

Perspectives on Debt-and-Equity Decomposition for Investors and Issuers of Real Estate Securities

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Abstract. The separation of commercial real estate into structured investment products as suggested by the debt-and-equity model can enhance property value due to positive net changes in agency costs and tax shields. In many cases this enhancement should be large enough to induce real estate owners to make property available for component separation. The resulting income component has the investment characteristics of a tax-sheltered corporate bond, and should be sold to taxable investors to realize the value enhancement.

Introduction

Recent articles introduced a variant of the discounted cash flow (DCF) model for real estate valuation.¹ The model implies that commercial real estate can be regarded as the sum of two components with different investment characteristics: a pure equity asset, and a portfolio of debt instruments similar to corporate bonds. The equity component captures all property appreciation, while the debt component captures all income from existing leases.

Initial investigations asserted that property ownership can be structured to separate the components without incurring major transaction costs or tax liabilities, but focused on component investment characteristics and on theoretical justification for the existence of both debt and equity dimensions in real estate returns. It was sufficient for those objectives to assume that the combined agency and tax costs associated with separate ownership of the components are the same as the agency and tax costs associated with ownership of unseparated property, i.e., that the net change in total agency and tax costs due to component separation is zero.² However, component separation does produce changes in total agency costs, and in the timing—and hence, present value—of tax obligations.

A net change in agency and tax costs implies that the expected sum of the component values after separation will differ from the value of unseparated property.³ The key consequence in the case of component separation is to transform the income component from a largely taxable stream of payments to a largely tax-exempt stream of payments. Thus, to capture the full benefit of component separation, the income component should be purchased by taxable investors in the highest possible tax bracket, e.g., high net worth

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individuals or blue chip corporations, acting individually or in partnership. The equity component can be purchased by either taxable or tax-exempt investors, although it will be shown that the value added by component separation is greater if these purchasers are tax-exempt.

This article addresses the restructuring of property ownership to effect its separation into debt and equity components. It discusses the sources and dimensions of agency costs, the tax consequences of component separation, and the mechanics of transferring ownership and structuring finance to produce tax benefits and avoid liabilities.⁴

The Real Estate Debt-and-Equity Model

Assume that the source of commercial real estate value is the right to future occupancy of the property. In the case of property not encumbered with any leases, all future occupancy rights belong to the property owner, and it follows that the value of the property equals the net present value of future occupancy. However, commercial property owners rarely retain full rights to future occupancy. Instead, they exchange portions of their rights for promises to receive specified payments at specified future times. In other words, they sell some of their occupancy rights to tenants and finance the purchases by accepting leases for payment in lieu of cash. Thus commercial property can be regarded as the sum of two assets: (1) a portfolio of leases, and (2) an equity component consisting of the residual owner occupancy rights after existing leases expire. This implies that the value of commercial property equals the value of its lease portfolio plus the present value of residual occupancy rights. Since leases are tenant debt obligations, commercial property can be regarded as a portfolio of debt and equity.

Property can be valued by pricing each component separately. The leases can be valued by fixed-income techniques, and the equity component by real estate equity pricing techniques. If leased property is owned in fee simple, then from the perspective of the property owner the lease is secured tenant debt with default protection analogous to the protection accorded holders of tenant debentures. More precisely, in the absence of written covenants to the contrary, and unlike nonrecourse commercial mortgages, the lease has binding legal status similar to general obligation tenant debt (debentures) as long as the tenant does not seek the legal protection of bankruptcy. Unlike debentures, in tenant bankruptcy the property owner has a senior claim on a specific tenant asset—term occupancy rights to the leased space—rather than a general claim on all unmortgaged assets. Furthermore, bankruptcy law makes it easier for the property owner to foreclose on the pledged security and take possession than corresponding foreclosures for holders of tenant mortgages or debentures. In addition, as we will discuss later, standard commercial lease covenants give the owner an unsubordinated general claim on tenant assets for any losses incurred by lease termination and re-leasing due to tenant bankruptcy, up to a limit specified by federal bankruptcy law.

While leases can be regarded conceptually as asset-backed bonds, complex payment provisions can make lease pricing a complicated procedure. A comprehensive discussion of lease valuation would be a digression from the main subject of this article. We restrict ourselves to pointing out the existence of a commonly occurring lease that is straightforward to value off the Treasury yield curve: the triple-net lease, i.e., a lease that, in addition to net rent, obligates the tenant to pay fractional shares of taxes, management

and maintenance, and property insurance costs in proportion to the fractional value of total space occupied by the tenant. For a triple-net lease without renewal options or CPI escalators, the present value can be calculated by discounting the net rental payments at a rate equal to the appropriate Treasury yield plus a risk premium determined by the tenant credit rating.

Since leases do not represent ownership of occupancy rights, lease value is not affected significantly by market changes for commercial space. The inflation-hedging and diversification properties of real estate are captured entirely by the equity component.

The percentage of property value represented by existing leases depends on the fraction of available space leased and on the average lease length. Typically, leases comprise no more than 50% of total property value, although long-term leases could represent 90% or more.

Constraints in Separating Debt and Equity Components

The Modigliani-Miller proposition implies that the value of an asset is independent of how it is securitized, except for changes in agency costs and tax shields.⁵ Thus the key issue in component separation is how to maximize the present value of net changes in agency costs and tax shields.

An examination of the tax code shows that the income component owner can write off the asset purchase price most quickly for tax purposes if the right to receive payments from existing leases is classified by the tax code as an income-generating asset. This implies that real estate components must be separated so that the right to receive payments from existing leases is secured by a claim on tenant occupancy, and in such a way that receipt of lease payments also entails the obligations normally associated with property ownership (e.g., responsibility for taxes, management and maintenance, and property insurance). This suggests that the residual right to re-lease space after existing leases expire should not involve the holder in any obligations with regard to the property until the residual matures. In addition, in order for residual occupancy rights to be marketable, the value of residual rights should be protected from adverse behavior by the debt component holder prior to residual maturity.

In short, the holder of the debt component should have all the benefits and obligations of property ownership until the leases expire, and none of those benefits or obligations afterwards; and the holder of the equity component should have none of the benefits or obligations of ownership until the leases expire, and all of those benefits and obligations afterwards. In addition, ownership of the two components should be functionally independent, so that the investment activities of each asset holder do not affect the value or investment characteristics of the other asset.

The Mechanics of Separation

Assume for the moment that we are dealing with single-tenant property. Then at least three well-established mechanisms exist within the framework of U.S. law to separate fee simple ownership into components that have the benefits, obligations, and risks identified in the preceding section:

- Issuance of two deeds, one conveying term ownership of the underlying property for the remaining term on the existing tenant lease, the other conveying a future interest that vests in fee simple when the term ownership expires.
- Creation of a prepaid master lease on the property coincident with the term of the existing tenant lease.
- Establishment of a trust with two beneficiaries, one entitled to all income during the term remaining on the existing tenant lease, the other entitled to undivided beneficial ownership upon expiration of the term interest.

The dual deed structure creates a division of fee simple ownership that is both legally and conceptually close to the theoretical division of benefits and obligations derived in the preceding section. The master lease structure creates a separation of ownership in which the legal status of the term owner appears subordinate to that of the residual rights holder, but which is nearly the same from an economic perspective as that achieved through dual deeds.

The subordination of term ownership rights produced by the master lease structure may in fact result in greater independence of component ownership rights than can be achieved with dual deeds. Epstein [9] and Simes and Smith [17] observe that, under the dual deed structure, the holder of the term interest can sometimes obtain a court order allowing the term holder to sell the entire fee interest.⁶ This weakens the independence of the two owners by raising the possibility that the term holder could alter the timing of tax benefits and obligations expected by the residual equity holder.

The trust structure differs from the dual deed and master lease structures in that creation of a trust is not a mere matter of drawing up appropriate standardized contracts at nominal cost. To qualify for the full set of tax benefits available from component separation, the parties to the separation transaction must retain the services of a party unrelated to the two beneficiaries to serve as trustee.⁷ This imposes a third-party administrative cost the net present value of which at the time the trust is established will be subtracted by the purchasers from the combined market values of the term and remainder interests.

A trust can be structured so that the trustees do not have the legal authority to sell trust assets. However, the trustees do have a fiduciary responsibility to conserve the trust assets, to keep them productive, and to protect the economic interests of all trust beneficiaries.⁸

Legal precedent suggests that the term interest holder has access to judicial recourse to force the trustees to manage the property to maintain income, but not to force a sale of the fee simple.⁹ In other words, the trust can be structured to virtually guarantee that, in the absence of condemnation, the trustees will distribute the fee simple in the property to the residual equity holder when the term interest expires.

The master lease is a familiar and widely accepted instrument in commercial real estate, while trusts and dual deed structures have been used primarily in estate planning. However, the favorable tax implications of trusts and dual deeds have been established by both statute and judicial interpretation. By contrast, leases have sometimes received favorable tax treatment, sometimes unfavorable treatment.¹⁰

Furthermore, as the tax code is presently written, certain investor pairings create situations in which the tax treatment accorded real estate components separated via the

dual deed and trust mechanisms is preferable to the treatment accorded master lease separations, even if the master leases receive favorable tax interpretations.

Multitenant property can be separated into components in at least two different ways by resecuritizing ownership to reduce component separation to the single-tenant case. See Graff [12] for a discussion of this reduction.

The Impact of Tax Law on Component Separation

We have stressed the fixed-income investment characteristics of the term interest component. However, from the tax code perspective the term interest is quite different from a bond. It is an income-generating asset, and a wasting asset because its expected future income stream declines to zero as its term approaches expiration.

For the remainder of this article, we will refer to the term interest as the ABBE Security, or ABBE for short. Similarly, we will refer to the residual component as the LURE Security, or LURE for short.¹¹

Blum [4] suggested that one longstanding objective of judicial tax policy towards temporal asset separation has been to make the combined treatments of component tax benefits and obligations as close as possible to the treatment of the unseparated asset, within the constraints imposed by tax law. Thus total taxes on the combined cash flows should be unchanged or nearly unchanged, as should total depreciation deductions. In practice, a complicated body of statutes, regulations, and court decisions has created an area of tax law dependent both on scenario and legal form that only sporadically approaches this objective.

An owner who separates property into debt and equity components and sells the ABBE in a commercial transaction is not treated as having sold an asset. For tax purposes the net sale price is treated instead as prepaid rent, and is fully taxable as income when received.¹² This is the case regardless of which mechanism is used to separate the components. Owner (tax) basis in the LURE after the ABBE sale remains the same as the basis in the property immediately prior to the transaction. The owner is treated for depreciation purposes as retaining ownership of the property and is expected to continue recovering the cost of the property according to the schedule in effect prior to the ABBE sale.

By contrast, if the property owner separates the property into debt and equity components and sells the LURE in a commercial transaction, then at the time of the LURE sale the owner must allocate the property tax basis between the LURE and ABBE based on the relative economic value of the two components and treat the difference between the net proceeds from the LURE sale and the LURE basis as a capital gain (or loss). However, the owner is not entitled to amortize the ABBE over its term. By itself, this is not an obvious tax penalty. However, if the owner subsequently sells the ABBE, the new ABBE owner is allowed to amortize the purchase price.¹³

In short, the tax code contains disincentives to deter an owner who separates property into components from selling one of the components and retaining the other. This implies that real estate components will most likely be created by owners who separate the components and sell both components at approximately the same time.

So we will assume for the rest of this article that the ABBE and LURE are created in a market-based split purchase, i.e., that a fee simple owner disposes of the property by selling the ABBE and LURE components in a simultaneous pair of independent commercially motivated transactions. In addition, assume that the purchasers are unrelated for tax purposes in the sense of Internal Revenue Code (I.R.C.) Section 167(e) (this will include most pairs of purchasers in economically unrelated transactions).¹⁴

Tax Treatment of an ABBE Purchase

Assume that either the dual deed or the trust mechanism is used to separate the ABBE and LURE components. Then the section of tax law concerned with future interests and estates applies. As long as the holders of the two components remain unrelated in the sense of I.R.C. Section 167(e), the ABBE holder is entitled to straight-line amortization of the ABBE purchase price over the remaining ABBE term. In addition, the ABBE holder is entitled to all depreciation deductions connected with the property improvements (valued at the time of separation). This implies that the total property value minus the portion of property value represented by land ownership is depreciable by the ABBE holder over the 31.5-year period the tax code currently defines as the useful life of commercial real estate.

This has led some tax experts to suggest an aggressive policy towards amortization and depreciation deductions by ABBE holders: that holders amortize the ABBE over the life of the term interest, and simultaneously depreciate the non-land portion of total property value.¹⁵

Opposing this aggressive stance is a universally applicable exclusionary principle: if the purchase price of an asset is entitled to cost recovery under more than one provision of the tax code, the taxpayer must select a provision at the time cost recovery is first used and stick with that provision.

Since property is the sum of its ABBE and LURE components, depreciation of the property may be viewed as simultaneous depreciation of the ABBE and LURE. If the ABBE and LURE are considered indivisibly bundled, then the property and the ABBE are not the same asset, and ABBE amortization should not disallow property depreciation. On the other hand, if components can be unbundled, then simultaneous ABBE amortization and property depreciation amounts to the selection of two cost recovery provisions for the ABBE. In this case, one of the two ABBE cost recovery provisions will be disallowed.

On the other hand, the concept of component separation leads to a third, less aggressive but still attractive cost recovery policy: amortization of the ABBE purchase price over the remaining ABBE term and simultaneous depreciation of the value of LURE improvements over the 31.5 years allowed for commercial property.¹⁶

This policy seems natural by analogy with cost recovery for components separated via the master lease mechanism. In this case, it is appropriate under current tax law to amortize the ABBE as an income-generating capital asset. In addition, the LURE holder has fee simple title to the property and has the right to depreciate the LURE purchase price over the 31.5-year period allowed for commercial property.

Thus under the master lease separation mechanism simultaneous ABBE amortization and LURE depreciation is allowed. Furthermore, the combined deductions for the

master lease mechanism are the same as the combined deductions allowed for the dual deed and trust separation mechanisms. The only difference between these cases is that the tax code allows all deductions to be routed to the ABBE holder in the case of dual deed and trust component separations, whereas lease tax provisions view both ABBE and LURE as income-generating assets the owners of which are entitled to cost recovery of their respective investments.

The Value of ABBE Tax Shields

Cost recovery provisions are not designed to waive tax obligations, merely to reschedule payments to correspond more closely to the receipt of cash flows generated by the asset. Thus LURE depreciation deductions taken by the ABBE holder if the components were separated by the dual deed or trust mechanisms must be deducted from the tax basis of the LURE. This implies that the LURE holder must pay capital gains tax when the LURE is sold on LURE depreciation taken by the ABBE holder, in addition to capital gains tax on any actual LURE appreciation. However, due to the time cost of money this tax deferral can add significantly to the difference between the combined ABBE and LURE values and the value of unseparated property. In addition, if the LURE holder is in a lower tax bracket than the ABBE holder, then a portion of the LURE depreciation deductions taken by the ABBE holder is permanently forgiven.

A particularly strong result holds if the LURE holder happens to be a tax-exempt investor. In this case, all taxes on LURE depreciation deductions taken by the ABBE holder are permanently waived, and the LURE tax basis is stepped up to the resale price when the LURE holder disposes of his investment.

The joint use of depreciation and different tax brackets to transform tax deferral into tax forgiveness has solid precedent. During periods in which capital gains are taxed at lower rates than ordinary income, cumulative depreciation deductions on investments are routinely taxed at the (lower) capital gains rate when the investments are sold. The dollar value of taxes permanently forgiven upon asset sale is computed by multiplying the total dollar value of depreciation deductions taken during the holding period by the difference between the asset holder's marginal tax rates on ordinary income and capital gains.

An Example

To see the magnitude of the impact amortization and depreciation acceleration can have on property value when components are sold separately, assume for the moment that we are dealing with an unleveraged single-tenant property with an eight-year lease. Assume that Treasuries are priced to yield 8.75%, and that the appropriate discount rate for the lease is the appropriate Treasury rate plus 100 basis points—in other words, 9.75%. Assume in addition that the ABBE represents 50% of total property value.

If the property owner decides to sell the property without separating the components, then over the remaining term of the lease the new owner is allowed to depreciate 8/31.5 of the total value of property improvements. Assuming that land represents 10% of total property value, the new owner can depreciate no more than 22.86% of the total purchase price over the remaining term of the lease.

By contrast, if the seller of the property decides to separate the property into components, then over the ABBE term the new ABBE owner will be able to amortize the 50% of total property value represented by the ABBE and in addition depreciate 8/31.5 of the 45% of total property value improvements represented by the LURE—in other words, 61.43% of total property value. Thus component separation generates additional depreciation and amortization deductions totalling 38.57% of the total sale value of the property over the ABBE term. Another way to view these tax deductions is that under the law governing future interests the ABBE holder is entitled to deduct 122.86% of the ABBE purchase price over the life of the ABBE asset.

Only the ABBE amortization portion of each deduction reduces the tax basis of the ABBE holder. The LURE depreciation portion reduces the LURE holder tax basis even though the benefit of the deduction goes to the ABBE holder. Thus tax code disallowance of cost recovery deductions that reduce the adjusted tax basis of an asset below zero does not prevent the ABBE holder from recovering more than 100% of the ABBE purchase price.

The annual deduction taken by the ABBE holder is larger than the annual depreciation deduction allowed on unseparated property by 4.82% of the total purchase price of the property—in other words, by 9.64% of the ABBE purchase price. Exhibit 1 presents a year-by-year breakdown of the net present value added by incremental deductions if the ABBE and LURE holders are both in a 35% tax bracket and the LURE holder sells the property at the end of the eighth year immediately after vesting in fee simple.¹⁷ The net present value of the incremental deductions is 2.08%.¹⁸

This strategy is not optimal if the ABBE and LURE holders are in the same tax bracket. The optimal strategy in this case is for the LURE holder to continue to defer the tax obligation on accumulated amortization and depreciation deductions as far into the future as possible by retaining title to the property. Beyond the eighth year, the

Exhibit 1
Tax Deduction Comparison of Real Estate Components with Undivided Property: First Scenario*

Year	ABBE Amortization/ Depreciation Deduction** %	Real Estate Depreciation Deduction** %	Difference*** %
1	7.68	2.86	4.82
2	7.68	2.86	4.82
3	7.68	2.86	4.82
4	7.68	2.86	4.82
5	7.68	2.86	4.82
6	7.68	2.86	4.82
7	7.68	2.86	4.82
8	-53.76	-20.02	-33.74

*assuming an eight-year ABBE term, and that the LURE holder sells the LURE upon vesting in fee simple at the end of the eighth year

**percentage of property value at time of component separation

***NPV of total excess depreciation = 2.08%, assuming ABBE and LURE holders are both in a 35% tax bracket and the market price of tenant debt is 9.75%

Exhibit 2
Tax Deduction Comparison of Real Estate Components with Undivided Property: Second Scenario*

Year	ABBE Amortization/ Depreciation Deduction** %	Real Estate Depreciation Deduction** %	Difference*** %
1	7.68	2.86	4.82
2	7.68	2.86	4.82
3	7.68	2.86	4.82
4	7.68	2.86	4.82
5	7.68	2.86	4.82
6	7.68	2.86	4.82
7	7.68	2.86	4.82
8	7.68	2.86	4.82
9	1.43	2.86	-1.43
10	1.43	2.86	-1.43
11	1.43	2.86	-1.43
12	1.43	2.86	-1.43
13	1.43	2.86	-1.43
14	1.43	2.86	-1.43
15	1.43	2.86	-1.43
16	1.43	2.86	-1.43
17	1.43	2.86	-1.43
18	1.43	2.86	-1.43
19	1.43	2.86	-1.43
20	1.43	2.86	-1.43
21	1.43	2.86	-1.43
22	1.43	2.86	-1.43
23	1.43	2.86	-1.43
24	1.43	2.86	-1.43
25	1.43	2.86	-1.43
26	1.43	2.86	-1.43
27	1.43	2.86	-1.43
28	1.43	2.86	-1.43
29	1.43	2.86	-1.43
30	1.43	2.86	-1.43
31	1.43	2.86	-1.43
32	-94.33	-88.66	-5.67

*assuming an eight-year ABBE term, that the LURE holder vests in the property when the ABBE expires, that he continues to hold the property until he has written the tax basis down to zero at the end of 31.5 years, and that he sells the property at the end of the thirty-second year

**percentage of property value at time of component separation

***NPV of total excess depreciation = 6.40%, assuming ABBE and LURE holders are both in a 35% tax bracket and the market price of tenant debt is 9.75%

LURE holder begins to receive the benefit of LURE depreciation deductions taken previously by the ABBE holder. The LURE holder continues this deduction until 31.5 years from the time the components were separated, at which time the tax basis in the property will have been reduced to zero.

Exhibit 2 analyzes the net present value of incremental deductions if the LURE holder sells the property at the end of the thirty-second year, after the tax basis in the property has been reduced to zero. For this scenario, the net present value of the benefit rises to 6.40%.

Exhibit 3
Tax Deduction Comparison of Real Estate Components with Undivided Property: Third Scenario*

Year	ABBE Amortization/ Depreciation Deduction** %	Real Estate Depreciation Deduction** %	Difference*** %
1	7.68	2.86	4.82
2	7.68	2.86	4.82
3	7.68	2.86	4.82
4	7.68	2.86	4.82
5	7.68	2.86	4.82
6	7.68	2.86	4.82
7	7.68	2.86	4.82
8	7.68	2.86	4.82

*assuming an eight-year ABBE term, and that the LURE holder does not sell the LURE prior to vesting in fee simple at the end of the eighth year

**percentage of property value at time of component separation

***NPV of total excess depreciation = 10.34%, assuming the ABBE holder is in a 35% tax bracket, the LURE holder is tax-exempt, and the market price of tenant debt is 9.75%

Capital gains taxes on the incremental tax deductions incurred in the second scenario at the end of the thirty-second year can be indefinitely deferred if the LURE holder never sells the property. This effectively turns the tax deferrals into a waiver. Year-by-year incremental deductions for this scenario are the same as the second scenario (Exhibit 2) for the first thirty-one years. In the thirty-second year the incremental deduction is -0.72% (one-half the value of the incremental annual deduction in years nine through thirty-one), and after year thirty-two the incremental deduction is zero. Assuming that both component investors are in a 35% tax bracket and that the market price of tenant debt is again 9.75%, the NPV of incremental deductions rises slightly from the value in the second scenario, to 6.65%.

As discussed in the previous section, the best strategy for the seller who separates the components is to sell the LURE to a tax-exempt investor. In this case, it does not matter when the LURE holder sells the property. The deferral on tax deductions taken by the ABBE holder is automatically transformed to tax forgiveness, and the tax benefit can be priced unequivocally at the time the components are separated.

Exhibit 3 analyzes the value of incremental amortization and depreciation benefits if the ABBE holder is in a 35% tax bracket and the LURE holder is tax-exempt. The net present value of incremental deductions under these conditions is 10.34%, independent of the holding period of the LURE investor.

Additional Considerations

If ABBE and LURE holders are subject to same marginal tax rate, then it does not matter which of the two components receives the LURE depreciation deduction.¹⁹ Roughly speaking, this means that for taxable LURE purchasers the net present value

of the tax deferral is the same regardless of which mechanism is used to separate the components. By contrast, if the master lease mechanism is used to separate components and a tax-exempt investor purchases the LURE, then the value of the LURE depreciation deduction is lost.

Another factor that will significantly affect the tax treatment of depreciation and amortization deductions is the length of the ABBE term at the time the property is separated. Although restrictions on the length of the term asset are not addressed in the Internal Revenue Code, IRS regulations and court rulings combine to limit the range of permissible ABBE terms. As with most regulatory restrictions that interpret tax code, these restrictions are based on economic functionality:

- The term must be long enough to expose the ABBE holder to the obligations and risks of property ownership; otherwise the ABBE sale will be treated as an assignment of income, with no deductions allowed for the ABBE holder.
- The period must not be so long as to cause tax authorities to conclude that substantially all economic benefits and risks of property ownership have been transferred to the ABBE purchaser, or the ABBE will only be eligible for depreciation on the same schedule as unseparated property.²⁰

From the perspective of amortization and depreciation acceleration, these limits are not significant restrictions. The net present value of the acceleration benefit is greatest for ABBE terms in the mid-range, i.e., between five and fifteen years. As the term lengthens beyond that range, the combination of ABBE amortization and LURE depreciation begins to look more like depreciation of the unseparated property; and as the ABBE term declines towards zero, so does the net present value of accelerated deductions.

LURE Finance

Single-tenant LURE investment characteristics suggest a structure for LURE financings designed to be independent of other assets in the LURE investor's portfolio. This structure applies to the LURE analogue of a nonrecourse commercial real estate mortgage.

Since the LURE represents deferred property ownership, no cash flow should be expected from the asset until the ABBE expires. In particular, the LURE cannot service debt incurred to finance the LURE purchase.

On the other hand, occupancy deferral has a time cost analogous to the time cost of money. The discount rate associated with occupancy deferral is at least as large as—and in general is larger than—the risk-free rate corresponding to the ABBE term. Thus, even if the property value remains unchanged, the LURE is expected to appreciate with time like a zero-coupon default-free bond, but at a higher rate.²¹

If LURE financing is to be independent of cash flow generated by other assets in the LURE investor's portfolio, all interest must accrue to the debt principal until the ABBE expires and the LURE is transformed into an income-generating asset. In other words, a nonrecourse LURE mortgage should be structured as a zero-coupon loan for the period that the ABBE is in place, either due in full when the ABBE expires, or with a

provision to begin debt service at that time. Since the expected LURE appreciation rate due to occupancy deferral exceeds the growth rate the market is likely to require for the mortgage, the loan-to-value ratio can be expected to increase as time elapses despite the lack of interim debt service.

The only potential problem is that the real-world scenario for the loan-to-value ratio will differ from the expected scenario due to the presence of LURE risk components arising from fluctuations in real estate supply and demand and from property-specific risk. Clearly, the smaller the initial loan-to-value ratio, the less risky the mortgage. Thus a decrease in the initial loan-to-value ratio should result in a lower loan interest rate. This leads to the question of what is a reasonable initial loan-to-value ratio to expect in a LURE mortgage.

It is reasonable to expect mortgage bankers to extend comparable financing on unbundled LUREs to what they have extended historically on LUREs bundled with ABBEs. Thus one way to determine an appropriate range for initial LURE mortgage loan-to-value ratios is to regard conventional real estate mortgages as bundled financings of the ABBE and LURE components of whole property and extract the implied initial LURE loan-to-value ratios.²² The only difficulty with this approach is how to allocate conventional mortgage financing between the two components of commercial property.

If we are willing to settle for a lower bound on how much LURE finance has been available historically, we can avoid this difficulty. Since the amount of conventional mortgage finance allocated to the LURE component is whatever remains after ABBE component financing has been accounted for, a lower bound estimate for LURE financing results by taking the total mortgage value and subtracting the maximum financing that mortgage bankers could conceivably have provided for the ABBE component.

We will use the value of the ABBE component itself for this estimate, i.e., the maximum conceivable amount of ABBE component financing in a commercial real estate mortgage is 100% of the ABBE component value. Assume that a typical investment-grade property is 85% leased with an average lease term of seven years, and that the average lease was written at the current rental rate. If the average cost of intermediate-term tenant debt is 9.5%, and if expected property appreciation over the ABBE term is zero, then the ABBE represents about 40% of property value.²³

American Council of Life Insurance mortgage commitment data shows that most initial loan-to-value ratios on seasoned property range between 65% and 75%.²⁴ A liberal estimate for an initial LURE loan-to-value ratio follows from the upper end of this range, i.e., 75%.

If the loan finances 100% of the ABBE, and the ABBE represents 40% of total property value, that leaves borrowed funds worth 35% of total property value to finance the LURE, i.e., 35% of total property value to finance an asset worth 60% of total property value. This suggests an acceptable LURE loan-to-value ratio of $35/60 = 58\%$.

A more conservative estimate for an acceptable LURE loan-to-value ratio results from using the value 65% for the initial real estate loan-to-value ratio. This implies an acceptable initial LURE loan-to-value ratio of $25/60 = 42\%$.

Both estimates imply that mortgage lenders have implicitly been financing more than 40% of the LURE component for years. This has been the case even though the LURE traditionally has been bundled with a debt-like asset that also required financing and

whose investment risk has not been defeased by that financing. Thus it is reasonable to expect that stand-alone LURE financing for somewhere between 40% and 60% of the LURE purchase price will be available if component separation becomes popular among real estate investors.

One problem with zero-coupon financing is that accrued interest on zero-coupon debt is treated by the Internal Revenue Code as taxable income to the lender even though debt service has not actually been received. Thus zero-coupon loans generate a stream of negative cash flows for taxable lenders until the loans mature. Since taxable lenders find this feature a very negative aspect of zero-coupon financing, it is likely that LURE financing will be the exclusive domain of tax-exempt institutions.

Agency Costs

The separation of property into components changes the opportunity for real estate wealth leakages. The net present value of these changes represents a change in agency costs that, combined with the change in tax benefits, determines the net value added or subtracted by component separation.

Capital Improvements

Property maintenance after separation is the responsibility of the ABBE holder unless the trust mechanism is used for component separation. It is important that this responsibility in no way involve the LURE holder while the ABBE is in place, since this is one of the legal criteria that distinguishes an income-producing asset from a simple assignment of income and points the way to accelerated amortization and depreciation deductions. This also creates a potential source of economic loss for the LURE holder if the property requires a major capital improvement such as a new roof or HVAC system, since the ABBE holder does not have the long-term perspective of a fee simple owner concerning capital improvements.

The ABBE holder is not concerned with maintenance beyond that required by tenant leases and covenants in the component separation agreement, since the ABBE holder does not own any occupancy rights and does not benefit from an enhancement of those rights. The ABBE holder could conceivably face an unexpected expense that exceeds the remaining value of the ABBE, in which case the logical solution is to abandon the ABBE and allow the LURE holder to vest prematurely in fee simple. The net present value of this risk is an agency cost that lowers the value of the ABBE at the time the components are separated.

This agency cost also lowers the value of the LURE. The LURE purchaser faces the risk that the property will require a major capital investment during the ABBE term to maintain the value of future occupancy and that the ABBE holder will opt for a less expensive stop-gap solution, one that satisfies contractual obligations to current tenants but makes it more difficult to attract new tenants and/or accelerates deterioration of the property.

One solution is to insert a requirement into the covenants of the separation contract requiring the ABBE holder to maintain uncancellable insurance covering capital improvements that could become necessary during the ABBE term. To guarantee that there is no subsequent dispute between ABBE and LURE holders about the terms of the

coverage, the policy can be created as part of the original split purchase, with a fully funded reserve to pay policy premiums set aside at that time. This approach removes all ambiguity about pricing the agency cost for prospective ABBE and LURE purchasers: the net present value of the agency cost is the cost of funding the insurance policy.

The alternative is to make no provision in the separation agreement for the risk of unexpected capital improvement requirements. In this case, agency cost pricing is left to ABBE and LURE purchasers. Since efficient pricing of this risk requires real estate expertise, purchasers without the requisite expertise are likely to restrict their attention to properties where the perceived risk is negligible.

Re-leasing before the ABBE Expires

Unless the tenant defaults (or withdraws from the lease, a possibility only if the lease covenants explicitly allow for it), re-leasing is not an issue for the ABBE holder. In event of tenant bankruptcy and subsequent lease rejection, the obligation of the tenant to make any additional rental payments is voided, but the tenant is required to vacate the premises. Then the ABBE holder repossesses the unused portion of the term occupancy rights and goes searching for a new tenant.

If the ABBE term has ten or more years remaining, there is no significant difference between the re-leasing opportunities available to the ABBE holder and those available to a fee simple owner. However, if the term is close to expiration, term ownership could be a significant impediment to re-leasing and could result in the ABBE holder accepting less net income from a substitute tenant than a fee simple owner could expect. In this case, a prospective tenant might require a commitment from the LURE owner to extend a new lease beyond the ABBE expiration before agreeing to sign the lease with the ABBE owner. How much—if anything—such a requirement would cost the ABBE holder depends on the state of the spot rental market and the mechanism used to separate the ABBE and LURE components.

If the commercial market is on the downside of the real estate cycle, then the cost to the ABBE holder is likely to be zero. In a rental environment plagued by excess capacity, the LURE owner is likely to be happy if the ABBE holder finds an acceptable tenant, incurs the expense of reconfiguring the space to fit the tenant's needs, and absorbs all or part of any free rent the tenant may demand. If all that is asked of the LURE owner in this situation is to extend the tenant lease term beyond the end of the ABBE term, a rational LURE owner will perceive that it is in his/her interest to agree.

In a tight rental market (or in a slack market, if the LURE holder is willing to risk aggressive negotiations), the LURE holder could try to demand payment in return for an agreement to extend the tenant lease beyond the end of the ABBE term; and one way or another, this demand will end up costing the ABBE holder.

If the dual deed mechanism was used to separate the ABBE and LURE components, then obstructive behavior by the LURE holder could provide the ABBE holder with legal justification for requesting a court-ordered sale of the fee simple to protect the value of term ownership. The net present value of the expense associated with taking legal action is the re-leasing agency cost associated with component separation for this mechanism. If the LURE holder is willing to settle for a lesser amount as the price for

consenting to a tenant lease extension, then it would be rational for the ABBE holder to simply deal with the LURE holder and be done with it.

If the master lease or trust mechanism was used, then recourse to a court-ordered sale of the fee is not available to the ABBE holder. In this case, the ABBE holder will have to engage in a three-way negotiation with both the prospective tenant and the LURE holder and strike the best deal available. The net present value of any prospective concession to the LURE holder is the re-leasing agency cost associated with component separation for this mechanism.

It often takes three months or more to find a replacement tenant, even if the rental market is not slack. The cost of reconfiguring space to suit the new tenant can amount to between three and six months' worth of rent. In addition, the fee for a lease broker typically consumes 5% of the gross rental stream expected over the lease term. With these re-leasing expenses in mind, if the original tenant defaults and withdraws from the lease shortly before the end of the ABBE term, the least costly option for the ABBE holder could be to terminate the ABBE and allow the LURE holder to vest prematurely.

The ABBE holder does not necessarily have to absorb the full cost of any loss due to lease rejection by the original tenant. While tenant bankruptcy and lease rejection forces the ABBE holder to find a new tenant, the obligation of the previous tenant has not ended. A standard feature of commercial leases is a survival clause that transforms any loss due to lease rejection into unsecured tenant debt equivalent in seniority to unsubordinated debentures.²⁵

To summarize, the ABBE holder can face greater re-leasing expenses in tenant default and lease rejection than would be faced by a fee simple owner. However, the original tenant is liable in bankruptcy for a sizable portion of re-leasing costs incurred by the ABBE holder, and the claim has equivalent seniority to unsubordinated general obligation tenant debt.

The Separation Mechanism

As already discussed, the cost associated with the dual deed mechanism is merely the cost of writing two deeds instead of one—effectively zero. The cost associated with the master lease mechanism is similarly negligible.

The trust mechanism is not costless, since the trustees must be reimbursed for their expenses and compensated for their services. A percentage of the initial split purchase price can be set aside and invested in cash equivalents to cover their fees and expenses as accrued. Alternatively, the trustees can be compensated out of trust income. In either case, the net present value of the expense can be estimated fairly accurately at the time the ABBE and LURE components are separated. No specialized investor expertise is necessary to value the agency cost, and the cost is independent of the investment performance of the components.

A Market for ABBEs and LUREs

For many properties, the present value of tax deferrals created by component separation will swamp any increase in agency costs. The prospect of capturing this

incremental value should encourage owners to make property of this type available for split purchase.

The drawback to creating components via split purchase is that each seller has to identify two independent buyers (or more, if tenant leases are unbundled) and arrange coordinated purchases. Both tasks provide opportunities for financial intermediaries to earn transaction fees.

Coordinated purchases may not be necessary if a financial intermediary is making a market in components. In this case, the intermediary can warehouse a component on a temporary basis by purchasing the component for its own account once a purchaser has been identified for the other component. The warehoused component is available for resale later in a separate economic transaction. The intermediary could also arrange LURE mortgages between taxable LURE holders and tax-exempt institutions, and speculate in the acquisition and separation of property into components for its own account.

In the discussion of the tax benefits of component separation we observed that a property owner who separates property into ABBE and LURE components and sells the ABBE is subject to tax disincentives if he does not also sell the LURE. These disincentives do not apply if a property owner is tax-exempt. Since the ABBE must be owned by taxable investors to gain the benefit of accelerated amortization and depreciation deductions, a pension fund could simply separate property into components and sell the ABBE, continuing to hold the LURE in accordance with the real estate investment policy of the fund. Thus it appears at first glance that existing pension fund holdings could be a source of property for component separation without the need for three-way sales to create components.

While the taxable purchaser of the ABBE created via such a transaction is allowed to amortize the ABBE purchase price over the ABBE term, LURE depreciation is only available to the ABBE purchaser if the components are separated via split purchase.²⁶ This implies that tax benefits would be squandered unnecessarily by carving out ABBEs from existing pension fund property holdings. In addition, there is a possibility that such an asset sale could be regarded for tax purposes as the functional equivalent of mortgage finance, creating the risk that a portion of the ABBE rental income could become taxable to the pension fund as Unrelated Business Taxable Income on leveraged property.²⁷

Summary

Unleveraged commercial real estate is a combination of debt and equity. The debt component consists of existing leases; the equity component consists of unleased rights to future occupancy. The debt and equity components can be separated by splitting fee simple ownership temporally into two parts: term ownership of the property while current leases are in place, and residual ownership of the property after current leases expire.

At least three legal mechanisms exist to achieve a temporal split of ownership or the functional equivalent: dual deeds, trusts, and master leases. Though the tax implications of the mechanisms differ slightly, all three accelerate amortization/depreciation benefits.

The change in property value that results from component separation due to

incremental tax deferrals and agency cost changes can be shown in some cases to produce an enhancement in property value that exceeds 10% of the value of unseparated property. The prospect of capturing this incremental value should induce real estate owners to make property available for component separation.

Notes

¹See Booth et al. [5] and Graff and Cashdan [13].

²This assumption applies to a tax-free environment with perfect capital markets; see Modigliani and Miller [16].

³DeAngelo and Masulis [7] extend the Modigliani-Miller model to an environment of heterogeneous investor tax brackets that includes tax shields such as depreciation. They show that asset valuation varies with the form of securitization and demonstrate the existence of an optimal corporate capital structure if tax shields are available, even under the assumption of zero bankruptcy costs.

⁴A preliminary version of some of these results appeared in Graff [12].

⁵See DeAngelo and Masulis [7].

⁶A court could rule favorably on such a suit if sale of the property is the only way for the term interest holder to avoid wastage of the term interest asset (see Simes and Smith [17], Vol. 2). An active secondary market for term interests would establish a reliable market mechanism for such realizations without the necessity of court intervention, substantially reducing the likelihood of success for such a suit.

⁷See Internal Revenue Code §267(b)(6), and the discussion of I.R.C. Section 267 in [18], Vol. 4.

⁸Trustees can petition in court for the right to sell trust assets and invest the proceeds in other assets if they can demonstrate the necessity of this action for the fulfillment of their fiduciary responsibilities; see Simes and Smith [17], Vol. 3. See also, Epstein [9] for a survey of the history and evolution of property rights under American and English law and the role of trusts in the temporal division of assets for estate planning.

⁹See Simes and Smith [17], Vol. 3.

¹⁰Part of the difference between favorable and unfavorable tax treatment is in cost recovery allowed by the tax code for the term interest holder. If the master lease is viewed from a tax perspective as an income-generating capital asset, the purchase price can be amortized over the life of the term; if the master lease is viewed as the mere right to receive a stream of future income payments, then it cannot be amortized during the life of the term, but the asset holder is entitled to take a deduction equal to the term purchase price when the term interest expires. The "fruit and tree" doctrine distinguishing the two cases was originally developed by Oliver Wendell Holmes as a criterion to distinguish asset sales qualifying for capital gains from sales whose net cash flows are taxed as ordinary income. See Del Cotto [8] and Danzis [6].

¹¹"ABBE" and "LURE" are trademarks of Graff/Ross Holdings. The intuitive but inaccurate descriptor Lease Obligation Bond (LOB) was used for the ABBE in [5], [13], and was replaced by Wasting Asset Real Estate (WARE) in [12]. These earlier articles referred to the LURE as Residual Asset Real Estate (RARE).

¹²Blum [4] surveys statutes and court rulings on amortization by an owner who separates an asset into term and residual equity interests and retains one component. The author presents the case for allowing ABBE amortization by an owner who sells the LURE.

¹³See Blum [4].

¹⁴See [18], Vol. 3, Auster [1], [2], and Auster and Lau [3]. Note that prior to 1991, Section 167(e) was designated Section 167(r) in the Internal Revenue Code.

¹⁵See Leimberg and Schnepfer [15], Auster [1], [2], and Auster and Lau [3].

¹⁶This policy is the main cost recovery option discussed in two of the articles cited in the previous note. See Auster [1], and Auster and Lau [3].

¹⁷The net present value of the benefit increases with an equal rise in the tax brackets of both investors, and likewise with a rise in the ABBE holder tax bracket alone; but it declines with a rise in the LURE holder tax bracket alone. The value of the benefit also declines if the LURE holder sells the LURE prior to expiration of the ABBE term.

¹⁸It is important to use the proper discount rate for amortization and depreciation deductions. If ABBEs are liquid, the proper rate is the current market rate on senior tenant debt. To see this, it suffices to note what happens if the tenant defaults or the ABBE holder fails to generate sufficient income to use the full deduction. In event of tenant default, the investor who was interested in the ABBE as a fixed-income asset is likely to sell the ABBE, take a capital loss, and deploy the sale proceeds in a new fixed-income investment. Any capital loss on the sale equals the difference between the remaining amortization deduction available to the ABBE seller prior to the sale and the amortization deduction available to the ABBE buyer after the sale. Thus the availability of full ABBE amortization is dependent on the maintenance of ABBE credit quality. On the other hand, if the ABBE holder generates insufficient income to use the full ABBE amortization deduction, he will conserve the value of the deduction by selling the ABBE to an investor who can use the deduction, and deploy the sale proceeds in a bond that does not include amortization benefits.

¹⁹Provided that, if the LURE holder is an individual or partnership, the LURE holder has sufficient passive income to use the entire depreciation deduction. For corporate investors there is no distinction between active and passive income.

²⁰A master lease with twenty years or more remaining in its term must be depreciated as if the leasehold were a fee simple interest, and the IRS has applied this restriction to leases that have as few as twelve years remaining. Estate tax precedent suggests that the full benefit of accelerated amortization and depreciation is available for long-term ABBEs if the dual deed or trust mechanism is used to separate the components.

²¹Another way of looking at this is to note that property value is approximately equal to the sum of ABBE and LURE values. Since ABBE value declines steadily to zero over the ABBE term, LURE value must increase steadily to compensate as long as property value remains unchanged.

²²This is a variant of the technique introduced in Graff and Cashdan [13] to extract an index of historical LURE returns from returns on the Frank Russell Property Index and diversified real estate returns published by the Real Estate Research Corporation.

²³Under these assumptions, and assuming for simplicity of calculation that ABBE income is received annually at end of the year, ABBE value as a percentage of property value is given by $0.85 * (1 - (1 + r)^{-7}) = 39.97\%$, where $r = 9.5\%$ is the cost of tenant debt.

²⁴See ACLI [14].

²⁵Federal bankruptcy law limits this claim to the greater of one year of rent or 15% of the remaining rent due on the lease, but not to exceed three years' worth of rent. See Friedman [10], Ch. 16.

²⁶See Auster [1], [2] and Blum [4].

²⁷This would in turn call into question the tax-exempt status of other pension fund investment income. See Gallagher [11].

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