid., 47 T.C. pp. 340-355.

[34]Ibid., 47 T.C. 353.

[35]Ibid., 47 T.C. 354 (1966).

[36]Ibid., 47 T.C. 354.

[37]Louis A. Del Cotto, "Basis and Amount Realized Under Crane: A Current View of Some Tax Effects Mortgage Financing," University of Pennsylvania Law Review, Vol. 118 (1969), pp. 81-82.

[38]D. F. Bolger, 59 T.C. 760 (1973).

[39]Alvin D. Lurie, "Bolger's Building: The Tax Shelter That Wore no Clothes," Tax Law Review, Vol. 28 (1973), p. 364.

[40]Mayerson, 47 T.C. 352.

[41]Lurie, p. 360.

[42]Ibid., p. 357.

[43]Revenue Ruling 55-540, 1955-2 C.B. 39.

[44]Schmidt, p. 211.

[45]Ibid., pp. 211-212.

[46]Section 183, Internal Revenue Code of 1954.

[47]Gregory v. Delvering, 293 U. S. 465.

[48]Knetsch v. U. S., 364 U. S. 361 (1960).

[49]Lurie, p. 363.

[50]Section 20.2031-10, Income Tax Regulations.

[51]Kapel Goldstein v. Commissioner, 364 F.242d 735 (1966).

[52]Ibid., p. 742.

[53]Ibid., p. 741.

[54]Smith, p. 85.

[55]Charles M. Bernuth, 57 T.C. 225 (1971). See also Marvin A. May, 31 T.C.M. 279 (1972).

[56]Crane, 331 U. S. 1.

[57]Ibid.

[58]Redford, 28 T.C. 771.

[59]Section 183, Internal Revenue Code of 1954.

[60]Revenue Procedure 72-3, 1972-1 C.B. 698.

[61]Revenue Ruling 55-540, 1955-2 C.B. 39. See also Revenue Ruling 55-541, 1955-2 C.B. 19; Revenue Ruling 55-542, 1955-2 C.B. 59; and Revenue Ruling 57-371, 1957-2 C.B. 214, for examples of transactions determined to be sales rather than leases.

[62]Revenue Procedure 75-21, 1975-2 C.B. 15.

[63]Ibid., p. 15.

[64]Hugh Calkins and Kenneth E. Updegraft, Jr., "Tax Shelters," Tax Lawyer, Vol. 26, No. 3 (1972-1973), p. 508. See also Lewis R. Kaster, "Subsidized Housing: Facts versus Tax Projections," Tax Lawyer, Vol. 26, No. 1 (1972-1973), pp. 125-140, and for an optimistic description, Michael J. Cenatiempo, "Tax Advantages Under Section 236 of the National Housing Act," Houston Law Review, Vol. 8, No. 5 (1971), pp. 911-928.

[65]Bruce B. Packman, "Tax Shelters: A Non-Dilettante's View," Taxes--The Tax Magazine (May, 1975), pp. 287-295.

[66]Section 1374, Internal Revenue Code of 1954.

[67]Ibid., Section 1374(c)(2).

[68]Ibid., Section 1372.

[69]Packman, pp. 288-289.

[70]Section 704, Internal Revenue Code of 1954.

[71]Ibid., Section 704(d).

[72]Ibid., Section 752.

[73]Ibid., Section 704(d).

[74]Packman, p. 289.

[75]Sections 301.7701-3(b), Income Tax Regulations.

[76]Revenue Rulings 72-135, 1972-1 C.B. 100 and 72-350, 1972-2, C.B. 394.

[77]Revenue Procedure 72-13, 1972-1 C.B. 735.

[78]Section 301, 7701-2(a)(1), Income Tax Regulations.

[79]Ibid., Section 301, 7701-2.

[80]Ibid., Section 301, 7701-2(b)(3).

[81]Ibid., Section 301, 7701-2(d)(1).

[82]Ibid., Section 301, 7701-2(d)(2).

[83]Ibid., Section 301, 7701-3(b)(2).

[84]Revenue Procedure 72-13, 1972-1 C.B. 735.

[85]Revenue Procedure 74-17, 1974-2 C.B. 438.

[86]Section 3.201, Revenue Procedure 72-9, 1972-1 C.B. 719.

[87]Revenue Procedure 74-17, 1974-2 C.B. 438.

[88]Section 4, Revenue Procedure 74-17, 1974-2 C.B. 438.

[89]William C. Drollinger, Tax Shelter and Tax-Free Income for Everyone (Ann Arbor, Michigan, EPIC publications, Inc., 1972), pp. 96-101 and 161-163.

[90]Revenue Ruling 72-135, 1972-1 C.B. 100.

[91]Revenue Ruling 72-350, 1972-2 C.B. 394.

[92]Donald M. Tannenbaum, "Leverage Shelter Operations: Oil and Gas, Motion Pictures and Other Theatrical Shelters," 31st Annual New York University Tax Institute, pp. 783-784.

[93]Section 722, Internal Revenue Code of 1954.

[94]Burton W. Kanter, "Real Estate Tax Shelters--Everything You Wanted to Know and Did not Know What to Ask," Taxes--The Tax Magazine (December, 1973).

[95]Section 752(a), Internal Revenue Code of 1954.

[96]Ibid., Section 752(e).

[97]Section 1.752-1(e) Income Tax Regulations, T.D. 6175, May 23, 1956.

[98]Section 1371, Internal Revenue Code of 1954.

[99]Section 1.752-1(e), Income Tax Regulations.

[100]Article Section 213, Tax Reform Act of 1976.

[101]Section 704(d), Internal Revenue Code of 1954.

[102]Mayerson, 47 T.C., pp. 351-352.

[103]Ray M. Sommerfield, Federal Taxes and Management Decisions (Homewood, Illinois, 1974), pp. 155-156.

[104]Stanley S. Surrey, Pathways to Tax Reform (Cambridge, Mass., 1973), pp. 110-113.

[105]Upon the investor's death the deferral is complete since the unrealized gain caused by taking depreciation at a rate faster than the actual decrease in the fair market value will go unrecognized. The heirs will have a basis in the property equal to its fair market value.

[106]Had accelerated depreciation been used, there would be a larger total deferral before the "turn-around" occurs, but the "turn-around" would have occurred sooner.

[107]The present value of a dollar due in 16 years is $\frac{\$1.00}{(1+.05)16}=.46102$.

[108]A 70 per cent bracket taxpayer would be able to avoid $0.38 of tax for each dollar of deduction due to tax leveraging or 5 per cent of $0.70. The 20 per cent taxpayer would have to exclude 190 per cent of what the 70 per cent bracket taxpayer excluded to receive the same absolute benefit; i.e., $0.38/$0.20 = 190%.

[109]Surrey, p. 114.

[110]Bolger, 59 T.C. 760.

[111]Parker v. Delaney, 186 F2d 455 (1st Cir. 1950).

[112]Section 1245, Internal Revenue Code of 1954.

[113]1962 Senate Hearings on Tax Reform, Part 1, pp. 352-370.

[114]Ibid., p. 88.

[115]Section 1245, Internal Revenue Code of 1954.

[116]Staff of the Joint Committee on Internal Revenue Taxation, 88th Congress, 1st Session, Summary of the President's Tax Message of 1963, pp. 67-68.

[117]Comments by Dan Throop Smith, Tax Reform Studies and Proposals, U. S. Treasury Department, February 5, 1969, footnote (1), p. 446.

[118]Ibid., p. 446.

[119]Statement by Alan J. B. Aronshon, General Tax Reform, Panel Discussion Before the Committee on Ways and Means, House of Representatives, Ninety-Third Congress, February 8, 1973, part 4 of 11, pp. 510-520.

[120]The Tax Reform Act of 1969.

[121]The Tax Reform Act of 1976.

[122]Ibid.

[123]Act Section 209, Tax Reform Act of 1976, amending Section 163, Internal Revenue Code of 1954.

[124]Act Section 301, Tax Reform Act of 1976, amending Sections 56, 57, and 58, Internal Revenue Code of 1954.

[125]Act Section 204, Tax Reform Act of 1976, adding Section 465, Internal Revenue Code of 1954.

[126]Act Section 207(c), Tax Reform Act of 1976, adding Section 184, Internal Revenue Code of 1954.

[127]Act Section 207(c), Tax Reform Act of 1976, adding Section 447, Internal Revenue Code of 1954.

[128]Ibid., Section 1250(a)(1)(iii), Internal Revenue Code of 1954.

[129]Act Section 202, Tax Reform Act of 1976, amending Section 1250, Internal Revenue Code of 1954.

[130]Ibid., Section 167(j)(2).

[131]Ibid., Section 167 (j)(5).

[132]Ibid., Section 167 (j)(1).

[133]Ibid., Section 162(d)(1).

[134]Ibid., Section 163(d)(3).

[135]Ibid.

[136]Ibid.

[137]Ibid., Section 163(d)(2).

[138]Statement by Wilbur Mills (August 6, 1969), 115 Congressional Record, H. 6978, Internal Revenue Acts 1966-1970 (St. Paul, Minn.: West Publishing Co., 1971), pp. 2073-2087.

[139]For a discussion of what constitutes a trade or business see Standard Federal Tax Reporter, Vol. 1, paragraph 1332, p. 16101. (New York: Commerce Clearing House, 1975).

[140]House Report No. 91-413, Tax Reform Act of 1969, Internal Revenue Act 1966-1970 (St. Paul, Minnesota, 1971), p. 1360.

[141]Robert H. Whitten, Jr. "Renting as an Actively Conducted Business Under Section 346 and 355: An Economic Concept," The Tax Adviser (July, 1975), p. 404.

[142]Fackler v. Commissioner, 133 E2d 509 (6th Cir. 1943).

[143]Section 56, Internal Revenue Code of 1954.

[144]Section 57, Internal Revenue Code of 1954.

[145]Senate Report No. 91-552, Tax Reform Act of 1969, Internal Revenue Acts 1966-1970 (St. Paul, Minnesota, 1971), p. 1755.

[146]Section 1201, Internal Revenue Code of 1954.

CHAPTER III

AN EVALUATION OF TAX LEVERAGING

The primary purpose of Chapter III is to demonstrate that financing terms for improved real estate are more important to investors than either accelerated depreciation or capital gain benefits. Second, the conditions under which tax leveraging occurs will be defined.

A general description of the tax leveraging simulation model will be discussed, followed by a mathematical explanation of the model. The actual manipulation of the variables will be performed by a computer program, written in FORTRAN for an IBM System 3 Model 15.[1] Because of the discontinuities that exist in the math functions caused by the federal tax structure, the reader may find it more convenient to study the FORTRAN program located in Appendix A in order to understand the simulation model.

Congress, in 1976, directed its attention to tax leveraging and limited the amount of loss from certain activities to the amount with respect to which the taxpayer is at risk as follows:

1. Holding, producing or distributing motion picture films or video tapes.
2. Farming (as defined in Section 464(e) IRC, 1954).
3. Leasing any section 1245 property.
4. Exploring for, or exploiting, oil and gas resources.

Congress also passed legislation that limits the partner's deductible losses of a partnership to the amount with respect to which the taxpayer is at risk.[4] Congress specifically exempted real estate from the above limitations.[5] The amounts "at risk" basically exclude liabilities for which the investor is not personally liable from the investor's basis in the investment.

The Tax Leveraging Simulation Model in General

The tax leveraging simulation model is based on the premise that the tax benefits from the postponement of tax liabilities can be as important as the permanent avoidance of taxes.

Basically, the tax leveraging simulation model computes the net present value of a real estate investment under various assumptions. The net present value of a real estate investment at the end of a year is equal to the net accumulated present value of the following:

1. Annual tax savings attributable to the operations.
2. The annual cash flow to the investor from operations and from disposing of the investment.
3. The tax savings due to terminating the investment, if any.
4. Tax liabilities from operation.
5. Tax liability due to terminating the investment.[6]

The accumulated present value of the annual tax savings or tax liabilities from operations is the sum of the present value of the annual taxable income or loss assuming a specified level tax rate. The amount of taxable income or tax loss generated each year is a function of the difference between the amount of depreciation deducted each year, the payment on mortgage principal, and the cash flow to the

investor before taxes from the investment.

If revenue is just large enough to pay all cash expenditures such as taxes, insurance, repairs, management fees, interest and the amortization of mortgage principle, the amount of profit or loss would be equal to the difference between the amount of depreciation deducted and the payment of principal, which is not deductible. Under the above assumption, as long as depreciation is larger than the payment on principal for any year, the investment will generate a tax loss. The investment will generate taxable income in the year the payment on principal exceeds the amount of depreciation deducted.

The amount of depreciation deducted is a function of the depreciable basis of the property, the depreciation method used, the useful life, and the amount of salvage value. The payment on principal is a function of the amount of indebtedness, the repayment period, and the interest rate. The present value of the taxes saved or tax liabilities owed due to annual operations is a function of the amount of tax loss or taxable income generated each year, the investor's tax rate, and the investor's discount rate.

The present value of the tax liability or tax savings from terminating the investment is based upon the investor's discount rate, the tax rate applicable to the sale, and the amount of gain or loss. The amount of gain or loss from terminating the project is a function of the net sales price and the investor's adjusted basis in the project.

Description of the Tax Leveraging Model

The type of leveraging model to be discussed below pertains to a government subsidized apartment complex. Residential housing qualifies for double declining depreciation, whereas nonresidential real estate investments are limited to 150 per cent declining balance depreciation.[7] Otherwise, the conclusions to be reached concerning residential housing can be generalized to nonresidential real estate.

It is assumed that all payments and receipts are made or received on the last day of the year, including the payment of income taxes or the receipt of refunds. Any disposition of the property is also made on the last day of the year.

The investor's discount rate is assumed to be equal to the rate of return, after taxes, that the investor can earn on the taxes postponed.[8]

The following definitions are assumed:

P_t = Principal of mortgage at the end of year t.

PP_t = Payment on principal for year t.

AD_t = Accelerated depreciation for year t.

d_t = Accumulated difference between accelerated and straight-line depreciation at the end of year t.

n = Useful life of depreciable asset for tax purposes.

A = Accelerated depreciation rate.

m = Amortization period for mortgage.

i = Interest rate for mortgage.

T = Ordinary income tax rate of investor.

CG = Capital gains tax rate for investor.

R = Return on investment before taxes.

APR = Accumulated present value of return on investment.

Y_t = Net taxable income or loss for year t.

PTY_t = Present value of tax liability or tax savings attributable to taxable income or loss for year t.

$APTY_t$ = Accumulated present value of tax liability or tax savings attributable to taxable income or loss at the end of year t.

F = Investor's original investment.

EA_t = Equity of investor using accelerated depreciation at the end of year t.

LA_t = Tax liability or tax savings if project abandoned at the end of year t using accelerated depreciation.

PLA_t = Present value of tax liability or tax savings using accelerated depreciation if project is abandoned at the end of year t.

$APLA_t$ = Accumulated present value of tax liability or tax savings using accelerated depreciation if the project is abandoned at the end of year t.

NA_t = Net present value of project using accelerated depreciation at the end of year t.

DBA_t = Depreciable basis using accelerated depreciation at the end of year t.

C = Cost of property new.

L = Basis of land.

The above definitions will be clarified in the discussion that follows, and any new definitions not specified above will be introduced where pertinent.

The federal income tax law is such that a residential building can be depreciated using either the 200 per cent declining-balance method or the sum-of-the-year's-digit method or any other method provided that it doesn't accumulate a greater amount of depreciation than would be allowed during the first two-thirds of the useful life under the 200 per cent declining-balance method.[9] Depreciation can be deducted in

the amount allowed under the law even though "actual" depreciation is less rapid or non-existent. Even though the building generates a positive cash flow, the investor may be entitled to a net tax loss which is the result of deductible depreciation being greater than the payment on mortgage principal and the excess of cash receipts over cash expenses, including interest payments. The value the investor will place on the annual deductible loss is a function of the investor's tax rate, the taxable income or loss from the investment, the applicable discount rate, and the length of tax deferral. That is:

$$\bar{A}PTY_t = \sum_{t=1}^{N} PTY_t \qquad (3\text{-}1)$$

where $APTY_t$ is the accumulated present value of the tax liability or tax savings attributable to the net taxable income or loss at the end of year t. The amount of net taxable income or loss for year t can be expressed as follows:[10]

$$Y_t = AD_t - PP_t - R \qquad (3\text{-}2)$$

When accelerated depreciation AD_t exceeds the payment on mortgage principal PP_t plus the cash flow R, Y_t is a loss. If accelerated depreciation for year t is shown as

$$AD = A(C - \sum_{t=1}^{N} AD) \qquad (3\text{-}3)$$

and will not be smaller than the undepreciated basis divided by the remaining useful life of the property or

$$AD_t = (C - \sum_{t=1}^{N} AD)/(N - t + 1) \qquad (3\text{-}4)$$

and the payment on mortgage principal for year t is expressed as

$$PP_t = \left[P(1+i)^m \Big/ \frac{(1+i)^m - 1}{i}\right] - i\left[(P(1+i)^m \Big/ \frac{(1+i)^m - 1}{i})(\frac{1-(1+i)^{-(m-t+1)}}{i})\right]$$

then Y can be shown as

$$Y_t = A(C - \sum_{t=1}^{N} AD_t) - \left\{\left[P(1+i)^m \Big/ \frac{(1+i)^m - 1}{i}\right] - i\left[(P(1+i)^m \Big/ \frac{(1+i)^m - 1}{i})\right.\right.$$

$$\left.\left.(\frac{1-(1+i)^{-(m-t+1)}}{i})\right]\right\} - R \qquad (3\text{-}5)$$

The accumulated present value of the tax liabilities or tax savings is expressed as

$$APTY_t = \sum_{t=1}^{N} \frac{TY_t}{(1+i)^t} \qquad (3\text{-}6)$$

Figure 1 shows graphically the accumulated taxable income or loss assuming the investor receives no cash flow from the investment. The apartment building is assumed to cost $1,000,000 which is 100 per cent financed. The building is depreciated over a 30-year period. The accumulated taxable income or loss is therefore equal to the investor's equity in the investment which is the difference between the mortgage principal P and the adjusted basis B. The amount of tax leveraging is also represented by the amount that the mortgage principal exceeds the adjusted basis. The accumulated loss reaches its maximum in the 15th year at which point the payment on mortgage principal exceed the annual depreciation. The investor has taxable income, even though cash receipts just equal cash expenditures including the payment on principal.

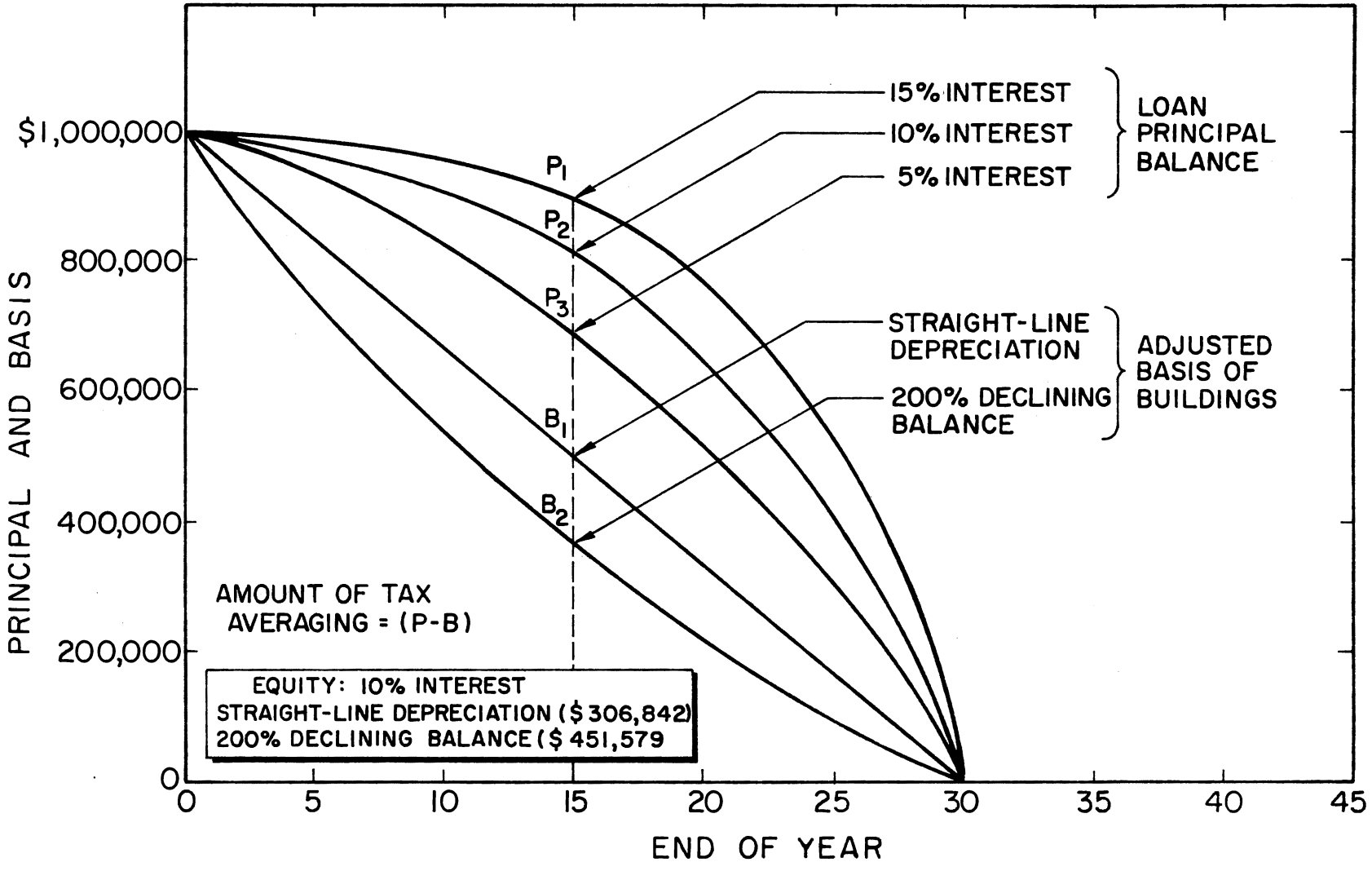

Figure 1. Relationship of Depreciable Basis and Loan Balance for Interest Rates of Five, Ten, and Fifteen Per Cent

It can be observed from Figure 1 that tax leveraging is larger for higher rates of interest. At the end of the 15th year, the difference between P_2 and B_1 using straight-line depreciation and a ten per cent interest rate is $306,842. Had the 200 per cent declining-balance depreciation method been used, the accumulated losses would be equal to the difference between P_2 and B_2 or $451,579.

Table I shows the amount of net income or loss assuming no cash flow to the investor on a 100 per cent financed building costing $1,000,000 with a 30-year useful life for ineterst rates of 6, 8, 10, 12, and 14 per cent, and using 200 per cent declining-balance depreciation. It is assumed that the investor will elect to switch to straight-line depreciation in the year that straight-line depreciation on the undepreciated cost exceeds depreciation computed using the 200 per cent declining-balance method. It is interesting to note the amount of tax leveraging that occurs and the year in which the payment on principal exceeds the annual depreciation deducted for the above interest rates.

Just as an increasing mortgage interest rate increases the amount of tax leveraging, an increasing discount rate causes the present value of the accumulated tax liabilities or tax savings to decrease. Table II shows the accumulated present value of the tax liability or tax savings from operations assuming a 60 per cent marginal tax rate and the amount of taxable income or loss shown on Table I. Notice that the maximum accumulated present value occurs in the 15th year for an interest rate of 10 per cent. If the investment will not have any salvage value, the investor needs to determine the optimum point in time to terminate his investment.

TABLE I

NET INCOME OR LOSS FROM OPERATIONS

Interest Rate	6%	8%	10%	12%	14%
Year					
1	54018.	57839.	60588.	62523.	63864.
2	48814.	52689.	55535.	57582.	59027.
3	43862.	47778.	50718.	52877.	54432.
4	39137.	43083.	46111.	48381.	50050.
5	34620.	38579.	41688.	44069.	45855.
6	30289.	34246.	37426.	39914.	41820.
7	26126.	30061.	33299.	35890.	37916.
8	22111.	26002.	29284.	31970.	34117.
9	18228.	22050.	25357.	28129.	30393.
10	14459.	18183.	21494.	24339.	26715.
11	10788.	14383.	17672.	20571.	23050.
12	7199.	10629.	13866.	16798.	19366.
13	3678.	6901.	10051.	12987.	15626.
14	209.	3181.	6201.	9108.	11794.
15	-3223.	-552.	2289.	5126.	7826.
16	-6630.	-4318.	-1711.	1004.	3677.
17	-8449.	-6559.	-4251.	-1718.	876.
18	-10378.	-8978.	-7044.	-4766.	-2317.
19	-12421.	-11591.	-10117.	-8180.	-5957.
20	-14588.	-14413.	-13497.	-12004.	-10107.
21	-16884.	-17461.	-17215.	-16287.	-14838.
22	-19318.	-20752.	-21305.	-21083.	-20231.
23	-21898.	-24307.	-25804.	-26455.	-26375.
24	-24633.	-28146.	-30753.	-32472.	-33388.
25	-27532.	-32293.	-36197.	-39211.	-41378.
26	-30605.	-36771.	-42185.	-46758.	-50486.

TABLE I (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-33862.	-41607.	-48772.	-55211.	-60870.
28	-37315.	-46831.	-56017.	-64679.	-72708.
29	-40975.	-52472.	-63987.	-75282.	-86203.
30	-44855.	-58565.	-72755.	-87158.	-101587.

"-" indicates excess of income over expenses.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	N.A.
(g)	Depreciation Rate	=	.6667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution		-0-

TABLE II

ACCUMULATED PRESENT VALUE OF THE TAX LIABILITIES
OR SAVINGS ON TABLE I

Interest Rate	6%	8%	10%	12%	14%
Year					
1	30576.	32133.	33048.	33495.	33613.
2	56643.	59236.	60586.	61037.	60864.
3	78739.	81993.	83449.	83619.	82908.
4	97339.	100993.	102346.	102067.	100689.
5	112861.	116747.	117877.	117071.	114978.
6	125673.	129695.	130552.	129204.	126410.
7	136098.	140219.	140805.	138945.	135501.
8	144422.	148648.	149002.	146692.	142677.
9	150895.	155266.	155454.	152778.	148285.
10	155739.	160320.	160426.	157480.	152609.
11	159149.	164021.	164143.	161028.	155881.
12	161296.	166553.	166794.	163615.	158293.
13	162330.	168076.	168540.	165401.	160000.
14	162386.	168726.	169520.	166519.	161130.
15	161579.	168621.	169849.	167081.	161788.
16	160013.	167865.	169625.	167179.	162059.
17	158130.	166801.	169121.	167029.	162116.
18	155948.	165453.	168361.	166657.	161984.
19	153485.	163842.	167368.	166087.	161688.
20	150756.	161986.	166164.	165340.	161246.
21	147776.	159905.	164768.	164436.	160678.
22	144559.	157615.	163198.	163390.	159999.
23	141120.	155131.	161469.	162219.	159221.
24	137469.	152468.	159595.	160935.	158358.
25	133620.	149638.	157591.	159551.	157420.
26	129584.	146655.	155467.	158078.	156416.

TABLE II (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	125370.	143530.	153235.	156524.	155354.
28	120990.	140273.	150904.	154900.	154241.
29	116453.	136894.	148484.	153211.	153083.
30	111767.	133402.	145982.	151465.	151887.

Assumptions:

(a) Land Cost = -0-
(b) Depreciable Balance = $1,000,000
(c) Mortgage = $1,000,000
(d) Investment = -0-
(e) Interest Rates (%) = 6, 8, 10, 12, 14
(f) Discount Rates (%) = 6, 8, 10, 12, 14
(g) Depreciation Rate = .6667
(h) Marginal Tax Rate = .60
(i) Depreciation Method = DDB
(j) Repayment Period = 30 yrs.
(k) Depreciation Period = 30 yrs.
(l) Distribution = -0-

The investor's discount rate is assumed to be the after tax rate of return that the investor can obtain on the tax savings deferred. It is also assumed that the discount rate is at least equal to the yield on tax-exempt municipal bonds. In those years that the tax losses completely offset the investor's taxable net income from other sources, the cost of borrowing and the discount rate will approach equality.[11]

As shown in Figure 1, the amount owed on the investment will exceed the adjusted basis in the investment until the end of the last year for those investments where the investor makes no initial investment. Therefore, if the investor abandons the project at the end of any year when the principal of the mortgage exceeds the adjusted basis in theproject, the investor will have to recognize a taxable gain due to disposing of the property.

The amount of gain realized from disposing of the property by abandonment is equal to the investor's tax equity in the investment. The amount of this equity or deficit is equal to

$$EA_t = L + DBA_t - P_t \tag{3-7}$$

or

$$EA_t = L + (C - \sum_{t=1}^{N} AD_t) - \left[(P(1+i)^m / \frac{(1+i)^m - 1}{i}) (\frac{1 - (1+i)^{-(m-t+1)}}{i}) \right] \tag{3-8}$$

The amount of the investor's equity at the end of each year of the investment's useful life is shown on Table III using the same assumptions as were used for constructing Table I. At the end of the 15th year, using a 10 per cent interest rate, the deficit has reached its maximum of $451,579. If the investor were to abandon the investment at the end of the 15th year, the investor would have to recognize a gain of $451,579. The gain would be subject to both ordinary income treatment under Section 1250 IRC discussed earlier and capital gain treatment. Prior to 1976, Section 1250 gain was reduced one per cent for each month residential property was held past 100 months. The Tax Reform Act of 1976 eliminated the reduction of Section 1250 gain on all real estate except for subsidized residential housing.[12] The Section 1250 gain is equal to the excess of accelerated depreciation over straight-line depreciation. In equation form, this difference is shown as

$$d_t = \left[C - t\left(\frac{C}{N}\right)\right] - \left[C - \sum_{t=1}^{N} AD_t\right] \qquad (3\text{-}9)$$

The tax liability that would be owed, if the project is abandoned at the end of year t when the investor's tax equity is negative and the project has been held for 100 months or less is

$$LA_t = (EA_t - d_t)CG + Td_t \qquad (3\text{-}10)$$

TABLE III

INVESTOR'S EQUITY

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-54018.	-57839.	-60588.	-62523.	-63864.
2	-102832.	-110528.	-116123.	-120105.	-122891.
3	-146694.	-158306.	-166841.	-172982.	-177323.
4	-185831.	-201389.	-212952.	-221363.	-227373.
5	-220451.	-239968.	-254640.	-265432.	-273228.
6	-250740.	-274214.	-202066.	-305346.	-315048.
7	-276865.	-304275.	-325364.	-341236.	-352965.
8	-298976.	-330277.	-354648.	-373206.	-387082.
9	-317204.	-352326.	-380005.	-401336.	-417475.
10	-331663.	-370509.	-401500.	-425675.	-444190.
11	-342450.	-384892.	-419172.	-446246.	-467239.
12	-349650.	-395521.	-433038.	-463043.	-486605.
13	-353328.	-402423.	-443089.	-476031.	-502232.
14	-353536.	-405604.	-449290.	-485138.	-514025.
15	-350313.	-405051.	-451579.	-490264.	-521852.
16	-343683.	-400733.	-449868.	-491268.	-525529.
17	-335234.	-394175.	-445617.	-489550.	-526405.
18	-324856.	-385197.	-438573.	-484783.	-524088
19	-312435.	-373606.	-428456.	-476603.	-518131.
20	-297847.	-359193.	-414959.	-464599.	-508024.
21	-280963.	-341732.	-397743.	-448312.	-493186.
22	-261645.	-320980.	-376438.	-427229.	-472955.
23	-239747.	-296673.	-350634.	-400773.	-446577.
24	-215114.	-268526.	-319881.	-368301.	-413189.
25	-187582.	-236233.	-283684.	-329091.	-371811.
26	-156977.	-199462.	-241499.	-282332.	-321325.

TABLE III (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-123115.	-157855.	-192727.	-227121.	-260455.
28	-85800.	-111024.	-136710.	-162443.	-187747.
29	-44825.	-58552.	-72723.	-87160.	-101545.
30	30.	13.	32.	-2.	42.

"-" indicates deficit

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.6667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

If the investor's equity is negative and is subsidized residential housing that has been held more than 100 months but less than 200 months, the liability is computed as follows:

$$LA_t = \left[EA_t - d_t\left(\frac{(t-8)12-4}{100}\right)\right] CG + \left[dt\left(\frac{(t-8)12-4}{100}\right)T\right] \qquad (3\text{-}11)$$

The above computation is only necessary if the investment is subsidized residential property, otherwise the Section 1250 gain is not reduced one per cent for each month the property is held past 100 months. If the property is subsidized residential property and the investor's equity is negative and has been held for 200 months or more, the total gain is subject to capital gain rates computed as follows:

$$LA_t = (EA_t)CG \qquad (3\text{-}12)$$

If the investor's equity is positive, the abandonment of the investment will cause a tax loss. The amount of the investor's reduction in taxes is a function of the tax bracket the investor is in, since the loss will be treated as an ordinary loss under Section 1231 IRC, i.e.,

$$LA_t = (EA_t)T \qquad (3\text{-}13)$$

The amount of the tax liability from abandoning the investment is reflected in Table IV using interest rates of 6, 8, 10, 12, and 14 per cent and a 25 per cent capital gains tax.

TABLE IV

TAX LIABILITY DUE TO ABANDONING THE INVESTIMENT AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-25171.	-26127.	-26814.	-27298.	-27633.
2	-47486.	-49410.	-50809.	-51804.	-52501.
3	-67111.	-70014.	-72148.	-73683.	-74768.
4	-84199.	-88089.	-90980.	-93082.	-94585.
5	-98894.	-103773.	-107441.	-110139.	-112088.
6	-111325.	-117194.	-121657.	-124977.	-127402.
7	-121614.	-128466.	-133739.	-137707.	-140639.
8	-129871.	-137696.	-143789.	-148428.	-151897.
9	-131645.	-140426.	-147346.	-152678.	-156713.
10	-129131.	-138843.	-146591.	-152634.	-157263.
11	-124922.	-135532.	-144102.	-150870.	-156119.
12	-119369.	-130836.	-140216.	-147717.	-153607.
13	-112793.	-125067.	-135233.	-143469.	-150019.
14	-105486.	-118503.	-129424.	-138386.	-145608.
15	-97710.	-111394.	-123026.	-132698.	-140594.
16	-89703.	-103966.	-116249.	-126599.	-135165.
17	-83808.	-98544.	-111404.	-122387.	-131601.
18	-81214.	-96299.	-109643.	-121196.	-131022.
19	-78109.	-93401.	-107114.	-119151.	-129533.
20	-74462.	-89798.	-103740.	-116150.	-127006.
21	-70241.	-85433.	-99436.	-112078.	-123297.
22	-65411.	-80245.	-94110.	-106807.	-118239.
23	-59937.	-74168.	-87658.	-100193.	-111644.
24	-53779.	-67132.	-79970.	-92075.	-103297.
25	-46896.	-59058.	-70921.	-82273.	-92953.
26	-39244.	-49866.	-60375.	-70583.	-80331.

TABLE IV (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-30779.	-39464.	-48182.	-56780.	-65114.
28	-21450.	-27756.	-34178.	-40611.	-46937.
29	-11206.	-14638.	-18181.	-21790.	-25386.
30	18.	8.	19.	-1.	25.

"-" indicates gain on disposition.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.6667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

The present value of the tax liability from abandoning the investment is stated as

$$PLA_t = LA_t (1 + i)^{-t} \qquad (3\text{-}14)$$

Table V reflects the present value of the tax liability assuming a discount rate equal to the cost of borrowing.

The net present value of the investment at the end of year t is equal to the difference between the accumulated present value of the tax losses or income and the present value of the tax liability from abandoning the project. The net present value of the investment using accelerated depreciation at the end of year is

$$NA_t = APTY_t + APR - PLA_t - F \qquad (3\text{-}15)$$

which is the difference between the accumulated present value of the tax losses less the accumulated present value of any tax liabilities from operations plus the accumulated present value of any cash flow to the investor less the present value of the tax liability from abandoning the investment and the investor's original investment.

If it was not for the current income tax structure, which allows investors to postpone taxes attributable to tax losses, the investment project described above would have no value. The investor receives no cash flow from operations or from disposing of the investment. The net present value of the investment for years 1 through 30 and interest rates of 6, 8, 10, 12, and 14 per cent is shown in Table VI.

TABLE V

PRESENT VALUE OF THE TAX LIABILITIES DUE
TO ABANDONING THE INVESTMENT AT
THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-23746.	-24191.	-24376.	-24373.	-24239.
2	-42262.	-42361.	-41991.	-41298.	-40398.
3	-56348.	-55579.	-54206.	-52446.	-50466.
4	-66694.	-64748.	-62140.	-59156.	-56002.
5	-73999.	-70626.	-66713.	-62496.	-58215.
6	-78480.	-73852.	-68672.	-63317.	-58043.
7	-80881.	-74959.	-68630.	-62292.	-56205.
8	-81483.	-74393.	-67079.	-59948.	-53249.
9	-77921.	-70248.	-62489.	-55058.	-48191.
10	-72107.	-64312.	-56518.	-49144.	-42421.
11	-65808.	-58128.	-50507.	-43372.	-36941.
12	-59323.	-51957.	-44678.	-37915.	-31883.
13	-52882.	-45987.	-39173.	-32880.	-27314.
14	-46657.	-40346.	-34082.	-28317.	-23255.
15	-40771.	-35116.	-29452.	-24243.	-19697.
16	-35312.	-30347.	-25300.	-20651.	-16611.
17	-31124.	-26634.	-22041.	-17825.	-14187.
18	-28453.	-24099.	-19721.	-15760.	-12390.
19	-25816.	-21642.	-17514.	-13834.	-10745.
20	-23218.	-19266.	-15420.	-12041.	-9241.
21	-20662.	-16972.	-13437.	-10374.	-7870.
22	-18152.	-14760.	-11561.	-8827.	-6620.
23	-15692.	-12632.	-9790.	-7393.	-5483.
24	-13282.	-10587.	-8119.	-6066.	-4450.
25	-10927.	-8624.	-6546.	-4840.	-3513.

TABLE V (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	-8626.	-6742.	-5066.	-3707.	-2663.
27	-6383.	-4940.	-3675.	-2663.	-1893.
28	-4196.	-3217.	-2370.	-1700.	-1197.
29	-2068.	-1571.	-1146.	-815.	-568.
30	3.	1.	1.	-0.	0

"-" indicate tax liability

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE VI

NET PRESENT VALUE OF AN APRTMENT BUILDING
IF ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	6830.	7942.	8672.	9122.	9373.
2	14380.	16875.	18595.	19739.	20467.
3	22392.	26414.	29243.	31173.	32442.
4	30645.	36245.	40205.	42911.	44687.
5	38962.	46121.	51164.	54575.	56763.
6	47193.	55843.	61880.	65886.	68367.
7	55217.	65260.	72175.	76653.	79297.
8	62939.	74255.	81923.	86744.	89428.
9	72974.	85018.	92965.	97721.	100094.
10	83632.	96008.	103909.	108336.	110188.
11	93341.	105893.	113635.	117656.	118940.
12	101972.	114596.	122116.	125700.	126410.
13	109448.	122089.	129368.	132521.	132686.
14	115729.	128380.	135438.	138202.	137875.
15	120807.	133505.	140397.	142837.	142091.
16	124701.	137518.	144326.	146528.	145448.
17	127006.	140168.	147080.	149204.	147929.
18	127495.	141354.	148640.	150896.	149594.
19	127669.	142199.	149854.	152253.	150943.
20	127538.	142720.	150744.	153299.	152005.
21	127114.	142933.	151331.	154062.	152808.
22	126407.	142854.	151637.	154563.	153378.
23	125428.	142499.	151679.	154826.	153738.
24	124187.	141881.	151476.	154869.	153908.
25	122693.	141015.	151045.	154712.	153907.
26	120957.	139913.	150401.	154371.	153753.

TABLE VI (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	118988.	138590.	149560.	153862.	153460.
28	116794.	137056.	148534.	153199.	153043.
29	114385.	135323.	147338.	152396.	152515.
30	111770.	133403.	145983.	151465.	151888.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.6667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

If the project will not have any terminable value, the optimum holding period would be 23 years when the net present value is $151,679. If the project is held beyond 23 years, the increase in the present value of the tax liabilities from operations is in excess of the decrease in the capital gains tax that decreases as the investor's negative tax equity decreases.

Financing Factors v. Tax Incentives

The tax leveraging simulation model will be used to demonstrate that the rational investor will be more concerned about the financing terms of an investment than either accelerated depreciation or capital gains rates on the gain at the time the property is disposed of. As explained in Chapter II, there have been several attempts to restrict the use of accelerated depreciation or to eliminate capital gain treatment for residential and non-residential structures. The return to the investor will be reduced by the elimination of the two tax incentives, but as long as tax leveraging is possible, investors will still find it advantageous to continue to invest in long-term depreciable investments.

Straight-line Depreciation

As previously stated, tax leveraging occurs when an investor is able to deduct a loss that has been financed with borrowed funds. As shown in Table VI, under the assumptions shown at the bottom of Table VI, the net present value of the investment reached its maximum of $154,869 at the end of the 24th year for an interest and discount rate of 12 per cent. In other words, the value of the right to deduct the

operating losses was equal to $154,869. Had the investment been depreciated using straight-line depreciation, using the same assumptions as before, the net present value of the project at the end of the 24th year would be $97,298. Therefore, the present value of accelerated depreciation using a 12 per cent discount rate is equal to $57,571. The net present value of the investment for interest and discount rates of 6, 8, 10, 12, and 14 per cent at the end of year t using straight-line depreciation is shown in Table VII.

Capital Gains Taxation

If all gains were taxed at ordinary income rates, the investor would still find it advantageous to acquire an interest in a depreciable building due to tax leveraging. Using the same example as before, at the end of the 24th year, using a 12 per cent interest rate, the mortgage on the apartment building would exceed the adjusted basis in the property by $368,301 using accelerated depreciation rates. The amount of tax at capital gain rates is $92,075, but the present value of this amount, due at the end of the 24th year discounted at 12 per cent, is only $6,066. Therefore, if the gain on disposing of the property was taxed at ordinary income rates of 60 per cent, the tax would amount to $222,980 but the present value of this amount, discounted at 12 per cent for 24 years is only $14,540 or $8,474 more than if capital gain rates had been used.

TABLE VII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THAT IT IS ABANDONED AT THE END OF YEAR t USING STRAIGHT LINE DEPRECIATION

Interest Rate / Year	6%	8%	10%	12%	14%
1	6830.	7942.	8672.	9122.	9373.
2	13312.	15503.	16942.	17826.	18312.
3	19443.	22671.	24786.	26071.	26760.
4	25217.	29434.	32184.	33830.	34679.
5	30633.	35787.	39125.	41088.	42051.
6	35689.	41726.	45604.	47837.	48868.
7	40386.	47251.	51621.	54077.	55132.
8	44726.	52363.	57178.	59815.	60855.
9	48711.	57067.	62282.	65060.	66053.
10	52344.	61368.	66941.	69828.	70746.
11	55630.	65274.	71168.	74135.	74958.
12	58573.	68791.	74974.	77999.	78714.
13	61178.	71930.	78374.	81440.	82039.
14	63452.	74700.	81383.	84480.	84961.
15	65401.	77111.	84017.	87138.	87507.
16	67030.	79175.	86291.	89437.	89702.
17	68348.	80904.	88222.	91398.	91572.
18	69361.	82308.	89826.	93041.	93142.
19	70077.	83398.	91118.	94385.	94435.
20	70503.	84188.	92116.	95452.	95472.
21	70647.	84689.	92834.	96259.	96276.
22	70516.	84912.	93287.	96825.	96864.
23	70118.	84868.	93491.	97165.	97257.
24	69460.	84570.	93460.	97298.	97471.
25	68551.	84028.	93207.	97237.	97521.
26	67399.	83253.	92745.	96997.	97423.

TABLE VII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	66009.	82255.	92088.	96592.	97189.
28	64391.	81046.	91246.	96035.	96833.
29	62552.	79634.	90232.	95337.	96365.
30	60500.	78030.	89057.	94509.	95797.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.33333
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	SL
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

Under the present tax law, only that portion of the gain that is attributable to the excess of accelerated depreciation over straight-line depreciation is subject to ordinary income tax rates. The remainder of the gain is taxed at capital gain rates as explained in Chapter II, even though the gain is caused by claiming straight-line depreciation.

Effect of the Difference Between Interest Rate and Discount Rate

Thus far, the analysis has assumed that the investor has been able to reinvest the taxes saved at an after tax rate which is equal to the investor's borrowing rate. The investor's investment opportunities include certificates of deposit and corporate, state, and municipal bonds.[13] Because of a difference in markets, an investor cannot normally expect to be able to generate the same rate of return on invested tax savings as it cost to borrow.

The analysis that follows is based on the assumption that the investor's discount rate will be less than the borrowing rate by one, two, three, and four percentage points. The purpose for this rate differential is to determine the effect this differential will have on the net present value of the investment project described earlier in this chapter with an additional assumption that the initial investment is $50,000.

A lower discount rate will cause two opposing effects on the net present value of an investment. First, a lower discount rate will cause the present value of the tax savings due to operating losses to increase, increasing the net present value of an investment. Second,

the net present value is decreased because of the increase in the present value of the tax liabilities from taxable income from operation, and from terminating the project.

Tables VIII, IX, X, and XI show the net present value of an apartment building assuming the project is abandoned at the end of year t and the investor's discount rate is one, two, three, and four per cent less than the mortgage rate of interest, respectively. The assumptions under which each table is prepared are stated at the bottom of the tables. From Tables VIII, IX, X, and XI it can be seen that the investor must avoid terminating the project for the first three to six years to prevent an economic loss. The minus sign on the tables indicates that the return to the investor has not yet exceeded his original investment. The investor's return as discussed in Chapter II is from reinvesting the taxes postponed and from tax avoidance due to capital gain taxation.

The length of time required to return the investor's original investment of $50,000 varies from six to three years as the interest rate increases from six per cent to 14 per cent. As the difference between the discount rate and the interest rate increases, the length of time required to recover the original investment increases slightly up to a point. As the interest rate and discount rate increase, the effect of the differential between the interest rate and discount rate decreases and then begins to increase as shown in Figure 2.

TABLE VIII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INVESTOR'S DISCOUNT RATE IS ONE PER CENT LESS THAN THE INTEREST RATE IF ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-21429.	-21963.	-22477.	-22973.	-23451.
2	-21319.	-21675.	-20847.	-20063.	-19680.
3	-17008.	-13502.	-11164.	-9701.	-8874.
4	-9502.	-4500.	-1102.	1075.	2354.
5	-1931.	4594.	9046.	11905.	13579.
6	5577.	13600.	19054.	22518.	24494.
7	12917.	22376.	28748.	32717.	34887.
8	20000.	30809.	37998.	42365.	44618.
9	29689.	41287.	48806.	53147.	55118.
10	40215.	52190.	59699.	63736.	65201.
11	49871.	62065.	69450.	73102.	74011.
12	58498.	70805.	78000.	81235.	81578.
13	65989.	78355.	85342.	88166.	87970.
14	72276.	84697.	91499.	93955.	93276.
15	77323.	89842.	96521.	98681.	97595.
16	81120.	93826.	100475.	102432.	101032.
17	83164.	96324.	103163.	105101.	103540.
18	83136.	97176.	104527.	106693.	105166.
19	82775.	97676.	105539.	107945.	106473.
20	82087.	97836.	106215.	108879.	107486.
21	81078.	97667.	106573.	109516.	108230.
22	79754.	97180.	106628.	109876.	108728.
23	78120.	96385.	106396.	109977.	108999.
24	76182.	95294.	105890.	109837.	109063.
25	73946.	93916.	105125.	109471.	108937.

TABLE VIII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	71417.	92261.	104114.	108894.	108637.
27	68600.	90338.	102868.	108122.	108176.
28	65502.	88157.	101400.	107165.	107568.
29	62566.	85726.	99720.	106038.	106826.
30	62526.	85351.	99158.	105514.	106407.

"-" indicates investment exceeds net present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	5, 7, 9, 11, 13
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE IX

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INVESTOR'S DISCOUNT RATE IS TWO PER CENT LESS THAN THE INTEREST RATE IF ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-21154.	-21698.	-22222.	-22727.	-23214.
2	-21065.	-21447.	-20616.	-19826.	-19442.
3	-16910.	-13346.	-10966.	-9475.	-8629.
4	-9577.	-4454.	-965.	1281.	2611.
5	-2225.	4512.	9128.	12112.	13880.
6	5044.	13397.	19107.	22766.	24888.
7	12141.	22073.	28810.	33055.	35429.
8	18991.	30436.	38113.	42843.	45359.
9	28727.	41097.	49199.	53963.	56231.
10	39505.	52358.	60519.	65015.	66787.
11	49475.	62642.	70734.	74871.	76085.
12	58450.	71814.	79762.	83496.	84136.
13	66292.	79789.	87569.	90900.	90987.
14	72900.	86524.	94156.	97127.	96715.
15	78210.	92005.	99555.	102238.	101407.
16	82180.	96245.	103814.	106312.	105160.
17	84189.	98836.	106677.	109199.	107899.
18	83804.	99543.	108040.	110875.	109652.
19	83045.	99864.	109021.	112184.	111061.
20	81913.	99805.	109631.	113145.	112151.
21	80407.	99371.	109884.	113776.	112942.
22	78528.	98570.	109792.	114092.	113455.
23	76277.	97407.	109365.	114111.	113710.
24	73654.	95888.	108616.	113848.	113724.
25	70659.	94018.	107554.	113315.	113513.

TABLE IX (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	67291.	91803.	104532.	112528.	113092.
27	63552.	89248.	102591.	111497.	112475.
28	59440.	86358.	102591.	110234.	111674.
29	55537.	83137.	100373.	108750.	110700.
30	55494.	82637.	99626.	108058.	110149.

"-" indicates investment exceeds net present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	4, 6, 8, 10, 12
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE X

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INVESTOR'S DISCOUNT RATE IS THREE PER CENT LESS THAN THE INTEREST RATE IF ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20874.	-21429.	-21963.	-22477.	-22973.
2	-20806.	-21215.	-20382.	-19586.	-19200.
3	-16819.	-13194.	-10771.	-9250.	-8384.
4	-9683.	-4432.	-846.	1472.	2856.
5	-2585.	4377.	9168.	12285.	14154.
6	4395.	13101.	19087.	22957.	25239.
7	11185.	21628.	28763.	33311.	35909.
8	17724.	29865.	38079.	43212.	46022.
9	27444.	40668.	49419.	54659.	57263.
10	38430.	52264.	61157.	66175.	68301.
11	48675.	62939.	71836.	76530.	78105.
12	57965.	72530.	81346.	85662.	86659.
13	66128.	80924.	89626.	93559.	93995.
14	73031.	88046.	96653.	100242.	100169.
15	78571.	93855.	102437.	105759.	105259.
16	82675.	98337.	107005.	110171.	109350.
17	84575.	100981.	110031.	113279.	112332.
18	83698.	101463.	111350.	115022.	114211.
19	82394.	101515.	112251.	116368.	115718.
20	80657.	101139.	112741.	117331.	116876.
21	78480.	100332.	112829.	117924.	117704.
22	75855.	99096.	112519.	118162.	118218.
23	72776.	97429.	111819.	118056.	118435.
24	69235.	95330.	110734.	117617.	118371.
25	65224.	92799.	109270.	116856.	118041.

TABLE X (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	60735.	89834.	107432.	115782.	117456.
27	55761.	86434.	105224.	114406.	116629.
28	50292.	82596.	102651.	112736.	115570.
29	45089.	78320.	99716.	110779.	114291.
30	45043.	77650.	98721.	109862.	113564.

"-" indicates investment exceeds net present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 10, 11
(g)	Depreciation Rate	=	.6667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XI

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INVESTOR'S DISCOUNT RATE IS FOUR PER CENT LESS THAN THE INTEREST RATE IF ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20588.	-21154.	-21698.	-22222.	-22727.
2	-20542.	-20980.	-20144.	-19342.	-18954.
3	-16735.	-13048.	-10580.	-9028.	-8141.
4	-9820.	-4436.	-748.	1647.	3088.
5	-3016.	4184.	9161.	12422.	14400.
6	3617.	12702.	18985.	23085.	25540.
7	10027.	21024.	28593.	33473.	36319.
8	16165.	29069.	37875.	43455.	46594.
9	25795.	39964.	49438.	55212.	58197.
10	36929.	51861.	61579.	67191.	69725.
11	47397.	62900.	72714.	78049.	80047.
12	56954.	72890.	82704.	87699.	89126.
13	65395.	81685.	91460.	96104.	96968.
14	72548.	89178.	98932.	103262.	103615.
15	78271.	95295.	105102.	109200.	109125.
16	82447.	99990.	109976.	113962.	113575.
17	84139.	102631.	113140.	117289.	116811.
18	82594.	102779.	114355.	119072.	118807.
19	80553.	102444.	115111.	120423.	120404.
20	78000.	101619.	115408.	121352.	121618.
21	74919.	100294.	115246.	121867.	122463.
22	71292.	98460.	114624.	121975.	122955.
23	67103.	96108.	113541.	121683.	123104.
24	62332.	93227.	111997.	120997.	122925.
25	56962.	89807.	109988.	119922.	122426.

TABLE XI (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	50972	85836.	107513.	118464.	121618.
27	44341.	81304.	104569.	116627.	120510.
28	37050.	76198.	101152.	114413.	119111.
29	30095.	70505.	97259.	111827.	117426.
30	30050.	69606.	95930.	110608.	116464.

"-" indicates investment exceeds net present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	2, 4, 6, 8, 10
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

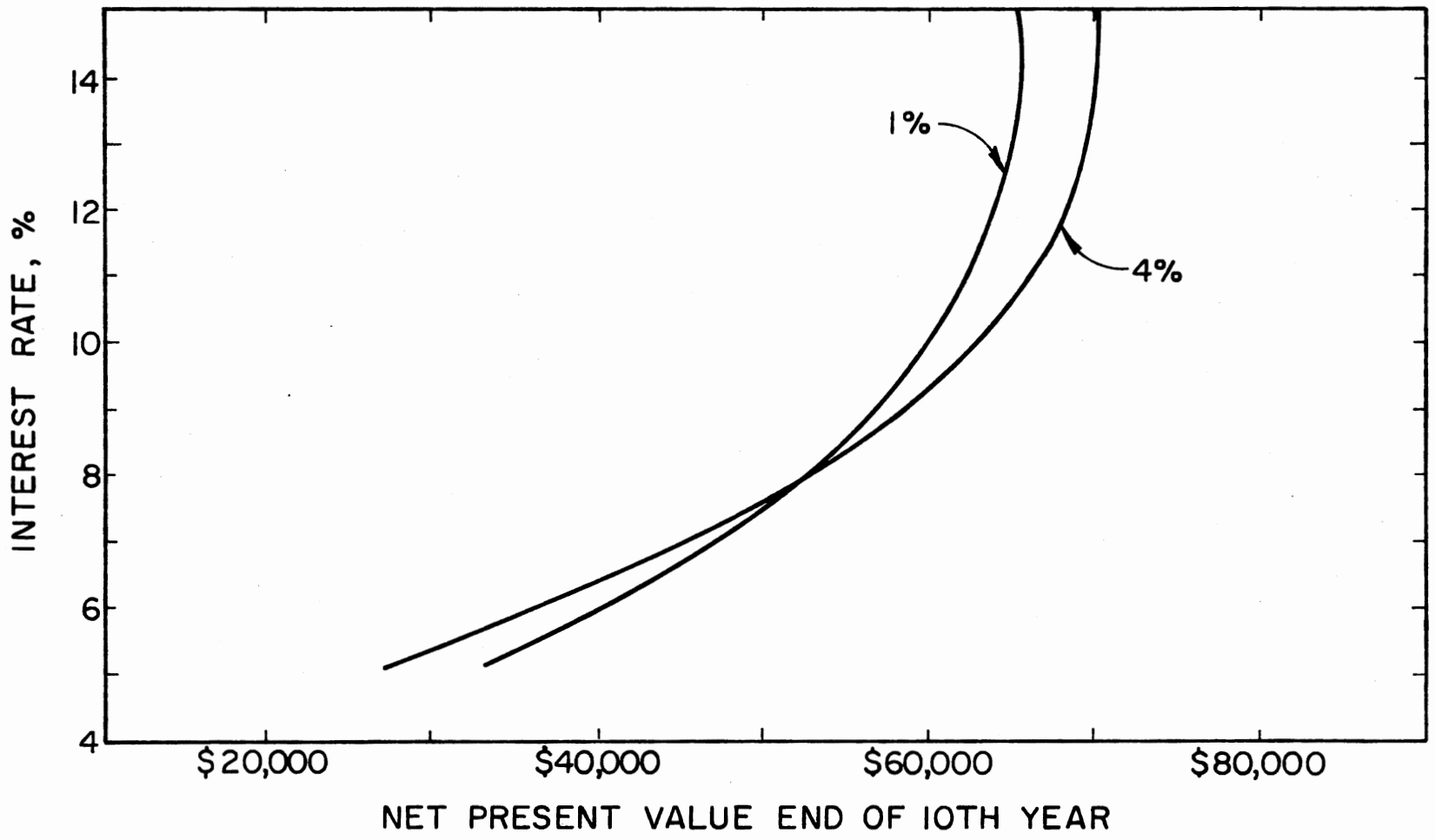

Figure 2. Net Present Value of an Apartment Building at the End of the 10th Year for Interest Rates 5% Through 15% With the Investor's Discount Rate 1% and 4% Less Than the Interest Rate

Figure 2 shows graphically the net present value of an investment at the end of the 10th year as determined from Tables VIII, IX, X, and XI for a discount rate that is one per cent and four per cent less than the interest rate. It can be seen from Figure 2 that the net present value is smaller for lower rates of interest when the interest-discount differential is larger and the net present value is larger for higher rates of interest. Also, as interest rates and discount rates increase, the net present value increases at a rate increasing geometrically and the interest-discount rate differential effect is less pronounced.

Effect of Investor's Tax Rate

As the investor's tax rate increases, the net present value of the investment increases. The higher the investor's ordinary tax rate, the greater will be the reduction in the investor's tax liability. The optimum net present value of the apartment project financed with a 10 per cent interest rate is $73,095 for a taxpayer in the 30 per cent tax bracket and $151,679 for a taxpayer in the 60 per cent tax bracket.

Tables XII, XIII, and XIV show the net present value of an apartment project for an investor with an ordinary tax rate of 30, 40, and 50 per cent and no initial investment. Table IV indicates the net present value of the project assuming a 60 per cent tax rate. It is of significance to note that an investor of even modest means can benefit from tax leveraging if the investment does not require a large initial investment.

TABLE XII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING AN ORDINARY TAX RATE OF 30 PER CENT IF PROPERTY IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	976.	1135.	1239.	1303.	1339.
2	2672.	3261.	3729.	4102.	4398.
3	4927.	6128.	7120.	7933.	8597.
4	7600.	9527.	11128.	12437.	13496.
5	10573.	13287.	15527.	17333.	18764.
6	13747.	17268.	20138.	22407.	24156.
7	17038.	21357.	24820.	27497.	29495.
8	20374.	25460.	29465.	32482.	34654.
9	24083.	29830.	34266.	37511.	39749.
10	27883.	34197.	38968.	42350.	44569.
11	31516.	38333.	43373.	46828.	48972.
12	34937.	42197.	47447.	50923.	52949.
13	38113.	45760.	51171.	54626.	56503.
14	41019.	49008.	54538.	57942.	59651.
15	43641.	51932.	57551.	60883.	62413.
16	45971.	54532.	60218.	63467.	64817.
17	47941.	56767	62519.	65689.	66871.
18	49521.	58628.	64459.	67568.	68602.
19	50926.	60278.	66169.	69209.	70099.
20	52160.	61727.	67661.	70629.	71382.
21	53226.	62980.	68947.	71844.	72469.
22	54127.	64047.	70037.	72868.	73379.
23	54868.	64933.	70944.	73716.	74127.
24	55452.	65647.	71678.	74401.	74729.
25	55883.	66195.	72249.	74936.	75197.
26	56165.	66586.	72667.	75332.	75545.

TABLE XII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	56302.	66824.	72942.	75599.	75783.
28	56299.	66919.	73082.	75749.	75923.
29	56158.	66876.	73095.	75791.	75973.
30	55885.	66701.	72991.	75732.	75943.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.30
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XIII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING AN ORDINARY TAX RATE OF 40 PER CENT IF PROPERTY IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	2927	3404.	3716.	3909.	4017.
2	6575.	7799.	8685.	9314.	9754.
3	10749.	12890.	14495.	15680.	16545.
4	15282.	18433.	20820.	22595.	23893.
5	20036.	24232.	27406.	29747.	31430.
6	24896.	30127.	34052.	36900.	38893.
7	29764.	35991.	40605.	43882.	46095.
8	34562.	41725.	46951.	50569.	52912.
9	40380.	48226.	53832.	57581.	59864.
10	46466.	54801.	60615.	64345.	66442.
11	52124.	60853.	66794.	70438.	72295.
12	57282.	66330.	72337.	75848.	77436.
13	61891.	71203.	77236.	80591.	81897.
14	65922.	75465.	81505.	84695.	85725.
15	69363.	79123.	85166	88201.	88973.
16	72214.	82194.	88254.	91154.	91694.
17	74296.	84567.	90706.	93527.	93890.
18	75512.	86203.	92520.	95344.	95600.
19	76507.	87585.	94064.	96890.	97047.
20	77286.	88725.	95355.	98186.	98256.
21	77855.	89631.	96408.	99250.	99249.
22	79220.	90316.	97237.	100100.	100045.
23	78388.	90788.	97856.	100753.	100664.
24	78364.	91058.	98277.	101224.	101122.
25	78153.	91135.	98514.	101528.	101434.
26	77762.	91028.	98578.	101678.	101614.

TABLE XIII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	77197.	90746.	98481.	101687.	101675.
28	76464.	90298.	98232.	101566.	101630.
29	75567.	89691.	97843.	101326.	101487.
30	74513.	88935.	97322.	100977.	101258.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.40
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XIV

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING AN ORDINARY TAX RATE OF 50 PER CENT IF PROPERTY IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	4878.	5673.	6194.	6516.	6695.
2	10478.	12337.	13640.	14526.	15110.
3	16570.	19652.	21869.	23426.	24494.
4	22964.	27339.	30513.	32753.	34290.
5	29499.	35176.	39285.	42161.	44096.
6	36044.	42985.	47966.	51393.	53630.
7	42491.	50626.	56390.	60267.	62696.
8	48750.	57990.	64437.	68657.	71170.
9	56677.	66622.	73398.	77651.	79979.
10	65049.	75404.	82262.	86340.	88315.
11	72733.	83373.	90214.	94047.	95618.
12	79627.	90463.	97226.	100774.	101923.
13	85669.	96646.	103302.	106556.	107292.
14	90825.	101922.	108471.	111449.	111800.
15	95085.	106314.	112782.	115519.	115532.
16	98457.	109856.	116290.	118841.	118571.
17	100651.	112368.	118893.	121365.	120910.
18	101504.	113779.	120580.	123120.	122597.
19	102088.	114892.	121959.	124571.	123995.
20	102412.	115722.	123049.	125743.	125131.
21	102484.	116282.	123870.	126656.	126029.
22	102314.	116585.	124437.	127332.	126712.
23	101908.	116643.	124767.	127789.	127201.
24	101275.	116469.	124877.	128047.	127515.
25	100423.	116075.	124780.	128120.	127670.
26	99360.	115471.	124490.	128024.	127683.

TABLE XIV (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	98092.	114668.	124020.	127774.	127568.
28	96629.	113677.	123383.	127383.	127337.
29	94976.	112507.	122590.	126861.	127001.
30	93141.	111169.	121652.	126221.	126573.

Assumptions:

(a)	Land Cost	=	-0-
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	-0-
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	6, 8, 10, 12, 14
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.50
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

It can be seen from Figure 3 that the net present value of a project increases at a decreasing rate as the interest rate increases. As the tax rate increases, the net present value increases at an increasing rate for lower rates of interest.

Effect of Initial Investment

Tax leveraging is significantly affected by the size of the investor's initial investment. As would be expected, an increase in the initial investment requires a longer period of time for the investor to recover from the return on taxes postponed or avoided.

The effect on the net present value of increasing the initial investment is whosn by Tables X, XV, XVI, and XVII for initial investments of $50,000, $100,000, $150,000, and $200,000, respectively. As shown in Table X, the net present value of a $50,000 investment at the end of the fifth year is $9,168 and at the end of the tenth year it is $61,157 for an interest rate of ten per cent. As shown in Table XV, if the investor makes an initial investment of $100,000, the present value of the return from tax leveraging will not exceed the initial investment until the ninth year and the net present value at the end of the tenth year is only $18,832. If the investor makes an initial investment of $150,000, the return from tax leveraging will not exceed the initial investment until the 13th year and the maximum net present value occurs at the end of the 21st year in the amount of only $26,089. If the investor makes a $200,000 initial investment, the return from postponing or avoiding taxes will not exceed the initial investment.

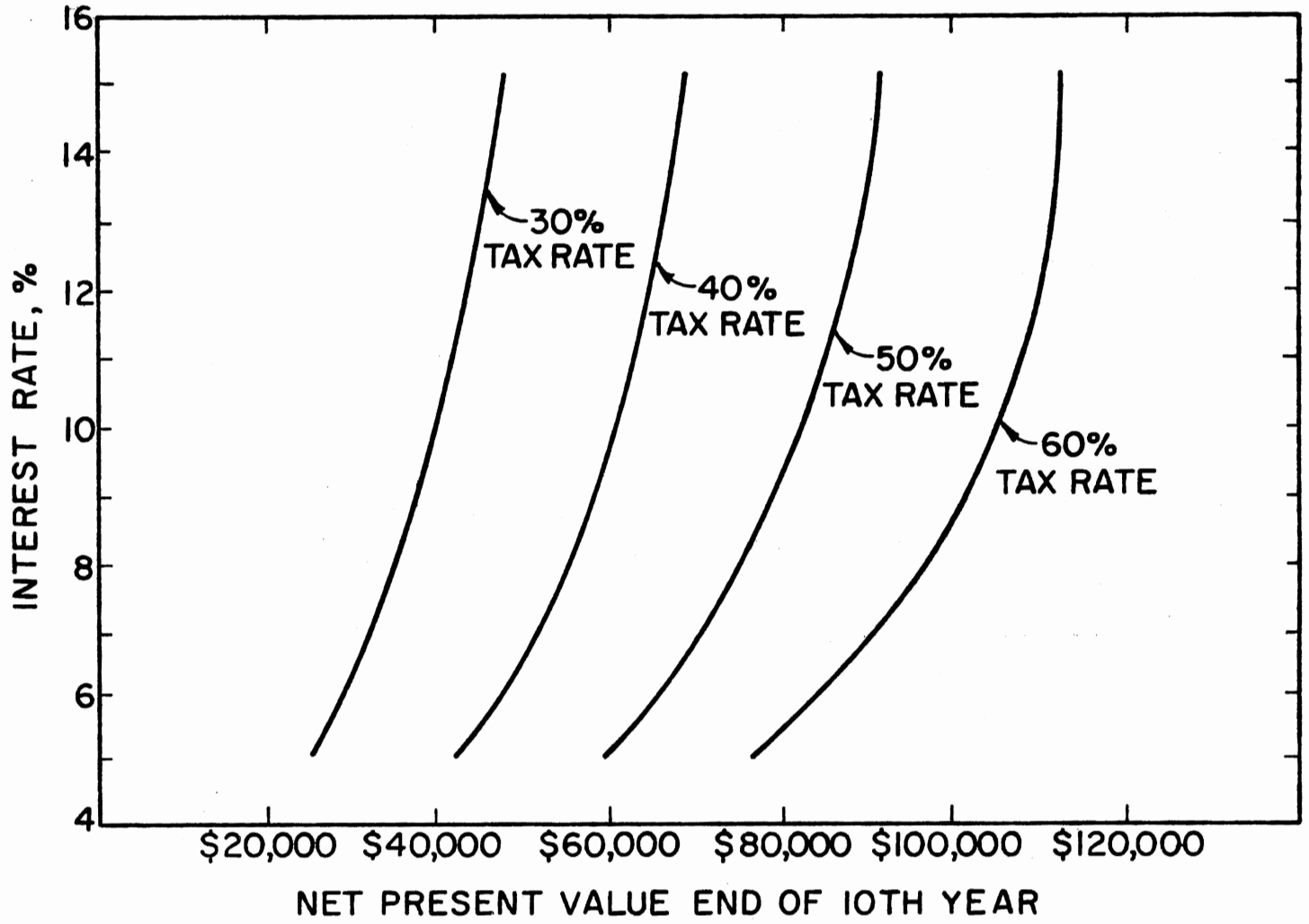

Figure 3. Net Present Value of an Apartment Building at the End of the 10th Year for Interest Rates 5% Through 15% Assuming Ordinary Tax Rates of 30%, 40%, 50% and 60% if the Project is Abandoned at the End of Year t

TABLE XV

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $100,000 IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-41748.	-42857.	-43925.	-44954.	-45946.
2	-42517.	-43992.	-45360.	-46648.	-47874.
3	-42449.	-43696.	-44785.	-45791.	-46755.
4	-41670.	-42221.	-40868.	-39373.	-38708.
5	-40294.	-35001.	-31349.	-29202.	-28165.
6	-33683.	-26550.	-21878.	-19107.	-17752.
7	-26915.	-18264.	-12603.	-9270.	-7676.
8	-20378.	-10238.	-3646.	171.	1912.
9	-10639.	385.	7375.	11209.	12690.
10	387.	11829.	18832.	22364.	23322.
11	10693.	22381.	29267.	32401.	32770.
12	20064.	31875.	38567.	41257.	41017.
13	28330.	40199.	46669.	48916.	48086.
14	35356.	47278.	53551.	55396.	54033.
15	41041.	53069.	59217.	60743.	58929.
16	45310.	57557.	63697.	65015.	62859.
17	47397.	60233.	66661.	68012.	65709.
18	46729.	60770.	67944.	69670.	67482.
19	45655.	60901.	68834.	70956.	68908.
20	44170.	60626.	69337.	71883.	70007.
21	42267.	59945.	69459.	72462.	70795.
22	39938.	58855.	69207.	72705.	71288.
23	37177.	57358.	68585.	72624.	71503.
24	33977.	55451.	67599.	72229.	71452.
25	30330.	53133.	66253.	71529.	71149.
26	26229.	50403.	64553.	70533.	70605.

TABLE XV (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	21665.	47260.	62502.	69250.	69832.
28	16631.	43701.	60104.	67688.	68840.
29	12396.	39724.	57362.	65854.	67639.
30	12325.	39375.	56578.	65074.	67000.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$ 950,000
(d)	Investment	=	$ 100,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XVI

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $150,000 IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-62621.	-64286.	-65888.	-6431.	-68919.
2	-64228.	-66769.	-69146.	-71388.	-73718.
3	-64962.	-67745.	-70263.	-72598.	-74797.
4	-64951.	-67469.	-69659.	-71666.	-73768.
5	-64309.	-66168.	-67690.	-69082.	-70483.
6	-63139.	-64038.	-62842.	-61171.	-60742.
7	-61536.	-58156.	-53970.	-51851.	-51261.
8	-58580.	-50340.	-45372.	-42970.	-42199.
9	-48721.	-39898.	-34670.	-32241.	-31884.
10	-37656.	-28606.	-23493.	-21448.	-21658.
11	-27290.	-18178.	-13302.	-11727.	-12564.
12	-17837.	-8780.	04212.	-3147.	-4626.
13	-9469.	-525.	3713.	4273.	2177.
14	-2319.	6510.	10448.	10551.	7896.
15	3511.	12283.	15998.	15727.	12599.
16	7945.	16778.	20389.	19861.	16368.
17	10220.	19484.	23291.	22746.	19086.
18	9760.	20077.	24538.	24320.	20753.
19	8916.	20287.	25416.	25546.	22097.
20	7683.	20114.	25932.	26436.	23137.
21	6053.	19557.	26089.	27000.	23885.
22	4021.	18615.	25894.	27250.	24359.
23	1578.	17287.	25350.	27194.	24570.
24	-1281.	15572.	24463.	26842.	24532.
25	-4564.	13468.	23236.	26203.	24256.
26	-8278.	10973.	21673.	25285.	23754.

TABLE XVI (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-12430.	8087.	19779.	24096.	23035.
28	-17030.	4806.	17556.	22642.	22110.
29	-20297.	1129.	15007.	20931.	20986.
30	-20393.	1101.	14433.	20287.	20435.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$ 900,000
(d)	Investment	=	$ 150,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XVII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $200,000 IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-83495.	-85714.	-87851.	-89908.	-91892.
2	-85940.	-89546.	-92931.	-96128.	-99162.
3	-87476.	-91794.	-95741.	-99405.	-102840.
4	-88232.	-92717.	-96707.	-100358.	-103763.
5	-88323.	-92544.	-96193.	-99504.	-102609.
6	-87854.	-91475.	-94508.	-97270.	-99927.
7	-86917.	-89686.	-91916.	-94010.	-94847.
8	-85599.	-87329.	-87097.	-85911.	-86309.
9	-83975.	-80181.	-76714.	-75691.	-76457.
10	-75699.	-69041.	-65818.	-65258.	-66638.
11	-65272.	-58737.	-55871.	-55855.	-57899.
12	-55738.	-49434.	-46991.	-47551.	-50270.
13	-47267.	-41250.	-39243.	-40369.	-43732.
14	-39994.	-34258.	-32655.	-34294.	-38241.
15	-34020.	-28503.	-27222.	-29287.	-33731.
16	-29419.	-24002.	-22919.	-25294.	-30123.
17	-26958.	-21264.	-20079.	-22520.	-27537.
18	-27209.	-20616.	-18868.	-21030.	-25977.
19	-27823.	-20328.	-18000.	-19864.	-24713.
20	-28805.	-20399.	-17473.	-19011.	-23734.
21	-30160.	-20831.	-17280.	-18461.	-23024.
22	-31897.	-21625.	-17418.	-18205.	-22571.
23	-34021.	-22784.	-17884.	-18236.	-22363.
24	-36539.	-24307.	-18672.	-18544.	-22388.
25	-39457.	-26198.	-19781.	-19122.	-22637.
26	-42784.	-28457.	-21205.	-19962.	-23097.

TABLE XVII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-46526.	-31087.	-22943.	-21058.	-23762.
28	-50690.	-34090.	-24991.	-22403.	-24621.
29	-52990.	-37145.	-27347.	-23991.	-25668.
30	-53112.	-37173.	-27710.	-24498.	-26130.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$ 850,000
(d)	Investment	=	$ 200,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDE
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

If the net present value of the project is negative or small in relation to the initial investment, the investor would have to receive a cash flow from the annual operations and/or from terminating the project if the investment is to be profitable. If the cash flow is not forthcoming and the initial investment is significant and the project terminates before the investor has had a chance to receive a return of his investment from tax leveraging, the investor will experience an economic loss.

Figure 4 indicates the net present value of the apartment project in the tenth year for initial investments of $50,000 and $100,000 based on the information in Tables X and XV. The net present value increases at a decreasing rate as the interest rate is increased. At some point, however, the net present value will decrease with increasing rates of interest as is shown for a $100,000 investment on Figure 4.

Tables XVIII, XIX, XX, and XXI show the net present value of an apartment building using straight-line depreciation for interest rates of 6, 8, 10, 12, and 14 per cent. As the initial investment increases, the time period necessary to recover the initial investment from the return on taxes postponed or avoided will increase. If the initial investment is $50,000 the project will not generate a positive net present value until four to seven years have passed, depending upon the interest rate. If the initial investment is $100,000, the return from taxes postponed or avoided will not exceed the initial investment until the 13th year and even then the maximum net present value if $14,545 in the 23rd year for a 12 per cent interest rate.

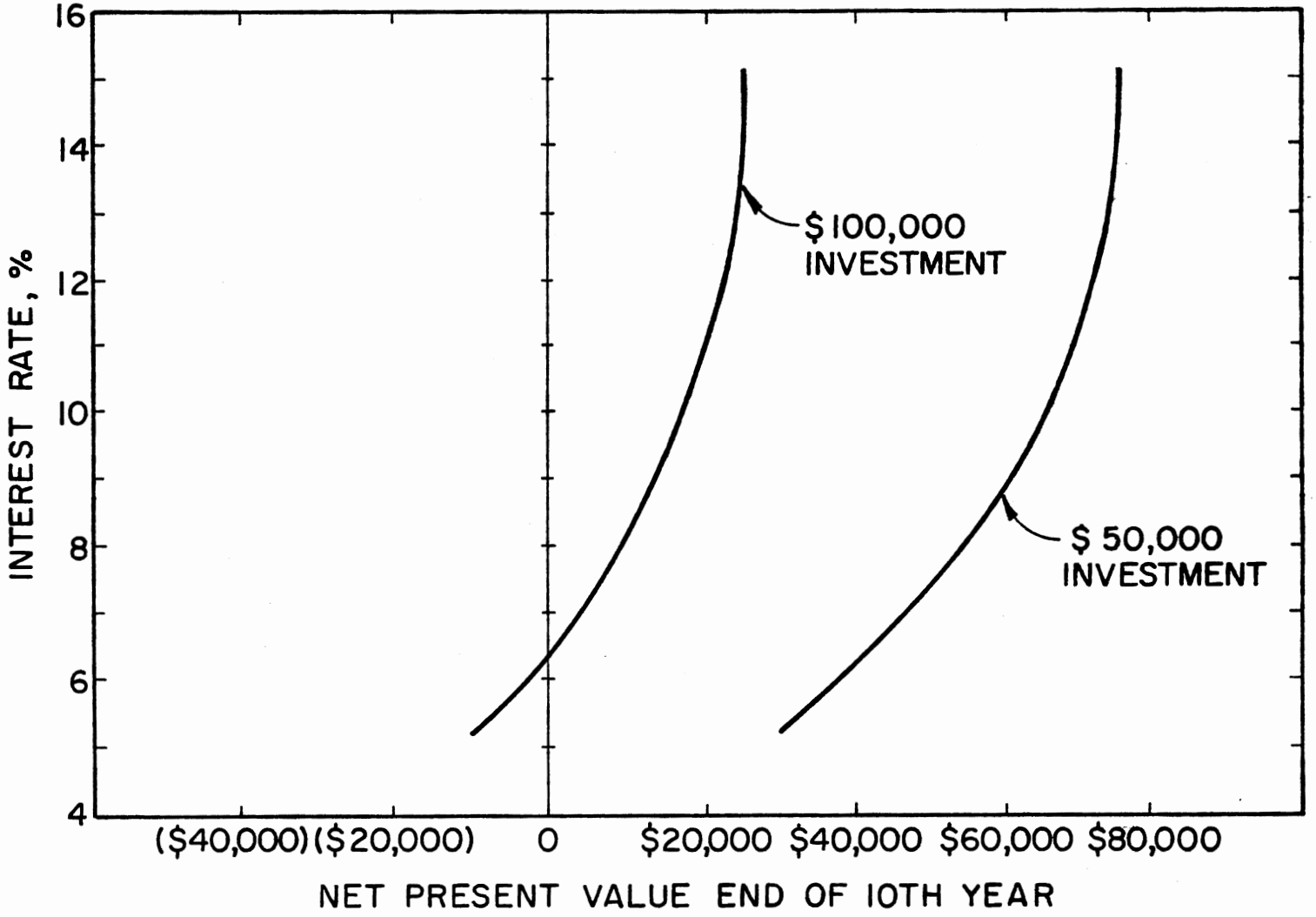

Figure 4. Net Present Value of an Apartment Building at the End of the 10th Year for Interest Rates 5% Through 15% for Initial Investments of $50,000 and $100,000

TABLE XVIII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $50,000 USING STRAIGHT-LINE DEPRECIATION IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20874.	-21429.	-21963.	-22477.	-22973.
2	-21371.	-22122.	-21605.	-21101.	-20985.
3	-18409.	-15714.	-14127.	-13360.	-13173.
4	-12664.	-9098.	-6989.	-5964.	-5714.
5	-7240.	-2824.	-204.	1064.	1361.
6	-2147.	3100.	6214.	7709.	8032.
7	2610.	8664.	12256.	13957.	14284.
8	7021.	13861.	17912.	19801.	20110.
9	11081.	18685.	23178.	25236.	25508.
10	14780.	23128.	28048.	30260.	30478.
11	18113.	27185.	32519.	34872.	35025.
12	21070.	30852.	36588.	39075.	39156.
13	23646.	34122.	40256.	42872.	42880.
14	25833.	36993.	43522.	46269.	46209.
15	27622.	39460.	46386.	49270.	49153.
16	29008.	41519.	48849.	51884.	51725.
17	29982.	43167.	50914.	54118.	53938.
18	30536.	44401.	52583.	55978.	55805.
19	30663.	45217.	53858.	57474.	57339.
20	30355.	45613.	54741.	58614.	58554.
21	29604.	45586.	55236.	59405.	59462.
22	28402.	45133.	55346.	59856.	60076.
23	26741.	44251.	55073.	59976.	60407.
24	24611.	42938.	54421.	59772.	60467.
25	22006.	41191.	53393.	59251.	60268.

TABLE XVIII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	18916.	39006.	51991.	58422.	59819.
27	15331.	36381.	50218.	57291.	59130.
28	11244.	33313.	48076.	55865.	58211.
29	8845.	29891.	45569.	54149.	57070.
30	8728.	29882.	44995.	53470.	56478.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	SL
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XIX

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $100,000 USING STRAIGHT-LINE DEPRECIATION IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-41748.	-42857.	-43925.	-44954.	-45946.
2	-43082.	-44899.	-46583.	-48163.	-49660.
3	-44039.	-46215.	-48141.	-49901.	-51543.
4	-44651.	-46887.	-47010.	-46809.	-47277.
5	-44950.	-42202.	-40721.	-40423.	-40958.
6	-40224.	-36551.	-34750.	-34356.	-34958.
7	-35490.	-31228.	-29111.	-28624.	-29301.
8	-31080.	-26241.	-23813.	-23240.	-24000.
9	-27002.	-21599.	-18866.	-18214.	-19066.
10	-23263.	-17307.	-14277.	-13552.	-14502.
11	-19870.	-13374.	-10050.	-9257.	-10310.
12	-16831.	-9803.	-6191.	-5330.	-6487.
13	-14152.	-6602.	-2700.	-1771.	-3029.
14	-11842.	-3775.	419.	1423.	72.
15	-9908.	-1327.	3166.	4255.	2823.
16	-8357.	739.	5541.	6729.	5234.
17	-7196.	2419.	7545.	8851.	7315.
18	-6433.	3708.	9177.	10627.	9076.
19	-6076.	4603.	10441.	12063.	10529.
20	-6132.	5101.	11337.	13166.	11684.
21	-6610.	5198.	11867.	13942.	12553.
22	-7516.	4893.	12034.	14400.	13147.
23	-8859.	4181.	11839.	14545.	13475.
24	-10646.	3059.	11286.	14384.	13548.
25	-10646.	1525.	10376.	13924.	13376.
26	-12888.	-425.	9112.	13173.	12969.

TABLE XIX (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-18764.	-2793.	7495.	12135.	12334.
28	-22417.	-5583.	5529.	10817.	11481.
29	-23848.	-8355.	3215.	9225.	10417.
30	-23990.	-8393.	2852.	8682.	9915

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a) Land Cost = 50,000
(b) Depreciable Balance = $1,000,000
(c) Mortgage = $ 950,000
(d) Investment = $ 100,000
(e) Interest Rates (%) = 6, 8, 10, 12, 14
(f) Discount Rates (%) = 3, 5, 7, 9, 11
(g) Depreciation Rate = .33333
(h) Marginal Tax Rate = .60
(i) Depreciation Method = SL
(j) Repayment Period = 30 yrs.
(k) Depreciation Period = 30 yrs.
(l) Distribution Period = -0-

TABLE XX

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $150,000 USING STRAIGHT-LINE DEPRECIATION IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-62621.	-64286.	-65888.	-67431.	-68919.
2	-64794.	-67676.	-70368.	-72903.	-75304.
3	-66553.	70264.	-73619.	-76708.	-79586.
4	-67932.	-72135.	-75802.	-79102.	-82137.
5	-68964.	-73368.	-77061.	-80313.	-83276.
6	-69680.	-74039.	-75714.	-76420.	-77949.
7	-70111.	-71120.	-70477.	-71204.	-72886.
8	-69182.	-66344.	-65539.	-66281.	-68111.
9	-65085.	-61882.	-60911.	-61664.	-63639.
10	-61306.	-57742.	-56602.	-57363.	-59482.
11	-57852.	-53932.	-52620.	-53385.	-55645.
12	-54731.	-50458.	-48970.	-49734.	-52130.
13	-51951.	-47327.	-45657.	-46413.	-48938.
14	-49517.	-44543.	-42684.	-43422.	-46065.
15	-47438.	-42113.	-40053.	-40761.	-43507.
16	-45721.	-40040.	-37767.	-38426.	-41257.
17	-44374.	-38330.	-35825.	-36415.	-39309.
18	-43403.	-36985.	-34229.	-34724.	-37653.
19	-42815.	-36012.	-32977.	-33348.	-36282.
20	-42620.	-35412.	-32069.	-32281.	-35186.
21	-42823.	-35189.	-31503.	-31519.	-34356.
22	-43433.	-35348.	-31279.	-31056.	-33783.
23	-44457.	-35890.	-31396.	-30886.	-33458.
24	-45904.	-36820.	-31850.	-31003.	-33372.
25	-47781.	-38141.	-32642.	-31401.	-33516.
26	-50097.	-39855.	-33768.	-32075.	-33883.

TABLE XX (Continued)

Interest Rate	6%	8%	10%	12%	14%
Years					
27	-52860.	-41966.	-35228.	-33020.	-34463.
28	-56078.	-44478.	-37019.	-34229.	-35250.
29	-56540.	-46600.	-39140.	-35699.	-36236.
30	-56708.	-46667.	-39293.	-36105.	-36651.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$ 900,000
(d)	Investment	=	$ 150,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.33333
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	SL
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XXI

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE INITIAL INVESTMENT IS $200,000 USING STRAIGHT-LINE DEPRECIATION IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-83495.	-85714.	-87851.	-89908.	-91892.
2	-86505.	-90454.	-94154.	-97643.	-100947.
3	-89067.	-94313.	-99097.	-103514.	-107628.
4	-91213.	-97383.	-102850.	-107795.	-112332.
5	-92979.	-99744.	-105564.	-110725.	-115402.
6	-94395.	-101476.	-107380.	-112519.	-117134.
7	-95492.	-102650.	-108423.	-113363.	-116471.
8	-96301.	-103332.	-107264.	-109322.	-112221.
9	-96850.	-102165.	-102955.	-105114.	-108213.
10	-97165.	-98177.	-98927.	-101174.	-104461.
11	-95835.	-94491.	-95189.	-97513.	-100979.
12	-92632.	-91113.	-91749.	-94138.	-97773.
13	-89749.	-88051.	-88613.	-91055.	-94847.
14	-87192.	-85311.	-85786.	-88267.	-92202.
15	-84969.	-82899.	-83273.	-85776.	-89837.
16	-83086.	-80819.	-81075.	-83580.	-87748.
17	-81551.	-79078.	-79195.	-81681.	-85932.
18	-80372.	-77678.	-77634.	-80074.	-84382.
19	-79555.	-76626.	-76393.	-78758.	-83093.
20	-79107.	-75924.	-75473.	-77728.	-82056.
21	-79036.	-75577.	-74872.	-76980.	-81265.
22	-79350.	-75588.	-74592.	-76511.	-80713.
23	-80056.	-75961.	-74630.	-76316.	-80391.
24	-81162.	-76699.	-74985.	-76389.	-80292.
25	-82675.	-77806.	-75658.	-76726.	-80409.
26	-84603.	-79285.	-76646.	-77323.	-80734.

TABLE XXI (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
27	-86955.	-81140.	-77949.	-78174.	-81260.
28	-89207.	-83373.	-98566.	-79275.	-81980.
29	-89234.	-84847.	-81426.	-80621.	-82889.
30	-89427.	-84941.	-81436.	-80890.	-83216.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$ 850,000
(d)	Investment	=	$ 200,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.33333
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	SL
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

For an initial investment of $150,000 to $200,000, the net present value remains negative, which means the return generated from postponing or avoiding taxes does not exceed the initial investment. This does not mean that tax leveraging does not occur using straight-line depreciation. At the end of the 19th year, the mortgage exceeds the adjusted basis of the property by $203,417, using a 10 per cent interest rate and an initial investment of $150,000, and by $170,699 for an initial investment of $200,000.

Effect of Loan Repayment Period

Thus far, it has been assumed that the loan repayment period and the useful life for computing depreciation are equal. Just as an increase in the initial investment will cause tax leveraging to decrease, a decrease in the repayment period with the useful life held constant will also cause tax leveraging to decrease.

The effect of changing the loan repayment period or the net present value of the apartment project, described earlier, is shown on Tables XXII, XXIII, XXIV, and XXV. The useful life is held constant at 30 years, except for Table XXV where it is 40 years. The loan repayment period used for testing for the existence of tax leveraging was set at 15, 20, 25, and 30 years. It is assumed that the investor doesn't receive a positive cash flow and that the original investment is $50,000. Tables XXII, XXIII, XXIV, and XXV reflect only the net present value of the apartment project until the loan is paid off.

TABLE XXII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE LOAN REPAYMENT PERIOD IS 15 YEARS IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20874.	-21429.	-21963.	-22477.	-22973.
2	-21320.	-21977.	-22506.	-22939.	-23302.
3	-21478.	-21918.	-22067.	-22020.	-21851.
4	-21475.	-21489.	-21017.	-20244.	-19307.
5	-21425.	-20896.	-19666.	-18034.	-16216.
6	-21432.	-20321.	-18278.	-15737.	-13005.
7	-21589.	-19920.	-17072.	-13631.	-10008.
8	-21981.	-19831.	-16230.	-11940.	-7480.
9	-22685.	-20171.	-15905.	-10840.	-5613.
10	-23772.	-21043.	-16222.	-10470.	-4552.
11	-25305.	-22536.	-17284.	-10937.	-4399.
12	-27343.	-24728.	-19175.	-12324.	-5225.
13	-29938.	-27686.	-21964.	-14690.	-7077.
14	-33140.	-31466.	-25705.	-18078.	-9983.
15	-37001.	-36122.	-30445.	-22520.	-13955.
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

TABLE XXII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26					
27					
28					
29					
30					

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	15 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XXIII

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE LOAN REPAYMENT PERIOD IS 20 YEARS IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20874.	-21429.	-21963.	-22477.	-22973.
2	-21052.	-21570.	-21992.	-22350.	-22669.
3	-20675.	-20703.	-20544.	-19432.	-16871.
4	-19868.	-19074.	-17393.	-12624.	-8936.
5	-18747.	-16895.	-12196.	-5876.	-1166.
6	-17413.	-14353.	-7462.	285.	6175.
7	-15959.	-11610.	-3037.	5988.	12892.
8	-14469.	-8807.	662.	11000.	18892.
9	-13019.	-6066.	6118.	17321.	25730.
10	-11678.	-3493.	11707.	23479.	32213.
11	-10507.	0.	15970.	28243.	37267.
12	-9562.	2163.	18795.	31552.	40879.
13	-8895.	2830.	20120.	33395.	43081.
14	-8552.	3454.	19921.	33792.	43930.
15	-8574.	4034.	18202.	32789.	43504.
16	-9901.	4053.	17370.	30447.	41888.
17	-9866.	3474.	17247.	29503.	39408.
18	-11186.	2284.	16429.	29087.	39334.
19	-12977.	473.	14915.	27954.	38556.
20	-15261.	-1976.	12700.	26112.	37097.
21					
22					
23					
24					
25					

(TABLE XXIII (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26					
27					
28					
29					
30					

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	20 years
(k)	Depreciation Period	=	30 years
(l)	Distribution	=	-0-

TABLE XXIV

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE LOAN REPAYMENT PERIOD IS 25 YEARS IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20874.	-21429.	-21963.	-22477.	-22973.
2	-20900.	-21347.	-21724.	-21835.	-20983.
3	-20219.	-18349.	-15082.	-12761.	-11180.
4	-17839.	-11509.	-6791.	-3388.	-1029.
5	-13025.	-4724.	1492.	5989.	9108.
6	-8431.	1872.	9584.	15141.	18959.
7	-4129.	8186.	17338.	23891.	28327.
8	-185.	14069.	24536.	32106.	37071.
9	6833.	22431.	33861.	41786.	46876.
10	15007.	31478.	43390.	51455.	56414.
11	22328.	39496.	51764.	59882.	64653.
12	28579.	46321.	58872.	67007.	71580.
13	33587.	51836.	64653.	72816.	77224.
14	37214.	55967.	69085.	77332.	81644.
15	39357.	58671.	72172.	80601.	84917.
16	39938.	59931.	73946.	82685.	87128.
17	38188.	59235.	74075.	83383.	88167.
18	33530.	56255.	72396.	82633.	88038.
19	28311.	52724.	70194.	81403.	87474.
20	22521.	48638.	67477.	79706.	86496.
21	16151.	43995.	64249.	77554.	85120.
22	14741.	38791.	60516.	74959.	83364.
23	14464.	38578.	58097.	71947.	81244.
24	13823.	38125.	57893.	71944.	80617.
25	12798.	37189.	57179.	71454.	80303.

TABLE XXIV (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26					
27					
28					
29					
30					

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	25 yrs.
(k)	Depreciation Period	=	30 yrs.
(l)	Distribution	=	-0-

TABLE XXV

NET PRESENT VALUE OF AN APARTMENT BUILDING ASSUMING THE LOAN REPAYMENT PERIOD IS 30 YEARS AND THE USEFUL LIFE IS 40 YEARS IF THE PROJECT IS ABANDONED AT THE END OF YEAR t

Interest Rate	6%	8%	10%	12%	14%
Year					
1	-20874.	-21429.	-21963.	-22477.	-22973.
2	-20806.	-21215.	-21574.	-21908.	-22531.
3	-19935.	-19647.	-17914.	-16007.	-19591.
4	-18389.	-14030.	-9747.	-6793.	-12907.
5	-15165.	-7050.	-1230.	2807.	-4995.
6	-10261.	42.	7426.	12522.	2823.
7	-5416.	7118.	16048.	22142.	10307.
8	-696.	14072.	24499.	31502.	17282.
9	8935.	25101.	36283.	43540.	26221.
10	21068.	37939.	49295.	56319.	35361.
11	32914.	50183.	61471.	68075.	43207.
12	44218.	61616.	72643.	78693.	49695.
13	54767.	72076.	82703.	88117.	54820.
14	64392.	81446.	91586.	96332.	58611.
15	72955.	89646.	99265.	103356.	61124.
16	80348.	96626.	105741.	109231.	62431.
17	84241.	100740.	109856.	113151.	61981.
18	82729.	100769.	110850.	114660.	59515.
19	80522.	100186.	111301.	115684.	56483.
20	77640.	99013.	111234.	116254.	55829.
21	74103.	97272.	110674.	116398.	55335.
22	69927.	94982.	109645.	116140.	54233.
23	65126.	92161.	108165.	115504.	52545.
24	59712.	88822.	106253.	114510.	50294.
25	53695.	84978.	103925.	113177.	47500.

TABLE XXV (Continued)

Interest Rate	6%	8%	10%	12%	14%
Year					
26	47083.	80641.	101196.	111521.	44184.
27	41626.	75894.	98121.	109585.	40366.
28	41545.	73788.	95154.	107376.	36068.
29	41091.	73539.	95104.	106912.	31308.
30	40252.	72854.	94636.	106628.	26096.

"-" indicates initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 50,000
(b)	Depreciable Balance	=	$1,000,000
(c)	Mortgage	=	$1,000,000
(d)	Investment	=	$ 50,000
(e)	Interest Rates (%)	=	6, 8, 10, 12, 14
(f)	Discount Rates (%)	=	3, 5, 7, 9, 11
(g)	Depreciation Rate	=	.66667
(h)	Marginal Tax Rate	=	.60
(i)	Depreciation Method	=	DDB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	40 yrs.
(l)	Distribution	=	-0-

After the loan has been paid off, there would be a positive cash flow to the investors if the rents were held constant. Another factor that should be considered is the liquidating value of the project. If the loan repayment is relatively short, the investor's equity in the project will probably have an increasing fair market value which would be inconsistent with the assumption used to compute the net present value of the project at the end of each year that the project has a zero terminating value. The above limitations appear to be reasonable since the primary purpose of this analysis is to measure the value of tax leveraging due to postponing or avoiding taxes.

Little or no tax leveraging occurs when the loan repayment period is 15 years and the useful life of the property is 30 years. As reflected by Table XXII, an investor would not knowingly invest $50,000 in such a project just for tax benefits. The negative net present value indicates a net economic loss at the end of each year if the project is abandoned. The negative net present value doesn't mean that some tax leveraging doesn't exist with a $50,000 initial investment. With an interest rate of 15 per cent and a discount rate of 12 per cent, the annual losses exceed the initial investment by $104,993 at the end of the sixth year. The accumulated present value of these losses, assuming a sixty per cent tax rate, is $70,278. If the investor should die at the end of the sixth year of the project, the investor's estate could abandon the property and not be subject to any income taxes for years prior to 1977, because the estate's basis in the property would be equal to the loan balance at the date of death. If the investor could predict the date of his death, he could receive a return from avoiding taxes due to operating losses which would exceed his original

investment.

From Table XXIII, with a 20-year repayment period, it can be seen that an investor could receive an adequate return on his investment from postponing and avoiding taxes if the project doesn't terminate for at least seven years if the interest rate is ten per cent. The net present value increases up to about the 14th year and then begins to decrease as the interest rate increases. At the end of the 12th year the total accumulated losses are $225,000, which means that the project could generate significant tax savings if the investor dies before the project is terminated.

If the loan repayment period is increased to 25 years as shown on Table XXIV, the investor can recover his investment from taxes postponed or avoided by the end of the fourth or fifth year, depending on the rate of interest and the investor's discount rate. If the interest rate is 10 per cent and the investor's discount rate is seven per cent and the investment doesn't terminate for at least ten years, the net present value of the taxes postponed or avoided will exceed the initial investment of $50,000 by $43,000.

From Table XXV it can be seen that with a useful life of 40 years and a loan repayment period of 30 years, the net present value of the taxes postponed or avoided will not exceed the initial investment of $50,000 until the fourth or fifth year once the interest rate is above seven per cent. At the end of the tenth year the net present value exceeds the initial investment fy $49,295. The total accumulated annual losses at the end of the tenth year with a ten per cent interest rate are $401,500. If the investor dies at the end of the tenth year year and the project is abandoned at that point, the total taxes avoided

would equal about $240,000, if the investor were in the 60 per cent bracket.

Summary

Tax leveraging can provide greater tax benefits than either accelerated depreciation or long-term capital gains treatment. The reason for this situation is that the present value of tax deferral is greater than the present value of taxes avoided upon termination of the project.

The tax leveraging simulation model was used to determine the conditions under which tax leveraging occurs and the value of tax leveraging given the following variables:

1. Land cost.
2. Building cost.
3. Amount of indebtedness
4. Original investment.
5. Interest rate.
6. Investor's discount rate.
7. Depreciation rate.
8. Investor's marginal tax rate.
9. Depreciation method.
10. Loan repayment period.
11. Depreciation period.
12. Cash distributions to investor.

The tax leveraging simulation model pertains to a government subsidized apartment complex. An apartment building can be depreciated using 200 per cent declining balance depreciation. The Section 1250

gain on the sale of a government subsidized apartment building can still be reduced by one per cent for each month the building is held past 100 months. The model is also based on the assumption that the investor's discount rate is the rate of return, after taxes, that the investor can earn on the taxes postponed.

The net present value of an investment based on the assumptions stated on Table VI would be affected the most if the depreciation rate was limited to straight-line. The net present value of the investment based on a 12 per cent interest rate at the end of the 24th year is $154,869. The net present value of the investment at the end of the 24th year if straight-line depreciation is used is $97,298. If the gain from abandoning the project at the end of the 24th year is taxed at ordinary rates, the net present value of the project would be $146,395 or $8,474 less.

What makes tax leveraging so beneficial is the fact that the taxes postponed can earn a return after taxes that in some cases is greater than the investor's original investment. The net present value of a project increases as the investor's discount rate increases up to approximately 15 per cent, at which point any further increases will decrease the net present value as illustrated by Figure 2.

Tax leveraging is affected the most by the size of the rate, the investor's original investment, and the length of the repayment period. The net present value of tax leveraging increases as the interest rate increases up to about 15 per cent, at which point the net present value begins to decrease.

The liability will exceed the adjusted basis of a building by $452,000 using the assumptions stated on Table III for a ten per cent

interest rate at the end of the 15th year. The accumulated losses over the first 15 years equal $452,000. Therefore, any investment that is less than $452,000 will cause some tax leveraging based on the above assumptions.

Tax leveraging can occur even when the loan repayment period is substantially shorter than the depreciable life of the property.

Investors in the upper tax brackets will benefit more from tax leveraging than investors in the lower tax brackets. It is interesting to see that investors in the 30 per cent tax bracket can benefit from tax leveraging even though the investment is abandoned eventually as shown in Figure 3.

FOOTNOTES

[1]Large institutional lenders have used present value concepts for determining the rate of return a project will earn before taxes and interest. Sanford Rose, "The Future Largest Landlords in America." Fortune (July, 1970), p. 90.

[2]Act Section 204, Tax Reform Act of 1976, adding Section 465 of the Internal Revenue Code of 1954.

[3]Ibid.

[4]Act Section 213, Tax Reform Act of 1976, amending Section 704(d) of the Internal Revenue Code of 1954.

[5]Ibid.

[6]For a study that measures the effect of tax leveraging on the internal rate of return see William S. McKee, "The Real Estate Tax Shelter: A Computerized Exposé," Virginia Law Review (Vol. 57, May, 1971), pp. 521-523. The present study differs from the methodology presented by McKee in that the effect of tax leveraging is determined from its effect on the net present value of the investment. The internal effect on the net present value of the investment. The internal rate of return method is not useful if the investor has a small or no initial investment. Also, the internal rate of return method assumes the taxes postponed can be reinvested at an after tax rate equal to the internal rate of return.

[7]1975 Federal Tax Course (New York, 1974), p. 1315.

[8]There are numerous ways that the taxes postponed could be invested. The after tax rate of return depends largely upon the tax bracket the taxpayer is in after availing himself of any tax shelters. It is conceivable that the tax shelter may be large enough to offset all of the taxpayer's taxable income which includes the income earned from reinvesting any taxes postponed. As the investor's marginal tax rate increases, the more there is an incentive to invest in tax exempt state and municipal bonds.

[9]1975 Federal Tax Course, p. 1311.

[10]Because the study is primarily interested in the tax losses a project can generate and that in the first half of the asset's life, depreciation will exceed payments on principal plus any return to the investor, the payment on principal PP_t and return on investment R are shown as being subtracted from annual depreciation AD_t. When the model produces a taxable income the income will be negative.

[11]At this point in the analysis the investor's discount rate is assumed to be equal to the interest rate. Later on, the assumption will be relaxed to determine the effect of having a discount rate that is less than the interest rate.

[12]Act Section 202(a), The Tax Reform Act of 1976, amending Section 1250 of the Internal Revenue Code of 1954.

[13]A prudent investor would want to invest the taxes saved in an investment that is easily liquidated because of the contingent tax liability that exists if and when the project is terminated.

CHAPTER IV

EMPIRICAL EVIDENCE OF THE USE OF NON-RECOURSE LOANS FOR FINANCING REAL ESTATE TAX SHELTERS

Chapter II has provided an explanation of how tax leveraging is possible under the Federal tax laws and an analysis has been made of the conditions which contribute to tax leveraging.

The purpose of Chapter IV is to present empirical evidence obtained through the analysis of actual real estate investments and interviews of some of the principals involved as to how real estate is acquired with non-recourse loans. Individual investors do not want to be contingently liable in case of default on large real estate loans. In addition, if no partner is personally liable for partnership indebtednesses, then all partners, including limited partners, will receive an increase in the basis in their partnership interest by their proportionate share of the partnership indebtedness, which increases the amount of losses that may be deducted. Of particular interest, then, are the special conditions that are required by the lenders and the methods utilized by limited partnerships to maximize the tax benefits of the limited partners.

Information of how non-recourse loans are obtained was acquired from interviews of principals, from gleaning through records filed in the Tulsa County Clerk's Office and the Tulsa County Court Clerk's

Office, and from studying offering memoranda of non-registered limited partnerships. Information obtained from 11 limited partnerships and one corporation will be presented concerning the acquisition of apartments, warehouses and shopping centers. Interviews were made with five individuals, each of whom was engaged in some aspect of creating, promoting or investing in real estate tax shelters. As expected, the interviews disclosed a wide range of philosophies concerning non-recourse financing.

Thus far, only two actual examples of how non-recourse financing is used in real estate investments to create tax leveraging have been discussed. In Chapter II, the Mayerson and Bolger cases disclosed how it was possible to generate tax losses from the investment without being personally liable to make payment on the notes.[1] In Mayerson, the taxpayers acquired a $342,500 basis in a building and land with only a $10,000 investment. The principal of the loan of $342,500 did not have to be repaid for 99 years.[2] In Bolger, the taxpayer generated net losses over a four-year period of $295,793 with little or no investment and without personal risk.[3] The properties acquired consisted of bank buildings, factories, stores and warehouses.[4]

In Mayerson, it is understandable as to why the seller-mortgagee would consent to a 99-year payback period. The building was in a poor state of repair and was without a tenant. The seller-mortgagee had little to lose in the deal and much to gain.

The Bolger case is different from Mayerson, in that the mortgagee was not the seller of the property, but either an insurance company or a bank. The method of acquiring the property was similar in each situation. Bolger would form a corporation which would buy the property

in question, arrange for long term financing and lease the property for a period that was as long as or longer than the loan repayment period.

Bolger did not add anything to the transaction. The lessee could have acquired the property directly. If the mortgagee was willing to accept the lease as adequate collateral, then a signed mortgage would be equally as secure. The lessee could have acquired the property without a cash outlay. With a lease as collateral, the mortgagee is merely relying on the general financial strength of the lessee.

Since Bolger contributed little or no investment, the lease payments could not be any less than the mortgage payments. The lessee did, however, obtain several benefits from leasing the property rather than purchasing it. At one time, the financing arrangement may not have been disclosed on the lessee's balance sheet as a liability.[5] The lessee may have benefited from the deductibility of that portion of the lease payments that would have been categorized as principal had the lessee purchased the property. Also, the lessee and mortgagee may have circumvented an interest ceiling limitation.[6] Further, the lessee may be motivated to obtain, in effect, a write off of the property over a shorter period than would be otherwise allowable.[7]

Method of Obtaining Examples

Non-recourse loans have been obtained by individuals, partnerships, and corporations. Most of the transactions are private, which makes it very expensive and time consuming, if not impossible, to obtain information concerning non-recourse loans. Real estate investments are widely held and come in many different forms. It is beyond the scope of this study to obtain conclusive information concerning how extensive

the use of non-recourse financing is in real estate tax shelters.

There is available, however, public information which provides several approaches for obtaining information concerning limited partnerships' use of non-recourse financing. The Oklahoma Uniform Limited Partnership Act requires that the following information be filed with the Secretary of State of Oklahoma:[8]

1. Name of limited partnership.
2. Character of the business.
3. Location of principal place of business.
4. Name and place of residence of each member and whether a limited partner or a general partner.
5. Term of the partnership.
6. Amount of cash and description of the agreed value of the other property contributed by each limited partner.
7. Additional contribution, if any, agreed to be made by each limited partner.
8. Time when contributions of each limited partner are to be returned.
9. Share of profits or other compensation by way of income each limited partner shall receive.

Also, all partnerships that use a fictitious name and all limited partnerships are required to file with the District Court Clerk for the County in which they do business, the names of the partnership and the partners.

Once the name of the limited partnership was known, it was possible to determine from two sources what real estate was owned by it in a given county. The most useful method was to scan what is

commonly called the Grantee to Grantor Book in the County Clerk's office. In Tulsa County, each real estate transaction recorded in the County Clerk's office is listed in alphabetical order, for each year, by Grantor to Grantee and Grantee to Grantor. From this record, the book and page number can be obtained where the transaction is recorded. The legal description of the property acquired can then be obtained, which makes it possible to obtain a complete history of a given property from the Platt or Addition Book.

The second method, used less often, was to obtain from the Tulsa County Assessor's Office a list of apartment buildings and document locator numbers. This led to the assessment record, which included the legal description.

Ordinarily, the County Treasurer's Office would have a list of properties owned by a particular person so that only one tax assessment notice would have to be issued for each taxpayer. The Tulsa County Treasurer's Office maintains this list, but not for partnerships.

Another approach that was used occasionally to obtain information about non-recourse loans and limited partnerships, was to obtain the address of an apartment building and from the address file obtain the legal description.

Some very productive sources of tax examples were the interviews with some of the principals, which will be discussed later.

Limited Partnerships in Tulsa County

Tulsa County was selected to obtain examples of the use of non-recourse financing for real estate because of its proximity to the writer and the writer's familiarity with real estate development there.

As of June 22, 1976, 2,521 partnership registrations had been filed with the Court Clerk in Tulsa County. Probably not all limited partnerships doing business in Tulsa County are registered. It is presumed, however, that most are registered, since an unregistered limited partnership may have difficulty in bringing suit or making a defense in District Court. The number of partnerships registered each year in Tulsa County are shown in Table XXVI.

The number of new registrations shown above is overstated because some partnerships registered in previous years have re-registered each time there was a change in the partners. Some firms, such as the national public accounting firms with several hundred partners each, were re-registered every year.

Not all limited partnerships have the notation "Ltd." or the word "Limited" included in their name. The registration statements for the years 1974 and 1974 were inspected to determine the number and names of the limited partnerships registered for those years which are shown on Tables XXVII and XXVIII.

From Table XXII it can be seen that the largest increase in registration occurred in 1973, with total registrations of 117 for that year. There were 38 limited partnership registrations in 1973 and 41 in 1974. It is estimated that at least 22 of the limited partnerships registered in 1973 were organized for the purpose of operating apartment buildings. As was mentioned previously, some limited partnerships, such as Oakridge Tower, Ltd., are registered in more than one year. Also, there are duplications even in the same year. Four limited partnerships, such as The Marina, Ltd., were registered twice in 1974.

TABLE XXVI

REGISTRATION OF PARTNERSHIPS IN TULSA COUNTY

Year	Number of Registrations
1963	33
1964	31
1965	44
1966	34
1967	31
1968	44
1969	51
1970	55
1971	63
1972	81
1973	117
1974	117
1975	121
TOTAL	882

TABLE XXVII

REGISTRATION OF LIMITED PARTNERSHIPS IN 1973

Registration Number	Name
2103	Woodlake Village Duplexes
2106	River Oaks Square
2109	Lake Country Associates
2113	Parkway South
2114	5400 South, Ltd.
2121	James Square Apartments, Ltd.
2122	Tulsa Gardens, Limited
2125	Detrick Lynn Lane Partnership
2126	U. S. Development-Parkway South
2127	Fairmont Apartments II, Ltd.
2129	U. S. Development-Pheasant Run
2130	Sophian Plaza, Ltd.
2132	Chestnut Partners, Limited
2142	Campus Properties
2143	Venture Centers, Ltd.
2152	Cedar Ridge Estates
2153	Royal Manor South II
2164	TULOK
2167	Forty First & Mingo
2172	Capital Resources Real Estate Partnership II (Brookhollow Apt.)
2174	Country Squire Estates
2175	River Squire Estates
2179	Sheridan Partners, Limited
2178	Venture Capital Associates, Ltd.
2190	Lexton-Ancira Real Estate Fund, Ltd.
2196	Frates Investment Company
2197	REMC Investment Fund, Ltd.

TABLE XXVII (Continued)

Registration Number	Name
2198	Appreciating Properties, Ltd.
2202	I.D.C. # 1
2205	Darlington Associates
2206	Massie Southern Hills Drug
2208	Riverlanes, Ltd.
2211	Beeline Development Co., Ltd.
2213	Peoria Avenue Associates
2216	Center Mall Professional Building Associated
2217	akridge Tower, Ltd.
2218	Financial Limited Partnership No. RL-11
2219	Midway Associates, Ltd.

TABLE XXVIII

REGISTRATION OF LIMITED PARTNERSHIPS IN 1974

Registration Number	Name
2220	Mingo Valley Apartments, Ltd.
2224	Open World Square
2226	Riverbend Development Associates
2231	Appreciating
2232	Skyline East Office Building II, Ltd.
2234	Rockwood South Apartments
2242	The Marina, Ltd.
2244	The Marina, Ltd.
2246	Heatherridge Limited
2247	Sigma
2249	141st & South Lewis, Ltd.
2251	Arrow Village Shopping Center Project
2252	University Mansion of Tulsa Company
2254	Eastland Associates II
2259	Two-Forty Associates
2264	M-L & Associates, Ltd.
2265	Utica Square Apartments, Ltd.
2266	Victor Apartments, Ltd.
2267	Oakridge Tower, Ltd.
2275	H-S Tulsa, Ltd.
2279	Lex-Ancira Real Estate Income Fund, Ltd.
2281	T.I.G. Development Company
2282	Planning/Design Consultants
2283	Planning/Design Consultants
2284	T.I.G. Development Company
2285	Transamerica Investments Group
2286	Transamerican Investments Group
2287	T.I.G. Development Company

TABLE XXVIII (Continued)

Registration Number	Name
2291	R. P. Investment Company
2294	Green Country Ranches, Ltd. #1973-1
2299	Indian Territory Tranding Co.
2302	Country Squire Estates
2305	Big Five Lands, Ltd.
2307	Civic Center East Building, Ltd.
2310	CRC Limited Partnership No. 1
2312	Admiral Shopping Centers, Ltd.
2316	D. & R. Enterprises
2324	Pheasant Run
2326	James Halsey Property Managements
2335	Marina Properties, Ltd.
2336	Duck Creek Farms, Ltd.

It can be observed from Tables XXVII and XXVIII that it is often the same persons who are developing limited partnerships and real estate tax shelters. Notice that occasionally the same partnership name is used with a slight change, such as The Marina, Ltd. and Marina Properties, Ltd. and Lexton-Ancira Real Estate Fund, Ltd. and Lex-Ancira Real Estate Income Fund, Ltd.

The 1973 and 1974 Grantee to Grantor Books located in the County Clerk's office were examined to determine the book and page number of any real estate transactions that involved some of the limited partnerships listed in Tables II and III. This procedure ultimately led to the deed and mortgage for the property acquired by each of the entities listed in Table XXIX. From an inspection of the mortgage the following information was obtained:

1. Mortgagee and mortgagor.
2. Amount of loan.
3. Loan period.
4. Date of loan.
5. Interest rate.
6. Type of property.
7. Guarantee of F.H.A.
8. Non-recourse provision.

The most pertinent information obtained from the Office of the Secretary of State of Oklahoma for each limited partnership includes the investment made or required to be made by the limited partners, the profit and loss sharing ratio for each partner, the type of general partner and the number of limited partners.

TABLE XXIX

INFORMATION PERTAINING TO LIMITED PARTNERSHIPS IN TULSA COUNTY OBTAINED FROM THE TULSA COUNTY CLERK'S OFFICE AND THE SECRETARY OF STATE FOR OKLAHOMA

	Partnership & Mortgagee	General* Partner*	# of Ltd. Partners Units	Act'l	Investment to Limited Partners	Profit & Loss Percentage Gen.	Ltd.	Amt. of Mortgage	Non-Recourse	Loan Period	Interest Rate	Date of Loan
1.	Fairmont Apartments II, Ltd.* Universal Finance Corporation	(I)	1	1	$ 186,666	5%	95%	$1,198,100	Yes	40	7%	3-73
2.	Fairmont Terrace Apartments, Ltd.* Home Federal Savings & Loan	(I)	18	6	329,625	10%	90%	2,656,100	Yes	40	8½%	5-71
3.	The Marina, Ltd. New York Life	(I)	50	27	1,525,000	5%	95%	4,700,000	no	30	N/A	12-74
4.	The Marina Properties, Ltd. New York Life	(I)	50	34	867,300	5%	95%	2,000,000	no	30	N/A	10-75
5.	Midway Associates, Ltd. Prudential	(I)	1	1	168,000	50%	50%	1,200,000	no	25	N/A	10-74
6.	Normandy Apartments, Ltd.* T. J. Bettes	(I)	2	2	495	1%	99%	2,698,000	yes	N/A	N/A	4-67
7.	Oakridge Tower, Ltd.* Sooner Federal Savings & Loan	(C)	10	8	300,000	10%	90%	1,665,000	yes	30	9⅛%	3-75
8.	Royal Manor South, Ltd.* Midland Mortgage	(I)	4	4	124,000	4%	96%	1,290,000	no	40	7%	3-72
9.	Tulsa Gardens, Limited Park Place Associates	(LP)	8	8	375,000	$5,000	100%	2,030,000	yes	40	N/A	3-73

TABLE XXIX (Continued)

	Partnership & Mortgagee	General* Partner*	# of Limited Partners Units	Act'l	Investment to Limited Partners	Profit & Loss Percentage Gen.	Ltd.	Amt. of Mortgage	Non-Recourse	Loan Period	Interest Rate	Date of Loan
10.	Venture Centers, Limited Sooner Federal Savings & Loan	(C)	1	1	$ 200,000	50%	50%	$1,665,000	yes	25	N/A	5-74
11.	5400 South, Ltd. Mager Mortgage	(C)(I)(GP)	2	2	90,000	55%	45%	350,000	yes	N/A	N/A	10-72

*Mortgage Guarantee by F.H.A.

**General Partner is Individual (I), Corporation (C), Limited Partnership (LP), or General Partner (GP).

Table XXIX presents the information obtained from analyzing the records on file at the County Clerk's Office and the Office of the Secretary of State of Oklahoma for eight limited partnerships registered in Tulsa County in 1973 and 1974 and three other limited partnerships discovered in the search of the County Clerk's office.

Of the 71 limited partnerships registered in 1973 and 1974, information was obtained on eight of them. All eight were organized to own apartments. Residential property, as discussed in Chapter II, receives more favorable treatment under the tax laws than non-residential property.

It is not known whether the limited partnerships discussed here are representative of all limited partnerships in Tulsa County. It appears, however, that there is some uniformity in the way the limited partnerships are organized and financed.

Non-recourse Clause

Non-recourse loans were obtained directly by seven of the 11 limited partnerships. It is interesting to note the difference in the wording of several of the non-recourse provisions contained in the mortgages. Paragraph eight in the mortgage given by Venture Centers, Ltd., to Sooner Federal Savings and Loan is as follows:

> It is hereby agreed by and between the parties that the liability of the mortgage shall be limited to its interest in above described real estate and in the event of a default hereunder, mortgator shall not be liable for any deficiency.

Paragraph 38 in the mortgage given by Oakridge Tower, Ltd., to Sooner Federal Savings and Loan has the non-recourse provision worded differently to obtain the same effect:

> That notwithstanding any provision herein or in the Note hereby to the contrary, the Mortgagee covenants and agrees with the Mortgagor that in the event the Mortgagee shall at any time take action to enforce the collection of the indebtedness evidenced by said Note and secured hereby or otherwise arising hereunder, it shall proceed first to foreclose this Mortgage instead of instituting suit upon said Note and if, as a result of such foreclosure and the sale of the property described herein, a lesser sum is realized therefrom than the amount then due and owing hereunder and under said Note, the Mortgagee will never institute any action, suit, claim, or demand in law or in equity against the Mortgagor for or on account of such deficiency, provided that nothing in this paragraph contained shall in any way effect or impair the lien of this mortgage . . .

The non-recourse provision is necessary so that the limited partners can use their proportionate part of the mortgage in computing their basis.[10] Even though the non-recourse clause was not contained in the mortgage of Royal Manor South, Ltd., it is probably that the partners obtained the non-recourse agreement with the mortgagee because the mortgage was guaranteed by the Federal Housing Administration. If the limited partners only expected profits or that the cumulative losses would not exceed their case investment, there would be no need for the limited partners to insist on the non-recourse provision in the mortgage for tax purposes.

Limited Partner's Investment

In the Bolger case, the mortgageee could look to the financial strength of the lessee for security. The mortgagee can look only to the equity of the partners in an apartment project financed with non-recourse loans.[11] If it is assumed that the limited partners are the only ones to make an equity investment, the partner's equity, as shown in Table XXIX, ranges from $495 to $1,525,000. Table XV indicates

the net present value of an investment where the partners contributed 9.5 per cent of the total cost for interest rates of five per cent to 15 per cent.[12] The net present value is $18,832 for a 10 per cent interest rate and an after tax discount rate of seven per cent at the end of the 10 year if the project is abandoned.

The percentage of the total investment furnished by the limited partners is shown in Table XXX below.

TABLE XXX

PERCENTAGE OF TOTAL INVESTMENT CONTRIBUTED BY LIMITED PARTNERS

Partnerships	Percentage
Fairmont Apartments II, Ltd.	13%
Fairmont Terrace Apartments, Ltd.	11%
The Marina, Ltd.	25%
The Marina Properties, Ltd.	30%
Midway Associates, Ltd.	N.A.
Normandy Apartments, Ltd.	-0-
Oakridge Tower, Ltd.	15%
Royal Manor South, Ltd.	9%
Tulsa Gardens, Limited	19%
Venture Centers, Limited	11%
5400 South, Ltd.	20%

The general partners of the limited partnerships consist of corporations, individuals, general partnerships, and even another limited partnership for Tulsa Gardens, Ltd. 5400 South, Ltd. has as general partners a corporation, an individual proprietor and a general partnership. Limited partnerships that have corporations or limited partnerships as general partners must consider whether the I.R.S. may argue that the limited partnerships have the corporate characteristics of limited liability as discussed in Chapter II.[13]

The number of limited partners in a project varies from 1 to 34. The per unit cost for a limited partnership interest was as small as $30,000 for the Oakridge Tower, Ltd. In the Oakridge Tower, Ltd. the $30,000 was payable as follows:

1. $ 3,000 at time of admission.
2. $ 7,000 7-1-74 or when building permit obtained.
3. $10,000 1-1-75 or on completion date.
4. $ 5,000 1-1-76 or one year after the third installment.
5. $ 5,000 1-1-77 or one year after the fourth installment.

From an inspection of the records on file at the Office of the Secretary of State of Oklahoma it was not uncommon to find the purchase price for the limited partnership interest to be spread out over two to three years. The limited partner's share of the construction interest and taxes that would be deductible the first year could exceed the initial contribution. Therefore, the income taxes avoided each year could substantially reduce the net after-tax cost of the investment.

Profit and Loss Sharing Ratio

Usually, the limited partners receive 90 per cent to 95 per cent of the income and losses as shown by Table XXIX. The liabilities of the limited partnership that no partner is personally obligated to repay are allocated to the limited partners for determining their basis in their partnership interest in proportion to their share of the profits.[14] A change in the profit sharing ratio in the future will cause the amount of liability used in computing a partner's basis to change. If the reduction in a partner's share of the liabilities is greater than the partner's basis in the partnership, the partner will be treated as receiving a cash distribution which will be taxes at capital gain rates.[15]

Paragraph 9(a)(i) of the partnership agreement for The Marina, LTD., provides that the general partner is to receive five per cent of the profit until the limited partners have received cash distributions equal to their original investment after which 50 per cent of the profits are to be distributed to the general partner.

Paragraph 9(a)(ii) of the partnership agreement for The Marina Properties, Ltd., provides that when the cash distributions exceed $47,000 in 1975, $80,000 in 1976 and $86,731 in all subsequent years, the general partner is to receive a bonus of 25 per cent of the cash distributions in excess of the above amount.

The Oakridge Tower, Ltd., provides that the profit and loss sharing ratio will be 10 per cent to the general partner and 90 per cent to the limited partners until a "Minimum Cumulative Distribution" of $33,000 is received by the limited partners. Thereafter, 25 per cent

of the profit is to go to the general partner and 75 per cent to be divided as follows: 90 per cent of 75 per cent to the limited partners and 10 per cent of 75 per cent to the general partners.

The partnership agreement for Venture Centers, Ltd., simply states that losses and expenses are to be allocated to the limited partners up to a maximum of the limited partner's federal income tax basis for their interest. Thereafter the profits and losses are to be distributed 50 per cent to the general partner and 50 per cent to the limited partners.

The following analysis can be used for determining the tax effect of changing the profit and loss sharing ratio in a manner similar to the partnership agreement of Venture Centers, Ltd. Assume that the limited partners have received back their original investment of $100,000 as of the end of the 10th year, the apartment building cost $1,000,000, and the original indebtedness was $1,000,000 with a 10 per cent interest rate. The balance sheet as of the 10th year would be as follows:

XYZ PARTNERSHIP

Balance Sheet
End of Tenth Year

Land		$100,000
Building	$1,000,000	
Less Accumulated Depreciation	(498,391)	(501,609)
Total Assets		$601,609
Liabilities		$903,109
Equity of Partners (deficit)		(301,500)
Total Liability and Equity		$601,609

The basis of the limited partner's partnership interest both before and after the change in the profit and loss sharing ratio from 100 per cent to 50 per cent for the limited partner is as follows:

Original Investment	$ 100,000
Original Indebtedness	1,000,000
	$1,100,000
Accumulated Losses from Operations	(401,000)
Accumulated Distributions	(100,000)
Net Basis, End of 10th Year Before Reallocation of Liability	598,500
Decrease in Share of Indebtedness	(451,555)
Net Basis End of 10th Year After Reallocation of Liability	$ 146,955

In the above analysis, the limited partners received 100 per cent of the losses until they recovered their investment. Even though their partnership equity was a negative $301,500, the limited partner's basis in their interest was $598,500 before the re-allocation of the remaining liability of $903,109. At the time the limited partners have received cash distributions of $100,000, they are treated as receiving an additional cash distribution equal to 50 per cent of the remaining indebtedness. Since the limited partner's basis before the re-allocation exceeded the reduction in the limited partner's share of the liability, the imputed distribution is non-taxable.

Loan Repayment Period

The loan repayment periods vary from 25 years to 40 years. Most of the 40 year loans are guaranteed by the United States Department of Housing and Urban Development. The long term loans generate a larger

amount of tax leveraging.

Government Insured Loans

Of the 11 limited partnerships listed on Table XXIX, five have loans guaranteeds by the Federal Housing Administration (F.H.A.) branch of the U. S. Department of Housing and Urban Development (H.U.D.). In return for the guarantee, the partnership has to agree to limit distributions to partners to six per cent of the original equity investment under Section 236 of the National Housing Act.[16] Under Section 236, H.U.D. pays all but one per cent of the interest cost on the mortgage in the form of a rent subsidy. As of June 30, 1975, there were 30 housing developments operating under Section 236 of the National Housing Act in Oklahoma. There were 14 housing developments operating under Section 221(d)(3) and 16 operating under Section 221(d)(4) of the National Housing Act.

Section 221(d)(3) is similar to Section 236 except that there is not an interest reduction.[17] All of the housing units receive rent supplements. Section 221(d)(4) provides only mortgage insurance in return for limits on the monthly rentals for persons of moderate income.[18]

Lender of Non-recourse Loans

It is not surprising to see the names of large mortgage companies such as Mager Mortgage and Universal Finance Corporation as shown on Table XXIX, but it is interesting to see Sooner Federal Savings and Loan and Home Federal Savings and Loan making non-recourse loans to limited partnerships. The list also includes two large insurance

companies. Information brought out in the interviews with various principals, to be discussed later, indicates that mortgage and insurance companies are more willing to accept the risk of non-recourse loans than not-for-profit savings and loan institutions; because the management of not-for-profit organizations is satisfied with earning an adequate return on investment, whereas private companies try to maximize return on investment.

Non-Recourse Loans for Corporations

Thus far, the discussion of non-recourse loans has been limited to partnerships. In the course of the search for non-recourse loans, it was found that a non-recourse loan had been made to a corporation, Premier Properties, Inc., which owns a well known apartment complex in Tulsa, Oklahoma, named The Falls. The original loan of $3,100,000 was made by Midwest Mortgage Company in January, 1971. The non-recourse clause in short and to the point as follows:

> In the event of foreclosure of the mortgage securing this indebtedness, the holder agrees that it shall not seek or obtain a deficiency judgment against the maker hereof.

The mortgage has an unusual clause that provides that the lender will receive, in addition to the interest rate stated on the note, 20 per cent of the gross receipts that exceed the sum of $761,700. The combined interest is not to exceed 18 per cent. In determining the gross receipts there is to be deducted $300 for each one-bedroom apartment rented, $420 for a two-bedroom and $480 for each three-bedroom apartment rented, presumably to adjust for overhead incurred.

The non-recourse loan was assigned to the First National Bank

and Trust Company of Tulsa two days after it was signed by Midwest Mortgage.

The significance of this loan is that it must have been a high risk loan as indicated by the variable interest rate but was still made to the corporation without obtaining the major stockholder as a co-signor. Also, it appears that significant tax benefits will be "locked" into the corporation that could otherwise have been marketed, since losses cannot be passed through to the stockholders if the losses are from rented property.

Sources of Limited Partnership Units

The list of limited partners for the limited partnerships on Table XXIX indicates that most of the partnerships were organized privately with just a few partners. It was noted that the limited partners for The Marina, Ltd., The Marina Properties, Ltd., and Oakridge Towers, Ltd., were predominately from the Northeaster states, mainly New York.

A developer can market the limited partnership interest through a brokerage firm. Before the project is started, but after construction and permanent loan commitments have been received, an offering memorandum is prepared along with the partnership agreement. The offering memorandum may contain the following:

1. Structure of the transaction.
2. Access to information.
3. Fees of the general partner and its affiliates
4. Risk factors.
5. Payment and application of capital contributions.

6. Description of the property.

7. Acquisition and financing of the property.

8. Description of the lessee (if any).

9. Description of the general partners.

10. Tax Considerations.

11. Cash distributions and allocations of taxable profits and losses.

12. Transferability of limited partnership interest.

13. Dissoluation and liquidation of the partnership.

14. Description of contemplated results of operations.

15. Assumptions underlying projections.

16. Projections.

17. Attorney's opinion.

The distribution of offering memoranda appears to be highly restricted.[19] Two private offering memoranda were obtained in the course of the interviews with some of the principals involved. It has been maintained throughout the paper that tax losses are a highly marketable commodity. The following information obtained from an offering memorandum confirms this.

A limited partnership was formed to build a $21 million warehouse for a national retail chain. The limited partner's contributions were not to exceed $1,550,100. The general partner, a corporation, contributed $15,660. The property was to be leased to the retail chain for a period of 30 years under a net lease. The total cash flow to the partners, after making principal and interest payments, was not expected to exceed $3,824.50, which would be less than a one per cent return on investment before taxes. It is expected that tax deductions

would exceed cash flow through 1989. The partners may receive a capital gain upon disposition of the property. The limited partners will receive 99 per cent of the profit or loss and the general partner one per cent. The offering memorandum advises the investor that a sinking fund should be utilized to pay the income taxes in case of disposition of the property or when the taxable income from the investment exceeds the cash flow. It also warns the limited partners of the possible tax preference items and the problem of excess investment interest, since the property is "net leased."[20] Non-depreciable costs are expected to be $650,000. Interest and taxes during construction are expected to be $1,500,000. The permanent loan is for a period of 30 years with an interest rate of 10.375 per cent from the New York Life Insurance Company. The project is expected to be completed in August, 1976.

The guideline life for a warehouse is 60 years. However, if component depreciation is used, depreciating the electrical components, plumbing and roof separately from the shell, the effective useful life may be reduced to a 40 to 50 year period. Table XXV in Chapter III, indicates that a partnership must maintain its investment at least five years if the partners are to break even, if the project is abandoned. The actual period will be somewhat longer because Table XXV was prepared using double declining balance depreciation. The depreciation method for a warehouse could not exceed the depreciation computed using 150 per cent declining balance.

The amount of the annual net income or loss, the net present value of the income and losses, and the net present value of the above warehouse project for a limited partner, assuming it is abandoned,

is presented in Tavle XXXI below. Table XXXI was prepared using the FORTRAN program developed in Chapter III using the assumptions stated at the bottom of Table XXXI.

According to Table XXXI, the investment must continue to be in existence for 10 years for the limited partner to break even and receive an adequate return on the investment. The maximum net present value of the losses at the end of the 14th year is $99,549.

The offering memorandum of an apartment project was obtained through a brokerage firm offering to sell units in the limited partnership. The total investment in the project was to be $4,000,000, of which the limited partners were to contribute $840,000. The permanent loan was for $3,160,000 from Sooner Federal Savings and Loan repayable ober a 30-year period with a variable interest rate of 1 1/8 per cent aboce the weekly AAA bond rate adjusted annually. The general partner will guarantee a fixed rate not to exceed 9 3/4 per cent and will also guarantee the loan amount in excess of $2,500,000. The limited partnership units are offered in 25 units of $33,000 each and $9,000 on March 1, 1978. There was an original limited partner who was to contribute $15,000.

The 25 limited partnerships will receive 99 per cent of the net cash flow up to 10 per cent of the "unreturned capital." Then any excess is to be distributed to the general partner to reimburse the interest and principal paid under the loan guarantee. If there still remains any cash, the excess if to be distributed 49 per cent to the 25 limited partners, one per cent to the original limited partner, and 50 per cent to the general partner.

TABLE XXXI

ANALYSIS OF INVESTMENT IN EAREHOUSE BY LIMITED PARTNERS

Year	Taxable Income or Loss	Present Value Income or Loss	Accumulated Present Value	Net Present Value
1	29976.	16809.	16809.	-29915.
2	28047.	14698.	31507.	-31065.
3	26113.	12789.	44297.	-31155.
4	24165.	11061.	55358.	-29866.
5	22197.	9496.	64853.	-24453.
6	20198.	8075.	72929.	-19208.
7	18161.	6786.	79714.	-14188.
8	16074.	5613.	85328.	-9442.
9	13928.	4546.	89873.	-5010.
10	11711.	3572.	93445.	-921.
11	9410.	2682.	96127.	-2799.
12	7011.	1868.	97995.	6132.
13	4501.	1121.	99116.	9065.
14	1863.	433.	99549.	11588.
15	-375.	-82.	99488.	13696.
16	-2525.	-513.	98955.	15393.
17	-4890.	-929.	98026.	16688.
18	-7492.	-1330.	96696.	17590.
19	-10354.	-1718.	94978.	18106.
20	-13501.	-2093.	92884.	18246.
21	-16964.	-2458.	90426.	18015.
22	-20773.	-2813.	87613.	17421.
23	-24963.	-3160.	84453.	16470.
24	-29572.	-3498.	80955.	15168.
25	-34641.	-3830.	77125.	14803.
26	-40218.	-4155.	72970.	14967.

TABLE XXXI (Continued)

Year	Taxable Income or Loss	Present Value Income or Loss	Accumulated Present Value	Net Present Value
27	-46353.	-4476.	68494.	14854.
28	-53100.	-4792.	63702.	14460.
29	-60523.	-5104.	58598.	13782.
30	-68688.	-5414.	53184.	12817.

"-" indicates either taxable income or initial investment exceeds present value of taxes postponed or avoided.

Assumptions:

(a)	Land Cost	=	$ 31,000
(b)	Depreciable Balance	=	$969,000
(c)	Mortgage	=	$931,300
(d)	Investment	=	$ 68,700
(e)	Interest Rate	=	10%
(f)	Discount Rate	=	7%
(g)	Depreciable Rate	=	0.37%
(h)	Marginal Tax Rate	=	.60%
(i)	Depreciation Method	=	150% DB
(j)	Repayment Period	=	30 yrs.
(k)	Depreciation Period	=	40 yrs.
(l)	Distribution	=	$ 700

If the property is refinanced, up to one-third of such proceeds are to be applied to the payment of the arrearages on the "cumulative preferred return" to the 25 limited partners and any remainder is to be distributed 49 per cent to the 25 limited partners, one per cent to the original limited partner and 50 per cent to the general partner.

Also, if the property is sold and the partnership liquidated, the proceeds are to be applied first to any unreturned capital of the 25 limited partners, then to any arrearages of the 25 limited partners, then to reimburse the general partner for any payments of principal and interest under the loan guarantee, then to the original limited partner for any unreturned capital, then the balance is to be distrubuted 49 per cent to the 25 limited partners, one per cent to the original limited partner and 50 per cent to the general partner.

The depreciable or amortizable items were broken down into the following components:

Item	Cost	Life
Building shell	$2,430,000	30
Air-conditioning	260,000	15
Carpets and drapes	100,000	5
Wall covering	7,000	10
Appliances	164,000	10
Landscaping	40,000	15
Paving and sidewalks	26,000	20
Swimming pool	14,000	15
Club furniture	8,000	5
Mortgage closing cost	8,000	5
Total	$3,057,000	

The "start up cost" is shown below:

Construction interest	$253,000
Permanent loan fee	47,000
Advertising	30,000
Sales taxes	28,000
Leasing fee	50,000
Interim loan fee	32,000
Loan closing cost	3,000
Total	$443,000

The above costs equal approximately 11 per cent of the total cost of the project. The land cost is stated to be $500,000.

The estimated losses are sho n below for a limited partnership unit:

Year	Loss
1976	$15,960
1977	15,040
1978	6,240
1979	5,000
1980	3,920
1981	3,040
1982	2,280
1983	1,600
1984	960
1985	100
	$54,140

The above project is not as highly leveraged as the preceeding project involving the warehouse. The warehouse project required only a five per cent equity investment, while the above apartment project requires a 21 per cent equity investment. The apartment project has estimated losses of $54,140 for an investment of $33,000. Over half ($37,240) of the losses is projected in the first three years. The cash flow for the warehouse is projected at about one per cent of the equity investment while the apartment project has a cash flow projection of eight per cent of the original investment. If the cash flow does not materialize, the investors will not reduce their taxes enough to recover their investment, assuming the investor needs an after tax return of eight per cent.

Table XXXII below indicates the net present value of an investment of $33,000 based on the above projections if an eight per cent after tax return is required by the investor. It is assumed the investor will be in the 60 per cent tax bracket. It is obvious that a person in the 30 per cent tax bracket would not receive an adequate return on his investment if the project is abandoned at the end of 10 years.

The aprtment project appears to be weighted in favor of the general partners. Besides earning a profit from the sale of the land and building to the partnership, the general partners are entitled to 50 per cent of the cash flow from disposing of the property or from refinancing it. The general partner in the warehouse project will receive only one per cent of the cash from disposing of the property or refinancing.

TABLE XXXII

NET PRESENT VALUE OF LIMITED PARTNERSHIP INVESTMENT

(1) Year	(2) Loss	(3) Tax Benefit @ 50%	(4) Cash Flow	(5) (3) + (4)	(6) Present Value @ 8%	(7) Net P.V. @ 8%
1976	$15,960	$ 9,576	$12,000	$ 9,576	.9259	$ 8,866
1977	14,040	9,024	12,000	9,024	.8573	7,736
1978	6,240	3,744	6,360	6,384	.7938	5,068
1979	5,000	3,000	2,640	5,640	.7350	4,145
1980	3,920	2,352	2,640	4,992	.6805	3,397
1981	3,040	1,824	2,640	4,464	.6302	2,813
1982	2,280	1,368	2,640	4,008	.5835	2,339
1983	1,600	960	2,640	3,600	.5403	1,945
1984	960	576	2,640	3,216	.5002	1,609
1985	100	60	1,640	2,700	.4632	1,251
	$54,140	$32,484	$11,880	$53,604		$39,169

Interviews With Principals

The real estate tax shelter industry has purposesly kept a low profile over the years to avoid attracting the public's attention to its form of tax avoidance. It was not unusual to find individuals who were unaware that non-recourse loans were being made. Several of these persons were lawyers who practice in the area of real estate law.

The literature on real estate tax shelters does not provide an analysis of the impact of non-recourse loans. This has been accomplished in Chapter III. The literature also does not explain why non-recourse loans are made by lenders. Interviews were conducted with persons who are in the real estate tax shelter market to find out how non-recourse loans are obtained.

Interviews were conducted with five individuals in Tulsa, Oklahoma. The persons interviewed and their occupations are shown below:

1.	George R. Bean	Vice President, First National Bank, Commercial Real Estate Loans
2.	Douglas Dixon	Construction Loan Analyst, Sooner Federal Savings and Loan
3.	Joe Friola	Manager, Tulsa Office of Blyth, Eastman, Dillon and Co., Inc.
4.	Paul Hinch	Tulsa Manager, Lincoln Properties Company and Real Estate Investor
5.	Edward Spraker	Commercial Loan Officer, Tulsa Federal Savings and Loan

Of the three lending institutions represented, Sooner Federal Savings and Loan has been more involved in the granting of non-recourse loans than either Tulsa Federal Savings and Loan or the First National Bank.

Tulsa Federal Savings and Loan had made only one non-recourse loan and that loan went to a non-profit organization. Tulsa Federal Savings and Loan's policy is to avoid loans where the principal persons involved are not personally committed to the repayment of the loan.

The First National Bank did not make non-recourse loans as frequently as Sooner Federal Savings and Loan because the bank generally made construction loans. The construction period was described as the most risky period in the life of an apartment building. The First National Bank acquired the non-recourse permanent loan from Midwest Mortgage for the Falls Apartments discussed earlier.[21]

All of the loan officers were in unanimous agreement that they would like the personal endorsements from the borrowers and the borrower's principals for psychological reasons. All of the endorsers are more likely to take a personal interest in the success of the investment if each endorser is jointly and severally liable for the repayment of the loan.

There is a philosophy among loan officers, according to Edward Spraker, that a project should be able to "stand on its own." In case of default, the mortgage may be foreclosed. Then, according to law, a sheriff's sale is conducted. If the fair market value of the property is high enough, the property will be sold for an amount that equals or exceeds the unpaid principal and interest and any attorney fees. If the property is sold for an amount that is less than the amounts owed to the mortgage, the property is "bid in" at an amount up to the amount owed to the mortgagee and then the property is resold by the mortgagee in a more orderly market. If the mortgagee does not bid the property in and the property sells for less than the amounts

owed to the mortgagee, the mortgagee can then seek a default judgment against the endorsers.

According to Douglas Dixon, it is easier to obtain a non-recourse loan on a large project than a small one. The personal net worth of the investor may be insignificant when compared with a $10 million apartment project or shopping center. If the investors do have large personal net worths, it may be too expensive to obtain a personal judgment against the investor for any deficiency. Sooner Federal Savings and Loan has made several loans to limited partnerships that have as a general partner Trammell Crow who has an interest in at least 295 partnerships and 77 corporations with contingent liabilities in excess of one billion dollars, according to Douglas Dixon.

If the general partners have a history of developing successful projects, then a lender is more likely to make a non-recourse loan. All the loan officers agreed that the interest rates are not any higher for non-recourse loans and the repayment periods are not any shorter. It was mentioned by Dixon that his institution was now requiring the general partners to guarantee the top 20 per cent of a mortgage which generally had not been required in previous years.

Paul Hinch is the Tulsa manager of Lincoln Properties Company No. 151, a Texas General Partnership. One of the principal general partners of Lincoln Properties Company No. 151 is Trammell Crow. Lincoln Properties Company, a corporation, is engaged in the supervision of the development and operation of apartment projects affiliated with Trammell Crow and Mack Pague, each of whom has a net worth in excess of $10 million. Paul Hinch, through Lincoln Properties Company or one of its affiliated organizations, acquires undeveloped land, plans its

development, arranges for the financing, oversees the construction, promotes the sale of limited partnership interest through a local brokerage firm, leases up the property, and manages it.

Paul Hinch stated that limited partners are needed in the projects to reduce the amount of permanent loan necessary to finance them. He said that rents are not currently high enough to offset the operating cost and to amortize a 100 per cent loan bearing a 10 per cent interest rate. In other words, the return before debt payments is less than 10 per cent. If the limited partners are prevented from using the non-recourse debt in computing their tax basis, this secondary source of financing will disappear. The distribution of limited partnership interests for Lincoln Properties Company affiliated partnerships for the Tulsa area is by the brokerage firm, Blyth, Eastman, Dillon and Company, Inc.

Joe Friola is the managing partner for the Tulsa office of Blyth, Eastman, Dillon and Company, Inc. He stated that before a customer is allowed to purchase a limited partnership interest through his firm, he must demonstrate that he has a net worth in excess of $100,000, exclusing household and personal assets. Further, limited partnership interests are not recommended for persons who are in a tax bracket of less than 50 per cent. His firm has handled the distribution of limited partnership interests that were organized to lease properties to such firms as J. C. Penney and Wal-Mart. The limited partnership interests are usually sold out in a matter of hours. The broker's commission on the sales are 10 per cent of the total sale price.

Joe Friola was critical of the limited partnership offerings that fail to disclose to the customer the annual potential Section 1250

gain that would result if the investment was disposed of prematurely. Also, he was vague concerning the postponement of the deductibility of investment interest in excess of $25,000 in connection with the net losses. He was under the opinion that most of the limited partnership interests were designed for persons in a 50 per cent bracket or higher.

Summary

Non-recourse loans are a vital component in the marketing of real estate tax shelters. Information obtained from three different sources has been presented, which indicates how non-recourse loans are obtained. The sources of this information are court cases, the Tulsa County Clerk's Office, and interviews with persons involved in the real estate tax shelter market.

It appears that the number of real estate tax shelters formed each year has been increasing, especially since 1971. A significant number of partnerships registered each year are limited partnerships formed for the purpose of operating tax shelters.

Non-recourse loans, though scarce, are not impossible to obtain, especially if the promoter has a history of successful projects. It appears that the lending institutions do not require a larger equity investment by the partners or an unusually high interest rate in return for the non-recourse clause in the mortgage.

It is not unusual for the partnership agreement to be drafted so that the limited partners may receive a higher percentage of the tax losses in the first 10 years of existence of the project. Many of the partnership agreements provided that the general partner would

receive an increased share of the profits after the limited partners received distributions equal to their original investment.

There is a well established market for limited partnership interest. The number of limited partnership units in a single project varies considerably, but there are not generally more than 30 units offered. Even though the future cash return to the investor is usually small or insignificant, the partnership units are often sold out in a matter of hours.

Non-recourse loans are being obtained from mortgage companies, banks, insurance companies, and savings and loan institutions. Non-recourse loans are readily made when the loan is guaranteed by the Federal Housing Administration or the property is leased to a large national corporation. It is easier to obtain a non-recourse loan for a $5 million project than a $100,000 project. Some creditors are reluctant to make non-recourse loans unless the promoter has a history of successful projects.

The construction of new apartment houses would substantially decrease if Congress were to limit the deductibility of losses to a limited partner's actual investment, according to a real estate promoter. Outside investors are needed as long as rents are not high enough to affect operating cost and the current high interest rate of approximately 10 per cent.

FOOTNOTES

[1]Manuel D. Mayerson, 47 T.C. 349 (1966); D. F. Bolger, 59 T.C. 760 (1973).

[2]Mayerson, 47 T.C. 349 (1966).

[3]D. F. Bolger, 59 T.C. 760 (1973).

[4]Ibid., 59 T.C. 760.

[5]The ability of the lessee to obtain "off balance sheet" financing has been restricted by Accounting Principle Board Opinions No. 5 (1964) and No. 31 (1973).

[6]Some states such as Arkansas treat interest that exceeds 6 per cent as usurious.

[7]See Chapter II for a discussion concerning situations where a lease will be treated as an installment sale.

[8]Oklahoma Statues, Vol. 54, Section 143, pp. 71-72.

[9]Residential property can be depreciated using the 200 per cent declining balance method and a gradual elimination of Section 1250 ordinary gain treatment, if it is subsidized government housing.

[10]Section 1.752-1(e), Income Tax Regulations.

[11]D. F. Bolger, 59, T.C. 760 (1973).

[12]See page 144 in Chapter III.

[13]See page 45 in Chapter II.

[14]Section 1.752-1(e), Income Tax Regulations.

[15]Sections 752, 731 and 741, Internal Revenue Code of 1954.

[16]William C. Drollinger, Tax Shelter and Tax-Free Income for Everyone (Ann Arbor, Michigan, 1972), p. 58.

[17]Ibid.

[18]Ibid.

[19]In a "Statement of Policy" adopted by the Midwest Securities Commissioners Association on February 28, 1973, and amended February 26, 1974, and July 22, 1975, limited partnership interests are to be offered to individuals having an annual income of at least $20,000 and a net worth in excess of $20,000, excluding the household and personal property. Blue Sky Law Reports, New York, N. Y.: Commerce Clearing House, Inc. (1976), Vol. 1, pp. 633-658.

[20]Section 163(d)(1), Internal Revenue Code.

[21]See page 187, Chapter IV.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

Restatement of Objectives

The primary objectives of this study were to identify and analyze those factors that have contributed to the use of leveraged financing with non-recourse loans in real estate tax shelters. The specific objectives of the study were stated as follows:

1. To study those aspects of the federal tax system that affect the use of leveraging with non-recourse loans in real estate tax shelters.
2. To determine the conditions under which tax leveraging occurs.
3. To determine the importance of tax leveraging in relation to other tax avoidance methods.

Basically, the above objectives were accomplished by a thorough review of the literature, the manipulation of a tax leveraging simulation model, interviews with individuals in the tax shelter industry, and logical reasoning.

Legal Concepts Perpetuating Tax Leveraging

Financing depreciable real estate with borrowed funds which the borrower is not personally liable to repay makes it possible to create deductible losses that are in excess of the owner's investment. When deductible losses exceed the investor's investment, tax leveraging has occurred. Tax leveraging, in the case of depreciable real estate, is caused by deductible depreciation being greater than payments on principal.

Tax leveraging has been possible since the passage of the first Revenue Act in 1913. It wasn't until 1947 that the United States Supreme Court ruled indirectly in Crane on whether the basis of property included the money borrowed to acquire the property.[1] The Crane decision merely confirmed what had been the customary practice for the previous 35 years. The United States Supreme Court in Crane held that an unassumed loan should not be treated any differently than an assumed loan.

Congress codified the Crane decision by providing that a general partner's basis in his partnership interest be increased by the partner's share of any unassumed indebtedness.[2] The Internal Revenue Service took its cue from Congress and provided that a limited partner can also increase his basis by the proportionate share of any unassumed indebtedness.[3] The marketing of tax shelters is normally accomplished in the form of limited partnership interest. If limited partners were unable to add to their basis the unassumed partnership indebtedness, the marketing of limited partnership interest would be severely restricted. Only those projects that are economically a good investment, ignoring income taxes, could then be sold.

Bona Fide Indebtedness

If it can be assumed that a capital investment will eventually occur in the amount of the mortgage, then no distinction should be made between unassumed and assumed liabilities. If an obligation is contingent or indefinite, the Courts have disallowed the liability as part of the basis.[4] The Court in Mayerson, however, held that an obligation on which the principal payments were not due for 99 years was not "contingent and indefinite in nature."[5]

It was learned in the course of an interview with a savings and loan officer that default judgments are rarely obtained if a mortgage is foreclosed. If this is generally true, then there is little difference between an assumed and unassumed liability. There is, however, the psychological advantage of a potential default judgment for an assumed liability.

Efforts to Restrict Tax Leveraging

The Internal Revenue Service has sought to restrict the proliferation of real estate tax shelters by requiring them to be organized within certain guidelines.[6]

If the property is leased to a single user, the I.R.S. may argue that the contract is in reality a conditional sales agreement and the lease is merely a method of financing the acquisition of the building for the user.[7] If the cash flow to the owner of the property is insignificant, the I.R.S. may show that the property was acquired primarily for the purpose of avoiding income taxes without any intent of making a profit. However, the projected economic benefits of some

projects which have received favorable rulings from the I.R.S., only provide a slight profit to the investor. If the project is analyzed by determining the present value of the future expected benefits, ignoring income taxes, the return on investment is trivial.

Limited partnerships are the most common entity used for operating tax shelter investments. The I.R.S. has restricted the number of limited partnerships by withholding advanced rulings on whether they will be taxed as a corporation. Generally, the I.R.S. requires the general partner to have economic substance so that all partners in a limited partnership will not have the corporate characteristic of limited liability.[8]

Congress has indirectly reduced the benefits that can be derived from tax leveraging in the process of reducing tax avoidance by other means. Some legislation was designed to reduce tax avoidance and others to restrict the deferral of taxes. Congress reduced tax avoidance by reducing the amount of gain that is subject to the alternative capital gain tax to $50,000.[9] In 1969, and again in 1976, Congress passed legislation to tax at ordinary income rates gain on the disposition of property that is attributable to the excess of accelerated depreciation over straight-line depreciation.[10] Congress, in 1969 and again in 1976, reduced the deferral of taxes by limiting the deductibility of investment interest.[11] The amount of investment interest that is deductible is the first $10,000 of interest plus investment income.[12] In addition to investments, property that is rented on a net lease is specifically included as property generating investment interest.[13] Included in the 1969 Reform Act is the provision limiting depreciation on new nonresidential property to 150 per cent declining balance.

Congress, also in 1969, passed a 10 per cent tax on tax preferences which is in addition to the ordinary income tax.[14] Included as tax preferences are excess investment interest, accelerated depreciation, and the capital gains deduction. The 10 per cent tax on tax preferences did not pose much of a threat to tax shelters. The minimum tax rate was increased to 15 per cent in 1976.

Of all the proposals by Congress and the I.R.S. to retard the marketing of tax avoidance, one of the most devastating and most restrictive would be to prevent limited partners from deducting losses in excess of their actual equity investment. Investors would then require a greater return on investment than previously requested, or else the future profit potential would have to be substantially increased.

Tax Leveraging Simulation Model

The primary purpose of the tax leveraging simulation model was to determine the sensitivity of tax leveraging to changes in the 12 parameters listed below:

(a) Land cost.

(b) Depreciable balance.

(c) Mortgage balance.

(d) Investment balance.

(e) Interest rate.

(f) Discount rate.

(g) Depreciation rate.

(h) Marginal tax rate

(i) Depreciation method.

(j) Repayment period.

(k) Depreciation period.

(l) Distributions.

The tax leveraging simulation model computes the present value of the deductible losses, given the marginal tax rate and the investor's discount rate or after tax rate of return that can be earned on an investment. The model also computes the net present value of an investment, assuming it is disposed or for an amount equal to what is owed on the mortgage.

The rational investor will be more concerned with the amount of the original investment, interest rate, and repayment period of the loan than with the method of depreciation or whether the gain on disposition is taxed at capital gain rates or ordinary rates. Based on the assumptions stated on Table VI in Chapter III, the net present value of the project assuming 200 per cent declining balance depreciation and capital gains taxation upon disposition is $154,869.00. The decrease in the net present value, if depreciation was limited to the straight-line method, is $57,571.00. If the gain on the disposition of the property at the end of the 24th year was taxed at ordinary rates, the decrease in the net present value would be only $8,474.00. Therefore, the net present value of the investment without accelerated depreciation and long-term capital gains benefits is $88,824.

It is interesting to note that a rational investor will usually prefer a high interest rate over a lower interest rate for projects that are primarily organized for the purpose of avoiding income taxes on other income. The reason for this, as illustrated by Figure I in Chapter III, is that a higher percentage of the annual loan payment is

applied on interest rather than principal for a longer period of time, therefore increasing the difference between the amount owed on the mortgage and the adjusted basis in the property.

If the investor makes a capital contribution that is approximately five per cent of the total cost of the property acquired, the project must remain in existence for approximately three to four years in order to recover the original investment through tax deferral or tax avoidance as shown by Table X in Chapter III. As the original investment increases, the length of time required to merely break even increases, as shown by Tables X, XVI, and XVII in Chapter III.

Tax leveraging usually doesn't require a loan repayment period equal to or in excess of the depreciable life of the property. Even with a repayment period of 15 years and a depreciable life of 30 years, the annual losses will exceed the five per cent investment by the end of the sixth year by $104,993.00. The amount of the deferral and the length of the deferral, however, is not enough to earn an adequate return on the original investment. If the repayment period is extended until 20 years the investor can earn an adequate return on investment if the project remains in existence for at least seven years for a 10 per cent interest rate as shown by Table XXIII in Chapter III.

Examples of Real Estate Tax Shelters

Examples of the use of non-recourse loans were found by first locating a list of partnerships located in the District Court Clerk's Office for Tulsa County that includes limited partnerships. Limited partnerships that own real estate often have loans for which none of the partners are personally liable.

Of the 117 partnerships that registered in Tulsa County in 1973, 38 were limited partnerships of which at least 22 were organized for the purpose of operating apartment buildings. Of the eight limited partnerships that were registered in 1973 for which information was obtained by analyzing records in the County Clerk's Office of Tulsa County, seven had individuals as limited partners. The "at risk investment" of the limited and general partners ranged from zero to 30 per cent of the total cost of the property acquired. Four of the eight limited partnerships had non-recourse loans as recorded with the County Court Clerk's office. The limited partners usually received 95 per cent of the profit and losses from operations. Several of the limited partnership agreements provide that the general partner will receive a bonus if the profits exceed a specified amount. This allows the limited partners to receive a larger portion of the losses in the first few years of operation. As in many cases, the limited partner is primarily interested in obtaining losses that are deductible rather than income from the investment.

Interviews with Principals

Five individuals were asked how persons obtain non-recourse loans. Three of the individuals interviewed worked for lending institutions. The other two either developed real estate tax shelters, invested in them, or sold interest in the limited partnerships.

The loan officers all agreed that non-recourse loans were not unusual, but were not made often. They stated that there were not any significant differences in the terms of the agreement between non-recourse loans and loans with recourse. The one institution that made

most of the non-recourse loans relied heavily on the borrower's past experience.

All of the loan officers agreed that a multi-million dollar project could more easlily qualify for a non-recourse loan than a small project. This was due to the fact that personal wealth of the investors would probably be insignificant in comparison with a five to ten million dollar loan.

Conclusions

Tax leveraging can be of greater importance than the excess of accelerated depreciation over straight-line depreciation and the 50 per cent capital gains deduction. In other words, a rational real estate investor will normally be more concerned with the financial terms of a transaction than with the tax benefits derived from accelerated depreciation or capital gains. Congress could eliminate the above two tax benefits, but investors could still receive a sufficient return from tax deferral benefits to justify making an investment in improved real estate, even though there was little probability of receiving any cash flow from the project.

The most important variable that affects the existence of tax leveraging is the size of the interest rate charged on a loan.

An investor will favor a higher interest rate over a lower one for interest rates up to 15 per cent for investments where there is little probability of receiving any cash flow. The net present value of an investment increases until the interest rate reaches about 15 per cent, where there is a 10 per cent equity investment. The present value of the future tax losses decreases as the interest rate

increases above 15 per cent. The more the amount of the equity investment decreases, the higher the interest rate can go before the net present value of an investment begins to decrease.

The loan repayment period can decrease considerably before tax leveraging is eliminated. However, the longer the repayment period, the greater is the net present value of the investment.

If the equity investment is small enough, even an investor in a very low tax bracket can benefit from tax leveraging. The larger the investment, the higher the tax bracket in which an investor must be before he can recover his investment and earn an adequate return solely from the tax benefits generated.

Historically, tax leveraging has been available since the writing of the first revenue act in 1913. Non-recourse financing has been available equally as long or longer. The Supreme Court in Crane merely provided an affirmation of existing practice for the treatment of non-recourse debt.

The proliferation of the marketing tax shelters has been helped considerably by lending institutions' agreeing to accept non-recourse rates. Tax leveraging can be accomplished without a non-recourse loan, but investors may be hesitant about incurring such a risk.

Congress could limit the marketing of tax losses generated by real estate tax shelters that utilize non-recourse debt by limiting the deductions for losses to the investor's "at risk" investment. The investor would then be more interested in investments that have economic benefits in excess of cost. Presently, because of tax deferral from tax leveraging and tax avoidance caused by the capital gain deduction, investors find profitable investments that will not generate

enough cash flow to repay even the original total cost on investment.

Congress recently, in the Tax Reform Act of 1976, did limit the deductible losses in certain non-real estate tax shelters to the investor's "at risk" investment; i.e., the original investment plus any indebtedness for which the investor is personally liable. It is doubtful whether Congress will restrict losses in residential housing projects to amounts for which the investor is "at risk" until rents increase or the interest rates decrease substantially, or there is otherwise adequate housing available.

The examples presented are not purported to be representative of limited partnerships in Tulsa or in the United States. They were described to show that tax leveraging does exist and is possible under the present tax structure. For an investor interested in postponing or avoiding tax, sufficient detail has been provided to enable him to evaluate the tax aspects of a tax leveraging project. The concept of tax equity has not been discussed. Congress should study the impact that tax leveraging would have on the availability of housing if it were to be eliminated or restricted.

FOOTNOTES

[1]Crane v. Commissioner, 331 U.S. 1 (1947).

[2]Section 752(a), Internal Revenue Code of 1954.

[3]Section 1.752-1(e), Income Tax Regulations.

[4]Albany Car Wheel Company, Inc., 40 T.C. 831-841 (1963) and Lloyd H. Redford, 28 T.C. 771-779 (1957).

[5]Mayerson, 47 T.C. 352.

[6]Revenue Rulings 72-135, 1972-1, C.B. 100, 72-350, 1972-2, C.B. 394; 72-13, 1972-1, C.B. 735, 74-17, 1974-2 C.B. 438.

[7]Revenue Ruling 75-21, 1975-2 C.B. 15.

[8]Revenue Ruling 72-13, 1972-1, C.B. 735.

[9]Section 1201, Internal Revenue Code of 1954.

[10]Section 1250, Internal Revenue Code of 1954.

[11]Act Section 221, Tax Reform Act of 1969 and Act Section 209, Tax Reform Act of 1976.

[12]Act Section 209, Tax Reform Act of 1976.

[13]Section 163, Internal Revenue Code of 1954.

[14]Act Section 301, Tax Reform Act of 1969.

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Recenue Procedure 75-17, 1975-1 C. B. 15.

Revenue Procedure 72-3, 1972-1 C. B. 698.

Revenue Procedure 74-17, 1974-2 C. B. 438.

Revenue Ruling 72-350, 1972-2 C. B. 394.

Revenue Ruling 72-135, 1972-1 C. B. 100.

Revenue Ruling 64-273, 1964-2 C. B. 62.

Revenue Ruling 68-358, 1960-2 C. B. 68.

Revenue Ruling 55-540, 1955-2 C. B. 39.

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Revenue Ruling 55-541, 1955-2 C. B. 19.

Revenue Ruling 55-542, 1955-2 C. B. 59.

Revenue Ruling 57-371, 1957-2 C. B. 214.

APPENDIX

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  FORTRAN IV V20S/MCD00

// READ DEVICE-1442
// PRINT DEVICE-1403
*PROCESS LINK(T,LIB(R2))
   1           PROGRAM FISHER
         C     ALOSS  = NET LOSS
         C     ANENT  = ANNUAL INTEREST
         C     ANPAY  = ANNUAL PAYMENT
         C     ANDEP  = ANNUAL DEPRECIATION
         C     CHANGE = ANNUAL DEPRECIATION WHEN SWITCH MADE TO STRAIGHT-LINE
         C     DEPBAL = DEPRECIABLE BASIS
         C     DEPRAT = DEPRECIATION RATE
         C     DIF    = ACCELERATED - STRAIGHTLINE DEPRECIATION
         C     DIS    = DISCOUNT RATE TO INVESTORS
         C     DOLIAB = TAX LIABILITY OR TAX SAVINGS IF PROJECT ABANDONED
         C     ENT    = INTEREST RATE
         C     EQSL   = PARTNER'S EQUITY USING STRAIGHTLINE DEPRECIATION
         C     EQUITY = EQUITY OF P/S
         C     FRONT  = ORIGINAL EQUITY OF INVESTORS
         C     N      = USEFUL LIFE
         C     M      = MORTGAGE PAYMENT PERIOD
         C     PAYPRI = PAYMENT ON PRINCIPAL
         C     PRIN   = PRINCIPAL OF LOAN
         C     PVCASH = SUM OF PRESENT VALUE OF CASH
         C     PVDIF  = PRESENT VALUE OF ANNUAL DIFFERENCE BETWEEN DEPRECIATION METHODS
         C     PVLIA  = PRESENT VALUE OF TAX LIABILITY OR SAVINGS
         C     PVNET  = PRESENT VALUE OF OPERATING LOSS - DOLIAB
         C     PVNOL  = PRESENT VALUE NET OF LOSS
         C     PVRETN = PRESENT VALUE OF RETURN ON INVESTMENT
         C     PVSLNT = PRESENT VALUE OF NET LOSS AND TAX LIABILITY-SL DEPRECIATION
         C     PVSUMD = PRESENT VALUE OF SUM OF DIF
         C     RESDIF = SECTION 1250 GAIN
         C     RETURN = RETURN ON INVESTMENT BEFORE TAXES
         C     SLDEP  = STRAIGHTLINE DEPRECIATION
         C     SOIL   = INVESTMENT IN LAND
         C     SUMDIF = SUM OF ACCELERATED - STRAIGHTLINE DEPRECIATION
         C     SUMPVL = SUM OF PRESENT VALUE OF OPERATING LOSS
         C     SUMPVR = SUM OF PRESENT VALUE OF RETURN ON INVESTMENT
         C     TAXRAT = TAX RATE
         C     TAXSAV = TAX SAVINGS
   2     050   READ (5,080)PRIN,ENT,DIS,DEPRAT,DEPBAL,TAXRAT,FRONT,M,N,RETURN
   3     080   FORMAT (F10.2,2F5.5,F10.6,3F10.2,2I5,F10.2)
   4           IF (PRIN) 090,300,090
         C     COMPUTATION OF ANNUAL PAYMENT
   5     090   ANPAY = (PRIN * (1+ENT)**M)/((((1+ENT)**M)-1)/ENT)
   6           WRITE (3,101)
   7     101   OFORMAT (1H1, 'PRIN  = PRINCIPAL AT END OF YEAR                    '/
               1' ANDEP= ANNUAL DEPRECIATION                                    '/
               2' SUMDIF= SUM OF THE DIFFERENCE BETWEEN STRAIGHTLINE AND        '/
               3'          ACCELERATED DEPRECIATION                             '/
               4' PVSUMD= PRESENT VALUE OF SUMDIF ASSUMING  TAX RATE            '/
               5' ALOSS = ANNUAL LOSS (DEPRECIATION LESS PAYMENT ON PRINCIPAL)  '/
               6' PVNOL = PRESENT VALUE OF ANNUAL LOSS AFTER TAXES              '/
               7' SUMPVL= SUM OF PRESENT VALUE OF ANNUAL LOSS                   '/
               8' EQUITY= PARTNERSHIP EQUITY IN PROJECT AT END OF YEAR          '/
               9' EQSL  = EQUITY IF COMPUTED USING STRAIGHTLINE DEPRECIATION    '/
               A' DOLIAB= TAX LIABILITY OR TAX SAVINGS IF PROJECT ABANDONED     '/
               B' PVLIA = PRESENT VALUE OF DOLIAB                               '/
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     C' PVEQSL= PRESENT VALUE OF TAX LIABILITY OR SAVINGS IF EQUITY   '/
     D'         COMPUTED USING STRAIGHTLINE DEPRECIATION             '/
     E' PVSLNT= NET PRESENT VALUE OF INVESTMENT - STRAIGHT-LINE DEPREC',
     F'IATION                                                        '/
     G' PVNET = NET PRESENT VALUE OF PROJECT USING ACCELERATED  DEPREC',
     H'IATION                                                        ')
 8    WRITE (3,099) PRIN,ENT,DIS,DEPRAT,DEPBAL,TAXRAT,FRONT,N,M,RETURN
 9 099 FORMAT (1H0,' ASSUMPTIONS                                      '/
     1' CAPITAL GAINS RATE = .25                                     '/
     2' PROJECT = APARTMENT BUILDING                                 '/
     3' DEPRECIATION METHOD = DOUBLE DECLINING BALANCE               '/
     4' USEFUL LIFE = SPECIFIED                                      '/
     5' LOAN PERIOD = SPECIFIED                                      '/
     6' GROSS RECEIPTS = OPERATING EXPENSES PLUS PAYMENT ON LOAN     '/
     8' SALE PRICE = LOAN BALANCE                                    '/
     9' SALE OCCURS AT END OF YEAR                                   '/
     A' SECTION 1250 GAIN COMPUTED                                   '/
     B' LOAN                  = ',F10.2,'                            '/
     C' INTEREST RATE         = ',F10.2,'                            '/
     X' DISCOUNT RATE         = ',F10.2,'                            '/
     D' DEPRECIATION RATE     = ',F10.6,'                            '/
     E' DEPRECIABLE BALANCE = ',F10.2,'                              '/
     F' PARTNERS TAX RATE     = ',F10.2,'                            '/
     G' PARTNERS INVESTMENT = ',F10.2,'                              '/
     H' DEPRECIATION PERIOD = ',I10,'                                '/
     I' REPAYMENT PERIOD      = ',I10,'                              '/
     I' RETURN                = ',F10.2)
10    WRITE (3,100)
11 100 FORMAT (1H1,' YR.    PRIN     ANUDEP    SUMDIF    PVSUMD ',
     1'    ALOSS     PVNOL    SUMPVL    EQUITY      EQSL    OOLIAB    PVLIA ',
     2'    PVSLNT    PVNET ')
12    SLDEP = DEPBAL/N
13    SOIL = PRIN + FRONT - DEPBAL
14    SUMPVR = 0
15    SUM = 0
16    PVSUMD = 0
17    PVRETN = 0
18    SUMPVR = 0
19    SUMDIF = 0
20    PAYPRI = 0
21    PVDIF = 0
22    ANENT = 0
23    PVCASH = 0
24    SUMPVL = 0
25    DO 200 L= 1,N
26    PVLIA = 0
27    OOLIAB = 0
      C     COMPUTATION OF ANNUAL INTEREST AND PAYMENT ON PRINCIPAL
28    ANENT = ENT * PRIN
29    PAYPRI = ANPAY - ANENT
30    PRIN = PRIN-PAYPRI
31    IF (PRIN.LT.1) PRIN = 0
      C     COMPUTATION OF ANNUAL DEPRECIATION USING 200  DB OR STRAIGHT-LINE
      C     WHICHEVER IS GREATER
32    ANUDEP = DEPRAT * DEPBAL
33    CHANGE = DEPBAL / (N+1-L)
34    IF (CHANGE.GT.ANUDEP) ANUDEP = CHANGE
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35          DEPBAL = DEPBAL - ANDEP
      C     COMPUTATION OF EXCESS OF ACCELERATED DEPRECIATION OVER STRAIGHT-LINE
36          DIF = ANDEP-SLDEP
      C     COMPUTATION OF PRESENT VALUE OF DECREASE IN TAXES ATTRIBUTABLE TO
      C     EXCESS OF ACCELERATED DEPRECIATION OVER STRAIGHT-LINE
37          PVDIF = (DIF*TAXRAT)/(1+DIS)**L
38          PVSUMD = PVSUMD + PVDIF
39          SUMDIF = SUMDIF + DIF
      C     COMPUTATION OF SECTION 1250 GAIN BASED ON TIME HELD
40          IF (DEPRAT.EQ..0375) GO TO 12
41          IF(L.LT.9.) GO TO 12
42          IF(L.GT.16.) GO TO 13
43          RESDIF = (SUMDIF - ((SUMDIF/100)*((L-8)*12-4)))
44          GO TO 14
45    12    RESDIF = SUMDIF
46          GO TO 14
47    13    RESDIF = 0
      C     COMPUTATION OF PRESENT VALUE OF ANNUAL LOSS OR INCOME
48    14    ALOSS = ANDEP - PAYPRI - RETURN
49          PVNCL = (ALOSS * TAXRAT) / (1+DIS)**L
50          PVRETN = RETURN/(1+DIS)**L
51          SUMPVR = SUMPVR + PVRETN
52          SUMPVL = SUMPVL + PVNCL
53          EQUITY = SCIL + DEPBAL - PRIN
      C     COMPUTATION INVESTOR'S EQUITY
54          IF (EQUITY) 2,2,1
      C     EQUITY IS POSITIVE WHICH RESULTS IN TAX LOSS ON ABANDONMENT
55    1     DOLIAB = EQUITY*TAXRAT
56          GO TO 10
      C     IF STRAIGHT-LINE DEPRECIATION EQUALS OR EXCEEDS ACCELERATED
      C     DEPRECIATION-GO TO 3
      C     IF ACCELERATED DEPRECIATION EXCEEDS STRAIGHT-LINE DEPRECIATION-
      C     GO TO 4
57    2     IF (SUMDIF)3,3,4
58    3     DOLIAB = EQUITY*.25
59          GO TO 10
      C     SMALLER OF GAIN REALIZED OR 1250 GAIN TAX AT ORDINARY RATES
60    4     IF (EQUITY+RESDIF) 444,444,44
61    44    DOLIAB = EQUITY*TAXRAT
62          GO TO 10
      C     IF HELD FOR 8 YEARS OR LESS SUMDIF FULLY TAXED AT ORDINARY RATES
63    444   IF (DEPRAT.EQ..0375) GO TO 7
64          IF (L.LT.9.) GO TO 7
      C     IF HELD FOR 9 TO 16 YEARS RESDIF TAXED AT ORDINARY RATES
65          IF (L.LT.17.) GO TO 8
      C     IF HELD FOR MORE THAN 16 YEARS ALL GAIN TAXED AT CAPITAL GAIN RATES
66          IF (L.GT.16.) GO TO 9
67    7     DOLIAB = (EQUITY+SUMDIF)*.25-(TAXRAT*SUMDIF)
68          GO TO 10
69    8     DOLIAB = (EQUITY+RESDIF)*.25-(RESDIF*TAXRAT)
70          GO TO 10
71    9     DOLIAB = EQUITY*.25
72    10    PVLIA = DOLIAB/(1+DIS)**L
73          IF (L.GT.M) PVCASH = PVCASH + ANPAY/(1+DIS)**L
74          PVNET = SUMPVL+PVLIA-FRONT + SUMPVR + PVCASH
75          EQSL = EQUITY + SUMDIF
76          IF (EQSL) 20,20,21
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77      20      PVEQSL = (EQSL*.25)/(1+DIS)**L
78              GO TO 23
79      21      PVEQSL = (EQSL*TAXRAT)/(1+DIS)**L
80      23      PVSLNT= SUMPVL - PVSUMD + PVEQSL - FRONT + SUMPVR + PVCASH
81             0WRITE (3,150)L,PRIN,ANUDEP,SUMDIF,PVSUMD,ALOSS,PVNCL,
               1SUMPVL,EQUITY,EQSL,DCLIAB,PVLIA,PVSLNT,PVNET
82      150     FORMAT  (I4,12F9.0,F8.0)
83      200     CONTINUE
84              GO TO 050
85      300     STOP
86              END

  000 TOTAL ERRORS FOR THIS COMPILATION
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VITA

Ted Lance Fisher

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN ANALYSIS OF THE FACTORS THAT HAVE CONTRIBUTED TO THE USE OF LEVERAGED FINANCING WITH NON-RECOURSE LOANS IN TAX SHELTERS

Major Field: Business Administration

Biographical:

Education: Graduated from Edison High School, Tulsa, Oklahoma, in May, 1958; received Bachelor of Business Administration degree and Master of Arts degree in Accounting from the University of Oklahoma in 1963 and 1968, respectively; enrolled in doctoral program at Oklahoma State University, 1969-70; completed requirements for minor in taxation from the University of Texas at Austin, Texas, 1971-72; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in July, 1977.

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